

## **PART III. NATIONAL REPORTING GUIDELINES FOR CSD-14/15 THEMATIC AREAS**

### **B. ENERGY**

Government focal point: **Radomir M. Naumov, minister**

Responding ministry/office: **Ministry of Mining and Energy**

#### **Decision-Making: Strategies, policies, programmes and plans, legislation, policy instruments and the regulatory framework; involvement of Major Groups**

The reform process of the Serbian energy sector is focused on:

- **Policy development**, in order to set up short/medium term guidelines for all participators in energy activities. Cornerstone of such policy development is energy demand and supply management, supported by least cost plans for rehabilitation, modernisation, up-grading of old and investing in new energy production capacities, including the financing of technical measures for energy savings and improvements of energy efficiency. The main goals of Energy Policy are increase of overall sector efficiency, security of energy supply, introduction of competition and compliance with relevant stipulations of EU Acquis Communautaire while following principles of sustainable development. The energy policy is pursued through the implementation of the Energy Sector Development Strategy, the Strategy Implementation Program and the Energy Balance
- **Legislative and institutional framework development**, in order to enable viable and efficient energy markets. Both legal and institutional framework are defined by the Energy Law.

Current energy challenges in Serbia:

- High energy consumption in buildings with large share of use of electricity for space heating purposes
- Low energy efficiency in industry with out-dated energy-intensive manufacturing technologies
- Technically deteriorated, energy inefficient and polluting municipal energy supply services
- Low exploitation of the available potential of renewable energy sources
- Unsustainable financial operation of energy supply companies due to energy prices not reflecting actual production costs
- Need for large investments in the energy sector to improve and modernize energy infrastructure
- Need to develop and implement a comprehensive policy designed to improve energy efficiency and the utilisation of renewable energy sources.

- Access to electricity and other energy services, through either grid extension or decentralized energy technologies, in both urban and rural areas, including main programme objectives, impacts and progress;

All electricity users in Serbia in both urban and rural areas (almost 100%) have access to electricity grid.

- Efficient use of energy in the household and commercial sectors through, e.g., introduction of improved cook stoves or liquefied petroleum gas (LPG) for cooking, minimum energy performance standards for appliances and lighting, energy efficient building codes, and metering.

According to the recently approved Energy Development Strategy this is the third priority which should be implemented as of 2007.

- Improved efficiency in energy supply (e.g. energy generation, transmission and distribution).

There are a lot of different projects concerning efficiency improvement in energy generation, transmission and distribution. These issues are treated by Electric Power Industry of Serbia and through National Energy Efficiency Program managed by Ministry of Science and Environmental Protection of the Republic of Serbia.

- Policies to facilitate the transfer of modern energy technologies, such as export promotion policies or establishment of an enabling environment for investments, including their objectives, the types of financing available and other incentives provided to facilitate technology transfer.

INVESTMENT- It is possible to invest in Serbia through acquiring shares or establishing companies, as well as obtaining concessions or concluding BOT deals.

NATIONAL TREATMENT is secured for foreign investments and companies with foreign capital, with the possibility of obtaining preferential treatment if such treatment is envisaged in a concluded international or bilateral treaty between the state of the foreign investor and Serbia.

TRANSFER OF PROFIT- Company has a right to transfer (repatriate) its income derived from foreign investments such as profit or dividends, property, subject of investment, amounts originating from sales of stakes or stock of a company with foreign investment, amounts acquired on the basis of decrease of the basic capital of a company with foreign investment etc.

FREE IMPORT OF GOODS that represent the investment of the foreign investor is allowed

SIMPLIFIED REGISTRATION- the procedure for company registration is simplified by establishment of the Agency for registration and shortened deadline

for deciding upon filed requests. This deadline is 10 days now, and it will be shortened to 5 days as of 01.11.2005.

TAX REGIME- The VAT has been introduced as of 01.01.2005. Serbia has the lowest corporate profit tax in the region.

- Reform or restructuring of the energy sector within the last ten years to improve the functioning of energy markets.
- **The Electrical Power Company of Serbia (EPS)** is since 1992 the national company for generation, transmission and distribution of electrical energy including both the open pit and underground coal mines.

Electric Power Industry, has already been split into two independent entities, by the Government Decree:

- for Transmission (EMS),
- for Electricity Supply (Generation and Distribution) including electricity trade (EPS), while the functional and financial separation are in the progress.

The model for restructuring of our public Oil and Gas Company- NIS is in the final phase of decision-making

- Legal and regulatory frameworks related to overall energy policies that have been adopted.

Parliament of Serbia has adopted Energy Law on July 23,2004. The Energy Law can be used to institute a systematic, dynamic, open and responsive policy-making process. Energy Law will be base to reorganise Serbia's energy sector and integrate it in the European community. One of the most important activities arising from this law is Serbia's full participation on the regional energy market in southeastern Europe, i.e., the Energy Community of South East Europe (ECSEE).

One of the objectives of the new Energy Law is **establishment of the** competition on the energy market based on non-discriminatory principles (Ensuring equal legal status to all subjects at the energy market, open energy market and non-discriminatory access to energy systems and supply networks). In that purpose the founding of the **Regulatory Agency** for the Energy Sector is predicted by Energy Law.

According to the Energy Law there are several long-term objectives:

- secure, quality and reliable supply of energy and energy carriers;
- long-standing and balanced development of energy industries in order to provide the quantities of energy and energy carriers necessary to meet the customer needs;

- stimulation of market competition based on principles of non-discrimination, transparency and stimulation of competitiveness of the economy in the Republic of Serbia;
- creation of conditions for safe and reliable operation and functioning of energy systems;
- provision of conditions for enhancing energy efficiency in the whole chain of energy-related activities and energy consumption;
- creation of transparent, attractive and stable conditions for investments into building, revitalization and upgrading of energy-related facilities and systems, as well as creation of conditions for their connection to energy systems of other countries;
- stimulation of use of renewable energy sources and environment protection;

The recently adopted Serbian Energy Sector Development Strategy provides medium-term Priority Programs of tangible development of energy sub-sectors in accordance with the Serbian energy policy objectives which, besides the basic objectives that are more or less the same as in any other country, include two additional ones. The first one is a specific Technological and Environmental Objective concerning the fully irregular conditions for operation of energy sub-sectors during the past decade, while the second one is a generic long-term developing objective, within the national energy infrastructure and regional strategic objectives concerning the need for integration of our energy infrastructures into the regional and all European energy markets.

Selection of the Priorities in the medium term Serbian Energy Sector Development Strategy is based on a detailed analysis of the Serbian current and future economic activities, current constraints in the capabilities of the energy supply sub-sectors, and the structure of final energy carriers in the energy consumption sectors, including the acceptance of environmental impacts from the existing energy production sources. With respect to the long-term production response from new power plants operated on the domestic lignite, and the demographic and macro-economic assumptions used to derive the future energy demand for two scenarios, a prosperous one and a slowdown of economic and industrial activities up to 2015, five Priority Programs have been selected. For their implementation, measures and instruments are proposed. Assessments of energy demand and energy supply, in both scenarios, are based on the integrated policy for efficient energy production and energy end-use, as well as on the need for cost-effective use of renewable energy sources, respecting the benefits of the entire economy, energy system, and environmental protection.

The selected Priority Programs (table 2) are:

1. Basic Energy Sub-sector-oriented Priority Programs, focused on the continued improvement of technical and operational performance of energy conversion and/or transformation infrastructure systems;
2. Program-oriented Priority, with specific Programs for rational use of energy and improved end-use energy efficiency;
3. Technology-oriented Priorities, with specific Programs for selective use of RES and new, energy- efficient and environmentally acceptable technologies for additional production of electricity and heat in centralized and decentralized power systems;
4. Emergency-oriented Priority, with optional Projects for urgent investment in new electricity and heat production sources, based on gas technologies (CCGT), in order to avoid electricity shortages;
5. The long-term Serbian energy sub-sectors development Priorities, with specific Programs for development of energy supply sectors (with new energy production technologies), and regional strategic and new regional electric power infrastructures (Pump storage hydropower plants and transmission systems), including oil and gas pipeline transportation systems for domestic, regional and all European energy markets.

See the table below.

## DYNAMICS OF SERBIAN ENERGY REFORMS AND PRIORITIES IN COMING YEARS

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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**REFORMS OF THE SERBIAN ENERGY SECTOR : 2004. Energy Law adopted; 2004. Establishing of REA (2004.); Energy sub-sectors reforms: Legal, Functional and Financial separation and Corporatisation of Energy Public Companies ( 2005.); REA Enforces Energy Services and Prices Regulations ( 2006.); Energy Market Design and Operations (2007); Realization of the First, Second and Thrid Priorities Programmes (2012); New Energy Entities Commercialization and partial Privatization (>2012).**

<p><b>First Priority-</b>Improvements of technical and operational performance of energy production systems/units:</p>	<p><b>Programmes for technical and operational improvements of energy conversion/transformation systems:</b></p> <ul style="list-style-type: none"> <li>&gt;Oil sector</li> <li>&gt;Gas sector</li> <li>&gt;Coal sectors</li> <li>&gt;Electric Power Sectors:                             <ul style="list-style-type: none"> <li>▪Generating Units ( TPP,HPP,CHP)</li> <li>▪Transmission system</li> <li>▪Distribution systems</li> </ul> </li> <li>&gt;District Heating Sector/Industrial Energy (Power and Heat) Sources</li> </ul>
<p><b>Second Priority -</b>Rationale energy use and improvements of energy efficiency:</p>	<p><b>Programmes for rationale energy use and improvements of energy efficiency by:</b></p> <ul style="list-style-type: none"> <li>&gt;Replacement of electricity for space heating through numerous local Projects for households gasification in urban/sub-urban areas</li> <li>&gt;Fossil fuels savings by improvements of Boilers efficiency and on this basis connects the new heat consumers on the existing DHS</li> <li>&gt;Reduction of electricity and heat transport/distribution losses, including heat losses in industrial thermal processes/equipements</li> </ul>
<p><b>Third Priority-</b>Selective usages of renewable and a new energy efficient and for environment acceptable production technologies:</p>	<p><b>Programmes for a new RES and New Technology/electrical appliances/devices as follows:</b></p> <ul style="list-style-type: none"> <li>&gt;Selective use of RES (Biomass, Wind, Geothermal/Solar)</li> <li>&gt;Increasing the natural gas utilization by CHP production</li> <li>&gt;Introduction of efficient lighting devices and a new households electrical. appliances</li> <li>&gt;Private investment in small HPP' s</li> </ul>
<p><b>Fourth Priority-</b>Short-term investment in a new power and heat production units, in the case prosperous economy and power deficiency:</p>	<p><b>Programmes/Projects for investment in a new CC Gas Technology and CHPunits:</b></p> <ul style="list-style-type: none"> <li>&gt;Emergency investment in a new 250 MW/220MJ/s CCGT power plant unit, within Electric Power Industry Sectors and possible investment in a series of small /medium size CHP, within municipal/industrial sectors, based on natural gas, for combined electricity and heat production</li> </ul>
<p><b>Fifth Priority-</b>Medium/long-term capital-intensive investment in a new capital energy infrastructures, and participations in planning and investments in a strategic (regional/european) energy infrastructures:</p>	<p><b>Programmes/Projects for medium/long- term intensive investments in a new infrastructures:</b></p> <ul style="list-style-type: none"> <li>&gt;Large TPP' s : Completion of TPP "Kolubara B" or investment a new TPP units on the basis "Kolubara", "Kostolac" or /and KiM lignite, including private investment</li> <li>&gt;Large oil transport infrastructure system (diversification of oil sources and transport lines, with regional connection)</li> <li>&gt;New natural gas supply/storage systems (diversification of oil sources and transport lines, with regional connection)</li> <li>&gt;New strategic electricity production units on "borders" rivers, including investments in a new large pumped storage hydropower plants, for regional/european electricity markets supply, with all modes of investments/owners</li> </ul>

- The use of economic instruments, including pricing and tariff reform.

Privileged power producers shall be entitled to subsidies, tax relief, customs exemptions and other relief in line with laws and other regulations on taxes, customs and other duties, i.e. subsidies and other incentive measures.

- Participation of private companies in the electricity sector, their impact on electricity services and their involvement (e.g. generation; transmission; distribution).

There are two main energy state-owned companies, the Electric Power Utility (JP EPS) and the Oil&Gas Company (NIS).

There are no private companies that are involved in generation (only few small private producers for their own purposes), transmission and distribution of energy. But the legal framework for the private participation in this sector is developed by Energy Law and its future by-laws.

- Major Groups<sup>2</sup> participation in energy decision-making, whether at the national or community level

At the national level the main decision-making organization is Ministry of Mining and Energy of the Republic of Serbia. The responsibilities are defined by new Energy Law.

**Ministry of Mining and Energy (MoME)** is charged by Republic of Serbia with governmental affairs regarding: Electricity Power Sector, Geology and Mining Sector, Oil and Gas Sector, General Energy Sector (Communal energetic/ Municipality), Energy Balance of Republic of Serbia, provision of conditions for the operation of Public Enterprises under its jurisdiction. Ministry of Energy and Mining is in charge of Governmental energy policy making, preparation and adoption of energy legislation, secondary legislation and regulation.

The **Serbian Energy Efficiency Agency (SEEA)** is a national non-profit organization founded in May 2002 by the Government of the Republic of Serbia on behalf on financial support of EAR. The Serbian Energy Efficiency Agency develops and proposes programmes and measures, co-ordinates and stimulates activities intended to achieve rational use and saving of energy, as well as increase in efficiency of energy use in all sectors of consumption; collects data on energy consumption; proposes measures for obtaining financial resources and for technical assistance, including monitoring; proposes financial support and priority projects and monitors results following implementation of projects; in co-ordination with relevant Ministries, co-operates with similar international, foreign and local institutions and performs other activities at the request of the Government of the Republic of Serbia.

- Women's participation in needs assessments or planning and policy formulation related to energy at the local and/or national levels; other means.

In Ministry of Mining and Energy there are a lot of women employed and they are all working on policy making in different areas. It is the same situation on all institutional levels.

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<sup>2</sup> Major Group consists of: Women; Business and industry; Local authorities; NGOs; Children & Youth; Indigenous People; Workers & Trade Unions; Scientific & Technical Communities; and Farmers.

- Programmes designed to increase the share of renewable energy in the national energy supply mix, including information on their goals and targets.

According to the Energy sector development strategy a development of programme for Renewable energy sources is foreseen.

In order to stimulate wider use of Renewable Energy Sources, the New Energy Law recognized the category of privileged power producers, which in their electrical power generation process use renewable energy sources or waste, those who generate electrical power in small electric -power plants (up to 10MW), as well as those who simultaneously generate electrical power and heat, if they meet energy efficiency criteria.

Privileged power producers shall be entitled to subsidies, tax relief, customs exemptions and other relief in line with laws and other regulations on taxes, customs and other duties, i.e. subsidies and other incentive measures.

Currently, the working group of the Ministry is established for the purpose of development of the secondary legislation which will define criteria for obtaining status of Privileged power producers.

Through the CARDS programe 2002 Energy Efficiency Agency was granted a Donation for the implementation of projects in order to stimulate energy efficiency and wider use of renewable energy sources. 200.000 € is assigned to promotion of RES for demonstration programmes, development of a few studies and organization of seminars.

- Measures and programmes adopted to improve fuel efficiency for transport vehicles. Such as vehicle fuel efficiency standards; vehicle inspection and maintenance programmes; introduction of cleaner fuels; any other.

There are no measures and programs that are adopted to improve fuel efficiency for transport of vehicles and introduction of cleaner fuels but it is planned for those programs to be prepared because of low fuel quality and emissions to air.

- Existence of nuclear energy programme and information on nuclear materials transported within or across national boundaries; national programmes that ensure nuclear safety; arrangements in place for public review and hearings.

There is no nuclear energy program. Law on prohibition of Construction of Nuclear Power Plants was enforced a decade ago and is still valid. There is only one small nuclear-research laboratory based in Vinca near Belgrade.

### **Capacity-Building, Information and Research & Technologies**

- Efforts to establish new, or strengthen or reform existing national and local institutions responsible for national programmes on energy for sustainable development.

The Energy Law introduces into the Energy sector the key institutions for future operation of energy sector such as:

- **Energy Regulatory Agency** - an independent, non-profit organization with jurisdiction in Electricity, Oil and Gas and District Heating Sub-sectors. **Main duties of the ERA are enhancing and directing the energy market development, price regulation, licensing, compliance monitoring, dispute settlement etc**

- **Energy Efficiency Agency - special organization for carrying out professional activities of improving conditions and measures for energy and energy sources rational use and saving, as well as increasing efficiency of energy use within all sectors of energy consumption**
- **TSMO – Transmission and Market System Operator**
- **The Law will result in the restructuring of public energy companies and is for the first time enabling non discriminatory participation of Individual Power Producers in the Serbian energy market.**
- Training or other capacity-building activities undertaken to strengthen energy planning, management of energy efficiency or development of new and renewable sources of energy.

Energy Efficiency Agency has undertaken several trainings in this area:

- Training on energy management in Municipalities
- Training on energy management and energy auditing in Industry
- Demo project – Development of Energy Plans for three Municipalities
- Seminar on use of Biomass was held in April 2005
- Launching of public information campaigns and educational programmes to raise awareness of energy efficiency and environmentally sound energy systems.

Motivational and educational advertisements are used to educate consumers on energy and environment related issues.

Public information campaigns and educational programs are organized by Serbian Energy Efficiency Agency in several different sectors like industry, residential & commercial and transportation sector.

- Networking between centers of excellence on energy for sustainable development that has enhanced information sharing, capacity-building and technology transfer.

Concerning the sustainable development issues in the field of energy there is only Network dealing with the Energy Efficiency issues.

- Internet websites related specifically to the issues contained in these Energy Guidelines, provide homepage addresses (URL).

All events and news are presented on web page (including methods, legislation –Energy Law and Energy Strategy, etc; projects, programmes and forums) regarding the energy.

[www.memsr.gov.yu](http://www.memsr.gov.yu)

[www.seea.sr.gov.yu](http://www.seea.sr.gov.yu)

- Efforts to promote increased research and development of various energy technologies: renewable energy; energy efficiency; advanced energy technologies, including cleaner fossil fuel technologies; any other.

There are a lot of different projects concerning research and development of renewable energy, energy efficiency, advanced energy technologies, cleaner fossil fuels, etc. These issues are treated by National Energy Efficiency Program managed by Ministry of Science and Environmental Protection of the Republic of Serbia, and few different faculties and research institutes.

## **Financing**

- Specific measures taken to establish an appropriate enabling environment conducive to attracting investments in the energy sector: pricing/subsidy reform; fiscal and financial incentives; power purchase agreements; other arrangements.

Those are ongoing activities according to the Energy Law.

## **Cooperation**

- Cooperation with neighbouring countries in energy trade and/or interconnection of electricity or gas networks, including through transnational pipelines; nature of such cooperation.

Seven high voltage overhead transmission lines connecting Serbia with neighbouring countries enabling trade in electricity (3500 GWh). There are two others connections under considerations: Nis-Skoplje and Sombor-Pacs (Hungary). One main gas pipeline coming from Hungary (2,5 bcm input from Hungary). Also, Serbian and Bulgarian Governemnt signed MoU regarding necessity to connect gas pipeline systems of Bulgaria and Serbia.

Due to the damage of 400 kV substations Ernestinovo (Croatia) and Mostar (Bosnia), the power system of Serbia remained disconnected from UCTE since 1992, but is still interconnected to all neighbouring countries, owing to its central position in the Balkans. Thus, the Serbian power electricity system is operating in parallel, synchronous modes with power systems of Romania, Bulgaria, Macedonia, Albania, Republic of Srpska /BiH and Greece. Electricity supply from Hungary are realized through so called "island" operation (Vojvodina becomes a part of power system of Hungary).