

Improving Access to Green Funding in CEE and Ukraine

Country fiche on Access to Green Funding

BULGARIA

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REGIONAL ENVIRONMENTAL CENTER

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Overview of financing in the following areas:

1. Financing Low Carbon Development

1.1. Strategies and national financial mechanisms for low carbon economic development

I. Energy Strategy of the Republic of Bulgaria till 2020 for Reliable, Efficient and Cleaner Energy

The energy strategy is directed to overcoming the main challenges faced by the Bulgarian energy nowadays, namely:

- 1) High energy intensiveness of GDP: Regardless of the positive trend to improvement, the energy intensiveness of the national GDP is 89% higher than the EU average (considering the parity of the purchasing power);
- 2) The high dependency on energy resource imports: Bulgaria meets 70% of its gross demand through import. The dependency on natural gas, crude oil and nuclear fuel imports is practically full and has a traditional single origin - the Russian Federation;

The necessity for environmentally sound development: the world is facing the challenges of climate changes influenced by the growing volume of greenhouse gas emissions.

Along with the revenue raised at national level by bids for allowances, up to 300 million emission allowances with estimated value between 6 and 9 billion Euro have been allocated at European level for financing of clean technologies – demonstration projects for carbon capture and storage technologies and innovative projects for renewable energy. The rules and criteria for selection of projects with these funds were defined with EC's decision of November 3rd 2010. Bulgaria, as a member state, will avail itself of this chance and is preparing to apply for financing of such projects on national territory as early as in the first procedure – by the end of 2011, as well as in the second one – by the end of 2012.

Regardless of this positive trend, energy intensiveness of the national GDP is 89% higher than the EU average (measured by gross domestic energy demand per unit of GDP and taking into account the parity of purchasing power) – **302 toe/MEUR05** compared to **160 toe/ MEUR05 in the EU**. There are considerably smaller – 42.6%, differences between the national and the European indicator measured by final energy demand. This is an indicator of inefficient use of the primary energy resources, which is corroborated also by the relation between produced energy and the resources put into the production. This relation is 49% for the national energy balance and 64% - for Europe. For comparison, this difference of 15 points indicates that 3 mln. toe more energy resources are consumed in Bulgaria annually, which makes ~900 mln. Euro more energy costs per year.

The sources of financing the energy efficiency measures and projects are of particular significance for the successful implementation of the policy. Within the period till 2013 an increasing flow of financial resources be provided will from the operative programs, from the Kozloduy International Fund, as well as from sales of the national surplus of prescribed greenhouse gas ERU's. After 2013, the revenues from sale

of greenhouse gas emission allowances under the European scheme for greenhouse gas emission allowance trading will constitute an additional financial source.

In our judgment and that of the European institutions, the member states' national funds shall be the main instrument for financing of energy efficiency measures. Since such a fund already exists in our country, it shall continue to operate after its additional financial and administrative strengthening.

Reduction of greenhouse gas emissions

- Timely creation of working mechanisms for conducting of bids for greenhouse gas emission allowance after 2013 and participation in a Common-European trading platform.
- Regulation of the spending of revenues from the bids for greenhouse gas emission allowance in projects for sustainable energy development, construction of „smart grids“ and creation of administrative capacity and procedures for project selection and evaluation.
- Active participation of the state in the European procedures for financing of clean technologies – demonstration projects for capture and storage of carbon dioxide and innovative projects for renewable energy.ⁱ

II. Second National Energy Efficiency Action Plan 2011-2013

The second National Energy Efficiency Action Plan (NEEAP) has been developed on the basis of Directive 2006/32/EC of the European Parliament and of the Council on energy end-use efficiency and energy services (the "Directive"). This is the second of the three National Energy Efficiency Action Plans and covers the period 2011-2016 and the projections for 2020.

The implementation of the second NEEAP should help to achieve the national energy savings target laid down in the first National Energy Efficiency Action Plan. The national target to be achieved in 2016 amounts to 7 291 GWh of annual savings or 627 ktoe/year and represents 9 % of the average final energy consumption for the period 2001-2005 (81 024 GWh).

The second three-year Energy Efficiency Action Plan establishes a 6 % intermediate indicative fuel and energy savings target for the period 2011-2013 of the average final energy consumption falling under the scope of the Directive for the period 2001-2005. This target amounts to 4 860 GWh (418 ktoe) of annual fuel and energy savings.ⁱⁱ

III. National Long Term Programme for Energy Efficiency until 2015

The National Long-term Energy Efficiency Programme until 2015 (NLEEP) is developed in accordance with the requirements of article 10, paragraph 3 from the Energy Efficiency Act. It is consistent both with the Energy Strategy of Bulgaria from 2002 and with the amendments in the legislative framework from 2004, which defined the development of the energy sector. The legislation mentioned was formulated in the Law of Energy and in the secondary legislative decrees to it, as well as those following the Energy Efficiency Act.

The implementation of the priority national objective for fast and sustainable economic growth, connected with the existence of an energy sector, responding to the key requirements for:

- high competitiveness;
- security of energy supplies and
- observing the requirements for protecting the environment is utilization of the high potential for energy saving and large-scale introduction of renewable energy sources. The priorities of the policy in energy sector ensue from the National Development Plan of the Republic of Bulgaria and are in correlation with

the Energy Strategy of the country.ⁱⁱⁱ

IV. National Long Term Programme Renewable Energy Sources 2005 – 2015

Aims:

- The National Long Term Programme aims RES in Bulgaria to reach share of 9% by 2015.
- Replacement of conventional fuel and energy used for heating and hot water - not less from 1300 ktoe energy equivalent annually.
- Consumption of liquid bio fuels to be increased: as by Directive 2003/30/EC. The market share of bio fuels to be in compliance with the real opportunities and the market in the country.

V. Law on Energy Efficiency 2008

This law regulates the public relations with regard to the implementation of the governmental policy for energy end- use efficiency promotion and providing energy services. This law applies to energy end-use by:

1. the installations for the categories of industrial activities, as provided by Art. 131c of the Law on the Environmental Protection;
2. the transport means in the air and water transport

The objective of this law is to promote the energy efficiency as a major factor for enhancing the competitiveness of the economy, electric power supplies security and the protection of the environment, through:

1. a system of measures and activities for enhancing the energy efficiency in the energy end-users;
2. market development of the energy services and performing activities and measures for promotion of the energy efficiency in the end-users from the energy traders.^{iv}

VI. Law on Energy from Renewable Resources 2011

This law provides for the public relations, connected with production and consumption of:

1. electric energy, thermal energy and energy for cooling from renewable sources;
2. gas from renewable sources;
3. biofuels and energy from renewable sources in transport.

The basic targets of this law are:

1. promotion of production and consumption of energy, produced from renewable sources and promotion of production and consumption of bio-fuels and energy from renewable sources in transport;
3. creating conditions for including gas from renewable sources in the networks for transfer and distribution of natural gas; thermal energy and energy for cooling from renewable sources in thermal-transferable networks;
5. providing information on the supporting schemes, the use and practical peculiarities of the development and use of energy from renewable sources of all interested persons, participating in the process of production and consumption of electric energy, thermal energy and cooling energy from renewable sources, of production and consumption of gas from renewable sources, as well as production and consumption of bio-fuels and energy from renewable sources in transport;
6. creating conditions for achieving systems and competition energy policy and economic growth through innovations, introducing new products and technologies; for achieving sustainable development at regional and local level; for raising the competitiveness of the small and medium enterprises through production and consumption of electric energy, thermal energy and cooling energy from renewable sources;

- 7. reliability of the energy supply, delivery and technical safety;
- 8. protection of environment and restricting the climate change;
- 9. raising the life standard of population through economically effective use of energy from renewable sources.

According to the Law on Energy from Renewable Resources the following actions should be undertaken to assure achieving of the targets set:

1. introducing supporting schemes for production and consumption of electric energy, thermal energy and cooling energy from renewable sources, production and consumption of gas from renewable sources, as well as for production and consumption of bio-fuels and energy from renewable sources in transport;
2. regulating the rights and duties of the executive bodies and of the local self-government while conducting the policy in the area of promotion the production and consumption of electric energy, thermal energy and cooling energy from renewable sources, production and consumption of gas from renewable sources, as well as for production and consumption of bio-fuels and energy from renewable.

VII. Sustainable Energy and the Covenant of Mayors

The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO2 reduction objective by 2020.

The municipalities in Bulgaria are relatively active members of the Covenants. The country has well established Energy Efficiency Agencies and a high number of projects related to energy efficiency. The main financing source is EU Funds and National Operational Programmes.



Figure 1. ● Number of Signatories, ● Covenant Territorial Coordinators, ● Supporters, ● Energy Agencies, Sustainable Energy Action Plans Submitted.

Web-site: http://www.eumayors.eu/about/covenant-of-mayors_en.html

1.2. Public financing schemes and sources for supporting a low-carbon development

I. Energy Efficiency Fund

Such funds have been established in a considerable number of EU Member States. In the MURE database, these funds are mainly described in the cross-cutting section, since they usually address more than one sector. Nevertheless, many of them also include specific programs addressing electricity consumption in residential and tertiary buildings.

II. Sale of the national surplus of prescribed greenhouse gas ERU's.

After 2013, the revenues from sale of greenhouse gas emission allowances under the European scheme for greenhouse gas emission allowance trading will constitute an additional financial source which according to the National Energy Strategy will be used for various low-carbon economy projects.

III. Bulgarian credit line for energy efficiency and renewable energy sources

BCLEERES credit facility operates on the basis of partnership between the European Bank for Reconstruction and Development, the European Union and Bulgarian government. Loans amounting to € 2.5 million are distributed by six Bulgarian commercial banks acting as intermediaries in the scheme. In addition, eligible projects can take advantage of the opportunity to receive consultant services. Every successfully completed project can receive grants amounting to 15% of the disbursed loan. The grant is provided by the KOZLODUJ INTERNATIONAL DECOMMISSIONING SUPPORT FUND (KIDSF).

IV. Tax preferences

One invaluable sufficient fiscal mechanism provide incentives in the form of exemption from taxes on national and local level. Successfully certified, sanitized and modernized buildings may be exempted from tax for a period of 10 years. In addition, some municipalities waive fees for obtaining a building permit, as well as fees for sidewalk right for the duration of the construction works of the rehabilitation, renovation and modernization of the buildings.

At present the Bulgarian legislation does not provide significant tax credits or reduced rates of VAT to support initiatives of energy efficiency.

FLAG – FUND FOR LOCAL AUTHORITIES AND GOVERNMENTS

Fund for local authorities and governments (FLAG) was established in March 2007 by the Council of Ministers with funding provided through the Bulgarian National Budget. FLAG is an instrument of the central government policy for regional development. Its aim is to provide financial assistance to municipalities for the absorption of as much funds as possible from the Structural Funds and the Cohesion Fund of the EU. The contribution of FLAG to the regional development involves coverage of as many municipalities as possible, located at the whole territory of the country, by creating conditions for maximum absorption of the funds from all operational programs under which the municipalities are beneficiaries.

The Fund is an institution of unique status, having no parallel not only in the Bulgarian financial and legal practice. The Fund is an independent legal entity having the status of a commercial company (joint stock company). It is structured as a revolving mechanism for financing the development and implementation of economically and financially viable projects in the area of municipal infrastructure and for supporting capacity building of municipalities with a view to absorbing funds from the structural and cohesion funds. The Fund is designed as a financial mechanism to overcome the problem of

ensuring cash funds to municipalities when they develop project proposals or finance approved projects in the framework of the Operational Programmes, co-financed by the EU funds.

FLAG provides loans only to Beneficiaries eligible for funding from the EU Funds and which are either: **municipalities or a group of municipalities** in Bulgaria (for development of project proposals or for implementation of investment projects, approved by the Managing authority of the Operational programme), or **public utilities** operating in Bulgaria, owned or controlled by municipalities, local governments or local government agencies in the Republic of Bulgaria (only for implementation of investment projects, approved by the Managing authority of the Operational programme). FLAG established a partnership with one of the most respectable commercial banks operating in the country – Unicredit Bulbank (Managing Bank). The bank's role is to assist the Fund in assessing applicants' creditworthiness and to administer the loan repayment. FLAG finances only projects, which the Managing Bank regards as financially and economically admissible, and which have been approved by the respective Operational Programme, except for the financing of the preparation of projects (project development). The risk of the projects is minimised by the evaluation carried out by the Managing Bank; afterwards, the Fund has adopted additional criteria that aim to reduce risks for the Fund itself and ensure the prudent management of its portfolio.

1.3. Key areas of interventions of EU funds for low-carbon measures in the 2007-2013 period and outlook for 2014-2020

I. Operational Programmes 2007 - 2013

1. Operational Programme Competitiveness 2007 – 2013 (OPC) – offers financing for low-carbon economy mainly under Priority 2 "Increasing efficiency of enterprises and promoting of business friendly environment".

Specific objectives:

- Modernization of technology and management in enterprises;
- Providing accessible and high quality consulting and information services for business.
- **Reduction of energy intensity and diversification of energy sources, used by businesses.**
- Increase the efficiency of production and the market performance of companies, using the advantages of clusters and business networks.

Grants under OPC 2007 – 2013 are provided to micro, small and medium enterprises. Operational Program "Competitiveness" is financed by the **European Regional Development Fund** and the **Bulgarian government**. Allocated means are valued at **€150 million** and are to be spent on individual grants, which will fund the implementation of large and small investment projects with budgeted ranged between **BGN 2,000,000** and **BGN 391,166**. Eligible investments include equipment, technology and services. Thresholds of **co-financing** of the projects range between **30%** and **50%** depending on several criteria like company size, turnover, staff etc.

The last monitoring report on OPC 2007 - 2013 implementation progress unfortunately shows that **none of the set target indicators** related to energy efficiency and green economy were achieved so far. ^v

Scheme under OPC 2007 - 2013 – "Energy Efficiency and Green Economy" – launched on 28.06.2012, applications are accepted till 31.10.2013. A procedure for prolonging the deadline for submission of

applications is in process. "Energy Efficiency and Green Economy" provides support to SMEs for projects related to improving the efficiency and productivity of environmentally friendly technologies used in small and medium-sized enterprises, as well as reducing energy consumption and adverse environmental impacts by promoting environmentally friendly, reducing waste and energy saving production technologies.

For the first programming period 2007-2013 for Bulgaria under OP "Competitiveness" are allocated funds in the amount of **€1, 162 million**. From this amount **36% is allocations for financial engineering instruments**, the largest percentage of the funds were allocated for **technological modernization and systems management (33% of total financing)**, followed by **innovation and support for R&D (17%) and energy efficiency and green economy**.

Next program period 2014-2020 – OP "Competitiveness" will be transformed to OP "Innovations and Competitiveness" with total budget for 7 years of **€ 1 billion**. The main priority in the new OP is **Green and efficient economy as a guarantee for sustainable growth**, which includes:

- a) Green economy and resource efficiency and
- b) energy technology and energy efficiency;^{vi}

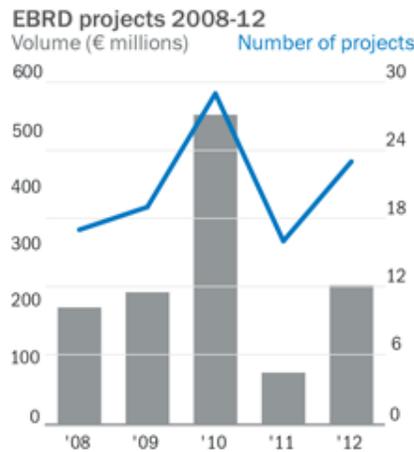
Operational Programme Regional Development 2007 – 2013

Grants of up to 50% of the project cost can be obtained from the Ministry of Regional Development and Public Works, which recently started work on implementing program of energy efficiency measures in Bulgarian households. The program budget of € 50 million provided by the European Regional Development Fund of the European Union under the Operational Program "Regional Development 2007-2013. The program operates in 36 cities throughout the country. Eligible beneficiaries are associations of homeowners in multifamily buildings, which are used mainly for residential purposes. Eligible investments include a wide range of remedies, renewal and modernization. The grant comes bundled with technical energy efficiency audits, which is fully funded by the program, which execution will continue to 2015.

1.4. The role of international financing of low-carbon development

Key facts about the EBRD's work in Bulgaria

No. of projects	225
Net business volume	€2.7 billion
Total project value	€8.8 billion
Gross disbursements	€2.4 billion
Portfolio in private sector	93%



Last updated 1 October 2013

Figure 2. Key Facts about the EBRD's work in Bulgaria

The Bank's portfolio in Bulgaria is well balanced with 34 per cent in energy and infrastructure, 25 per cent in financial institutions and 41 per cent in the corporate sector.

I. EBRD Programme Residential Energy Efficiency Credit Line (REECL)

Residential Energy Efficiency Credit Line (REECL) an EBRD programme developed to support Bulgarian residents undertaking energy efficiency investments. The first REECL framework was launched in 2005, with loans of €50 million to Bulgarian banks, and was then expanded with a further €40 million in loans in 2011. More than 42,000 small-scale residential energy efficiency projects have been implemented using REECL resources. These projects have resulted in electricity savings equivalent to 186,000 MWh per year. Energy-saving measures funded by the credit line include replacing windows, insulating exterior walls and roofs, and installing heat pumps, solar thermal collectors and high-efficiency gas and biomass boilers. The EBRD credit line is complemented by grant funding from the Kozloduy International Decommissioning and Support Fund (KIDSF).

EBRD has financed over 200 projects in Bulgaria, with a total volume of more than €8.5 billion. The Bank is focused on strengthening sustainable growth in the country through a focus on enhancing local business competitiveness and investing in the modernisation of the country's real economy and infrastructure.

Banks in Bulgaria part of EBRD's Programme Residential Energy Efficiency Credit Line (REECL): CIBANK support energy investments in the country with the assistance of a €2 million loan provided by the EBRD. The funds will be used to extend loans to individuals, households and associations of apartment owners for energy efficiency investments. This is a second loan to be used for such investments. The first loan of €5 million was received in March 2012, which it on-lent to 3,400 Bulgarian households.

II. EBRD Bulgarian Energy Efficiency for Competitive Industry Finance Facility (BEECIFF) The EBRD has signed credit lines promoting energy efficiency in the residential and small and medium-sized enterprises (SME) sectors, as well as trade finance facilities with the three leading Bulgarian banks – Postbank, Piraeus Bank Bulgaria A.D. and United Bulgarian Bank A.D. (UBB) – in support of the local economy and intra-regional trade. The total amount of financing to be received by the three banks is €64 million, of which Postbank will receive €24 million, Piraeus Bank Bulgaria €13 million and UBB €27 million.

Total amount to be received: € 64 million

Postbank	Piraeus Bank Bulgaria A.D.	United Bulgarian Bank A.D. (UBB)
€24 million	€13 million	€27 million

The three banks will join, launched in April 2012, which provides financing to SMEs for energy efficiency investments eligible for grants under the government's Green Economy Programme, which is supported by EU Structural Funds.

Piraeus Bank Bulgaria and UBB will also participate in the EBRD's Residential Energy Efficiency Credit Line (REECL), for on-lending to individuals and housing associations to finance housing refurbishments and residential energy efficiency projects. Under this programme clients of the participating banks can also benefit from technical assistance and grants sponsored by the Kozloduy International Decommissioning Support Fund. Further EBRD support will be provided to the three banks under trade facilitation agreements to finance international and intra-regional trade transactions.

III. KOZLODUY INTERNATIONAL DECOMMISSIONING SUPPORT FUND (KIDSF)

The Fund operates on the basis of a Framework Agreement between the EBRD and the Bulgarian government, which has also been approved by the KIDSF Assembly of Contributors and ratified by the

Bulgarian Parliament. More than €170 million has been committed in contributions from the European Community, Austria, Belgium, Denmark, France, Greece, Ireland, the Netherlands, Spain, Switzerland and the United Kingdom. The KIDSF energy efficiency package for Bulgaria has been launched in line with the National Energy Strategy in which the Bulgarian government outlines steps to improve the energy sector within a 10 year period. The measures are aimed at introducing milestone improvements both on the supply and demand side of the energy sector.

Rehabilitation of the district heating network in Sofia. This €114 million programme is the single largest energy conservation project in Bulgaria funded by different lending institutions, including the World Bank, EU's Phare and the EBRD. The KIDSF has provided a €30 million grant for the supply and replacement of network pipes and district heating substations, with the prospect of additional equipment as the project progresses. The whole package of rehabilitation measures incorporated in this District Heating Project has had an important effect upon the efficiency of heating and hot water supply in Sofia. Among the results achieved are: increased reliability of heat services and cost savings for customers, reduction of energy losses and a decrease in the adverse impact of energy production on the environment.

New electricity meters in private households. With the help of a €3 million from the KIDSF, new electricity meters in the residential sector have now successfully replaced the outdated and less efficient ones.

Energy efficiency improvements in public buildings. This project addresses the demand side of energy use in Bulgaria and is grant-financed from the KIDSF together with Bulgarian resources. It is aimed at the improvement of the energy balance of a range of public buildings all over the country, including 16 hospitals, 15 schools and 3 cultural buildings. The scope of the project covers the supply and implementation of specific measures designed to rehabilitate the existing energy installation in order to reduce losses and optimise consumption. As a result, those buildings are anticipated to achieve savings of nearly one-third of their current energy consumption levels.

Energy efficiency and renewable energy credit line facility. The KIDSF contributes €10 million to this EBRD-funded facility, which was started in March 2004 to promote better energy efficiency and renewable energy projects in the Bulgarian private, small and medium size industry sector. The credit line provides eligible Bulgarian banks with funds that can be sub lent to local businesses for the development of projects improving energy consumption and control, heat recovery, and the use of renewable energy. A further €10 million grant has been allocated also to the preparation of a similar EBRD credit line facility for the residential sector. The aim is to support Bulgarian families in their effort to increase the energy efficiency of their households, which include investments in the modernisation of wall insulations, replacement of windows, heating systems and others.

It has been projected that, as a result of the above improvements, the total savings in energy consumption by 2006 would be equivalent to the installed capacity of a nearly 200 MW power plant.

The KIDSF energy efficiency package is used for pilot projects that have been designed to demonstrate the economic viability of the applied energy saving measures. These measures can be replicated across other Bulgarian regions lacking efficient and competitive energy supply-and-demand infrastructure. The next region identified for similar assistance is the district of Pernik, near Sofia.

The KIDSF is in a position to consider new projects for grant funding to support off-site decommissioning infrastructure works and promote new end-consumer efficiency measures in the residential sector.

IV. EEA Grants & Norway Grants

Key areas of support:

- Strengthening the justice sector through reforms;

- Assisting in the fight against organised crime, including trafficking;
- Combating violence against women;
- Improving the situation for vulnerable groups, including Roma;
- Promoting green industry innovation;
- Improving public health and reducing health inequalities;

EEA Grants funding distribution Bulgaria 2009 – 2014:

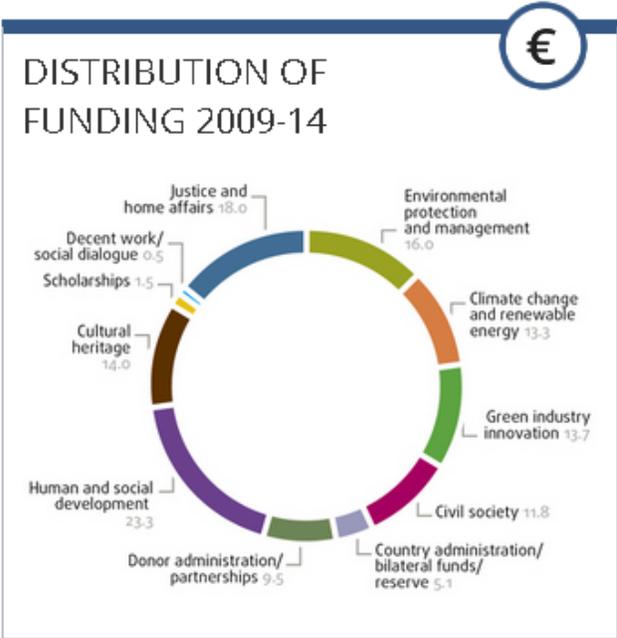


Figure 3. EEA Grants funding distribution Bulgaria 2009 - 2014
Total Allocation (Bulgaria)

2009-2014		2004-2009	
Total allocation:	€126.6 M	Total allocation:	€41.5 M
EEA Grants:	€78.6 M	EEA Grants:	€21.5 M
Norway Grants:	€48 M	Norway Grants:	€20 M

Figure 4. Total allocation of funds in EUR (Bulgaria) for EEA Grants & Norway Grants
<http://eeagrants.org/Where-we-work/Bulgaria/>

EEA Grants & Norway Grants will fund two programmes in Bulgaria till 2017:

1. BULGARIA - ENERGY EFFICIENCY AND RENEWABLE ENERGY -

Country: Bulgaria

Case number: BG04

Grant amount: € 13,260,245

Partner (DPP): Norwegian Water Resources and Energy Administration (NVE),

Status: In implementation

Source: <http://eeagrants.org/programme/view/BG04/PA05>

KEY FACTS	
Objective: Reduced emissions of greenhouse gases and air pollutants Increased share of renewable energy in energy use	
Priority sector: Climate Change	Programme operator: Ministry of Economy, Energy and Tourism
Programme number: BG04	Donor programme partner: Norwegian Water Resources and Energy Administration (NVE),
Programme duration: 30 April 2017	Date of approval: 20 December 2012
Number of open calls: 0	Total grants amount: € 13,260,245.00
From Norway Grants:	From EEA Grants: € 13,260,245.00
Programme areas: » PA05 - Energy efficiency » PA06 - Renewable energy	

2. BULGARIA - GREEN INDUSTRY INNOVATION

Country: Bulgaria

Case number: BG10

Grant amount: € 13,699,000

Partner (DPP):

Status: In implementation

Source: <http://eeagrants.org/programme/view/BG10/PA21>

KEY FACTS

Objective:

Increased competitiveness of green enterprises, including greening of existing industries, green innovation and green entrepreneurship

Priority sector:

» Green Industry Innovation

Programme operator:

Innovation Norway

Programme number:

BG10

Donor programme partner:

Programme duration:

30 April 2017

Date of approval:

10 September 2012

Number of open calls:

1

Total grants amount:

€ 13,699,000.00

From Norway Grants:

€ 13,699,000.00

From EEA Grants:

Programme areas:

» PA21 - Green Industry Innovation

V. Intelligent Energy Europe Programme

ELENA – European Local ENergy Assistance

ELENA is part of the EIB's broader effort to support the EU's climate and energy policy objectives. This joint EIB-European Commission initiative helps local and regional authorities to prepare energy efficiency or renewable energy projects. It is on track to mobilise more than EUR 1.6bn in investments over the next few years. Many EU towns and regions lack the necessary technical expertise and organisational capacity to implement large energy efficiency and renewable projects. The benefits of cutting energy use and pollution are clear, but the challenge is to guarantee value for money and timeliness, as well as securing extra funding. ELENA ("European Local ENergy Assistance") is there to help. Run by the EIB, it is funded through the European Commission's Intelligent Energy-Europe programme.

How ELENA helps

ELENA covers up to **90% of the technical support cost** needed to prepare, implement and finance the investment programme. This could include feasibility and market studies, programme structuring, energy audits and tendering procedure preparation. With solid business and technical plans in place, this will also help attract funding from private banks and other sources, including the EIB. So whether it is the retrofitting of public and private buildings, sustainable building, energy-efficient district heating and cooling networks, environmentally-friendly transport etc, ELENA helps local authorities get their projects on the right track.

Budget

Funds are currently available to support projects under the Facility. When funds will be exhausted, a notice will be posted on this webpage.^{vii}

1.5. The role of private financing in supporting the shift to a low-carbon economy

Commercial lenders are often hesitant in developing independent, innovative tools with a particular focus on projects in the field of energy efficiency, with the exception of initiatives partially financed with public

funds. Currently no commercial Bank in Bulgaria provides specific financial instruments for energy efficiency.

List of banks that offer energy efficiency loans (with the financial support of EBRD):

- Pro Credit Bank
- Raiffeisenbank
- DSK Bank
- CIBANK
- Piraeus Bank
- United Bulgarian Bank

1.6. Examples of public-private partnerships in the energy sector

A Bulgarian energy efficiency fund is created through a public-private partnership and now it is successfully functioning. Through it, financing of energy efficient projects in various sectors of energy generation and consumption is provided.

The Energy Efficiency and Renewable Sources Fund (EERSF) is initially capitalized entirely through grant financing - the main donors being the Global Environment Facility (GEF) through the IBRD (World Bank) - with ten million US Dollars, the Government of Austria - with 1,5 million Euro, the Bulgarian Government - with 1,5 million Euro and private Bulgarian donors **ENEMONA S.A.** with BGN 200 000; **(DZI Bank** /after the 1st of November 2007 - **Eurobank EFG Bulgaria AD** - BGN 100 000; **Lukoil AD** - BGN 100 000;**Brunata Bulgaria** - BGN 1000; **EVN Bulgaria EAD** - BGN 50 000; **Ena Optima Ltd.** - BGN 1 000; **Minev and partners Ltd.** - BGN 1 000).

The **Global Environment Facility** (GEF), established in 1991, helps developing countries and countries with economies in transition fund projects and programs that protect the global environment and promote sustainable livelihoods in local communities. Since 1991, GEF has provided 6.2 billion US dollars in grants and generated over 20 billion US dollars in co-financing from other sources to support over 1800 projects that produce global environmental benefits in 140 countries. The official recipient of all the GEF grants in Bulgaria is the Ministry of Economy and Energy (MEE). Its contractual relationship with the World Bank (WB), one of the Implementing Agencies of GEF, related to these grants are set in the Global Environment Facility Trust Fund Grant Agreement (GA) which defines all rights and responsibilities of MEE towards this WB grant money. MEE transferred the above rights and responsibilities to BEEF through a subsequent document called Subsidiary Grant Agreement (SGA).

In the spirit of public-private partnership the **Bulgarian Government** participates with a single time government contribution through the Ministry of Economy and Energy (MEE). The Deputy Minister in charge on behalf of the government is Mr. Valentin Ivanov from MEE.

The **Republic of Austria**, represented by the Federal Ministry of Finance, has agreed to make available to the MEE an amount of 1,5 million Euro for the purpose of establishing and operating the BEEF as a self-sustaining, market-based financing mechanism for the development and financing of commercially viable energy efficiency projects and capacity building in Bulgaria. In the course of the fund raising campaign that was carried out in the beginning of 2007 **Enemona S.A.** made the sum of BGN 200 000 available to EERSF.^{viii}

1.7. Financing sources for supporting green jobs creation in the sector

I. Green jobs – State Budget

The new National Action Plan for Employment provided opportunities for opening of so called “green jobs”. For 2013, green jobs funding is in the amount of **BGN 1,114,278** for employment of 515 unemployed people, 400 of them newly hired individuals. **Funds come from the state budget.**

In 2013 the **State Budget funds** for each unemployed person for the time that they have been hired by the employer:

- Remuneration amounting to **BGN 310** for a period of **6 months**;
- Additional Compensations, set for all the other employees as stated in the Labour Code, like for annual paid leave; contributions due to be paid by the employer to the state budget (health and social insurance etc.)

Contributions payable by the employer are not subsidized by the state budget and are paid by the employer. There is no limitation for the maximum monthly salary paid to an employee part of the “green jobs” program or for prolonging of the labour contract for more than 6 months. The additional costs for monthly salary to those stated above (BGN 300) however are to be paid by the employer.

II. Programme on green industry innovation Bulgaria under Norway Grants 2009-2014

On 4 December 2012, **€13.7 million** programme on green industry innovation was launched in Bulgaria under the Norway Grants 2009-2014. The programme promotes the development of green entrepreneurship, creation of green jobs and the greening of the country’s economy.

As Bulgaria’s performance in this field is below the EU average, and its economy is the most energy intensive in Europe, its government has developed a new national investment policy with special focus on promoting the development of innovative enterprises. Activities supported by the green industry innovation programme in Bulgaria include investments in environmental technology and processes, training, research and development, capacity building on environmental issues within the public, NGO and private sectors, and remote monitoring related to the environment.

1.8. Indicators

Energy consumption (toe) per capita

Energy use (kg of oil equivalent per capita)

	2008	2009	2010	2011
Bulgaria	2,599	2,309	2,375	2,615

Source: WorldBank, <http://data.worldbank.org/indicator/EG.USE.PCAP.KG.OE>

Energy intensity (toe/unit of GDP)

Overview	2011		2000-2011 (%/year)	
Primary intensity (EU=100) ^a	186	--	-3.4%	++
CO ₂ intensity (EU=100)	234	--	-2.3%	+
CO ₂ emissions per capita (in tCO ₂ /cap)	6.8	+	2.1%	--
Power generation	2011		2000-2011 (%/year)	
Efficiency of thermal power plants (in %)	29	--	0.3%	+
Rate of electricity T&D losses (in %)	13.6	--	-3.3%	++
CO ₂ emissions per kWh generated (in gCO ₂ /kWh)	568	--	1.8%	--
Industry	2011		2000-2011 (%/year)	
Energy intensity (EU=100)	167	--	-4.6%	++
Share of industrial CHP in industrial consumption (in %)	3.4	--	-15.4%	--
Unit consumption of steel (in toe/t) ^a	0.208	+	-6.9%	++

^a2010 and 2000-2010 for steel

++ Among the best performing countries + Above the EU average¹ - Below the EU average¹ --Among the worst performing countries

Source:

[http://www05.abb.com/global/scot/scot380.nsf/veritydisplay/bd34e089687336f7c1257be800531fbb/\\$file/Bulgaria.pdf](http://www05.abb.com/global/scot/scot380.nsf/veritydisplay/bd34e089687336f7c1257be800531fbb/$file/Bulgaria.pdf)

2. Adaption to Climate Change

2.1 National mechanisms and strategies for reducing the vulnerability to climate change

The development of a National Adaptation Strategy (NAS) is **under preparation**.

The developing and coordinating body of the NAS is the Ministry of environment and water. **The current legal climate framework concerning adaptation in Bulgaria has been defined by the following documents:**

- The Environmental Protection Act defines the Bulgarian national green investment scheme as an instrument intended to be used for the development of projects with adaptation activities;
- Second National Action Plan on Climate Change– defines a small number of adaptation measures in the agriculture and forestry sectors. Such measures are:
 - o new zoning of the agro climatic resources and agricultural crops;
 - o new cultivars and hybrids to be adapted to climate change;
 - o optimisation of soil treatment;
 - o measures for the increase of irrigation effectiveness;
 - o adaptation phyto-sanitary measures.

The Fifth National Communication on Climate Change to the UNFCCC - was coordinated by the Ministry of Environment and Water and realised by the Energy Institute in cooperation with the Ministry of Agriculture and Food, Ministry of Industry, Energy and Tourism and National Institute of Meteorology and Hydrology.^{ix}

The Bulgarian Institute of Oceanology (IO, Bulgarian Academy of Sciences) follows the principle of project development especially after 2000 as a major tool for introducing up-to-date methods and approaches, capacity building, raising the role of science in the sustainable management of the Black Sea ecosystem and resources, integration with the Black Sea and European scientific community. The projects developed by the scientific teams of the Institute are funded by budget subsidy (15 projects for 2007), by fund "Scientific Research" (8 projects for 2007) and by contracts with different national (11 projects for 2007) and international companies and organisations including EC, NATO, GEF/UNDP, UNESCO, etc. (14 projects for 2007). Recently IO have been coordinator of the following more important international projects:

CESUM BS - Centre for Sustainable Development and Management of the Black Sea region^x

ARENA - A Regional Capacity Building and Networking Programme to Upgrade Monitoring and Forecasting Activity in the Black Sea

ASCABOS - A Supporting Program for Capacity Building in the Black Sea Region towards Operational Status of Oceanographic Services

SYMNET (Industrial Symbiosis Network for Environment Protection and Sustainable Development in Black Sea Basin), funded with the support of the European Union under the Joint Operational Programme "Black Sea Basin 2007- 2013"^{xi}

MAREAS 2012 – 2014 - Black Sea Joint Regional Research Centre for Mitigation and Adaptation to the Global Changes Impact.^{xii}

SPLASHCOS 2010 – 2013 - Submerged Prehistoric Archaeology and Landscapes of the Continental Shelf^{xiii}

MARINEGEOHAZARD - Set-up and implementation of key core components of a regional early-warning system for marine geo hazards of risk to the Romanian-Bulgarian Black Sea coastal area.^{xiv}

Important projects developed in 2007 within the context of EU, NATO, UNESCO, etc. international programmers are the following:

SRCSSMBSF 2011 - 2013

Strengthening the regional capacity to support the sustainable management of the Black Sea Fisheries (SRCSSMBSF)^{xv}

MPAs

Development of an Indicative Ecologically Coherent Network of Sub-tidal Marine Protected Areas in Bulgaria and Romania.

ELME

European Lifestyles and Marine Ecosystems.

SESAME

Southern European Seas: Assessing and Modelling Ecosystem changes.

THRESHOLDS

Minimum Social Standards across Europe.

BLACK SEA SCENE

Black Sea Scientific Network, MARIS, Netherlands.

SPICOSA

Science and Policy Integration for Coastal Ecosystem assessment, IFREMER, France.

IGSP

Black Sea - Mediterranean Corridor during last 30 ky: Sea level change and human adaptation (IGCP – 521 UNESCO).

SIBEMA

Scientific and Institutional Capacity Building for Implementing European Marine Policy in the Black Sea Region.

SEADATANET

Pan European Network for Ocean & Marine Data and Information Management.

ESONET

European Sea Floor Observatory Network (7FP).

ECOOP

European Coastal and Regional Seas Operational Observing and Forecasting Systems (6FP)

NOAH PROGECT

Ancient coastlines of the Black Sea and conditions for human presence

2.2 Public finance sources for improving adaptation to climate change

I. FLAG – FUND FOR LOCAL AUTHORITIES AND GOVERNMENTS

See section 1.2.

2.3 Key areas of interventions of EU funds for reducing the vulnerability and increasing adaptive capacity

1. The Romania-Bulgaria Cross Border Cooperation Programme- an EU-financed

Operational Programme, applicable in Romania and Bulgaria, for the programming period 2007-2013, it is part of the European Territorial Cooperation Objective of the Cohesion Policy and its total funding is **262 Million Euro**.^{xvi}

2. Project CLAVIER (Climate Change and Variability: Impact on Central and Eastern Europe)

The nations in central and Eastern Europe (CEE) face triple challenges of the ongoing economic and political transition, continuing vulnerability to environmental hazards, and longer term impacts of global climate change. The overall aim of the EU FP6 project CLAVIER (Climate Change and Variability: Impact on Central and Eastern Europe) is to assist with enabling CEE countries to successfully cope with these challenges. Three representative CEE Countries were studied in detail: Hungary, Romania, and Bulgaria. The CLAVIER project was supported by the European Commission's 6th Framework Programme (contract number 037013) as a 3 year Specific Targeted Research Project from 2006 to 2009 under the Thematic Sub-Priority "Global Change and Ecosystems".

Lead: Max-Planck Institute (DE)

Partners: Hungarian Meteorological Service (HU), University of Graz (AT), Laboratoire de Meteorologie Dynamique, Institut Pierre Simon Laplace, Centre National de la Recherche Scientifique (FR), JOANNEUM RESEARCH Forschungsgesellschaft mbH (AT), Environmental Protection and Water Management Research Institute (HU), Budapest University of Technology and Economics (HU), Env-in-Cent Ltd. (HU), National Institute of Meteorology and Hydrology (BG), University of National and World Economy (BG), National Institute of Hydrology and Water Management (RO), Babes-Bolyai University (RO), Institute of Geography - Romanian Academy (RO).^{xvii}

2.4 The role of international financing for reducing the vulnerability and increasing adaptive capacity xviii

The International Finance Corporation (IFC)

IFC will focus its private sector investments on renewable energy and climate change-related infrastructure and industries, social sector private investments and selectively in agriculture.

As of September 2011, the IFC has 35 projects (complete and ongoing) in Bulgaria with total commitments of over \$690 million. The single biggest investment of IFC in the country is in the field of renewable energy in the form of a loan for the construction of the largest wind park in Bulgaria.^{xix}

Project Regions4GreenGrowth (R4GG)

Financed by the European Regional Development Fund through the European interregional cooperation program INTERREG IVC and the Ministry of Regional Development and Public Works.

Project No: 1024R4

Area of Action: financial instruments to stimulate investment in sustainable energy.

Start: December, 2011

End: December, 2014

Status: on-going

Objective: To provide partners with regional policy instruments, mechanisms and approaches in order to improve access to financing and to accelerate investment in their territories in sustainable energy projects (e.g. renewable energy production, energy efficiency measures).^{xx}

SEE Transnational Cooperation Programme

Programme	SEE Transnational Cooperation Programme
Project Title	Clustering Knowledge, Innovation and Design in the SEE WOOD Sector (ID:WOOD)
Start of the Project	1 October 2012
Project duration:	24 months
Project Code	SEE/D/0227/1.2/X

Project Beneficiaries in Bulgaria	Business support organizations, SMEs and policy makers in the wood sector
Official web-site	www.idwood.eu

Common Strategy for Sustainable Territorial Development of the cross-border area Romania-Bulgaria – CBC

Programme of Initiative	Romania-Bulgaria Cross Border Cooperation Programme, 2007-2013
Project Title	Common Strategy for Sustainable Territorial Development of the cross-border area Romania-Bulgaria
Start of the Project	10-th of February 2012
Project Code	MIS ETC Code 171
Bulgarian Beneficiary Organisation	MRDPW, the nine Danube regions (NUTS3)
Official web-site	www.cbcrromaniabulgaria.eu

Agency of Sustainable Development and Integration - Ecoregions /ASDE/

ASDE have partnership with numerous Bulgarian and foreign companies and organizations. Important partners are Bulgarian state institutions both at national and local level.^{xxi}

F:ACTS!

F:ACTS! is a partnership of regions across Europe. It contains a mix of organisations dealing with policy making, implementation and innovation at relevant government levels.^{xxii}

2.5 Examples of good practices on the above points

CLIMATE CHANGE AND BULGARIA

Bulgaria ratified the UN Convention on Climate Change in 1995 and the Kyoto Protocol in 2002. The country is committed to reducing greenhouse gases emissions by 8% in 2008-2012 compared to the 1988 base year. The limit for the period is 144 523 000 carbon dioxide equivalent. Experts say Bulgaria is likely to have a 10 million tones yearly reserve. So far Bulgaria accepted the Joint Implementation from the Kyoto mechanisms. The country already has joint projects with Netherlands, Austria, etc. Bulgaria will build a national register on climate according to the Kyoto commitments. Facility's major task will be to register the emissions of greenhouse gases and to track the variations. To meet the Kyoto commitments

Bulgaria also has to elaborate updated and extended National Action Plan on Climate Change. The plan will indicate the proper measures on diminishing the greenhouse gases and their implementation. The last National Action Plan was made in 2000. New version will be developed in terms of the project “Updating and extension of National Action Plan on Climate Change”

Project CECILIA (Central and Eastern Europe Climate Change Impact and Vulnerability Assessment)

The project started on June 1st 2006 as a part of the **Sixth Framework Programme of the European Union**, with sixteen institutions from twelve European countries taking part in its research activities. CECILIA's primary mission is to improve the understanding of local climate change in Central and Eastern Europe and its impacts into forestry, agriculture, hydrology and air quality.^{xxiii}

Pilot Project Varna

Problems caused by climate change:

Heavy rain causes floods in the urban area and overflowing of sewer systems which results in sanitary problems to coastal bathing waters. In dry periods there is a shortage of drinking water, which is also used to irrigate and clean the public space. Moreover, longer summers, and consequently longer tourist seasons require an adapted policy for water management and bathing water quality.^{xxiv}

Project MiSRaR “Mitigating Spatial Relevant Risks in European Regions and Towns”

Financed by the European fund for regional development through the European program for interregional cooperation INTERREG IVC.

Start: November, 2009

End: December, 2012 **Total budget:** € 1,229,760.00

ERDF contribution: € 979,329.99^{xxv}

Euro Perspective Foundation and the SEE-IFA Network.

Project „Southeast European Cooperation for funding and innovations”

Financed by the South-East Europe Transnational Cooperation programme (SEE) and the Ministry of Regional Development and Public Work INTERREG IVB

Project № SEE/A/202/1.2/X

Priority areas: Innovation, Environment, Accessibility and Sustainable Urban Development.

Start: 11th of March, 2009

End: 30th of April, 2012

Partners: 11

Countries: 10

Project lead: Austria Wirtschaftsservice, Vienna

Budget: EUR 2.7 million

The project SEE-IFA Network is based on a group of already existing partnerships intended to support MSME in the area of innovations and technological transfer. The South East Europe programme (SEE) is an EU-financed instrument. It aims to improve integration and competitiveness in the SEE area.^{xxvi}

Partners: the project brings together 11 partners from 10 countries of Central and Eastern Europe among which is Bulgaria – Euro- Perspectives Foundation, public equivalent body aiming to promote regional cooperation and regional cohesion ^{xxvii}

Since 1990, joint projects with EC, NATO, IOC - UNESCO, etc. have been initiated. The Institute took part in the **Global Programme for Studying the World Ocean Impact on the Earth climate (Razrezi)**, the international programmes **Global Environment** and **Interaction between the Danube and the North-Western Part of the Black Sea**. Active international collaboration is going on with world-wide leading research centres as:

- Institute of Oceanology (Moscow), Russia
- Institute for Exploration, MA, USA and National Geographic Society, USA
- National Oceanographic Centre (Southampton), UK
- IFREMER (Brest), France
- Forel Institute – University of Geneva, Switzerland
- Institute of Crystallography, Mineralogy and Structural Chemistry (Vienna), Austria
- Institute of Marine Sciences (Erdemli), Turkey
- Institute of Marine Sciences and Technologies (Izmir), Turkey
- National Centre of Marine Sciences (Athens), Greece
- Institute of Computing Mathematics – RAS (Moscow), Russia
- Institute of Geological Sciences (Kiev), Ukraine
- Flanders Marine Institute (Oostende) Belgium

2.6 The main barriers in terms of adapting to climate change

Bulgaria's dilemma with the climate change discourse lies in its association with the rich industrial countries' club (expected to dramatically cut their emissions), while having an economy that is still dependent on low cost energy from locally produced coal. Over the past two decades, Bulgaria has continued to rely on a centralized energy system highly dependent on imported resources and predominantly fossil fuel- and nuclear-dependent methods for electricity production. Bulgaria is both more CO₂ intensive per capita, compared to China and India, and more CO₂intensive per dollar of GDP than the US. Moreover, the country has consistently ranked as the most energy intensive economy in the EU: it uses much more energy than the other Member States to produce equivalent units of output. This makes the Bulgarian economy and its competitiveness more vulnerable to energy price swings.^{xxviii}

2.7 Finance sources for supporting green jobs creation in the sector

GREEN JOBS – state funding

Green jobs – mechanism of financing under the new National Action Plan for Employment. Please see section 1.7.

Programme on green industry innovation Bulgaria under Norway Grants 2009-2014

Please see section 1.7.

3. Financing for Ecosystems protection

3.1 Strategies and national mechanisms for nature conservation

Nature Conservation Act

The legislative base for biodiversity conservation regulates the following environmental matters:

- the environmental permits (relating to environmental pollution, waste management etc.);
- an environmental impact assessment for individual interventions;
- the environmental taxes on: the pollution of air with carbon dioxide emissions, the use of lubricating oils and fluids, landfilling with scrap motor vehicles, landfilling with scrap pneumatic tyres, landfilling with scrap packaging, landfilling with waste electrical and electronic appliances, and environmental pollution due to the use of volatile organic compounds;
- tradable emission permits (regulatory scheme for the sources of pollutants): trading the entitlements to release substances in water, the air or the land (emission coupons)

National Environmental Strategy 2009 – 2018

The main strategic objectives included in the above documents are:

- Reduce and prevent the consequences of climate change and strive toward clean energy;
- Provide sufficient quantity and good quality of water;
- A healthy environment for better quality of life;
- Encourage sustainable consumption and production;
- Limiting and halting the loss of biodiversity; ^{xxix}

National Biodiversity Conservation Strategy and the National Biodiversity Conservation Plan

They determine the political and the legal frame, the goals and the priorities for biodiversity conservation, the development of the institutional capacity, development of protection area systems and the national ecological network, recuperation and maintenance of biodiversity and eco-systems, strengthening the scientific base for biodiversity conservation, development of the ecological education, upbringing and enhancement of the public acquaintance, as well as the financial frame for fulfillment the action plan and implementation of the policy^{xxx}

National programme Recovery and protection of Bulgarian forest

- precondition for realization of the programme is increased number of forest fires in the last 15 years (up to 2007 r.) as a consequence are destroyed 42 997 ha of the country's forest fund. The main goal of the programme is to ensure labour for unemployed persons to take part in the recovery of burned forest areas.^{xxxi}

Operational Programme "Environment 2007 – 2013"

STRATEGIC OBJECTIVE: Improvement, preservation and recovery of the natural environment and development of the environmental infrastructure.^{xxxii}

GPP National Action Plans^{xxxiii}

National Development Plan of Republic of Bulgaria over the 2007-2013 period

National Strategy for the Environment 2005-2014 and Action Plan 2005-2009

Rio Conventions Project

National Forest Policy and Strategy

National agroecology program 2007-2013
National Strategy Plan for Rural Development (2007 –2013)
Project “Sustainable Rural Development”
National Ecotourism Strategy and Action Plan^{xxxiv}

3.2 Public finance sources for supporting eco-systems protection

The National Trust EcoFund

PRIORITY AREAS :

- Clean up of past pollution:
- hazardous waste and hazardous substances disposal;
- sources of drinking water or food contamination (by heavy metals, toxic organic compounds or other harmful chemicals);
- Reduction of air pollution:
- pollutants of health concern: particulate matter, sulphur dioxide, nitrogen oxides, lead and other toxic chemicals in urban areas;
- green-house gases: carbon dioxide, methane, CFCs.
- Clean water protection:
- municipal and industrial waste water treatment plants in the Danube watershed;
- municipal and industrial waste water treatment plants in the Black sea watershed.
- Protection of biodiversity:
- development of infrastructure in protected areas for species protection and habitat preservation, and
- biodiversity inventory and monitoring and sustainable utilization of components for creating social alternatives.

Fund for local authorities and governments (FLAG)^{xxxv}

See section 1.2.

InvestBulgaria Agency^{xxxvi}

InvestBulgaria Agency (IBA) is a government organization that reports directly to the Bulgarian Ministry of Economy and Energy and is established to attract investment to Bulgaria, to assist project set-up and to ensure successful project development resulting in new jobs, exports and know-how transfer for the Bulgarian economy. Investment projects:

Construction of wind farm Ivaylovgrad

Location: Popsko village, Haskovo

Brief description: Construction of wind farm Ivaylovgrad

Size of investment: € 48 million

Infrastructure: Strengthening of existing municipal roads. The electricity from the wind farm will be exported from its own substation through the cable route (8.5 km) to the substation «Madzharovo».

Status: under construction

Waste depot and factory, Asenovgrad

Location:Asenovgrad, Plovdiv

Brief description: Construction of a depot and factory wastes
Size of investment: To be negotiated
Status: Started

Building a construction waste recycling plant

Location: Asenovgrad, Plovdiv
Brief description: Building a construction waste recycling plant
Size of investment: € 2 556 000
Status: prepared feasibility study

Berkovitz biomass co-generation project

Location: Berkovitz, Montana
Brief description: Berkovitz biomass co-generation project
Size of investment: € 6 300 000
Status: Design work to be started

NGO Programme 2009-2014^{xxxvii}

Under the agreement for 2009-14, the bilateral dimension is strengthened with more strategic cooperation being established at the programme level. Nine public entities from Iceland, Liechtenstein and Norway are foreseen as programme partners with Bulgarian counterparts. Partnerships at project level will continue to be encouraged.

Total allocation to Bulgaria: €126.6 million

Allocation to NGO Programme: €11.8 million

In the current period, there will be three open calls for proposals for eligible NGOs in the following four priority areas:

- Democracy, human rights and good governance
- Social inclusion and empowerment of vulnerable groups
- Sustainable development and protection of the environment
- Capacity building for NGOs

3.3 The role of international financing mechanisms

EEA Grants

BIODIVERSITY AND ECOSYSTEM SERVICES

Objective: Halt loss of biodiversity

Priority sector: Environmental Protection and Management

Programme operator: Ministry of Environment and Water

Programme number: BG03

Donor programme partner: Directorate for Nature Management (DN),

Programme duration: 30 June 2017

Date of approval: 01 October 2013

Number of open calls: 0

Total grants amount: € 8,000,000.00

From Norway Grants:

From EEA Grants: € 8,000,000.00

INTEGRATED MARINE AND INLAND WATER MANAGEMENT

Bulgaria (BG02)

Objective: Good environmental status in European marine and inland waters

Priority sector: Environmental Protection and Management

Programme operator: Ministry of Environment and Water

Programme number: BG02

Donor programme partner: Climate and Pollution Agency (KLIF) ,

Programme duration: 30 April 2017

Date of approval: 13 November 2012

Number of open calls: 0

Total grants amount: € 8,000,000.00

From Norway Grants:

From EEA Grants: € 8,000,000.00

Programme areas:

PA01 - Integrated marine and inland water management

Funds for Non-governmental Organisations –EEA Grants

Objective: Strengthened civil society development and enhanced contribution to social justice, democracy and sustainable development

Priority sector: Civil Society

Programme operator: Open Society Institute

Programme number: BG05

Donor programme partner:

Programme duration: 30 April 2017

Date of approval: 06 September 2012

Number of open calls: 2

Total grants amount: € 11,790,000.00

From Norway Grants:

From EEA Grants: € 11,790,000.00^{xxxviii}

WWF Danube-Carpathian Programme

In response to these challenges and opportunities, WWF established the WWF Danube-Carpathian Programme to promote the conservation, restoration and sustainable management of nature for the benefit of people and environment. The work is primarily focused on freshwater and forest resources as well as rural landscapes. The area shared by the Danube River Basin and the Carpathian Mountains includes all or parts of the territory of 18 countries in total, including: Albania, Austria, Bosnia & Herzegovina, Croatia, the Czech Republic, Germany, Hungary, Italy, the Former Yugoslav Republic of Macedonia, Moldova, Poland, Romania, Serbia, Slovakia, Slovenia, Switzerland and Ukraine.^{xxxix}

Bulgarian-Swiss Cooperation Programme^{xi}

GEF Trust Fund

As an independently operating financial organization, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.^{xii}

Focal Area	GEF Grant	Cofinancing Total	Number of Projects
Ozone Depletion	10,500,000	3,000,000	1
Climate Change	13,550,000	49,701,100	3
Biodiversity	13,920,565	64,012,770	7
International Waters	7,500,000	5,780,000	1
Multi Focal Area	697,300	2,147,900	2
POPs	143,820	0	1
Land Degradation	978,102	12,207,400	1
Total	47,289,787	136,849,170	16

GEF_ID	Focal Area	GEF Agency	Project Type	Approval Date	GEF Project Grant	GEF Agency Fee	Total Transaction
2730	Biodiversity	UNDP	MSP	2007-06-06	950,000	90,000	1,040,000
2806	Biodiversity	UNEP	MSP	2009-02-19	482,338	49,484	531,822
Total					1,432,338	139,484	1,571,822

3.4 Key areas of interventions of EU funds regarding eco-systems protection

The operational programmes for the 2007-2013 period^{xlii}

Operational Programme 'Environment'

Operational Programme 'Development of the Competitiveness of the Bulgarian Economy'

Cross-border, transnational and interregional co-operation

Operational Programme 'Romania-Bulgaria'

The programme is expected to have a significant impact on economic development, the environment and mobility in the cross-border region.

Breakdown of finances by priority axis

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Accessibility	80 594 790	14 832 151	95 426 941
Environment	76 238 315	13 646 018	89 884 333
Economic and Social Development	47 921 227	8 577 497	56 498 724
Technical Assistance	13 069 425	7 124 118	20 193 543

Total	217 823 757	44 179 784	262 003 541
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Operational Programme 'South East Europe (SEE)'

The overall strategic goal of the programme is to improve "the territorial, economic and social integration process and contribute to cohesion, stability and competitiveness" through the development of trans-national partnerships. The programme focuses on four thematic priorities: Innovation, Environment, Accessibility, and Sustainable urban development.

Breakdown of finances by priority axis

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Innovation	44 051 157	7 773 734	51 824 891
Environment	53 739 828	9 483 499	63 223 327
Accessibility	55 160 834	9 734 265	64 895 099
Sustainable growth areas	41 338 329	7 294 999	48 633 328
Technical Assistance	12 401 497	4 133 832	16 535 329
Total	206 691 645	38 420 329	245 111 974

'Bulgaria-Turkey' IPA Cross-border Co-operation Programme 2007-2013

This overall aim has been broken down into three specific objectives:

- To boost sustainable economic development in the co-operation area and build on the comparative advantages;
- To improve overall social development and promote social cohesion among people and communities;
- To improve quality of life through the efficient use of shared natural resources as well as the protection of natural, cultural and historical heritage sites.

Breakdown of finances by priority axis

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Sustainable social and economic development	7 394 659	1 304 940	8 699 599
Improvement of the quality of life	9 243 324	1 631 175	10 874 499
Technical Assistance	1 848 665	326 235	2 174 900
Total	18 486 648	3 262 350	21 748 998

'Bulgaria – the former Yugoslav Republic of Macedonia' IPA Cross-border Co-operation Programme 2007-2013

The Cross-border Co-operation Programme is a continuation of the previous Neighbourhood Programme 2004-06. The overall aim remains largely unchanged - sustainable development in the border region that supports wider European co-operation and integration efforts. Objectives:

- To foster sustainable economic growth: providing support for economic development, e.g. through the diversification of economic activities in rural areas, the development of product chains, and the provision of support for innovations and new technologies.
- To promote social cohesion and co-operation: fostering a real sense of sharing through support for human-resource development and the labour market, cultural exchanges and cross-border networks.
- To further develop the attractiveness and quality of people's lives in the border region: protecting and jointly managing valuable natural and cultural resources, safeguarding biodiversity, and expanding sustainable tourism by harnessing the region's natural and cultural environment.

Breakdown of finances by priority axis

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Economic development and social cohesion	4 854 471	856 672	5 711 143
Improvement of the quality of life	6 068 089	1 070 839	7 138 928
Technical assistance	1 213 618	214 168	1 427 786
Total	12 136 178	2 141 679	14 277 857

Bulgaria-Serbia IPA Cross-border Co-operation Programme 2007-2013 ^{xliii}

The overall objective of the programme is to boost territorial cohesion in the Bulgarian-Serbian cross-border region as well as the competitiveness and sustainability of its development through co-operation in the economic, social and environmental spheres across administrative borders.

Breakdown of finances by priority axis

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Development of small-scale infrastructure	11 695 422	2 063 898	13 759 320
Enhancing capacity for joint planning, problem solving and development	7 442 542	1 313 390	8 755 932
Technical assistance	2 126 440	375 254	2 501 694
Total	21 264 404	3 752 542	25 016 946

Green Balkans and Natura 2000 ^{xliv}

German – Bulgarian cooperation project to enhance the implementation of Natura 2000 in Bulgaria

The Million Project

The PAN Parks Foundation launched 'The Million Project' with the aim to safeguard 1 million hectares of European wilderness by 2015. There are two Certified PAN Parks in Bulgaria, Central Balkan and Rila National Parks. However, there will even be a bigger potential in wilderness protection in the country if more protected areas join 'The Million Project' as wilderness partners.^{xiv}

LIFE+ Programme^{xlvi}

Initial funds for the 2007-2013 period amounted to EUR 70m, then increased to EUR 2.2bn; EUR 3.6bn are anticipated for the 2014-2020 period. The number of countries drawing on these funds has now increased from the initial 12 to 27.

Since the launch of the LIFE programme by the European Commission in 1992, a total of 28 projects were financed in Slovenia. Of these, five focus on environmental innovation, 17 on nature conservation, four on information and communication and two on capacity building. These projects represent a total investment of €32 million, of which €17 million has been contributed by the European Union.

LIFE+ financial instrument that is solely dedicated to protecting the environment. Support the implementation of environmental policy, which has three main objectives:

- implementation and development of Community environmental policy and legislation,
- integration of the environment into other policies, thereby contributing to sustainable development,
- finance measures and projects with European added value.
- Substantive and technical LIFE + is divided into three sections:
 - nature and biodiversity;
 - implementation of environmental policies and improve governance,
 - Information and Communication.

LIFE + Nature and Biodiversity

Objectives in this area arising from the Habitats Directive and the Birds Directive , which are the main European legal basis for the protection of nature. In broad terms, the objectives can be defined as:

Protection and preservation of habitats and flora and fauna as well as monitoring their condition,

Ensuring the functioning of natural systems and favorable habitats and wild species

Halting the loss of biodiversity by 2010.

Priority activities to be funded under this area are:

- Contribute to the implementation of policy and legislation - the Birds Directive and the Habitats Directive
- Support and further develop, and implement network Natura 2000
- Actions or projects, best practice
- Demonstration measures and projects
- The design and implementation of policies and instruments for the monitoring of nature and biodiversity and the factors, pressures and responses
- Improve knowledge on the impact of genetically modified organisms on ecosystems and biodiversity.
- LIFE+ consists of three parts:
 - LIFE+ Nature and Biodiversity,
 - LIFE+ Environmental Policy and Management,
 - LIFE+ Information and Communications and Communications

3.5 Examples of good practices on the above points

Natura 2000 management^{xlvii}

Region: Central Balkan

Size: 71,669.5 ha

Type: Alpine

Priority activities: Setting up of a national and regional public campaign

Results of action and activities:

Raising the level of awareness of Natura 2000

Creating positive attitudes towards the goals and objectives of Natura 2000 and awareness of the opportunities it provides for local development

Motivating key stakeholders to be the active party in the process of establishing the network and managing the Natura 2000 sites

The programme „Linking Nature Protection and Sustainable Rural Development“. Project Summary:

Name of the organization	Foundation for Organic Agriculture BIOSELENA on behalf of a consortium of 6 Bulgarian NGOs, 4 Swiss NGOs and the Bulgarian Ministry of Agriculture and Food
Project title	Linking Nature Protection and Sustainable Rural Development
Priority area	Reform Fund linked to Civil Society Participation
Geographical area of implementation	Western and Central Stara Planina
Total project cost (in BGN)	7'790'791 BGN (Calculated on the basis of the BNB official currency exchange rate, valid for 06.04.2012 – 1.62647) Budget in CHF: 4'790'000
Approved Swiss funding (in BGN)	6'831'174 BGN
Project duration	48 months
Partners	Association of Parks in Bulgaria; BIOSELENA Foundation for Organic Agriculture; Breeding Association of the Local Sheep Breeds; Bulgarian Biodiversity Foundation; Bulgarian Society for the Protection of Birds; WWF Danube-Carpathian Programme Bulgaria; Ministry of Agriculture and Food (Executive Agency on Selection and Reproduction in Animal Breeding); Foundation for the Preservation of Agro-biodiversity (SAVE Foundation); Pro Natura / Friends of the Earth Switzerland; Réseau - Echanges - Développement Durable (REDD); Swiss Association for the Protection of Birds (SVS/BirdLife Suisse)
Project objectives	<p>Overall objective: To link biodiversity protection and rural development in High Nature Value Territories by sustainable market mechanisms and reinforced public participation</p> <p>Specific Objectives:</p> <ol style="list-style-type: none"> 1. Provide tools and mechanisms for effective enforcement of the relevant legislation to guarantee sustainable use and long-term preservation of High Nature Value Territories 2. Develop models of sustainable use of rural areas and improving the socio-economic context by increasing incomes of local communities and businesses 3. Increase understanding of the importance of the sustainable development and protection of rural areas 4. Guarantee long-term sustainability of programme results by mainstreaming its outputs into the relevant legislation
Main activities	<p>Three main activity components are envisaged, meeting the first three specific objectives, while specific objective #4 is seen as a horizontal one.</p> <p>The first component aims at finding sustainable solutions for funding of biodiversity management through valorisation of ecosystem services, testing models to introduce voluntary contributions for use of Protected Areas, and provide capacity among park administrations to</p>

	<p>implement the new models through training and motivating Protected Area administrations to encourage and facilitate the development of pro-biodiversity businesses.</p> <p>The second component will deal mainly with increasing local incomes by production and marketing of value-added food and introducing pro-biodiversity business in HNV territories for the sustainable and nature friendly uses of forest areas; it will introduce mechanisms for selling locally produced food and establish solid basis for conserving threatened local domestic breeds; the profile of HNV areas will be brought higher on the public agenda. All these will secure long-term local support for sustainable local development.</p> <p>The third component will ensure the development of public awareness about the link between biodiversity and rural development and of public participation in decision making regarding management of nature resources. This will be done by establishing an open-air nature academy to introduce innovative models for work with children, involving students in direct project implementation (continuing the tradition established by previous Swiss-funded programmes), developing sustainable pasture schemes through a participatory way involving all stakeholders, and eventually reinforcing and diversifying the nature conservation community of Bulgaria. Part of the work on this component shall deal with mainstreaming the project outputs into the national policies and legislation, which will guarantee the long-term sustainability of the results.</p>
<p>Project results</p>	<p>Qualitative results:</p> <ul style="list-style-type: none"> Enhanced public participation in nature conservation management Developed economic potential of the HNVT Enhanced public awareness and appreciation for HNVT conservation, products and services Preserved integrity of HNVT Improved effectiveness of protected areas management Enhanced socio-economic context of the project regions Project outputs mainstreamed in relevant planning and legislation <p>Quantitative results:</p> <ul style="list-style-type: none"> Increased surface of High nature value territories where biodiversity friendly economic activities are carried out. Increased number of businesses and farmers generating income from HNVT products and services. Improved favourable conservation status of species and habitats in 30% of the HNVT. Biodiversity friendly rural development measures integrated in 2 regional development plans and 10 municipal development plans. <p>27 local breeds preserved as important part of HNVT diversity.</p>

Source: <http://www.swissbgcooperation.bg/en/Projects-approved>

4. Financing for Sustainable transport

Focus: Urban public transport and intercity road and rail transport. The section will present the sources of financing for the road, railway and public transport sector as well as the blockages for future financing.

4.1 National mechanisms and strategies for public transport development

The analysis of the development of Bulgarian transport sector over the last several years has highlighted major structural changes and upward trends for the share of road transport in the total transport performance. The road passenger transport performance (in passengers-km) rose from 56% in 2000 to 71.3% of the total passenger transport performance in 2007, which is equivalent to a 15.3 % increase for the seven-year period. For the same period, this indicator within the EU remained practically unchanged at a level of about 84%. A similar trend was observed in freight transport, where road transport increased its relative share from 52.3% to 70% of the total freight transport performance (tonnes-km), which is equivalent to a 17.7% increase. The EU member states average increase is only 2.8%. These structural changes result in a drastic rise in the overall energy consumption of the transport sector in Bulgaria, which rose by 47.5% in 2007 compared to 2000. For the same period, the overall increase of the energy consumption by transport in the EU member states rose by an average 8.7%.

I. Strategy for development of the transport system of Republic of Bulgaria for 2020

The Strategy outlines the main directions of development of the national transport system in the period 2010 - 2020 on the basis of multi-criteria analysis of the state of the transport sector in the Republic of Bulgaria, following the guidelines for the development of transport policy of the European Union and emerging trends. The Strategy defines the main priorities and measures need to be implemented by 2020. We can highlight several priorities related to sustainable transport policy:

- Achieving economic efficiency
- Development of a sustainable transport sector
- Effective maintenance , modernization and development of transport infrastructure
- Integration of the Bulgarian transport system into the European Transport System.
- Provide adequate funding for the operation and development of the transport sector. Effective absorption of EU funds
- Reducing the negative impact of transport on the environment and human health
- Sustainable development of mass public transport.

Financing:

- Public funds – the state budget, EU Structural and Cohesion funds
- Resources, generated by facilities on concession, which basically means the transfer of revenue from fees for access to infrastructure
- Private capital, participating in project financing by public-private partnerships for the implementation of projects and/or providing services, which are traditionally offered by the public sector
- Other resources, including bank loans mainly from the European Investment Bank, the European Bank for Reconstruction and Development, by the World Bank, by the Japan Bank for International Cooperation, as well as from other international financial institutions.

The regulatory base in the field of the transport in the Republic of Bulgaria consists of the following major acts and relevant bylaws:

- **Railway Transport Act** – defines the conditions and the procedures for the construction, maintenance, development and use of the railway infrastructure, the requirements for access to it, the major rules for rail traffic, and the relations between carriers and customers in providing transport services in compliance with the international treaties and agreements signed by the Republic of Bulgaria
- **Roads Act** – regulates the ownership, use, management, operation, construction, repairs, maintenance and financing of republican and local roads
- **Road Traffic Act** – specifies the traffic rules on roads open for public use, the requirements applicable to road vehicles and the licensing of road vehicle drivers, the rights and obligations of the participants in the traffic and of the respective authorities and officials, the compulsory measures, which may be enforced, and the sanctions for violating the effective regulations
- **Road Transport Act** – defines the conditions and the procedures for domestic and international public transport of passengers and freight by motor vehicles, performed by Bulgarian or foreign operators, as well as own-account transport, the control on performing such transport, and the specific rules applicable to contracts for the transport of passengers and freight
- **Act on Maritime Space, Internal Waterways and the Ports in the Republic of Bulgaria** – regulates the legal regime and the control on its enforcement.
- **Commercial Shipping Code** – regulates the public relations emerging in relation to commercial shipping and the control thereon, the requirements for granting Bulgarian affiliation of vessels; the requirements related to ship and shipping documents, the rights and obligations of captain and crew, the contracts for shipping of freight, passengers and belongings, the real rights on ships, the contracts for ship leasing, the contracts for insurance of ships and cargo, accidents on ships, sea and river salvation, and other relations, related to shipping and shipping safety
- **Civil Aviation Act** – regulates the conditions for civil aviation and the measures to assure its safety and security.

4.2 Public finance sources for supporting public transport

I. FLAG – FUND FOR LOCAL AUTHORITIES AND GOVERNMENTS

Please see section 1.2.

4.3 Key areas of interventions of EU funds regarding public transport development

I. Operational Programme on Transport (OPT) 2007 – 2013

Background & policy context

The Operational Programme on Transport 2007-2013 (OPT) is financed by the Structural and the Cohesion Funds of the EU. The OPT programme is the operational programme with the largest budget in Bulgaria. The goal of OPT is development of railway, road and waterway infrastructure, as well as stimulation of development of mixed transport in accordance with the transport policy of the European Union and the established requirements for development of the Trans-European transport network in order to achieve stability of the Bulgarian transport system.

Specific features of the OPT are advanced selection of particular Beneficiaries of the projects and advanced prioritisation of an indicative list of infrastructure projects envisaged for financing under the programme.

Strategic Objectives

The operational programme is focused on several strategic priorities, which will contribute to the integration of the national transport network in the EU one. Achieving those priorities will make a fundamental contribution towards stable and balanced economic growth in the country in the intermediate- and the long-term.

The general goal of the OPT is the development of a stable transport system.

The specific goals of the programme are:

Integration of the national transport system in the transport network of the European Union;

Achieving balance between different types of transport.

Programme organisation

According to Council Regulation (EC) No. 1083/2006 the programme has to be defined at the level of Priority Axes, underlining the most important directions of development. There are five Priority Axes in the OPT.

Priority axis I - Development of railway infrastructure along the major national and Pan-European transport axes

Priority axis II - Development of road infrastructure along the major national and Pan-European transport axes

Priority axis III - Improvement of intermodality for passenger and freight –get of bud€211 million – in this priority axis the two beneficiaries are Metropolitan AD (Sofia city metro) and National Company "Railway Infrastructure"

Priority axis IV - Improvement of the maritime and inland-waterway navigation

Priority axis V - Technical Assistance

Operational programme Transport in the NEW programme period 2014 – 2020

Operational Programme	New Program Period 2014 – 2020 Budget
Regional Development	€1,170.28 million
Human Resources Development	€707.13 million
Competitiveness and Innovation	€1,037.14 million
Good Governance	€356.24 million
Science and Education for smart growth	€508.04 million
Environment	€1,271.16 million
Transport and Transport Infrastructure	€1,207.33 million

II. Operational Programme Regional development - Support for integrated urban transport in five major cities." – launched in 5 Bulgarian pilot cities.

The funds are allocated as a direct grant. The scheme is part of Priority Axis 1 "Sustainable and Integrated Urban Development "operation 1.5" Sustainable Urban Transport " Scheme grant is funded by the European Union through the European Regional Development Fund. Projects will be implemented in the Republic of Bulgaria, in the cities of Plovdiv, Varna, Ruse, Stara Zagora and Pleven.

The main objectives are:

Creating a more efficient and rapid mass urban public transport with less energy consumption;

Build a more accessible secondary infrastructure of public transport networks and the introduction of environmentally friendly modes of public transport;

Increasing the attractiveness and utilization of the mass urban public transport;
Improving the functionality of the city and improve the mobility of the population
Reducing congestion and increasing the capacity of public transport
Ensure social inclusion and equal access of disadvantaged groups.

The total scheme budget is BGN 203,655,639.43

III. Burgas Municipality – Project for Integrated Urban Transport in Burgas

The first major project under OP Regional Development within the meaning of Art. 39 of EC Regulation 1083/2006 is BG161PO001-1.5.01-0001 “Integrated Public Transport in Burgas, which is implemented within Operation 1.5 “Sustainable Urban Transport Systems”. The total value of the project is **€67 million**, 56 million of which are OPRD grant and the other 11 million are co-funding by the beneficiary.

IV. Sofia Integrated Urban Transport Project

In order to improve the public transport in the city, Sofia Municipality together with Sofia Urban Mobility Centre has developed Project for Integrated Urban Transport and successfully applied for its funding under OP “Regional Development”. It is expected that the project will ease significantly the traffic in the capital, by making the use of public transport more attractive and preferred option because of the improved speed and convenience.

PROJECT COSTS: **€62,624,478**

€50,000,000 of which will be provided as grant under OP “Regional Development”. Co-financing of the project will be provided by a loan from the European Bank for Reconstruction and Development amounting up to **€6,900 000**.

4.4 The role of international financing of public transport in the area

EBRD

The Bank’s portfolio in Bulgaria is well balanced with 34 per cent in energy and infrastructure, 25 per cent in financial institutions and 41 per cent in the corporate sector. Key projects signed in 2012 included a Bank loan to support the integrated urban transport system in the City of Burgas, the fourth largest city in the country. The Bank extended a senior loan of €10 million alongside co-financing by the European Union Structural Funds which brought the total value of the project to €47 million. The project will reform the urban transport system including the introduction of a Bus Rapid Transit system, dedicated bus lanes and cycle networks and the replacement of obsolete rolling stock with new, clean diesel and compressed natural gas buses.

Bourgas Integrated Urban Transport Project – Preparation for Introduction of sustainable transport measures (co-funding project)

The objective of the assignment is to provide the City with expert support for a programme to introduce a sustainable transport system which reduces the reliance on car travel in favour of clean, non-motorized transport modes. The City seeks to hire consultants (the Consultant) to prepare a parking tender design strategy for the system of off – street parking spaces and discuss the approach with both the Municipality and the Bank. The Consultant will, *inter alia*:

1. With regard to parking management:

- Review the City’s Urban spacial plans, Parking Strategy and Parking Policy, to ensure that it will allow for the introduction of a zone based off-street parking management system;
- Review the package of necessary actions that the City must take in respect of the enforcement of off-street parking spaces;

Develop a feasibility plan for concept system of off – street parking spaces.

2. With regard to traffic calming and pedestrianisation:

- Analyse and propose streets within the city centre and the most densely populated residential areas which should be converted into 30 kmh maximum areas;
- Define and prepare a conceptual design for the expansion and improvement of the existing pedestrian zones in the city centre and the biggest residential areas.

3. With regard to cycling:

- Develop a bike sharing concept proposal for Burgas.

Funding Source: EBRD Shareholder Special Fund./ JASPERS

Maximum Budget available for the Assignment: EUR 310,000 (exclusive of VAT)^{xlviii}

II. Sofia Public Transport Reform Project

Project Description

This transaction is part of the Bank's Public Transport Reform Project covering essential areas of the Sofia's urban transport system including 4 loans worth a total **€24.96 million** to Sofia Municipality, Urban Mobility Centre Ltd (UMC), Sofia Electric Transport Company JSC (SETC) and Metropolitan JSC (Metropolitan).

Under this transaction the Bank is considering providing a loan of €5.96 million to the City of Sofia, representing the Bank's co-financing contribution to the City's Integrated Urban Transport Project (IUTP), jointly funded with EU grants under Operating Programme Regional Development ("OPRD") on a blended basis. Total EU project cost amounts to **€61.69 million** of which up to **€42.5 million** will be provided by the EU Cohesion Fund on a grant basis.

The EU funded programme supports the upgrade and the expansion of the electrical transport in the City, introduces intelligent, adaptative control traffic management system, real time passenger information both within public transport fleets and at public transport stops.

EBRD Finance

The size of the Bank loan to the Municipality is up to €5.96 million.

Project Cost

The project cost of the Sofia Municipality transaction is estimated to **€61.69 million**.

The total size of all related projects under the Bank's Public Transport Reform Project is estimated at **€94.63 million**.^{xlix}

4.5 The role of the private financing in supporting the development of public transport

Public Service Contract signed between Sofia Municipality and Urban Mobility Center Sofia (according to the new EU legislation). Urban Mobility Center Sofia can fund projects on sustainable transport. The activities of SUMC are as follows:

- development of analysis for development of environmental and operational aspects of public transport in Sofia;
- implementation and operation of intelligent transport systems for public transport;
- organization, management, supervision and finance of the Sofia public transport as an integrated process;
- issuing of transportation documents and collection of the transportation revenues;
- operation of information-management system for monitoring and supervision of the traffic, based on GPS-identification;
- operation of unified automated fare collection system (ticketing system);

- advertising and information services in public transport;
- finance, construction, operation and maintenance of parkings, garages and open space parking spaces in Sofia – owned by Sofia Municipality;
- lending of parking spaces;

4.6 Positive examples of public-private partnerships in the transport sector

I. Public transport services in Sofia are realized by:

3 in-house transport operators (100% municipally-owned):

“Stolichen Elektrotransport” EAD, operating tram and trolleybus transport.

“Stolichen Autotransport” EAD, operating bus transport.

“Metropoliten” EAD, operating the metro.

3 private transport operators, operating bus transport.

Union Ivkoni OOD

KRAT-S AD

Eridantrans OOD

The provision of public transport services by in-house and private transport operators is arranged on the basis of public service contracts (PSC) with Sofia Municipality.

II. The Tram and trolley traffic in the capital is carried out by Electrotransport EAD

Electrotransport EAD is a joint-stock company managed by its Board of Directors, through its Executive Director. The following units are included in the structures of Electrotransport EAD: Central Department, three tram depots, two trolley depots and the "Transenergo" Department.

In 1998, "Tram Transport", "Trolley Transport" and "Transenergo" merged in a joint-stock company. The composition of Electrotransport EAD includes three tram depots: "Banishora", "Krasna Polyana" and "Iskar", two trolley depots: "Iskar" and "Nadezhda".

III. UTOTRANSPORT EAD performs transportation of passengers by public transport and other service, operational and transportation activities. Zemlyane Road Worthiness Department at 21 'Zhitnitza' St performs annual road worthiness tests of vehicles and buses.

4.7 The main barriers in terms of financing public transport improvement

Not too many barriers. Well organized and accessible funds with variety of co-financing option - international, state, municipal financing.

4.8 Finance sources for supporting green jobs creation in the sector

I. Green jobs – State Budget

II. Programme on green industry innovation Bulgaria under Norway Grants 2009-2014

See section 1.7.

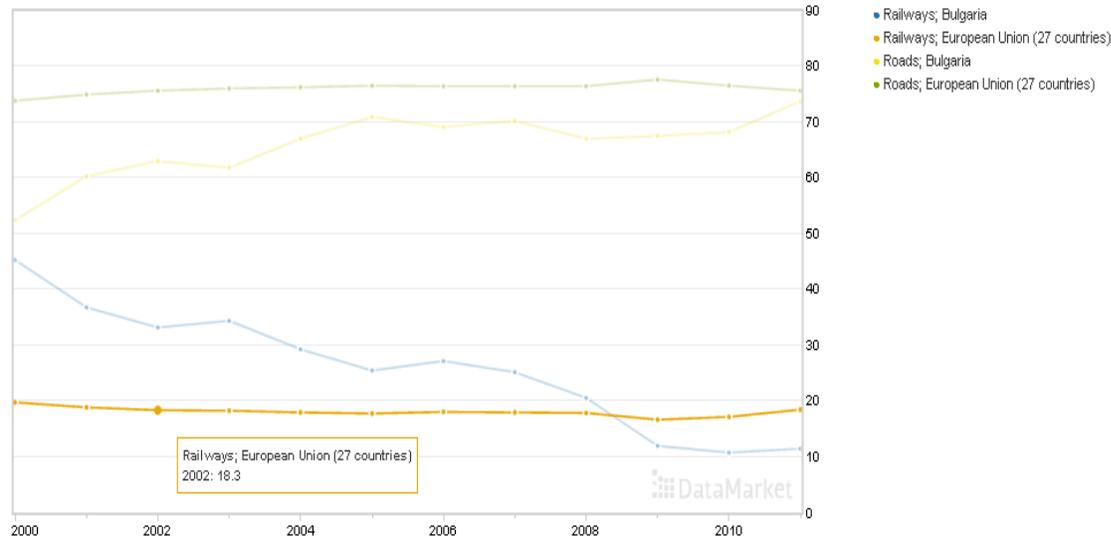
4.9 Indicators

Modal split of passenger transportation (also by purpose), measured in passenger-km and percentage

- The indicator is defined as the percentage share of each mode of transport in total inland passenger transport performance.

Modal split of freight transport

Modal split of freight transport



Source: Eurostat

5. Financing for eco-innovation

5.1 National mechanisms and strategies for supporting eco-innovations

The country has no specific national or local policy documents or programs targeting eco-innovation. Several other policy strategies (e.g. S&T, R&D, regional, energy, etc.) indirectly touch upon some eco-innovation promotion issues. The eco-innovative developments in Bulgaria are associated with the establishment of an eco-industry sector, which is represented by companies with specialisation in renewable energy (bio-energy, solar cells, and wind turbines), water and waste management, air purification, soil remediation, energy efficiency, and sustainable construction.

The Bulgarian Council of Ministers adopted: “Ordinances to adopt regulations for the management of construction waste and on the use of recycled aggregates” on 05.11.2012.¹ The aim is that by 2020, 70% of the total construction waste will be recycled.

There were legal amendments in the Act of Fisheries and Aquaculture^{li}, which contain new articles stipulating the terms and fees for registration and conduct of business in the fishery and aquaculture

industries, including the procedures for production of algae substance, used in new eco-products by the pharmaceutical, food and other industries.

The National Action Plan promoting the production and accelerated entry of environmental vehicles, including electric mobility in Bulgaria, for the period 2012-2014, was developed. The Action Plan was prepared in accordance with the European strategy for clean and energy efficient vehicles and other EU documents for the development of a low carbon and resource-efficient economy as well as the priorities of the EU economic policy. Within this process, Bulgaria is one of nine member states of the EU, which endorsed the priority for development of electric mobility with the Joint Declaration.

Another development in 2012 was a mechanism for selecting NGOs to participate in work groups for the design and advancement of national programs for the period 2014 – 2020 in a variety of areas such as regional development, environment, SMEs' competitiveness, transport etc. which deal with issues like eco-labeling, EMAS, green procurement, energy efficiency, electrical transportation.

The country achieved significant advancement in the utilization of funds under the National Operational Programmes "Competitiveness", "Regional Development", "Environment", "Fishery"; and the Programme for Rural Development to promote the development of green economics, energy efficiency and eco-innovation. There were many new schemes opened in 2012 and some of these schemes are closely related to boosting eco-innovation. For example: BG161PO003-2.3.02 „Energy efficiency and green economy”^{lii}, BG161PO001/1.4-09/2012 „ Green and accessible urban environment", BG161PO003-2.3.01 „Investments in „green industries", BG161PO003-1.1.06 „ Support for R&D activities of the Bulgarian companies", Fishery Measure 2.1 “Production investments in aquaculture”.

There are also funding opportunities for SMEs' technical assistance and advice under the Programme "Competitiveness of the Bulgarian economy". Part of these projects is aimed towards innovation, including introduction of eco-innovative products and technologies, and cluster development.

5.2 EU funds for stimulating eco-innovations

Entrepreneurship and Innovation Programme (EIP)

5.3 The role of international financing for supporting eco-innovation

European Investment Bank^{liii}

In 2012, EIB lending in Bulgaria totalled EUR 183 million. Over the past five years (2008–2012), the Bank provided funds totalling some EUR 1.1 billion to finance investment projects fostering Bulgaria's economic development and it expects to play an important role in supporting the country's investment needs in the future. The EIB pursues six priority objectives:

- Support for economic and social cohesion;
- Support for small and medium-sized enterprises (SMEs);
- Protection of the environment and sustainable communities;
- Innovation and the knowledge economy;
- Development of the trans-European transport and energy networks (TENs);
- Sustainable, competitive and secure energy supplies.

Green Industry Innovation^{liv}

Norway Grants

Objective: Increased competitiveness of green enterprises, including greening of existing industries, green innovation and green entrepreneurship

Priority sector: Green Industry Innovation

Programme operator: Innovation Norway

Programme number: BG10

Donor programme partner:

Programme duration: 30 April 2017

Date of approval: 10 September 2012

Number of open calls: 1

Total grants amount: € 13,699,000.00

From Norway Grants: € 13,699,000.00

From EEA Grants:

Programme areas: PA21 - Green Industry Innovation

5.4 The role of partnerships between public and private sectors in increasing eco-innovation

Establishing the European Public Policy Innovation Centre (EPIC) as a network of local laboratories

Establishing innovation laboratories (e.g. between local authorities), saved however from strict bureaucratism and not made up of “old” units can be an option in this regard. International aspects may also play a role, for example when intergovernmental laboratories deal with complex and sophisticated issues that are more likely to eclipse national borders (e.g. environmental protection).^{lv}

5.5 Specialized institutions that aim to facilitate the process of financing eco-innovations

The innovation performance of the Bulgarian economy depends on: (i) the absorptive capability of firms; and (ii) the ability to develop science and research capabilities and advanced human capital relevant to the current and futures needs of key sectors. These functions are supported by several government bodies in Bulgaria. There is no effective central body in charge of the innovation agenda; instead, responsibilities are dispersed among multiple ministries and agencies, leading to a dilution and duplication of efforts. Establishing an independent Advisory Council and a Coordination Body at the cabinet level to oversee and manage the innovation agenda would go a long way to improving the impact of the government’s interventions in the development of the innovation system.^{lvi}

5.6 Mechanisms for facilitating entry of eco-innovations into the market and better exploitation of results from research activities

Renovating multifamily buildings in Bulgaria^{lvii}

The UN Development Programme and local authorities in Bulgaria are convincing flats owners in socialist era high-rise blocks to join forces to implement energy-efficiency renovations.

5.7 Examples of good practices on the above points

Recycling initiatives under the Globul Green Strategy^{lviii}

The mobile operator "Globul" in Bulgaria has saved a total of 86 tons of paper last year thanks to the transition of more than a third of its customers to electronic bills, electronic recharge of prepaid vouchers, and other services. By refusing a hardcopy of the invoice, the volumes of paper saved have increased by 60%.

GLOBUL Green is the first of its kind long-term ecological strategy focused on the implementation of practical solutions of environment protection issues by promoting such activities as:

- Recycling and re-using of materials and equipment (mobile phones, non-alkaline batteries, accessories for mobile phones, etc.);
- Responsible usage of energy and other resources and materials;
- Support to a Public ecological projects.

Eco-battery initiative^{lix}

Ecobattery AD is an organization for utilization of waste batteries and accumulators (WBA) and is holder of Resolution № 00p – 28 – 00/05.01.2009 issued by the Minister of Environment and Water. The objectives set with the founding of the organization for utilization of waste batteries and accumulators (WBA) include the construction of a network of sites for receiving and temporary storage of waste batteries and accumulators; creation of optimal logistic scheme for collection of WBA; environmentally friendly disposal of waste obtained after treatment of WBA; attraction of as many users and importers of batteries and accumulators as possible and achievement of their targets for recycling as members of the collective system of Ecobattery AD.

Bottling of water^{lx}

The DEVIN bottling company introduced an innovative technology which allows reducing the amount of discarded plastic in nature. This is achieved through reducing the weight of the bottle cap of 0.5 and 1 liter and is another step in the development of the eco-production of the company. In 2008 DEVIN Ltd. makes its first steps toward environmental practices by reducing the weight of the bottles by about 15%. With current reduce in the caps's size the total weight of each bottle decreases by about 2.5 grams, which means approximately 250 tons of plastic per year (and for the past three years, the calculations show an impressive 750 tons!).

Recirculation system for the production of blue-green algae

On 24 July 2012, the Varna company "ECO ALGAE" LTD. and the Executive Agency for Fisheries and Aquaculture signed a 1,712,402 levs contract for a project to build a re-circulating system for the production of blue-green algae. The approved grant is 1,027,441 levs or approximately 525,320.00 euro. The contract is financed under measure 2.1 "Investments in aquaculture" of the Operational Programme "Fisheries".

The project envisions the construction of a plant for the production of blue-green algae of the Spirulina type (*Spirulina platensis*) through an accelerated process of photosynthesis (from seawater to dryness) in confined spaces, in accordance with the requirements for nature conservation in existing buildings.

Electromobiles

The electricity-powered vehicles are seen as a factor for sustainable urban development. They contribute to emission reduction. The electromobiles will be priority in public procurement in Bulgaria in the next years. As of 2014, all state institutions and municipalities in the country will purchase only electricity-powered service cars.

CityTraffic Management and Optimization System (CITMOS)

CITMOS is a fully-integrated, open-platform, information software system that utilizes its analytical intelligence to manage and optimize city traffic. In cities, where traffic inefficiencies and pollution are serious problems, CITMOS would optimize traffic volumes, ensure the efficient use of existing infrastructure and facilitate city planning and governance. This would further minimize congestion; reduce noise levels and unnecessary energy consumption, and lower emissions of CO₂, nitrogen oxide and fine dust.^{lxi}

5.8 The main barriers facing SMEs in terms of eco-innovations

The experience of Bulgaria so far in the field of PPP has shown that the primary obstacle hindering the EBRD implementation of significant, large-scale infrastructure projects, has been the lack of political will and the reluctance of the authorities to accept the concept of risk sharing between the public and the private partner, which is one of the primary features inherent in PPP. The three major challenges for the Bulgarian national innovation system in terms of innovation performance, identified in the EIS 2009 are related to:

- Low level of R&D expenditures and low commercialization of Bulgarian research base;
- Low competitiveness of Bulgarian enterprises due to low level of innovativeness;
- Insufficient cooperation between universities and business.

The intention of the donor partnership programmes is that Liechtenstein, Icelandic and Norwegian expertise should be involved in the strategic development of the programmes, the exchange of knowledge and best practice during implementation, and provide advice on selection of projects.^{lxii}

5.9 Indicators

Ranking on the European Innovation Scoreboard — the eco-innovation index includes eco-innovation inputs, eco-innovation activities, eco-innovation outputs, environmental outcomes and socio-economic outcomes

Bulgaria is on the 18th place among EU countries, with an overall score of 79.61.

Detailed scores:

- Eco-innovation inputs: 20.35
- Eco-innovation activities: 49.50
- Eco-innovation outputs: 98.08
- Environmental outcomes: 46.32
- Socio-economic outcomes: 194.88 (second place)^{lxiii}

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- ⁱ http://www.mi.government.bg/files/useruploads/files/epsp/23_energy_strategy2020%D0%95ng_.pdf
- ⁱⁱ http://www.seea.government.bg/documents/Second_Energy_Efficiency_Action_Plan_EN.pdf/
- ⁱⁱⁱ http://www.seea.government.bg/documents/NATIONAL_LONGTERM_EE_PROGRAMME-ENG.pdf/
- ^{iv} <http://www.seea.government.bg/documents/LEE.pdf/>
- ^v http://www.opcompetitiveness.bg/images/module3/1126_AIR_OPC_2012_Final_SFC.pdf
- ^{vi} http://www.opcompetitiveness.bg/images/module3/1211_131008_OPIC_draft_fin_CKZ_clean_BG.pdf
- ^{vii} <http://www.eib.europa.eu/products/elena/index.htm>
- ^{viii} <http://www.bgeef.com/display.aspx?page=about>
- ^{ix} <http://climate-adapt.eea.europa.eu/countries/bulgaria>
- ^x <http://www.io-bas.bg/cesum-bs/>
- ^{xi} <http://www.projectsymnet.eu/>
- ^{xii} <http://www.mareas-info.eu/>
- ^{xiii} <http://www.splashcos.org/>
- ^{xiv} <http://www.geohazard-blacksea.eu/>
- ^{xv} <http://www.rmri.ro>
- ^{xvi} http://ro-bg.ro/uploads/docs/REPORT_EN.pdf
- ^{xvii} <http://www.clavier-eu.org/>
- ^{xviii} http://www.asde-bg.org/projects_en.php
- ^{xix} <http://www.worldbank.org/en/country/bulgaria/overview>
- ^{xx} <http://www.europerspectives.org/images/reports/EPF-AnRep-2012-EN.pdf>
- ^{xxi} http://www.asde-bg.org/partners_en.php
- ^{xxii} <http://www.factsproject.eu/actors/Pages/default.aspx>
- ^{xxiii} <http://www.cecilia-eu.org/participants.htm>
- ^{xxiv} <http://www.factsproject.eu/SiteCollectionDocuments/Pilot%20projects/Description%20Pilot%20VARNA.pdf>
- ^{xxv} <http://www.misrar.nl/partners>
- ^{xxvi} <http://www.see-ifa.eu/downloads/SEE%20IFA%20Factsheet.pdf>
- ^{xxvii} www.europerspectives.org
- ^{xxviii} <http://library.fes.de/pdf-files/bueros/sofia/09016.pdf>
- ^{xxix} <http://www.moew.government.bg/?show=19&lang=en>
- ^{xxx} <http://www.moew.government.bg/>
- ^{xxxi} <http://www.nug.bg/>
- ^{xxxii} <http://ope.moew.government.bg/en/pages/obshta-informatsia-za-opos/4#1>

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- xxxiii http://ec.europa.eu/environment/gpp/pdf/national_gpp_strategies_en.pdf
- xxxiv <http://www.cbd.int/doc/nbsap/nbsapcbw-eur-01/nbsapcbw-eur-01-bg-01-en.pdf>
- xxxv <http://www.flag-bg.com/?id=47&l=2>
- xxxvi <http://www.investbg.government.bg/en/pages/about-82.html>
- xxxvii <http://www.ngonorway.org/countries/bulgaria>
- xxxviii <http://eeagrants.org/programme/search?country%5B%5D=bulgaria&submit=Search>
- xxxix http://awsassets.panda.org/downloads/wwf_dcp_annual_report2012_3_digital_spreads.pdf
- xl <http://www.swissbgcooperation.bg/en/About-us>
- xli http://www.thegef.org/gef/country_profile/BG?countryCode=BG&op=Browse&form_build_id=form-b6059d31e8c0071445d1c34c6bdcdc3d&form_id=selectcountry_form
- xlii <http://umispublic.minfin.bg/opOperationalProgramms.aspx>
- xliiii http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=BG&gv_reg=ALL&gv_PGM=1353&LAN=7&gv_per=2&gv_defl=7
- xliv http://www.greenbalkans.org/natura2000/german_project/index_en.html
- xlv <http://www.panparks.org/newsroom/news/2012/partnership-for-the-million-project>
- xlvi http://ec.europa.eu/environment/life/countries/documents/bulgaria_en_oct12.pdf
- xlvii http://www.natura.org/natura2000management/bg_central_balkan.html
- xlviii <http://www.ebrd.com/pages/workingwithus/procurement/notices/csu/20130503f.shtml>
- xlix <http://www.ebrd.com/pages/project/psd/2011/42140.shtml>
- http://pris.government.bg/prin/login.aspx?ReturnUrl=%2fprin%2fdocument_view.aspx%3fDocumentID%3diPIQMucQCS0J0S8WDV0lEA&DocumentID=iPIQMucQCS0J0S8WDV0lEA
- li <http://lex.bg/laws/doc/2135184393>
- lii <http://www.beeciff.org/cms/faq>
- liii http://www.eib.org/attachments/country/factsheet_bulgaria_2012_en.pdf
- liiv <http://www.norwaygrants-greeninnovation.no/Documents/Key%20Information%20Sheet%20v.4.12.pdf>
- liv http://ec.europa.eu/enterprise/policies/innovation/files/proinno/inno-grips-policy-brief-5_en.pdf
- lvi http://www.mi.government.bg/files/useruploads/files/innovations/full_report_3s.pdf
- lvii http://ec.europa.eu/environment/ecoap/about-eco-innovation/good-practices/bulgaria/706_en.htm
- lviii <http://globulgreen.bg/en/>
- lix <http://www.ecobatterybg.com/?cid=40>
- lx <http://www.devin-bg.com/en/>
- lxi http://www.eco-innovation.eu/media/EIO_Country_Brief_2011_Bulgaria.pdf
- lxii http://www.iisd.org/pdf/2012/harnessing_ppp.pdf
- lxiii http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=464&Itemid=52