Sector fiche – IPA National programmes / Component I

1. IDENTIFICATION

Title	**10 - Energy Sector**
MIPD Sector Code **ELARG Statistical code**	Energy Environment and Climate Change 27 - Environment
DAC Sector code **Total cost** (VAT excluded)[1]	23010 23050 14022 78,909,230 EUR
EU contribution	25,399,000 EUR
Management mode	**Centralised/joint:** Measure 2.1, Operation 2.1.1: European Bank for Reconstruction and Development (EBRD) by joint management with the European Commission **Decentralised:** All other measures/operations
Decentralised mngmt: **Responsible Unit or National Authority/Implementing Agency(ies)**	Central Finance and Contracting Unit (CFCU) - Ministry of Finance and Economy, Department for Contracting and Financing of EU Funded Projects Programme Authorising Officer (PAO) – Assistant Minister at the Ministry of Finance and Economy, Head of Department for Contracting and Financing of EU Funded Projects Mrs. Nataša Šimšić
Implementation management **Implementing modality** **Zone benefiting from the action(s)**	Ministry of Energy, Development and Environmental Protection Nominated SPO: Dejan Trifunović, Assistant Minister in Electricity Department Sector Based Approach The Republic of Serbia

2. RATIONALE

The selected measures/operations in proposed IPA 2013 Energy SF will contribute directly or indirectly to Government priorities in energy sector, at the same time corresponding to EU priorities. The operation 1.1.1 will improve capacity in the field of energy strategic planning and will help better coordination and harmonization of Serbian energy strategy with EU. The updating of Cadastre for small hydro potential will be completed through proposed SF operation 1.1.2. The operation 1.2.1 supports the gas market opening. The construction of regional by-directional high-pressure gas pipeline will contribute to security of supply (Operation 2.1.1) Proposed SF Operation 2.2.1 supports development of industrial waste water treatment

[1] The total cost should be net of VAT and/or of other taxes. Should this not be the case, clearly indicate the amount of VAT and the reasons why it is considered eligible.

infrastructure.

Other EU priorities such as improving air quality through reduction of harmful emissions will not be supported through this Sector Fiche since it has been already supported through several IPA funded programmes such as: IPA 2007 project: "Emissions reductions from the Nikola Tesla thermal power plants", IPA 2008 project: "Environmental Protection at the Electric Power of Serbia (EPS) company" and IPA 2012 proposed Sector Fiche measure 2.2: Improvement of air quality through reduction of dust emissions from thermal power plants.

2.1 LINKS WITH NATIONAL SECTOR OBJECTIVE(S) AND MIPD SECTOR OBJECTIVE(S)

National and EU integration policy and priorities and objectives in Serbian energy sector are presented in following strategic documents which IPA support is designed to address:

Needs of the Republic of Serbia for International Assistance 2011-2013 within the sector Environment and Energy (*page 122)* defines the following priorities for the environment and energy sectors: to create and strengthen policy, regulatory, financing and monitoring mechanisms for ensuring sustainable development; to ensure security, reliability and quality of energy supply and effective environmental protection; to enable sound management of natural resources and reduction of pollution.

National Plan for the Adoption ofthe Acquis (2013-2016) from February 2013 (NPAA) within the chapter 3.15. Energy(3.15.1. Energy Market and Security of Energy Supply and 3.15.2 Energy Efficiency and Renewable Energy Sources (pages: 310-320) include the following: Overview, priorities for 2013 with regard to harmonization of legislation, administrative capacities, measures for implementation of priorities in 2013 and as well as planned for the period 2014-2016, obligations under the Stabilisation and Association Agreement and the Interim Agreement for 2013, and overview of current and planned foreign development aid. The proposed SF measures are in line with activities envisaged in NPAA.

In **the Multi-annual Indicative Planning Document (MIPD) 2011-2013 of the Republic of Serbia** (3.*6 Environment, Climate Change and Energy, 3.6.3 Sector Objectives for EU support over next three years*), "*Focus* will be on water quality, waste water treatment, mitigation of and adaptation to climate change, renewable energy sources, energy efficiency and security." The specific objectives that IPA assistance will focus on are (*page 27*) to help Serbia align with the EU environmental and climate *Acquis* and fulfil requirements of the Energy Community Treaty, but also to reform energy policy and increase competition in the sector. One of the main objectives in this sector, which is in line with MIPD, is energy policy reforms, ensuring security of supply, increase in renewable energy resources, improvement of environmental infrastructure, waste water treatment and to prepare viable projects for investment and attract FDI;

The recently published **EC 2012 Serbia Progress Report** (Chapter 15 –Energy, Chapter 21 Trans-European networks and Chapter 27- Environment and climate change) state that little progress was made as regards **security of supply and** trans-European **energy networks** (TEN-E). The Feasibility study for construction of the Nis-Dimitrovgrad gas interconnector linking Serbia to Bulgaria has been finalised, but the financing of the project needs to be secured. Major challenges remain in terms of financing the new interconnections between energy networks. As regards **the internal energy market**, little progress was made. The 2011 Energy Law is largely in line with the requirements of the Energy Community but the adoption of implementing

legislation is progressing slowly. The unbundling of distribution and supply functions in the publicly owned generation, distribution and supply electricity company Elektroprivreda Srbije (EPS) has not yet been achieved. The electricity market has been opened for all non-household consumers. The energy regulator approved the new methodologies for establishing the costs for connection to electricity and gas transmission and distribution systems and the cross-border capacity allocation rules for electricity for 2012. However, no eligible customers have switched supplier. All eligible customers connected to the distribution system are entitled to be supplied at regulated tariffs until 2013. EPS, holds a de facto monopoly, due to the persistence of regulated prices which are set at levels below the market price. Under the new Energy Law, the tasks and powers of the Energy Agency of the Republic of Serbia (AERS) are largely in line with the second package of the EU energy *acquis*, but the implementation of the new law will require an increase in the AERS' staff and further capacity building. Adoption of the Electricity Market Code is still pending. Serbia needs to start preparing for alignment with the EU's third internal energy market package. The state-owned Srbijagas has not been unbundled. It remains a fully integrated company and is the only wholesale supplier on the market.

There has been little progress in **renewable energy and energy efficiency**. The Energy Law is partly in line with the Renewable Energy Sources Directive. Revised feed-in tariffs, which were due by the end of 2011, have not yet been adopted. The administrative procedures for issuing construction permits, licensing and network connections remain the biggest obstacle to the uptake of renewables. Further efforts need to be taken to strengthen administrative capacity and create a regulatory environment that fosters the increased use of renewable energy sources in all sectors. Serbia has not yet adopted the planned framework law on rational use of energy.

The Stabilization and Association Agreement *Title VIII, Cooperation policies, Article 109 – Energy* states that cooperation shall focus on priority areas related to the Community *Acquis* in the field of energy and be based on the Treaty establishing the Energy Community, with a view to the gradual integration of Serbia into Europe's energy markets. Cooperation may include: The formulation and planning of energy policy, including modernisation of infrastructure; The formulation of framework conditions for restructuring energy companies and cooperation between undertakings in this sector. *Title VIII, Cooperation policies, Article 111 – Environment* states that cooperation shall be established with the aim of strengthening administrative structures and procedures to ensure strategic planning of environmental issues and coordination between relevant actors and shall focus on the alignment of Serbia's legislation to the Community *Acquis*. Cooperation could also centre on the development of strategies to significantly reduce local, regional and trans-boundary air and water pollution, to establish a framework for efficient, clean, sustainable and renewable production and consumption of energy, and to execute environmental impact assessment and strategic environmental assessment. Article 116, financial assistance may cover all sectors of co-operation, paying particular attention to "approximation of legislation, economic development and environmental protection". *Under SAA title VIII, Cooperation policies, Article 111 Environment*- Cooperation could also centre on the development of strategies to significantly reduce local, regional and trans-boundary air and water pollution, to establish a framework for efficient, clean, sustainable and renewable production and consumption of energy, and to execute environmental impact assessment and strategic environmental assessment.

The European Partnership with Serbia from 18 February 2008 (2008/213/EC) (*under:*

Sectoral policies –Energy) sets out a number of short and medium term priorities, including: fulfilling the commitments arising from the Energy Community Treaty as regards the full implementation of the *Acquis* on environment; Continue environmental audits on energy plants, addressing the worst polluters.

The Energy Community Treaty signed in 2005 multilaterally by the EU Commission and Balkan countries including the Republic of Serbia introduces the legal requirement for Serbia to implement the *Acquis* on electricity, gas, energy efficiency, renewable and environment. Article 2. of the Treaty states that the task of the Energy Community shall be to:(a) create a stable regulatory and market framework capable of attracting investment in gas networks, power generation, and transmission and distribution networks, so that all Parties have access to the stable and continuous energy supply that is essential for economic development and social stability, (b) create a single regulatory space for trade in Network Energy that is necessary to match the geographic extent of the concerned product markets,(c) enhance the security of supply of the single regulatory space by providing a stable investment climate in which connections to Caspian, North African and Middle East gas reserves can be developed, and indigenous sources of energy such as natural gas, coal and hydropower can be exploited, (d) improve the environmental situation in relation to Network Energy and related energy efficiency, foster the use of renewable energy, and set out the conditions for energy trade in the single regulatory space.

Energy Strategy of the Energy Community (EC) proposed in 2010 by then Serbian Ministry of Mining and Energy and endorsed by Energy Community Ministerial Council at its 10th meeting in October 2012 following by wide consultations between EC Secretariat, EC Contracting parties, DG Energy and public (public authorities, industry, consultancies, NGO and citizens). Regional energy strategy is conceptualised in two phases: Strategy paper and Identification of Projects of Energy Community Interest (PECIs), and associated policy measures to promote it. The strategy paper set three important objectives: creating a competitive integrated Regional energy market, attracting investments in the energy sector and providing secure and sustainable energy supply to customers.

2.2 SECTOR ASSESSMENT – POLICIES AND CHALLENGES

Rationale for the IPA support

Primary energy production includes the exploitation and use of domestic resources of coal, crude oil, natural gas and renewable energy (hydropower, geothermal energy, biodiesel and fuel wood). In 2010, Serbia has produced 10.539 Mtoe of primary energy, which supplies about 65 % of the total energy needs. The production of coal is dominant, which makes 68% of the total domestic primary production, while the rest are related to hydro potential, oil production, fuel wood and natural gas. According to latest available data, the total primary energy consumption was **16.192** Mtoe and import dependence of Serbia amounted to 30.3% in 2011 In the structure of final energy consumption by sector, most energy was consumed in the household sector with 35%, industry 27%, and transport 25%, while all other sectors accounted for 13%. Based on these figures, more attention should be paid for improving strategic planning, security of supply and environmental protection. Apart from energy balance structure which needs improvement, Serbia must fulfil its domestic and international duties regarding energy and protection of environment (Energy Treaty, international conventions etc.).

In order to complete the approximation of the legal base with the EU *acquis* and other obligations, the multi-faceted and often inter-woven nature of energy management present a particular challenge. To be capable to plan resource use, adopt legislation, finance investments and design charging systems, and in particular monitor performance on energy policy and ensure effective inspection and the enforcement of laws and regulations, **developing strategic documents** are of utmost importance. Coordination must take account of the many public bodies responsible for policy-making and implementation at the national, provincial and local levels. Government of Republic of Serbia started preparation of new Energy Development Strategy until 2025 with projections to 2030. The draft of the Energy Development Strategy for the period until 2025 with forecasts until 2030 will be prepared in 2013 and it will be subject of public debate. The Strategy document defines the following: strategic goals and priorities of the energy sector development; energy transit potentials; energy development projections until 2025 and 2030; energy efficiency improvement pathways in energy generation and consumption sectors and use of new renewable energy sources; pathways for further energy development in the area of electricity, oil and gas, open pit mines, combined generation of electricity and heat, heat generation; necessary funds, legal, technical, technological, institutional and other mechanisms for achieving these goals, and timeline for their achievement. The relevant Ministry has engaged experts for the preparation of new energy strategy trough the public procurement. Having in mind that the Ministry is obliged to monitor and report regarding the implementation of the energy strategy, it is necessary to strength the capacity for monitoring and reporting energy policy and energy strategy implementation. The strengthening of the capacity of MEDEP could be obtained through the development tool for energy planning compatible with the model which is used in EU and training related stakeholders. Proposed SF Operation 1.1 will improve capacity in the field of energy strategic planning and could help better coordination and harmonization of Serbian energy strategy with EU.

With respect to **security of supply**, Serbia's production is dominated by coal and relies on imports for cleaner energy sources. Progress on energy infrastructure is also crucial for Serbia's economic development and security of energy supply. Local production and gas storage projects to diversify supply together with construction of new interconnections are planned in the Energy Sector Development Strategy. The SF proposed Operation 2.1.1: which is to contribute to security of supply by supporting construction of regional by-directional high-pressure gas pipeline through Serbia connecting the gas pipeline systems of Serbia and Bulgaria.

As regards to **trans-European energy networks (TEN-E**), most of Serbia's natural gas (92%) is supplied by Russia, via Ukraine and Hungary, the only entry point into the Serbian gas network. The transportation system is also used for gas transit bound for Bosnia and Herzegovina. The main precondition for implementation of the European standards and regulations, as well as for opening and establishing the regional market, is the appropriate gas pipeline infrastructure connecting the gas pipeline systems of the neighbouring countries. A current situation in the region of the South East Europe and West Balkans especially, is characterised by insufficient interconnected gas pipeline systems. At this point the individual national markets of the South East Europe are relatively small, which makes the construction of interconnection projects commercially unprofitable. At the same time, the region of South East Europe is a part of the primary strategic “South” Corridor for enabling new natural gas supplies for Europe and therefore there are intense on-going preparations towards realization of the major supply projects for Europe, such as South Stream, Trans Adriatic Pipeline and etc. The SF proposed Operation

2.1.1 which is construction of Serbia-Bulgaria gas interconnector will connect Serbian gas pipeline system with neighbouring EU country and as interconnection project contribute to trans-European energy networks.

Concerning **the internal energy market**, 2011 Energy Law is significantly in line with EU Second Energy package and some provisions of Third Energy Package had been also taken into account. The Serbian government focus on implementing and enforcing the new Law in correct manner therefore, implementing legislation is being made at slower pace. Serbia has started preparatory activities for alignment with the EU's 'third internal energy market package', which entered into force in March 2011. One of the activities is to amend the existing Energy Law in 2013, which will be aligned with the Third Energy Package. Regarding the unbundling of distribution and supply functions in the publicly owned generation, distribution and supply electricity company „Elektroprivreda Srbije“ (EPS), at the session of the Government of Serbia, held on 4 June, the resolution on the determination of the public electricity supplier was adopted and the job was entrusted to the public company "EPS Supply", founded by the Public Enterprise "Electric Power Industry of Serbia". In December 2012 AERS approved the Rules of Market Procedure and opening of the electricity market is planned for January 1st 2013 for the buyers connected to the transmission system in accordance with the Energy Law.

The state-owned Public Enterprise „Srbijagas“ is the only wholesale supplier on the market, and fully integrated company except production of natural gas. Although it has not yet been unbundled, PE „Srbijagas“ has been investing significant efforts to fulfil the number of Energy Community requirements and Serbian Energy Law provisions regarding internal market opening, commercial energy activity unbundling, requirements regarding the preparation of Market and Technical Codes in the capacity of TSO on its transmission system. IPA 2007 project „Assistance to Srbijagas“ which is being finalised in autumn 2012 aided PE „Srbijagas“ to prepare for the market opening. This assistance covered strengthening ability of PE „Srbijagas“ to implement unbundling and restructuring of the company, create OTS Code including the Gas Market Code. PE „Srbijagas“ prepared the Grid Code, in which third part access (hereinafter: TPA) to the transportation system of PE „Srbijagas“ is regulated and submitted to the AERS for approval. It is expected to be approved by the end of the third quarter 2013. In order to prepare for the internal market opening, existing OTS SCADA system and its equipment for remote supervision and control is partially inadequate and insufficient as it covers a limited number of exit points. One part of the equipment is not connected to the existing remote monitoring and control system and is not provided with the appropriate software which could enable operation of the market and the transmission system. This fact has a huge influence to the ability of PE „Srbijagas“ to operate the future market and transmission. Proposed SF Operation 1.1.3 (Support in gas market opening by procurement of hardware and software for measuring of consumption and remote control of all customers) is targeted to pass the procedure of purchasing equipment for upgrading SCADA system necessary for on line and periodical transfer of the data from “on field units” as measuring and regulating units to the central DC (Dispatching centre). That data is necessary for balancing and analysis of the capacity use for the transportation system. The expected gas trade expansion and new tariff buyers require a substantial improvement of system functions (balancing, TPA to the inlet and outlet points of the system). TSO shall enable a regulated third party access and promote market based competitiveness, as well as create preconditions for a reliable gas system operation. In implementing market mechanisms, competitions and attracting necessary investments stability and transparency of gas regulatory regime is vital. PE „Srbijagas“ must be

able to operate the future market and transmission.

EC 2012 Progress Report states that framework legislation on rational use of energy remains to be adopted. The Law on Efficient usage of energy has been adopted in March 2013. The objective of this framework law is to provide and stimulate rational, responsible, efficient and sustainable use of energy and contribute to increased security of supply, reduce import dependence and increase the competitiveness of the economy.

In order to reduce dependence on fossil fuels, contribute to the limitation of CO2 emissions, diversify sources of energy production and achieve renewable energy sources (RES) share 2020 of 27% in Gross Final Energy Consumption (GFEC), it is necessary to remove obstacles for **higher use of renewable energy sources (RES)** make reliable assessment of RES potential and enable constructions of renewable energy facilities/plants. Further efforts are being undertaken towards creating a regulatory environment fostering the increased use of renewable energy sources in all sectors. The new adopted Energy Law is mainly in line with the Renewable Energy Sources Directive (2009/28/EC). New Feed-in tariffs Regulations were adopted in January and entered into force in February 2013. Serbia has significant technical potential for renewable energy, which is estimated at over 5.6 Mtoe/year out of which potential, the biomass potential amounts to approximately 3.4 Mtoe per year (2.3 Mtoe per year is unused, and 1.1 Mtoe is used), 1.7 Mtoe lies in hydro potential (0.8 Mtoe per year is unused, and 0.9 Mtoe per year is the used hydro potential), 0.2 Mtoe per year in geothermal energy, 0.2 Mtoe per year in solar energy 0.1 Mtoe per year in wind energy and 0.04 Mtoe per year in biodegradable part of waste. Wood biomass is mostly used renewable source (1.063 Mtoe in 2011) mainly for heating and cocking in households using biomass stoves. Also, activities that refer to the usage of firewood biomass are already supported by many donors. The most available Serbian renewable potential, besides biomass are small watercourses for small hydro power plants (SHPP) up to 10 MW. Even though there is significant interest of investors for investment in small hydro potential the number of built SHPPs is small (in Register of privileged producers of electricity currently there are 21 facilities which is about 8,5 MW installed capacity). One of the major obstacles to the investments in small hydro potential is the long procedure for obtaining the energy permits (for facilities over 1 MW) and approvals for construction (up to 1 MW). Due to the lack of reliable assessment of the best locations for the construction of SHPPs, investors have to prepare the pre-feasibility study for each potential they plan to use and prove to the relevant Ministry that energy potential will be used in energy efficiency way.

The assessment of watercourse energy potential and the locations for the construction of SHPP (up to 10MW) in the Republic of Serbia is based on the “Cadastre of small hydro power plants in the Socialist Republic of Serbia excluding Socialist Autonomous Provinces” from 1987 as well as the “Cadastre of small hydro power plants in AP Vojvodina, from 1989. Bearing in mind that existing cadastres are 20 years old and that many small hydro power plants were built out of the cadastres locations and that new by-laws about environmental protection were adopted, it is necessary to update the existing and make a new Cadastre. As the new cadastre should be made on the basis of very detailed analysis for each location- having this study, the investors will not have to prepare their own energy potential study. This would facilitate and speed up procedures for issuing the energy permits and approvals for construction. This cadastre updating for small hydro potential will be processed through proposed SF operation 1.1.2. and will contribute to attraction of new investors in this area for achieving very ambitious Serbian adopted RES Share

2020 at 27% as well as increase reliability of energy supply, help the establishment of sustainable energy development, reduce dependency on electricity import (if Serbia would use only half of estimated small hydro potential it would reduce electricity dependency by one third). Also, SHPP Investments will contribute to job creation in terms of producing material for construction of SHPPs, and reduce emissions of greenhouse gases in terms of energy production which will be generated by small hydro potential instead of fossil fuels facilities.

In the meantime, in order to encourage investments in SHPPs, while awaiting development of the new cadastre envisaged by Operation 1.1.1, the Ministry published Notice on sites designated for construction of electricity generation facilities in urban planning documents o local self-government units on 19th February 2013. The Notice is based on mostly obsolete data from currently used cadastres and the investors also should prepare pre-feasibility studies with energy potential analysis. Other renewable energy sources such as wind, solar, biomass and geothermal are already supported by EU projects. Also, Government of the Republic of Serbia has limited Feed-in tariffs support in terms of installed capacity for wind and solar- 500 MW for electricity from wind and 10 MW electricity from solar will be financially supported by Feed-in tariffs. Even though the estimated RES potential in Serbia is significant, the RES Share 2020 target of 27% is very challenging. In accordance with the National Renewable Action Plan, which has been sent to the Energy Community, SHPPs should contribute to the target achievement with about 188 MW new installed capacities until 2020. This capacity represents about 17% of overall planned capacity. In terms of energy generation that means that SHPPs will produce about 752 GWh/year which is about 6% of overall planned electricity from renewable sources in 2020. These plans will compare the overall needs through the Report of Action Plan realization on an annual basis.

Although some progress can be reported in the area of **water quality** the country still faces many challenges. Significant further efforts are needed in order to implement the national legislation, especially in the areas of water management, industrial pollution control and risk management, nature protection and air quality. Thermal power facilities in Serbia are the biggest polluters of air and waters, compared to other plants and facilities within EPS. Untreated industrial wastewater (including thermo power plants TPP's) is major sources of water pollution. Surface water quality is problematic, notably in the tributaries to the big rivers Danube and Sava. Only 5% of industrial waste water discharged in 2010 is treated[2]. As regards to industrial pollution alignment with the Directive on integrated pollution prevention and control (IPPC) has been largely completed and implementation has commenced. According to the national legislation, all of the existing IPPC installations need to obtain a valid permit by 2015. The cost of approximation in this sector will be €1,340 million, which represents 13% of the total cost of environmental approximation. One of the conditions for obtaining an integrated permit (IPPC) for further operation of thermal power plants and performance of activities after 2015, in accordance with to the Integrated Pollution Prevention and Control Law, is alignment of emissions to water with the defined standards and introduction of best available techniques (BAT) for water emission reduction.

One of the segments of harmonisation process of domestic and EU regulations is related to water protection measures by reducing harmful substances emission, pursuant to the Law on Integrated Pollution Prevention and Control ('Official Gazette RS', № 135/04). After the adoption of the set

[2] Statistical Office of the Republic of Serbia, Statistical Pocketbook 2012

of environmental laws in Serbia, which became effective in the end of 2004 and 2009 ('Official Gazette RS', № 135/04 and 36/09) and the on Ratification Law of the Contract on the Creation of SE Europe Energy Community, PE Electric Power Industry of Serbia is under obligation to align the operation of its thermal power plants with the provisions of these laws by the end of 2015 in terms of harmful substances emission into waters. Waste waters created in the course of electricity generation which have to be treated include oily waters, atmospheric waters containing oil and oil derivatives (heavy oil), as well as waste waters to be created by flue gas desulphurisation (FGD), via wet limestone process prior to the discharge into the recipient. TPPs discharges waste water into the river. TPPs do not have a waste water treatment plants. Proposed SF Measure 2.2 supports development of industrial waste water treatment infrastructure which is strongly associated with building environmental infrastructure, resolving challenges in industrial pollution and namely improving waste water quality. IPPC concept (as well as the Industrial Emission Directive) deals with the environmental protection in the area of the industrial pollution in the very complex manner, tackling both air and water protection. Projects related to the air protection in Kostolac have already been scheduled and financial instruments are provided. Introduction of the waste water treatment envisaged by Measure 2.2 in this Sector Fiche will naturally and sinergically follow the projects related to the air protection in order to complete infrastructure necessary for the obtaining the IPPC permit.

2.2.1 National sector policy, strategy and context

The national strategic framework for energy policy consists of the following main documents:

Energy Development Strategy of the Republic of Serbia by 2015 contains objectives, priority programs and appropriate measures and instruments for their realization. Basic-energy objectives, stemming from the basic role of the energy sector and the tasks of energy facilities to provide reliability and regularity of supply with the appropriate energy products to the economic sector and citizens. Further, to encourage the harmonization of the energy production system operation and development with the energy consumption sectors needs, in order to enable more efficient production and economical, more effective (in economic terms) and more efficient (in energy terms) use of energy products, with the target oriented "fixed-term" reduction of energy intensity in the Industry and Transport sectors and the change in the structure of final energy products in the non-production sectors (Households and Public and commercial activities). Finally, to enable the diversification of the sources and directions of imported energy products supply, the technologies of power sources and the selective use of NRES. These encompass specific technological and environmental objectives that aim to address the inherited situation in energy facilities/systems and technologies with reduced operating performances and harmful environmental effect, so as to increase the operational safety of facilities and the functional reliability of the equipment and vital systems of energy installations. The priority of technological modernization of energy facilities and installations, *including the installation of equipment for reducing the emission of harmful effluents from energy sources*, targets not only a significant increase in the production capacity of a large part of existing energy sources, but also a reduced threat to the environment *(page 17).* Increasing energy efficiency and the use of renewable energy resources by 2015 that directly contribute to greenhouse gasses emissions reduction are two out of five main priorities in this Strategy. Program for the Implementation of Energy Development Strategy, Module environmental Protection, In the Table 15.2 Construction of the Waste water Treatment Facilities within the EPS is recognized as one of the

activities/measures which will contribute to the reduction of the negative impact of the energy sector on the environment.

The broad framework for implementing environmental policy is set by the **National Programme for Environmental Protection 2010-2019** (Official Gazette of the Republic of Serbia, No. 12/10), which lays down a set of objectives for Government policy over 2010-2019 at three levels: short-term (2010-2014); continuous (over the whole period of the National Programme); and medium-term (applying to the 2015-2019 period only). The NPEP covers all aspects of environmental policy and planning, financing and economic instruments, institutional capacity-building, including policy in the areas of energy waste management, air quality & climate change, industry, etc. Among the continuous objectives (2010-2019) for the Energy Sector, measure "Ensured Waste Water Treatment for the Energy Sector" was recognized.

The **National Sustainable Development Strategy of the Republic of Serbia (NSDS)** (Official Gazette of the Republic of Serbia, No. 57/08), is a key document in establishing a balance between sustainable economic growth, economic and technological progress, sustainable social development and environmental protection, together with a rational use of natural resources. The NSDS sets broad objectives supported by an institutional framework, covering both the short-term (2009-2011) and longer term (2009-2017), and is accompanied by an Action Plan.

2.2.2 Sector and donor coordination

The coordination and harmonisation of donor activities in Serbia, with a particular focus on country ownership over coordinating aid-funded activities, is ensured under the leadership of the Serbian European Integration Office (SEIO) – Sector for Planning, Programming, Monitoring and Reporting on EU funds and Development Assistance. "Coordination of programming at the highest policy level is the responsibility of the Commission for Programming and Monitoring of EU Funds and Development Assistance. The Commission meets annually and is chaired by Vice Prime Minister in charge for European Integration. The Commission is composed of 11 ministers and the Director of the SEIO." The task of the Commission is to review draft documents that will be presented to donors, suggest priorities for use of resources of international development assistance, and consider and make proposals to the Government on other significant issues related to the use and management of EU funds and development assistance. As a monitoring tool, the EU Delegation in the Republic of Serbia and NIPAC have also created monthly "bottleneck meetings" between the EU Delegation in the Republic of Serbia , NIPAC and line ministries to discuss the progress of IPA funded projects and to ensure their smooth implementation. The NIPAC Technical Secretariat has eight Sector Working Groups (SWGs) that prepared the Needs Assessment Document (NAD) for international assistance for the period 2011-2013, as the basis for identifying annual IPA I programmes, multi-annual IPA III-V programmes and bilateral donor projects. These SWGs comprise representatives from line ministries and other beneficiaries as the main actors in programming and project identification. The SWGs contribute to the identification and prioritisation of projects, ensuring sector and donor coordination, co-financing and analysis of project implementation. SWG for environment and energy covers/corresponds to the MIPD environment, climate change and energy sector.

Within the recently improved Aid Coordination Mechanism, informal donor coordination groups (previously mostly donor driven) have been rearranged and their work formalized based on increased national leadership. In the national energy sector, the Energy Aid Coordination Group

is formally established on 30th of May and is led by the Ministry of Energy, Development and Environmental Protection with EU Delegation to the Republic of Serbia and KfW as leading donors, and GIZ (Germany), Norway, SECO (Switzerland), JICA (Japan), USAID, USTDA, UNDP the Netherlands, Slovakia, SIDA (Sweden), World Bank, EBRD and EIB as other participating donors. In addition to sectoral aid coordination groups, the mechanism envisages the following four cross-sector groups: Local Development, Regional Development, Roma Integration and Gender Equality.

Aiming to include Serbian civil sector in the planning of the development assistance, SEIO decided to establish a consultation mechanism with civil society organisations in the end of 2010 The so-called Sector Civil Society Organisation (SECO), where each SECO was to represent one sector, has been established in the following 7 sectors that correspond to the NAD classification: Rule of Law, Public Administration Reform, Civil Society, Media and Cultural Rights, Human Resources Development, Agriculture and Rural Development, Environment and Energy and Competitiveness. During 2012 SECO as representatives of their associated networks participated in development of SF by taking part in sectoral working group meetings composed of line ministries and other state bodies by providing inputs for identification of the needs and development of sector (gap) analysis.

The Action Plan for Programming and Reporting on International Assistance is prepared annually by the NIPAC Technical Secretariat to ensure synchronisation with national planning and budgeting processes and to consider IPA programming specific requirements. By defining activities, timeframes and roles and responsibilities of relevant institutions, it serves as a tool for coordination and an instrument for aligning donor activities. ISDACON, as both a website and database of development assistance and priority projects, serves as a programming, reporting and communication tool.

2.2.3 Sector budget and medium term perspective

With the aim of increasing predictability of public financing for the budget users, as well as of improving transparency of the planning process in general, the Budget system Law prescribes the obligation of presenting the medium term expenditure framework as the three-year expenditure limits for budget users. According to the adopted Fiscal Strategy for year 2013, with projections for years 2014 and 2015, based on the medium-term macroeconomic projections and the targeted deficit for the respective years, the following funds are planned to be allocated from the state budget to the state institutions associated with the Energy subsector of the Energy, Environment and Climate Change Sector[3]:

Total budget expenditure limits for 2013-2015 (in EUR)*

Institution	2013	2014	2015
Ministry of Energy, Development and Environmental Protection**	71.103.377,92	71.212.792,64	72.397.826,08
Ministry of Natural Resources, Mining and Spatial Planning	5.282.115,38	5.329.807,69	5.401.438,13

** Converted at the agreed budgeting rate of 119,6 RSD: 1 EUR*

***Total budgets are presented referring to the general competences of Ministries and not only to area of Energy*

[3] The data presented herewith originate from the Fiscal Strategy adopted by the Government of Serbia in November 2012

Concerning funds to be allocated in the next three years to the Public enterprises concerned, both PE Srbijagas and PE EPS adopt budget on annual basis and PE Srbijagas adopts budget based on its Business plan which is yet to be adopted.

The **strategic goal** of the Government economic policy on the medium-term 2013-2015 as outlined in the Fiscal Strategy is the **acceleration of the European integration process** of the Republic of Serbia, by undertaking activities leading to the initiation of accession negotiations and by implementing systemic reforms leading to the fulfilment of the Copenhagen criteria. To this end, the adoption of the necessary systemic laws shall be accelerated, as well as the implementation of the adopted legislation with the aim of establishing market economy, macroeconomic stability and suppression of the corruption and the organized crime.

The document further clarifies that in order to fulfil economic and political criteria for membership to the EU, the resources shall be provided for strengthening of the administrative capacities and for the stability of institutions guaranteeing democracy, the rule of law and the protection of minorities, for the development of market economy and of its potentials to respond to the competition and market pressures from the EU, as well as for creating the stable economic and monetary surrounding. Having in mind the above strategic goal of the country, the focus of the economic policy in the medium-term perspective shall be on the economic recovery of the country and on the creation of conditions for the sustainable and balanced economic growth based on the increase of investments and export, and leading towards the increase in employment and of the living standard. With this regards, Fiscal Strategy outlines the energy policy among the key sector policies to be promoted in the period 2012-2015. The measures within the scope of this policy will be provided to raise the country's energy security through increased energy efficiency, the construction of hydro and thermal power capacity, renewable energy and the determination of price policy and price parity, raising communal energy through greater production of heat and electricity in district heating systems and the gradual replacement of fuel coal by gas and renewable energy sources, especially biomass. Likewise, Serbia shall be promoted as a transit route for energy storage, investment in the construction of the second gas storage and power connections with the neighbouring countries shall be given due attention, as well as the establishment of energy market (electricity, gas, petroleum products and liquefied petroleum gas) according to EU standards.

2.2.4 Sector monitoring system

Sector performance should be monitored by sector outputs and consequent impacts that will be continuously monitored based on the existing strategies and action plans. Sector monitoring is currently under development. For the time being the sector monitoring for the Environment and Energy Sector is based on two key mechanisms: system of performance indicators which have been developed to accompany the document ”*Needs of the Republic of Serbia for International Assistance 2011-2013*” and on periodical review of the implementation of strategies and action plans relevant for the sector.

Result-based system of indicators accompanying document ”Needs of the Republic of Serbia for International Assistance 2011-2013 ” defines baseline and target values (benchmarks) for a four-year period and will be revised annually. Indicators are linked with the relevant sector priorities and measures defined in the document, and are, to the extent possible, taken from sector performance frameworks described in the first paragraph. It is intended that this system of

indicators is used in planning and monitoring of EU funds and development assistance and integrated in the relevant planning/ programming documents (including sector/ project fiches).

The monitoring system under decentralised management of IPA (DM) is defined in detail in relevant Manuals of Procedures. System is based on a set of monitoring committees examining relevant monitoring reports - IPA Monitoring Committee, Sectoral Monitoring Committees (TAIB MC being one of them) and Sectoral Monitoring Sub- Committees (SMSCs). SMSCs will be examining IPA monitoring reports on activities funded through first IPA component per sector (it is envisaged that 8 SMSCs will be functional in the following sectors: rule of law; public administration reform; civil society, media and culture; transport; energy and environment; competitiveness; human resource development and agriculture and rural development). Progress in achieving the target values per indicator set in the relevant sector / project fiches will be included in the relevant monitoring report and examined at the SMSC and TAIB MC meetings.

2.2.5 Institutional setting

According to the Law on Ministries, Article 14. (1**) Ministry of Energy, Development and the Environmental Protection** is responsible for state administration related to: Energy, Energy Balance of the Republic of Serbia, the oil and gas industry, strategy and policy of energy security, annual and mid-term energy security program and provide financial and other conditions for the implementation of these programs; safe pipeline transportation of gas and liquid hydrocarbons, nuclear power plants whose purpose is the production of electricity and thermal energy production, use and disposal of radioactive materials in these facilities, the measures for ensuring a modicum of public companies in the areas of by the Ministry of educated, supervision within the competence of the Ministry, as well as other statutory duties.

(2) Ministry of Energy, Development and the Environmental Protection is responsible for state administration relating to: the basics of environmental protection, system protection and improvement of the environment; inspection in the field of environmental protection, climate change, trans boundary air and water pollution, water pollution protection to prevent deterioration in the quality of surface and groundwater; and other responsibilities as well as other statutory duties. The Ministry consists of seven departments: Electricity Department, Oil and Gas Department, Department for Energy Efficiency and Renewable Energy Sources, Environmental Protection Department, Control and Surveillance Department, Department for international cooperation and EU integration. The Division for Project Management in the Energy and Environmental Protection Sector is the Internal Division out of Departments and Secretariat. This Division consists of two groups, one for programming and the other one for implementation.

The Public Enterprise" Electric Power Industry of Serbia" (PE EPS) was established by Decision of the Government of Serbia which entered into force on 1 July 2005. The basic task of PE EPS represents meeting all the electric power requirements of the economy and inhabitants of the Republic of Serbia including the following activities: electric power generation; electric power distribution and distribution system management; electric power trade; coal production, processing and transport; steam and hot water production in combined heating processes; water power utilization and services in river and lake traffic; wholesale trade in fuel and similar products; research and development; design, construction and maintenance of energy and mining plants; design, construction and operation of telecommunication facilities; engineering. PE EPS is 100% owned by the Republic of Serbia.

The Public Enterprise "Srbijagas" with its headquarters in Novi Sad was established on 1st October 2005, pursuant to the decision of the Government of the Republic of Serbia on restructuring the former integrated petroleum company NIS. In the process, NIS divisions: NIS-Gas, NIS- Energogas and parts of NIS-Jugopetrol (Plinara and Business Unit Gas, Pančevo). Its main scope of activities include in natural gas transmission, distribution, storage and trade.

Energy Agency of the Republic of Serbia was established by the Energy Law as a regulatory body with competences covering electricity, natural gas, oil and oil product, and CHP heat energy sectors. By executing tasks assigned to it by the Energy Law, the Agency contributes to creation of a stable regulatory framework for the development of an efficient and sustainable energy sector that will be a strong backbone of the country's economic development. The Agency is a legal entity that is functionally independent of any state body, energy entity or user of its products and services, and of any other legal or physical entity. The Agency commenced its operation on June 16, 2005 at the day of its registration at the Trade Court. In accordance with the Energy Law and international agreements, the Agency carries out the following tasks:

- price regulation
- licensing of energy entities to conduct energy activities
- deciding appeals
- energy market supervision; and
- international agreement implementation

While conducting its tasks, all authorities described in institutional setting respects gender equality.

2.2.6 Macro-economic context and Public Financial Management

According to the adopted Fiscal Strategy and the macro-economic indicators presented therein, it is obvious that at the end of the year 2012 Serbian economy is in the recession. In general, the negative tendencies started with the second wave of economic crisis in the second half of year 2011, and continued throughout 2012 (the evident slow-down of the economic activities and of export and import of goods, the increase of fiscal and current account imbalances, growth of inflation, decrease of employment, dinar deterioration, decrease of foreign exchange reserves and of crediting activities in the banking sector, the increase of the share of the non-performing loans in the debt portfolio etc.). The stagnation of economic activities at the EU Member states, the recession in the countries of EURO-zone, and particularly in the countries of the region, strongly affected Serbian economy being heavily dependent exactly on those trade partners. This shall continue to represent major external risk for the national economy, but the comparative anticipations are such that the recession shall decelerate during 2013, while modest growth in economic activities and employment can only be foreseen in the horizon of year 2014. The Fiscal Strategy forecasts a macroeconomic scenario with real GDP growth at average rate of 3.2% per year over the period 2013-2015.

The prospects of economic recovery and growth are based on the projections and expectations of the increase of export, of savings in public sector, of productivity and of competition, as well as on the anticipation of the economic recovery of the markets of EURO-zone. As presented in the Fiscal Strategy, the macro-economic stability is the key pre-condition for fulfilling the **outlined priorities of economic growth and the increase of employment and of the living standard** in

the Republic of Serbia. In that sense, a strict coordination of fiscal and monetary policy in the following three years is of crucial importance for macro-economic stability and for the decrease of macro-economic imbalances (inflation, fiscal deficit, current account deficit). The prevailing orientation is therefore towards undertaking rational economic policies and on the acceleration of structural reforms. Fiscal policy shall focus on the decrease of fiscal deficit by introducing changes in tax policy and mostly through fiscal adjustments on the expenditure side in line with the rules of fiscal responsibility. Monetary policy shall aim at attaining targeted inflation and on carrying out the floating exchange rate regime. In parallel, structural policy shall promote reforms leading to increasing productivity and export capacities, improving the business environment and attracting potential foreign investors, as well as reforms in the public sector. With this regards, a particular challenge for the economic policy shall be to ensure the financial incentives for the most effective programs, particularly in agriculture, energy sector and in infrastructure. By strengthening the rule of law, suppressing the systemic corruption and with mitigation of the rigidity on the labour market, a better investment climate is to be created. Complementary special economic policies to be emphasized in the medium-term perspective are: policy of protection of competition, active population policy increasing birth-rates, balanced regional development policy, social policy (guaranteeing social rights and inclusiveness); Key sector policies towards which more substantial financial resources are going to be allocated, are again closely interlinked with the aims of economic growth and employment and presented as follows: agricultural policy, mining and energy, transport, telecommunications, tourism, health policy, education and science.

Envisaged structural reforms of the public sector are of great influence to the efficient **management of public finances.** The principal legal bases for the public financial management in the Republic of Serbia are set out with the Budget System Law which is assessed rather positively in terms that it "provides for many of the essential components of a sound budget system[4]". In the recent years (2010/2011), important new institutes such as medium-term expenditure framework and fiscal responsibility rules, have been introduced to streamline the management system. However, the implementation of those new concepts has not been fully exercised, largely because of the challenges the state faced with the financial crisis, and due to incremental approach in introducing the changes in practice. In addition to this, a significant reform potential is to be seen in the recent amendments of the Budget System Law (BSL)[5]. One of the major changes concerns the broadening of the definition of public finances, which previously referred exclusively to budget (local and central level) funds and did not encompass the totality of revenues/incomes (for example, the so-called own, or proper revenues of some public sector institutions were left out of the system of managing the public finances and of the treasury single account). The system and the Law as amended in September 2012 now provide for a more comprehensive approach in planning, spending and reporting on public funds and as such create conditions for a better control of spending in the public sector. Likewise, the amended BSL has incorporated system changes concerning the approach in establishing and charging of various taxes, levies and duties affecting particularly the private sector. Namely, the assessments carried out with this regards, revealed that much of the fiscal duties were being introduced in opaque and unpredictable manner. The amended BSL establishes fairly transparent principles in

[4] SIGMA Assessment for Serbia published in March 2012.

[5] The Law on Amendments to the Budget System Law was adopted by the Parliament on September 25th and published in the Official Gazette No. 93/12, September 28th, 2012.

introducing such financial charges and obliges for the subsequent adjustment of other pieces of legislation not aligned with the outlined principles; Further on, in line with the recommendations of the EC DG BUDGET, the definition of the managerial accountability has been adjusted, while in anticipation of the conferral of management powers for decentralized management of EU Funds, a new budget reserve has been introduced in order for Serbia to cope with the requirements of accreditation criteria.

Notwithstanding those improvements in the budget system, the public expenditure management still remains short of a consolidated plan for reforming the public expenditure management, which would focus exactly on implementing reforms that have already been agreed and launched. In 2010 Public Financial Management in the Republic of Serbia has been reassessed in accordance with the Public Expenditure and Financial Accountability (PEFA) methodology[6]. A basis is therefore now available for information and monitoring of PFM, for planning of the reform strategy and capacity development programme. Assessment of the PFM institutions, processes and systems, has been carried out in several important areas: budget credibility; transparency and comprehensiveness; policy-based budgeting; predictability and control in budget execution; accounting, recording and reporting; external scrutiny and audit; and donor practices. A standardised scoring system is applied in the structure (sub-elements) of each of the topics, so that weaker scoring directly signals the necessity to concentrate efforts on improvements in a medium-term perspective. The PEFA Report recognises the dependency between PFM reforms and the EU accession agenda and recommends a more systematic approach and stronger specific leadership to ensure consistency of future PFM reforms.

2.2.7 Sector assessment

The Government of Serbia is firmly committed to support implementation of relevant environment, climate and energy *Acquis*, strengthening institutional capacity, ensuring security of supply and improving environmental infrastructure within the Environment, Climate Change and Energy sector, in pursuit of its national policy objectives and reform agenda, and the path to European integration and accession to the EU. The needs for international assistance in Energy sector and Climate Change for 2011-2013 have been fully articulated by the Sector Working Group for Environment and Energy, and described in the ''Needs of the Republic of Serbia for International Assistance 2011-2013 (NAD), adopted by the Government in February 2011.

Apart from the consultations with relevant national institutions (held within the abovementioned eight sector working groups), the process of drafting the sector chapters of the NAD included consultations with representatives of civil society organisations (CSO), the donor community and local self-government. The consultation process was based on a number of sector-specific meetings, in order to present draft documents and discuss recommendations and input provided by CSO, donor community representatives and local self-government. Recommendations provided were taken into consideration and are reflected in the final text of the document.

The process of IPA 2013 programming extended the already established consultation process developed on a sector basis during the preparation of the NAD 2011-2013 and the IPA 2012 programme preparation. Strategic approach to the programming process has been improved

[6] The Republic of Serbia PEFA Assessment and PFM Performance Report 2010 has been published in November 2010

through more systematic approach in identification of the priority needs and earlier involvement of all relevant stakeholders in programming process, including civil society organisations.

A strategic (or gap) analysis has been conducted to identify priority areas relevant for the IPA 2013 programme. The strategic (or gap) analysis has been conducted through a range of actions including analysis of previous proposed assistance as well as the correlation between the NAD 2011-2013, the MIPD 2011-2013, the analysis of EC Opinion on Serbia (Analytic Report) 2011, the **EC 2012 Serbia Progress Report** and correlation with on-going and proposed 2013 assistance. Analysis has been carried out through the framework of Sector Working Groups (SWG) (SEIO, Line ministries, the EUD representatives and Civil Society Organisations) that have discussed the key messages derived from the above mentioned strategic documents. On the basis of this cross-checking strategic analysis, SWGs during the consultation process have identified a number of IPA I 2013 priority areas for this sector (also commented by the EUD and DG Enlargement) which have been used as basis for development of the SIF.

According to the document "**Analysis of strategic documents in Serbia" published by General Secretariat** of the Government of the Republic of Serbia in October 2010 and Energy Law, Energy Strategy should be adjusted with the Strategy of economic development with future Strategy on economic development. Overall remark is that there is the need for sector strategies improvement. In general terms, besides already implemented improvements, for full implementation of the sector approach it will be necessary in the coming period to create a unified methodology for the development of strategies, review existing strategic framework in relation to the new financial perspective 2014-2020, improve monitoring and evaluation requirements with a focus on results and consequently contribute to improvement of the strategic planning, improve planning of the national budget by linking strategies and action plans with the budget planning and avoid any overlap of responsibilities between different institutions. Finally, it is necessary also to ensure a constant development of project documentation, since without ready projects the strategy cannot be implemented.

3. DESCRIPTION

3.1 OVERALL OBJECTIVE OF THE IPA SECTOR SUPPORT

The overall objective of IPA 2013 sector support is to support Serbia in reforming energy policy by meeting EU *Acquis* through enhanced strategic planning, increase use of renewable energy and infrastructure support for establishing a regional gas market and improvement of water quality in Mlava River.

This objective of IPA sector support will contribute especially to the relevant MIPD sector objectives, as well as NAD priorities, described in Annex 3. The needs of the sector and corresponding results and measures have been articulated based upon the Strategic framework for energy and have been prioritised accordingly, based on the views and criteria of the EC. Identified results and measures under the SF directly tackle issues addressed in the EC's "Progress Report on Serbia 2012 on Serbia under Chapter 15 on Energy (pages 42-43), Chapter 21 on Trans-European networks (pages 47-48) and Chapter 27 on Environment (pages 57-59).

Further efforts are necessary to achieve real market opening, unbundling and cost-reflective tariffs. Additional efforts need to be taken to strengthen administrative capacity and create a regulatory environment that fosters the increased **use of renewable energy sources** in all sectors.

Framework Law on efficient usage of energy was adopted in March 2013. As regards to trans-European **energy networks** (TEN-E) little progress was made. Major challenges remain in terms of financing the new interconnections between energy networks. Little progress was made in implementing the legislation on industrial pollution and risk management. The integrated approach to permitting must be institutionalised and the administrative capacity strengthened.

The EU support through the identified **selected sector interventions** will directly contribute to the fulfilment of the overall sector objective.

Firstly, the selected support under **Measure 1.1** will assist relevant Ministry to build capacity in energy sector and enable it to monitor and report regarding implementation of existing strategic documents and implement Article 7 of the Serbian Energy Law. Development and providing tool for energy planning which corresponds with EU tool will support better reforming of energy policy through advanced knowledge. In addition, updating cadastre for small hydro potential which is mostly obsolete will contribute to the higher use of small hydro potential and contribute to attracting investors in this area. Furthermore, the small hydro power plants will contribute to prevention of negative effects on environment by large hydro power plants because SHPP up to 10 MW are mostly without tall dams and accumulation. It will support Serbia to implement the Directive 2009/28/EC on promotion of the use of energy from renewable sources, thus accepting the commitment to increase share of renewable energy in the energy balance.

Finally, the selected support under this measure will help Serbia align with the requirements of the Energy Community Treaty by supporting Serbian TSO in its efforts to implement EU Directives 2003/55/EC on the internal natural gas market and 2004/67/EC on security of gas supply and 1775/EC on transmission system access. This will implement market mechanisms, increase competition in the sector and attracting necessary investments, stability and transparency of regulatory regime.

Secondly, the selected EU support under **Measure 2.1** will contribute to the energy security supply and energy supply diversification and possible other supply sources. Moreover, it will strengthen regional and cross-border cooperation by assisting Serbia in its efforts in opening and establishing the regional market.

Thirdly, the selected EU support under **Measure 2.2** will aid Serbia to improve environmental infrastructure by further harmonisation of domestic and EU regulations related to water protection measures by reducing harmful substances emission discharged into River Danube., pursuant to the Law on Integrated Pollution Prevention and Control ('Official Gazette RS', No 135/04). Moreover, by construction of the WWTP, as envisaged by selected support, will contribute that discharges to surface waters will meet the limit levels set out in the Serbian Water Law, which is harmonized with the EU legislation. Finally, investments in environmental infrastructure envisaged in support of waste water treatment will lead to a better state of environment and promote better public health.

3.2 SPECIFIC OBJECTIVE(S) OF THE IPA SECTOR SUPPORT

This objective of IPA Sector support will contribute especially to the following **MIPD** sector objectives:

Specific objective 1: To help Serbia align with the EU environmental and climate *Acquis* and the requirements of the Energy Community Treaty and to improve environmental

infrastructure;

This objective will be achieved through implementation of proposed **Measure 2.2. -**Development of industrial waste water treatment infrastructure which will contribute to treatment of industrial waste waters from the electricity production, by construction of the new facility reducing the amount of harmful substances discharged into River Mlava.

Indicators:

- *Effluent quality of water in line with the Regulation on pollutant emission limit values in waters and deadlines for the achievement thereof (Official Gazette RS, No. 67/11);*

Specific objective 2: To reform energy policy to contribute to Europe 2020 and increase competition in the sector and strengthen regional and cross-border cooperation.

This objective will be achieved through implementation of proposed **Measure 1.1** by **improving security and efficiency of energy supply and use** b**y** supporting more efficient development of small hydropower plants as contribution to increase renewable energy use and lead to improvement of gas market in line with the Energy Law and EU standards for measuring of consumption and remote control of gas transport network and increase security of supply, **creating conditions for better strategic planning** by monitoring and reporting implementation of the Energy Strategy.

In addition, this objective will facilitate increase of security of supply by contributing to strengthening the regional energy market, establishing cross-border gas transmission and regional gas interconnection through diversification of the gas supply routes and possible supply sources through **Measure 2.1**

Indicators:

- *Number of applications for energy permit for Small Hydro Power Plants;*
- *Number of metering devices which are controlled and managed by the TSO through new SCADA system*
- *New SCADA operates on the new protocol basis, in accordance with the industrial standards;*
- *Improved indicator n-1 (defined by EU Regulation 994/2010 security of supply) compared to 2012*

3.3 RESULTS

IPA intervention in the energy sector is expected to lead to the following results:

Result 1: Ensured further implementation of Energy Community Treaty with the specific focus on development of strategic planning, further opening of gas market and increased use of renewable energy

Result will be measured through a range of the following indicators:

- *Strategic tool installed and operational;*
- *Updated Small Hydro Power Cadastre with real data from the field and new locations entries;*
- *Equipment for gas transmission system and market operation installed and operational;*

Result 2: Upgraded environmental infrastructure and improved security of supply through investments into industrial wastewater treatment and construction of new energy facility

Result will be measured through a range of the following indicators:

- *Construction of Serbian part of gas pipeline Serbia - Bulgaria completed and operational;*
- *Construction of waste water treatment facility at TPP Kostolac B completed and operational;*

In addition to the strategic framework

Results and measures have been identified based on the strategic framework presented in the SF sections 2.1, 2.2.1 and 2.2.3. In addition, they are compliant with recommendations from other relevant policy document.

3.4 MEASURES/OPERATIONS[7] TO ACHIEVE RESULTS

Result 1: Ensured further implementation of Energy Community Treaty with the specific focus on development of strategic planning, further opening of gas market and increased use of renewable energy

Measure 1.1: Improving of security and efficiency of energy supply and use through creating conditions for better strategic planning, increased use of renewable energy and upgraded energy facilities

This measure will assist Ministry in charge of energy policy to develop capacity in the field of energy planning and support implementation of the Energy Law (Article 7) to monitor and report regarding implementation of the Energy Strategy. The results from the IPA 2012 project on the development of energy indicators will provide data, which can be used for training of the representatives of public energy subjects. Furthermore, it will also support a more efficient development of small hydropower plants as a contribution to increase renewable energy use in terms of facilitating issuance of energy permits. Moreover, the measure will contribute to improvement of gas market in line with the Energy Law and EU standards for measuring of consumption and remote control of gas transport network and increase security of supply. Data required for adequate managing of market operations by the TSO need additional investments, which will be performed by PE Srbijagas and will be done before the implementation of this project (IT platform for market operations).

This measure will be implemented through three operations:

Operation 1.1.1*:* Capacity building in the field of energy planning will cover the following:

In accordance with the Energy Law, the Ministry is obliged to monitor and prepare annually report on Energy Strategy implementation to Serbian Government and Parliament. On the base of monitoring, the Ministry will propose to the Government the adjustment of Serbian Energy Strategy with the real situation. On the base of the Government decision, it is possible to revise or

[7] As defined in Article 6(2) of the IPA Implementing Regulation No 718/2006. IPA Component I programmes are subdivided into sectors (priorities), each of which define a global objective to attain and which shall be implemented through measures, which may be subdivided into operations, or directly through operations. Operations shall comprise a project or a group of projects (implemented by the Commission or the beneficiary country).

prepare a new Energy Strategy. The new Energy strategy is in the process of the preparation and it will be finished in 2013. After that, the new Program for the implementation of Energy strategy will be prepared. In accordance with the mentioned legal obligation, The Ministry will monitor the realization of these strategic documents and will prepare annual Report to Serbian Government and Parliament. The Ministry recognizes that it is necessary to improve the Serbian capacity in the field of strategic planning. Therefore, this project will develop and provide the tool for energy planning (energy system modelling and energy projections) complied with the energy system model, which is used by EU and the European Commission. It will be used for the evaluation of the set of policies and measures in the field of energy, environment and climate change and technical assistance for training of Serbian stakeholders in the field of energy planning. After the tool is developed and provided, the relevant Serbian participants will be trained for using the tool. They will consist of representatives from the public energy utilities, ministries, agencies and other relevant energy institutions, giving due considerations to the equal opportunities for men and women.

This operation will be implemented through one service contract.

Operation 1.1.2.: Through this operation, the mostly obsolete existing cadastre of SHPP will be updated and the IMIS data base will be upgraded. Updating of the existing cadastre of SHPP will be done through very serious analysis of both existing and new locations. Data analysis will include clearly defined locations with energy potentials and technology for the best utilization of each location in terms of energy efficiency and environmental protection**.** The analysis will be in line with domestic and EU legislation in this area. The updated cadastre will present a more realistic small hydro potential for SHPP construction and thus it will encourage and facilitate investment in small hydro potential.

This operation will be implemented through one service contract.

Operation 1.1.3 Support in gas market opening by procurement of hardware and software for measuring of consumption, remote control of all customers and transport system encompassing training of staff that will operate procured equipment. IPA 2007 project “Technical Assistance to Srbijagas” provided assistance in preparation of technical specifications for procurement of necessary hardware and software envisaged through IPA 2013. System Operation Platform, where SCADA is the main component supposed to ensure safe, secure and efficient operation on the gas transportation network. The existing SCADA system is old and cannot satisfy all demands in constantly changing environment. It cannot facilitate future operational and control requirements as the transport system is expending as well as connections to other networks. The implementation of this operation will enable better operation of gas transport network connections, better supervision of market operations and support of professional capacity in the planning, management and control of gas transportation. Finally, Transmission system operator (TSO) will be able to fully apply recently developed Grid Code.

This operation will be implemented through one supply contract.

Result 2: Upgraded environmental infrastructure and improved security of supply through investments into industrial wastewater treatment and construction of new energy facility

Measure 2.1: Improving the security and diversification of gas supply through construction of new energy facility

This measure will increase security of supply and contribute to strengthening of the regional energy market, establish cross-border gas transmission and regional gas interconnection Serbia-Bulgaria. It will improve security of supply through diversification of the gas supply routes and possible diversification of sources by enabling a new natural gas supply route for Serbia from Bulgaria, a new route from Serbia to Bulgaria as the access to the existing and the future storage facilities on the territory of the Republic of Serbia for Bulgaria.

This measure and resulting operation will be implemented based on agreement/s reached between relevant stakeholders, time schedule for IBS construction (Section Niš-Dimitrovgrad) presented by PE Srbijagas and in accordance with MoU signed by Prime Ministers of Serbia and Bulgaria on December 14th 2012.

Operation 2.1.1: This operation supports the construction of one part of the regional by-directional high-pressure gas pipeline through Serbia, which will connect the gas pipeline systems of Serbia and Bulgaria. Such connection would provide Serbia with access to a second import pipeline and Bulgaria with access to Serbia's existing and planned gas storage, benefiting the energy security of both countries. Other countries from the region, including Bosnia (which is presently supplied only through a connection from Serbia) and possibly FYROM, Montenegro and Kosovo[8] in the future would have benefit. The Energy Community Secretariat, DG Energy and EBRD endorsed the regional significance of this interconnection. For the Serbian part of interconnection, EU WBIF IPF TA financed EIA, SIA and FS which is partly harmonised with Serbian legislation. The major stakeholders for construction of gas pipeline are PE Srbijagas, EBRD and EC. The relation between EU and EBRD would be established by Contribution Agreement (CA) under joint management where the procurement rules would be based on EBRD´s own procedures. The CA should be agreed between parties and signed after the signature of Financial Agreement for IPA 2013 National programme between EU and Republic of Serbia. The transfer of EU funds to EBRD should be realised after the signature of the works contract for the construction of the gas pipeline or after the preparation of tender dossier for the works contract in both options depending on project implementation time table including main milestones in the project. In order to facilitate and better structure project activities, MEDEP established a Working group on March 8th 2013 in charge for planning and decision making related to realisation of Serbian part of the project Niš-Dimitrovgrad to Bulgarian border. PE Srbijagas prepared a draft Terms of Reference for selection procedure of consultant which will develop set of technical documentation including design and permitting and presented time schedule for IBS construction (Section Niš-Dimitrovgrad).

Measure 2.2 Development of industrial waste water treatment infrastructure

Requirements from the Energy Community Treaty, adoption of set of environmental laws in Serbia, and specially Law on Integrated Pollution Prevention and Control – IPPC Law ("Official Gazette RS", No. 135/04), PE Electric Power Industry of Serbia (PE EPS) is under obligation to align the operation of its thermal power plants with the provisions of legislation by the end of 2015 in terms of harmful substances emission into waters. One of the conditions for obtaining an integrated permit in accordance with IPPC Law for further operation of thermal power plants

[8] This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and ICJ Advisory opinion on the Kosovo declaration of independence

after 2015 is the construction of waste water treatment plant. In the „Green Book of the Electric Power Industry of Serbia“, waste water treatment plants represent one of the priorities for environmental protection and must be built for the new thermal power facilities and also for those being overhauled (according to priorities for international aid for PE Electric Power Industry of Serbia in the area of environmental protection, priorities and requirements in the period 2009–2017, page 97).

This measure will be implemented through two operations:

Operation 2.2.1*:* In order to treat industrial waste waters from the electricity production, new facility will be constructed which will provide adequate waste water treatment under all necessary technical – technological and economic parameters. Construction of the facility will reduce the amount of harmful substances discharged into River Danube by the treatment of waste waters which include: oily waters, atmospheric waters containing oil and oil derivatives (heavy oil), as well as waste waters to be generated by flue gas desulphurisation (FGD), via wet limestone process prior to the discharge into the recipient. This operation is defined in the Programme of Energy Development Strategy Implementation of the Republic of Serbia by 2015 for the period from 2007 and 2012 (15.Environmental protection, Table 1 “Infrastructure Projects in the Energy Sector”, “Environmental protection of air and land. It is also defined in the “PE EPS Development Plan 2008-2012” (Enclosure 5-4 Investment in TE-KO Kostolac, under the project of flue gas desulphurisation).

This operation will be implemented through one works contract for construction under FIDIC rules: Design, construction, trial operation and commissioning of WWTP at TPP Kostolac B with (Plant and Design-Build – Yellow Book).

Operation 2.2.2*:* Supervision of construction and commissioning of the new WWTP in TPP Kostolac B will be done through one service contract.

3.5 OVERVIEW OF PAST OR ONGOING ASSISTANCE, LESSONS LEARNED, MECHANISMS FOR DONOR COORDINATION/SECTOR WORKING GROUP AND/OR POLICY DIALOGUE

According to the ISDACON database, in the period 2007-2011 it is estimated that a total amount of € 570 million was actually disbursed in assistance from the international donor community to the energy sector in Serbia. The needs of this sector considerably exceed the amount of international assistance received. Support in the Energy sector is provided through IPA programmes, both under the IPA national programmes for Serbia and under the IPA multi-beneficiary programmes.

Until IPA 2012 including, a total of around € 73,35 million, has been allocated under the Serbia national programmes (2007-12) for the Energy sector (harmonisation with EU Energy *Acquis* implementation of requirements of the Energy Community Treaty, law enforcement in the field of industrial pollution control to enhance capacity for aligning legislation with the EU environmental directives especially for Industrial Pollution Prevention and Control (IPPC), capacity building in developing and implementing regulatory policies and strategies and overseeing the necessary reform of the energy sector, strengthening the capacities of gas transmission system operator, promotion of measures to stimulate energy efficiency and use of renewables, protection of environment aimed at reducing emissions from thermal power plants in

Serbia for improving air quality and water quality by building waste water treatment plants in line with EU directives, contributing to security of electricity supply in South Serbia, implementation of the energy component of the National Strategy for Sustainable Development).

IPA Serbia national programme (2007-2012)

There are 8 projects worth € 73,35 million, funded from IPA 2007-2012 Serbia national programmes, covering the following sectors:

1. Support the Implementation of the Energy Community Treaty regarding environmental obligations, implementation of the Regional energy market, requirements and oversee the necessary reforms in energy sector and strengthening the capacity of gas transmission system operator, (4 projects, 21 MEUR);
2. Environmental protection at the PE Electric Power Industry of Serbia (PE EPS) company to fulfil with the requirements of Directive 2001/80/EC for large combustion plants and improve water and soil quality through, (2 Project Fiche+ SF 2012 Measure 2.2, 30,35 MEUR);
3. Support to national electricity market and requirements of a Regional Energy Market contributing to energy security (1 project, 15,5 MEUR);
4. Sustainable development of Energy sector by implementation of Kyoto protocol, rational use of conventional fuels, effective implementation of the energy saving, reduced energy consumption, CO_2 emissions and energy efficiency measures and increased use of renewable energy sources. (2 projects, 4,5 MEUR);

The bilateral donor community has been prominent in resourcing projects in energy sector, including Austria, Czech Republic, Germany, Japan, Netherlands, Spain, Sweden, Switzerland, and Norway etc. Areas supported by the bilateral donors are: strategic planning, and the foundations of expecting Law on efficient use of energy and improving municipal planning in energy efficiency (Norway); capacity-building for monitoring and evaluation of energy efficiency policy (Germany); study of energy management (Japan); modernisation of the monitoring and control system in a thermal power plant (Switzerland); giving guidance on the implementation of EU renewable energy directives focused on biomass and bio fuels, but also biogas and electricity/heat production from organic waste and utilization of geothermal warmth for heating public buildings in Serbia (Netherlands); feasibility study for GHG emission reduction, as well as Development of capacities to use and promote the solar energy in Serbia (Spain). Soft loans have been provided by EBRD, KfW and the World Bank. Measures under this Sector Fiche are directly linked and will build up on several important programmes such as: "Improvement of strategic planning in the energy sector, introduction of the new energy efficiency policy and creating conditions for increased use of renewable energy" intended at implementation of energy efficiency policy and Programs, identification, development and implementation of Projects/activities aiming to increase energy efficiency, secure major improvements of energy efficiency in buildings, create market for energy efficiency business particularly in buildings, transfer of knowledge in the area of strategic planning on a local level; maximize local and regional involvement together with transfer of knowledge in creating national energy policy by creating network of energy managers on national, regional and local level. The results from the projects that were financed by Norway showed that it is necessary to further strengthen the capacity for strategic planning, human resources and tools. Furthermore, IPA 2007 Horizontal programme on the Energy Efficiency Finance Facility was built to financially assist the IPA

countries to promote investments in energy efficiency and renewable energy generation in order to improve the energy performance of the building and industry sectors offering opportunities for the highest savings in energy and reduction in CO2 emissions. Results achieved from projects financed from past assistance can be stated only for the projects which are finalised. When it comes to IPA funded projects quite a few projects are completed so far Environmental measures related to PE EPS in the scope of (IPA 2007 and IPA 2008) aimed at reconstruction of the electrostatic precipitators for TPP Nikola Tesla A6, B1 and B2 including procurement and installation of equipment for continuous measurement of air pollutants resulted in reduction of mass concentration particulate matter at the outlet of electrostatic precipitators several times to the acceptable levels in accordance to EU standards. For block A6 the mass concentration particulate matter was decreased from 313 mg/Nm^3 to 34 mg/Nm^3 , block B1 from 104 mg/Nm^3 to 38 mg/Nm^3 and block B2 from 60 mg/Nm^3 to 34 mg/Nm^3 . In order to prepare the gas market opening, two projects were approved for PE Srbijagas (within the Projects IPA 2007 and IPA 2010). IPA 2007 „Technical assistance to Srbijagas" analysed the functioning of the Transport System Operator using the SCADA system for remote supervision and control. Concerning the part of the project dealing with SCADA, all necessary functional/technical specifications and tender dossiers for system and market operations are prepared for the procurement of all systems and equipment proposed in the Measure 1.2 taking into consideration already prepared designs and documents in PE Srbijagas. The Energy Agency was involved in the IPA 2007, Implementation of the Energy Community Treaty. The result of the project contributed to the capacity of AERS to fulfil its tasks related to development of national and regional energy markets. The project's catalytic effect is especially visible in the rapid development of the Serbian energy market after its finalization – operationalization of the electricity balancing market after approval of the market rules by AERS, enabling seamless supplier switching after adopting the appropriate rules by AERS, transition to the new mechanisms of price regulation set by the Energy Law 2011. It is ensured that the results of the project will be maintained as a permanent asset to the AERS even after the end of the project implementation- the project results are built in the regulatory mechanisms applicable in Serbia (pricing methodologies and mechanisms, market rules, network codes, market monitoring mechanisms), and the extensive training has left behind a robust knowledge base which is available both to current and new employees. This project has an important cross border impact, since the Energy Community Treaty is intended to increase cross border (regional) energy trade by creating a single market in network energy covering the Member States and South Eastern Europe. The project enhanced AERS capacity to build the regional energy market, whereby bilateral coordinated capacity auctions have been established on 2 borders based on rules/agreements approved by AERS. AERS has also significantly contributed to the development of the SEE Wholesale Market Opening Regional Action Plan, setting the sequence of activities needed for implementation of the EU target market model in South Eastern Europe.

Regarding IPA 2010 project "Implementation of Energy Component of National Strategy for Sustainable Development two out of three project components are completed. In the scope of project component 1, The Mid-Term Implementation Plan for the Kyoto Protocol in the Energy Sector (and its possible successor) and the Action Plan for the implementation of the EU directives referring to the fuel quality are prepared. It serves as the background documents for the preparation of the Energy Development Strategy until 2025 with the projections up to 2030. The main results of these two components are: Pre-Feasibility studies clearly indicated economic and

technical justification for exploitation of geothermal heat energy (GHE) and construction of combined heat and power (CHP) facilities on selected locations. Having in mind those results new investments in the construction of these facilities are expected, which will have a positive social and economic impact. All other IPA 2010, 2011 and 2012 projects have recently started or are currently in preparation phase, therefore their results or impacts still cannot be reported.

Support to the measure "Improving the security and diversification of gas supply through construction of new energy facility" has been provided through implementation of the Western Balkans Investment Framework (WBIF) for the preparation of Feasibility Study, Environmental Impact Assessment Study and Social Impact Assessment according to the EBRD standards. As complement to the measure: "Upgraded environmental infrastructure through investments into industrial wastewater treatment is Construction of Waste Water Treatment Facility at TPP Nikola Tesla B (IPA 2011) "In the past several years, harmonisation process of National with EU regulations has been intensified and one of the segments of this harmonisation is related to water protection measures by reducing harmful substances emission, pursuant to the Law on Integrated Pollution Prevention and Control.

Deriving from the lessons learned from implementation of previous projects more attention should be paid to engaging experts having more expertise in Republic of Serbia energy potential. It is necessary to provide additional technical assistance for preparation of basic documentation for procurement. Previous experience on reconstruction has shown that equipment delivery period from abroad was prolonged; having an impact on the completion of the planned reconstruction implemented during overhauls, whose beginning and duration period is limited during the year. Therefore, tenders for equipment procurement and delivery necessary for the reconstruction should be planned earlier in advance, since equipment comes from abroad. Participation of domestic firms in the reconstruction was assessed as positive and they have demonstrated their technical ability to carry out the reconstruction to the end.

The project pipeline (the quality and number of projects in preparation) is increasing, but not rapidly and with insufficient achievement of the standards expected for EU public or private investments. There is also a tendency towards very large projects, with the combination of financing (IPA, IFI and final beneficiary co-financing) which demands the defined procedures for the implementation of such projects. PPF IPA 2008 and 2010 has continuously been improving project documentation and maturity of projects. But the need for this kind of activities should be addressed further. For the donor coordination mechanism and the system of SWGs, please refer to section 2.2.2.

Currently, there are on-going number of evaluations aimed at providing information on effectiveness of IPA and development assistance in relevant sectors in the past period and drawing conclusions and recommendations for the future planning of assistance. They include: EC funded evaluations of assistance implemented and financed by IPA programs and other donors in the Republic of Serbia per sector; IPA Interim Evaluations and meta- evaluation of IPA assistance, funded by the EC; and Evaluation of Effectiveness and Efficiency of Development Assistance to the Republic of Serbia per sector in the period 2007- 2011, initiated by SEIO and implemented with the SIDA support. Also, EC has initiated a project "Monitoring and Evaluation Capacity Building in Western Balkans and Turkey", implemented by the World Bank, in order to assist the beneficiary countries in strengthening capacities in monitoring and evaluation, with a focus on defining the performance indicators on the sector level.

3.6 SUSTAINABILITY

The stipulated results include capacity building as an essential element to developing an effective and sustainable sector. The envisaged measures will contribute to enforcement of national legislation, improved strategic planning and further alignment with EU *Aquis* in the energy. Selected support will improve the strategic planning in the energy sector and create conditions for better implementation of Energy Law regarding energy policy and increasing of renewable energy usage.

In addition, selected support will contribute to opening of gas market in line with the Energy Law and EU standards. According to the methodologies for calculation of the price for the TPA and market operations, which is based on the "cost plus" principle, maintenance costs are covered and checked by regulatory body. This principle guarantees resources for sustainable functioning of the market. Finally, the selected support will increase security of supply by building new energy facility contributing to regional energy market and regional energy interconnection.

Operations under Energy SF will strengthen national institutions and improve their proficiency in planning, management and monitoring of operations, which should improve the environment for policy-making and directing further investment in the energy sector.

Selected support will improve environmental infrastructure as wastewater treatment plants, which will contribute to fulfilling EU environmental standards in Serbia, and improve health of the population. Sustainability of this operation is guaranteed by the technical and financial capacity of the beneficiary responsible for its operation and maintenance. PE EPS will continue monitoring and maintenance of the operation of the wastewater treatment plant. The measures to be promoted in the period 2012-2015 within the scope of this Fiscal Strategy envisage determination of price policy and price parity. The current investment through donor financing should therefore represent a one-off improvement to bring the Serbian power generating capacity to a point where sustainable development is possible without subsidy or further donor intervention.

3.7 ASSUMPTIONS AND PRECONDITIONS[9]

On the **policy level** of Sector support, the proposed objective and results are based on the following assumptions:

- National authorities committed to fulfil EU energy and environmental standards and implement relevant *Acquis*;
- Incentive measures for electricity generation from small hydro power plants;
- Construction and fully operational pipeline;
- Existence of absorption capacities for EU funds to enable efficient distribution of funds.

On the level of measures of Sector support, assumptions identified in relation to sector support are the following:

- Good inter-sector communication and cooperation between different stakeholders and experts is necessary;

[9] Assumptions are external factors that have the potential to influence (or even determine) the success of a project but lie outside the control of the implementation managers. Such factors are sometimes referred to as risks or assumptions but the Commission requires that all risks shall be expressed as assumptions. Pre-conditions are requirements that must be met before the sector support can start.

- Implementation of the network grid code;
- Approved annual investment plan by AERS and the Government;
- Defined and agreed financial structure and responsibilities between the main stakeholders such as PE Srbijagas EBRD, MEDEP, and EU Delegation for the construction of the Serbian part of the interconnection Serbia- Bulgaria.

Other assumptions depend on types of contract of operation's to be implemented. In relation to technical assistance measures and operations, significant group of stakeholders should be included in the educational and training programmes. Availability and relevant knowledge of experts involved in training activities as well as availability of sufficient number of trainees on beneficiary side should be assured.

Preconditions regarding measures related to investment contract operations such as works and supply, should be set to correspond to national/regional/local planning documents such as spatial plans, project documentation prepared and relevant permits obtained for the implementation of the works, available indicative list of equipment to be procured and technical requirements defined (i.e. for operations 2.1.1. and 2.2.1.)

4. IMPLEMENTATION ISSUES

4.1 INDICATIVE BUDGET

Indicative budget (amounts in EUR) *(for decentralised management)*

SECTOR TITLE *Energy Sector*					**SOURCES OF FUNDING**								
			TOTAL EXPENDITURE	TOTAL PUBLIC EXPENDITURE	IPA CONTRIBUTION		NATIONAL PUBLIC CONTRIBUTION					PRIVATE CONTRIBUTION	
	IB (1)	INV (1)	EUR (a)=(b)+(e)	EUR (b)=(c)+(d)	EUR (c)	% (2)	Total EUR (d)=(x)+(y)+(z)	% (2)	Central EUR (x)	Regional/Local EUR (y)	IFIs EUR (z)	EUR (e)	% (3)
Measure 1.1			**5,900,000**	**5,900,000**	**5,150,000**	*87,3*	**750,000**	12,7					
Operation 1.1.1. ((Capacity building in the field of energy planning- Service contract for MEDEP)	x		1,100,000	1,100,000	1,000,000	*91*	100,000	9					
Operation 1.1.2: (Upgrading of existing cadastre of small Hydropower plants - Service contract for MEDEP	x		1,500,000	1,500,000	1,350,000	*90*	150, 000	10					
Operation 1.1.3 (Support in gas market opening -Supply contract for PE Srbijagas)	x		3,300,000	3,300,000	2,800,000	85	500,000	15					
Measure 2.1.			**66,009,230**	**66,009,230**	**14,269,000**	21,62	**51,740,230**	78,38	**7,300,000**		**44,440,230**		

Operation 2.1.1 (Support construction of Serbian part of gas interconnection Serbia-Bulgaria +Contribution Agreement to EBRD for PE Srbijagas)		x	66,009,230	66,009,230	14,269,000[10]	21,6	51,740,230	78,4	7,300,000		44,440,230		
Measure 2.2.			**7,000,000**	**7,000,000**	**5,980,000**	*85*	**1,020,000**	**15**					
Operation 2.2.1 (Construction of Industrial WWTP in TPP Kostolac B - Works contract for PE EPS)		x	6,300,000	6,300,000	5,350,000	*85*	950,000	15					
Operation 2.2.2: Supervision of construction and commissioning of the new WWTP in TPP Kostolac B- (Service contract for PE EPS –		x	700,000	700,000	630,000	*90*	70,000	10					
TOTAL IB			3,300,000	3,300,000	2,980,000	90,3	320,000	9,7					
TOTAL INV			75,609,230	75,609,230	22,419,000	29,6	53,190,230	70,4	7,300,000		44,440,230		
TOTAL SECTOR SUPPORT			**78,909,230**	**78,909,230**	**25,399,000**	**32,19**	**53,510,230**	**67,81**	7,300,000		44,440,230		

NOTE: DO NOT MIX IB AND INV IN THE SAME OPERATION ROW. USE SEPARATE ROWS

Amounts net of VAT

[10] IPA funds (Contribution Agreement) are exclusively provided to co-finance the works contract for the construction of the pipeline.

(1) In the Operation row, use "X" to identify whether IB or INV

(2) Expressed in % of the **Public** Expenditure (column (b))

(3) Expressed in % of the **Total** Expenditure (column (a))

4.2 INDICATIVE IMPLEMENTATION SCHEDULE (periods broken down per quarter)

Operations	Start of Tendering/ Call(s) for proposals	Signature of contract(s)	Activity Completion
Operation ***1.1.1: (Service)*** *(co-financing by MEDEP)*	T+1Q	T+4Q	T+12Q
Operation ***1.1.2: (Service)*** *(co-financing by MEDEP)*	T+1Q	T+3Q	T+12Q
Operation ***1.1.3:(Supply)*** (co-financing by PE Srbijagas)	T+1Q	T+3Q	T+8Q
Operation ***2.1.1* (*Contribution Agreement with EBRD)***		T+2Q	T+8Q
Operation ***2.2.1.*** (***Works)*** (co-financing by PE EPS) ***:***	T+ 4Q	T+ 7Q	T+14Q
Operation ***2.2.2: (Service)*** (co-financing by PE EPS)	T+1Q	T+2Q	T+18Q

Implementation will be carried out under Decentralised Management mode and its rules and procedures. Regarding measure 2.1, operation 2.1.1 is implemented under centralised management by the European Bank for Reconstruction and Development (EBRD) by joint management with the European Commission.

Partners in the implementation of all the envisaged measures/operations will be the Ministry of Finance and Economy, Ministry of Energy, Development and Environmental Protection, PE EPS and PE Srbijagas.

It is advised that gender equality principles are encouraged throughout implementation process, including drafting of tender documentation, guidelines, detailed description of actions".

4.3 CROSS CUTTING ISSUES

4.3.1 Equal Opportunities and non-discrimination

Based on the fundamental principles of promoting equality and combating discrimination, participation in the SF will be guaranteed on the basis of equal access regardless of sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation. All contractors shall be requested to provide monitoring data recording the participation of men and women in terms of expert inputs (in days), as a proof of equal participation of men and women during the implementation phase. Throughout project implementation, there will be no discrimination on the grounds of health status, race, sex, sexual orientation, mother tongue, religion, political or other opinion, national or social origin, birth or other status. Equal opportunities for all will be ensured during project implementation.

4.3.2 Environment and climate change

The objective of this SF is to help Republic Serbia to achieve compliance with the Environmental

Acquis, as required by the Energy Community Treaty. Thus, this project will directly involve mainstreaming of environmental issues. In addition, detailed environmental impact assessments will be prepared, which are a prerequisite for favourable permits for the site of WWTP.

4.3.3 Minorities and vulnerable groups

The link between energy supply and minorities and vulnerable groups is reflected primarily in the impact on the health and quality of living of Serbia's population. The general tendency is to work simultaneously on minimizing the consequences of energy poverty and promoting activities aimed at its prevention with an ultimate goal of ensuring energy sustainability in the long run.

4.3.4 Civil Society/Stakeholders involvement

Aiming to include Serbian civil sector in the planning of the development assistance, SEIO decided to establish a consultation mechanism with civil society organisations in the end of 2010. The so-called Sector Civil Society Organisation (SECO), where each SECO was to represent one sector, has been established in the following 7 sectors that correspond to the NAD classification: Rule of Law, Public Administration Reform, Civil Society, Media and Cultural Rights, Human Resources Development, Agriculture and Rural Development, Environment and Energy and Competitiveness. During 2012 SECO as representatives of their associated networks participated in development of SIF by taking part in sectoral working group meetings composed of line ministries and other state bodies by providing inputs for identification of the needs and development of sector (gap) analysis.

4.4 SECTOR MONITORING, EVALUATION AND AUDIT

Monitoring of the progress in sector support implementation will be done in accordance with the rules and procedures for monitoring under Decentralized Management (DM), as specified in the DM Decree and DM Manuals of Procedures. Manuals of procedures include detailed procedure for monitoring on different levels (contract, sector support/ project, IPA TAIB Sub-Committees, IPA TAIB Committee, IPA MC), with clear responsibilities and deadlines in the monitoring process. Specifically, it is envisaged that on the spot checks (monitoring visits, verification checks and supervisory checks) will be performed throughout the implementation process by the SPO and CFCU, as part of the contract management activities, while regular monitoring of the implementation will be done through the Steering Committee/s meetings and regular reporting by the Contractor. In addition, IPA monitoring process organized and lead by the NIPAC/ NIPAC TS includes regular meetings of Monitoring Committees on different levels, examining relevant monitoring reports and providing recommendations for ensuring delivery of planned results, as well as follow up of their implementation. With regards to the monitoring of sector support, it is envisaged that responsible SPO submits a Sector Support Monitoring Report to NIPAC twice a year, in a prescribed template. After quality check, NIPAC TS prepares the TAIB Sub-Sector Monitoring Report to be examined by the relevant Sector Monitoring Sub-Committee (SMSC), in this case, SMSC Environment and Energy. Report examined by the SMSC is envisaged to include information on status and progress in implementation of all relevant sector support/ projects in that respective sector. Depending on the issues/ problems identified, conclusions and recommendations of the SMSC may be taken forward to the TAIB MC and ultimately, the IPA MC. Monitoring process envisages participation of various stakeholders such as EC/EUD, NIPAC/ NIPAC TS,

SPO/IPA Unit, CFCU, NF, AA and other institutions and civil society organizations per need.

Evaluation and audit of sector support will be done in accordance with the Decentralized Management rules and procedures, defined in the DM Decree and DM Manuals of procedures. In line with IPA IR, Manuals of procedures envisage responsibility of the national authorities to provide for the IPA Interim evaluation, while other types of evaluation (ex-ante, ex-post, thematic, etc.) may be initiated by national institutions on ad hoc basis and per need. With regards to the audit, procedures on internal controls under decentralized management regulate in detail various types of audit to be performed (internal and external), audit planning, carrying out of audits, following up on audit recommendations and reporting on follow up activities.