



Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS

MINISTER
Zorana Mihajlović, Ph. D. Professor

Belgrade, December 14, 2012





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENERGY POLICY

- Energy Law
- Law on Rational Use of Energy (in the procedure for adoption)
- Energy Strategy
- Program for the Implementation of Energy Strategy
- Energy Community Treaty
- Action plan for RES
- Action plan for energy efficiency





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

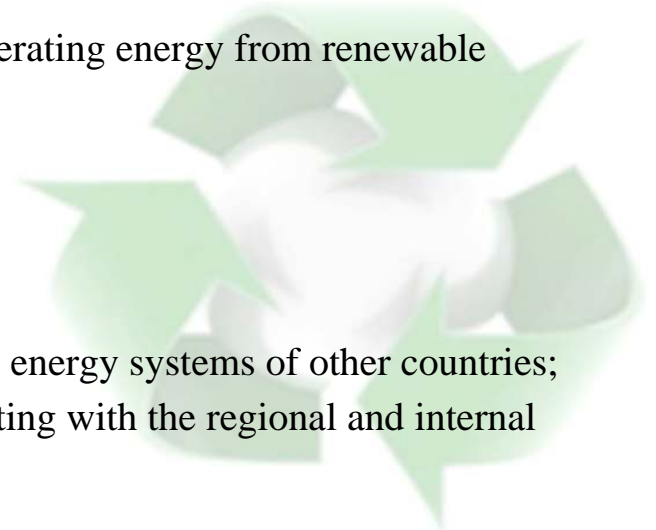
PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENERGY POLICY

ENERGY LAW (OFFICIAL GAZETTE No 57/2011, article 3),

Energy policy objectives:

- Reliable, safe and quality supply of energy and energy sources;
- Creating conditions for the safe and reliable energy systems operation and sustainable development;
- Energy market competition based on the principles of non-discrimination, publicity and transparency;
- Providing conditions for promoting energy efficiency in carrying out energy activities and energy consumption;
- Creating economic, commercial and financial conditions for generating energy from renewable energy sources and combined heat and electricity generation;
- Creating conditions for use of new energy sources;
- Promoting environmental protection in all energy related areas;
- Creating conditions for investments into the energy sector;
- Energy and energy sources' customers protection;
- Connecting the energy system of the Republic of Serbia with the energy systems of other countries;
- Electricity and natural gas market development and their connecting with the regional and internal market of the EU.





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

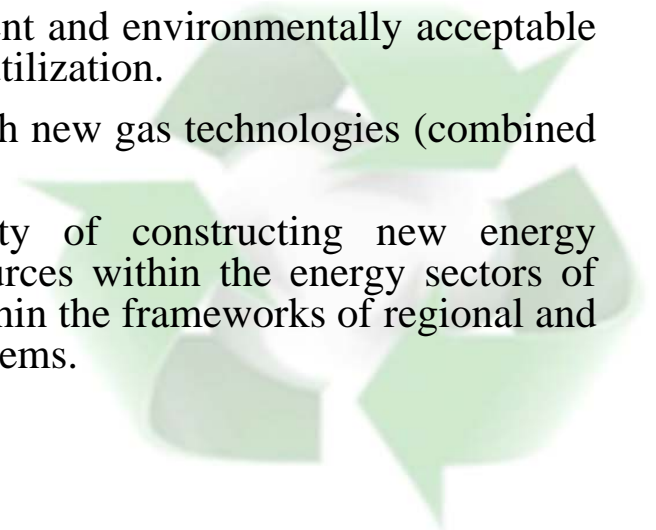
PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENERGY POLICY

ENERGY SECTOR DEVELOPMENT STRATEGY OF THE REPUBLIC OF SERBIA BY 2015, OFFICIAL GAZETTE No 44/05:

Priorities:

- Economical use of quality energy products and increase in the energy efficiency in the production, distribution and utilization of energy by end consumers of energy-related services.
- Use renewable energy sources and new, more energy efficient and environmentally acceptable energy technologies and installations/equipment for energy utilization.
- Extraordinary/urgent investments in new power sources, with new gas technologies (combined gas-steam thermal energy installations).
- Long-term developmental and regional strategic priority of constructing new energy infrastructure facilities and electric and thermal power sources within the energy sectors of Serbia, as well as capital-intensive energy infrastructure, within the frameworks of regional and pan-European infrastructure systems connected with our systems.





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENERGY POLICY

ENERGY COMMUNITY TREATY:

- Harmonization with the EU practice and regulations.
- Increase renewable energy share of gross final energy consumption (GFEC) – 27% share of RES in GFEC in 2020.
- Increase efficient use of energy by achieving a minimum 9% energy savings target by 2018.

ENERGY STRATEGY OF THE ENERGY COMMUNITY, MINISTERIAL COUNCIL, OCTOBER 2012 (INITIATED BY SERBIA):

Three main objectives:

- Creating a competitive integrated energy market
- Attracting investments in energy
- Providing secure and sustainable energy supply to customers

NEW SERBIAN ENERGY SECTOR DEVELOPMENT STRATEGY WITH THE PROJECTIONS UP TO 2030 (UNDER PREPARATION) WILL BE BASED ON:

- Energy market development.
- Security of supply.
- Sustainable development.
- New energy capacities with new more efficient technologies.





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENVIRONMENTAL POLICY

GENERAL POLICY FRAMEWORK: National Sustainable Development Strategy (2008), National Program of Environmental Protection (2010), National Strategy for Sustainable Use of Natural Resources and Goods, Environmental Approximation Strategy with sectorial approximation strategies (2011);

SPECIFIC (SECTORIAL) POLICY FRAMEWORK: National Biodiversity Strategy, Initial National Communication of Serbia to the UNFCCC, Water Management Master Plan of Serbia (to be replaced with Water Management Strategy in 2013) Waste Management Strategy, National Cleaner Production Strategy.

ENVIRONMENTAL APPROXIMATION STRATEGY (EAS)

- Set the framework for future approximation process;
- Provided cost assessment analysis of approximation process and set the basis for future planning activities;
- Identified main economic challenges in environmental sector: required investments, operational costs, administrative costs;
- Assessed date of accession to the EU – 1 January 2019.

Assessed costs of implementing the environmental *Acquis* - 10 billion EUR;

Implementation of 6 Heavy investment directives - almost 83% of the total cost of approximation (8.7 billion EUR)





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

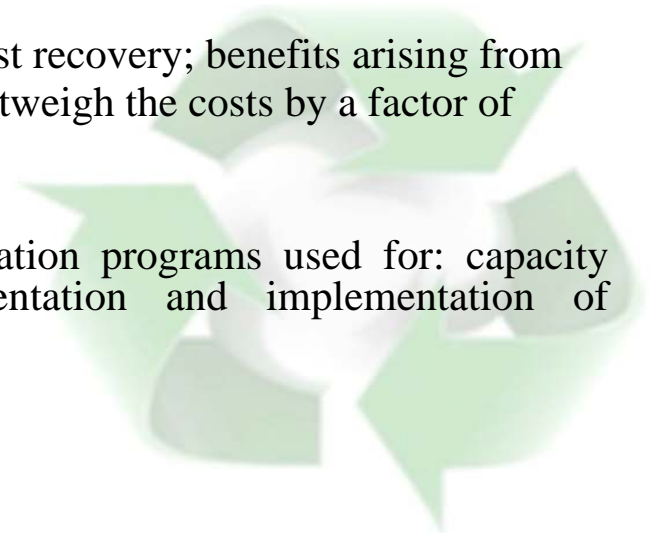
PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENVIRONMENTAL POLICY

FINANCING THE EU APPROXIMATION PROCESS:

- EU grants, loans (estimated at 22% of inv.cost), Industry/commercial direct investments and private investors- (estimated at 6.9% of inv. cost), public sector (central budget, local self-government budgets, other public sector institutions: SEPA, National Investment Plan (NIP), economic instruments etc.)
- Budgetary expenditures: maximum by 2018, by 2025 full cost recovery; benefits arising from environmental compliance between now and 2030 should outweigh the costs by a factor of approximately 2.4 (source: EAS).

Assistance received through EU-IPA and bilateral cooperation programs used for: capacity building, technical assistance, preparation of documentation and implementation of infrastructure projects.





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENVIRONMENTAL POLICY

NATURE PROTECTION SECTOR PRIORITIES:

- Implementation of NATURA 2000 (mapping of sites of EU interest and listing of species to be protected).
- Increase percentage of protected territory up to 15% (increase No. of Emerald sites);
- Improving implementation of CITES.
- providing framework for full implementation of Birds and Habitat directives.

Approximation costs: €139 million (1.3% of the total cost)

AIR QUALITY AND CLIMATE CHANGE SECTOR PRIORITIES:

- Establishment of institutional and legal basis for emission trading system based on the EU Emissions Trading Directive (target year: 2016).
- Development of the National Climate Change Strategy and Action Plan and supporting structure, including economy-wide MRV (assessed target year: 2017).
- Preparation of the Second National Communication (commenced and to be finalized in 2015).
- Air Quality management system in line with EU requirements is established in the Republic of Serbia.
- Pilot air quality plans for Belgrade, Novi Sad and Bor are developed (Twinning Project) - basis for introduction and prioritisation of measures for Air Quality improvement.

Approximation costs: €452 million (6% of total approximation costs).



Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS:

ENVIRONMENTAL POLICY

CHEMICAL SECTOR PRIORITIES: Further alignment with relevant EU acquis (Decree on Biocide Products), improvement of control and surveillance system in this area, strengthening capacities for implementation of Laws and by-laws, including development of guidelines etc.

Approximation costs: €105 million (around 10% of total approximation costs).

IPC AND NOISE PROTECTION SECTOR PRIORITIES:

- Implementation of IPA 2011 project Law enforcement in the field of industrial pollution control, prevention of chemical accidents and establishment of the EMAS system in Serbia (supporting implementation of IPPC directives, SEVESO, EMAS system, IED);
- Integrated permitting process for industry will be intensified in the forthcoming period;
- Noise: Training competent authorities on the implementation and execution of the Environmental Noise Directive. Established Working group for Strategic Noise Mapping will continue on the implementation of the Directive.

Approximation costs: €1,540 million (15% of the total environmental approximation).

WASTE MANAGEMENT SECTOR PRIORITIES: Development of Plan for biodegradable waste management, and Implementation of National Plans for specific waste streams;

- Preparations for the establishment of a Hazardous Waste Management Facility;
- Construction of regional waste management centers;
- long-term goal- 2020 to achieve adequate waste management services to more than 90% of Population (according to the Strategy);

Approximation costs: €2.7 billion (around 25 % of the total approximation)



Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS

KEY DOCUMENTS, OBJECTIVES, PRIORITIES



ACTIVITIES TO MEET THE OBJECTIVES



LEGAL, ECONOMIC, INSTITUTIONAL MEASURES,

INVESTMENTS IN ENERGY INFRASTRUCTURE AND ENVIRONMENT



LIST OF PROJECTS WITH THE AIM :

**"FINDING" A STRATEGIC PARTNER FOR THE CONSTRUCTION AND USE OF NEW
CAPITAL AND STRATEGIC ENERGY FACILITIES AND ENVIRONMENTAL ISSUES**

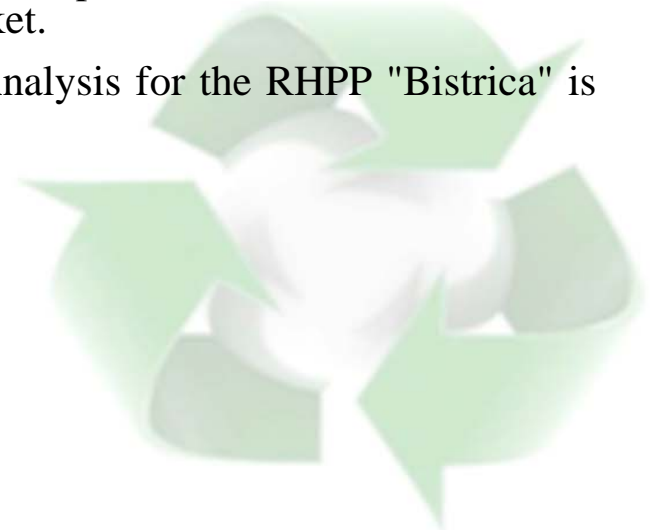




Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

REVERSIBLE HYDRO POWER PLANT “BISTRICA”

- **BENEFICIARY: PE EPS**
- **LEGAL GROUND:** Memorandum of Understanding and Cooperation between the former Ministry of Infrastructure and Energy of RS and the Federal Ministry of Transport, Innovation and Technology of Austria, PE EPS and the Consortium SNC Lavalin International INC and CNPE
- **PROJECT SIGNIFICANCE:** The project is of STRATEGIC importance. One of the most attractive new hydropower facilities is reversible hydro power plant "Bistrica", with power of 680 MW, near the existing HPP "Bistrica". The energetic importance and the role of this RHPP are particularly important in the regional energy market.
- **PROJECT STATUS:** The finalization of the Feasibility Analysis for the RHPP "Bistrica" is in process.
- **VALUE OF THE INVESTMENT:** 600.000.000 €
- **COMMENCEMENT OF PROJECT:** 2015
- **COMPLETION OF PROJECT:** 2020
- **SOURCE OF FINANCING:** Searching for





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

THERMAL POWER PLANT “NIKOLA TESLA” (TENT) B3

- **PROJECT LEADER: PE EPS**
- **LEGAL GROUND:** Protocols on cooperation with RWE, Chinese Consortium
- **PROJECT SIGNIFICANCE:** The project is of STRATEGIC importance. Electricity production in thermal power plants is based on combustion of lignite from the surface mines of Kolubara-Tamnava coal basin. In order to further develop and construct thermal units on this location, there is a need for the analysis of opportunities and feasibility of continuing the constructions on the existing location “Vorbis”, by building modernly designed building blocks of total capacity of 700 MW, with respect to all environmental protection measures.
- **VALUE OF THE INVESTMENT:** 1.500.000.000 €
- **COMMENCEMENT OF PROJECT:** 2014
- **COMPLETION OF PROJECT:** 2018-2019
- **SOURCE OF FINANCING:** The funds are not provided, and the manner of realization is independently/strategic partner.





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

INTERCONNECTIVITY POWER LINES 2X400 kV B. BASTA (SERBIA) - PLJEVLJA (MONTENEGRO) - VISEGRAD (BOSNIA AND HERZEGOVINA)+ POWER LINE 2X400 kV OBRENOVAC – B. BASTA

- **PROJECT LEADER:** PE EMS
- **LEGAL GROUND:** The Law on Energy, The Rules of Procedure of the transmission system, the Treaty on establishing the Energy Community
- **PROJECT SIGNIFICANCE:** The project is of **STRATEGIC** importance. Regional connections in particular of the Southeastern Europe countries are of great importance not only for the countries that belong to this region, but also for the EU countries. Strengthening the energy system of the region is a good basis for accession of these countries to the EU, so this project is significant in several areas as a regional and strategic project.
- **VALUE OF THE INVESTMENT:** 65.000.000 €
- **COMMENCEMENT OF PROJECT:** 2015
- **COPLETION OF PROJECT:** 2018
- **SOURCE OF FINANCING:** Searching for





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

GAS PIPELINE- PROJECT SOUTH STREAM, SRBIJAGAS INVESTMENTS IN THE GAS PIPELINE CONSTRUCTION

- **PROJECT LEADER: PE SRBIJAGAS**
- **LEGAL GROUND:** Law on Ratification of the Agreement between the Government of the Republic of Serbia and the Government of the Russian Federation on cooperation in the oil and gas industry.
- **PROJECT SIGNIFICANCE:** The project is of NATIONAL importance. Providing energy security of the Republic of Serbia; becoming status of energy transit country; reduction in payment of the current transit expenses of the gas price. Creating conditions for the significant development of gas, chemical and other industries.
- **VALUE OF THE INVESTMENT:** 1,700,000,000 €
- **COMMENCEMENT OF PROJECT:** 2012
- **COMPLETION OF PROJECT:** 2017
- **SOURCE OF FINANCING:** GASPROM / Company funds, project financing





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

UNDERGROUND GAS STORAGE ITEBEJ

- **PROJECT LEADER: PE SRBIJAGAS**
- **LEGAL GROUND:** Requests of the EU, through Directives and the Treaty on establishing the Energy Community
- **PROJECT SIGNIFICANCE:** The project is of NATIONAL importance. Underground storage "Itebej" would serve for storing strategic reserves of gas of the Republic of Serbia (about 50% of capacity) and storage of commercial quantities of gas (about 50% of capacity). In that case, the Republic of Serbia would be able to store 30% of its annual needs as strategic reserves
- **VALUE OF THE INVESTMENT:** 75,000,000 €
- **COMMENCEMENT OF PROJECT:** 2013
- **COMPLETION OF PROJECT:** 2017
- **SOURCE OF FINANCING:** EBRD loan / Company funds

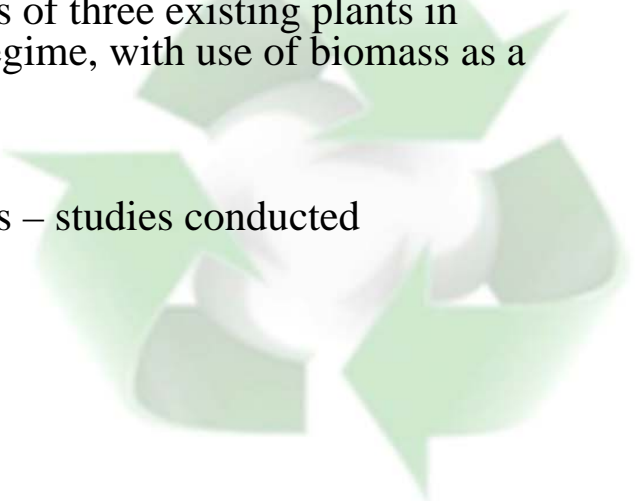




Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROJECT OF CONSTRUCTION OF MVP PLANTS – GAS OR BIOMASS DRIVE OPTION IN RUMA, KRUSEVAC, PANCEVO

- **PROJECT LEADER: MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION**
- **LEGAL GROUND:** Construction of MVP plant is defined in the Energy Development Strategy of the Republic of Serbia. From the energy efficiency aspect cogeneration represents one of priorities.
- **PROJECT SIGNIFICANCE:** Project is of a LOCAL importance. Combined production of heat and electric energy is set as an imperative when it comes to increase of total energy efficiency of the plant. Project IPA from 2010 defined the project of Renewable resources and energy efficiency promotion, which purpose was the analysis of three existing plants in Krusevac, Pancevo and Ruma and their transition to MVP regime, with use of biomass as a fuel, that is installation of gas engine.
- **VALUE OF THE INVESTMENT:** 1.4 -7.8 -8.3 million €
- **COMMENCEMENT OF PROJECT:** Planned investments – studies conducted
- **SOURCE OF FINANCING:** Not defined

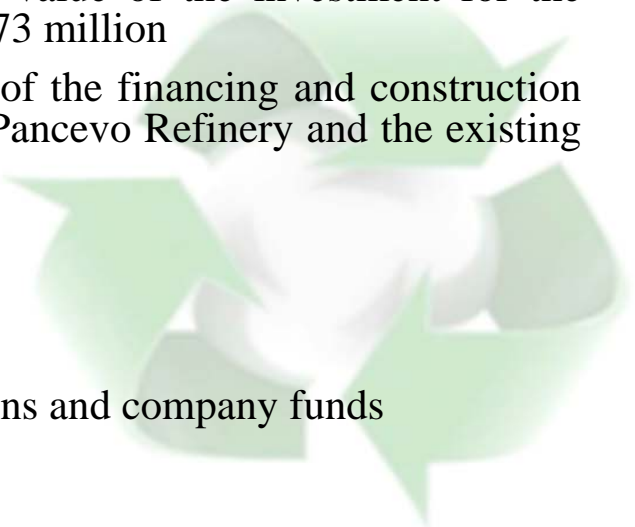




Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PETROLEUM PRODUCTS PIPELINE SYSTEM THROUGH SERBIA - CONSTRUCTION OF THE SECTIONS PANCEVO- SMEDEREVO AND PANCEVO-NOVI SAD

- **PROJECT LEADER: PE TRANSNAFTA**
- **LEGAL GROUND:** Energy Development Strategy of the Republic of Serbia until 2015, The Development Plan of the PE Transnafta Pancevo for the period 2010-2014
- **PROJECT SIGNIFICANCE:** The project is of NATIONAL importance. The basic idea is that from the Pancevo oil refinery through the petroleum products pipeline system, the regional market of Republic of Serbia will be supplied. The system would be built in phases according to the following sections: Pancevo-Smederevo and Pancevo-Novı Sad in the first phase, Smederevo-Jagodina-Nis in the second, and the section Novi Sad-Sombor and a separate line Pancevo-Belgrade as optional in the third phase. Estimated value of the investment for the implementation of all three phases of the project amounts to 173 million
- **PROJECT STATUS:** The activities for the implementation of the financing and construction of Phase I: Building petroleum products pipeline connecting Pancevo Refinery and the existing storage reservoirs in Smederevo and Novi Sad are in progress.
- **VALUE OF THE INVESTMENT:** 32.800.000 €
- **COMMENCEMENT OF PROJECT:** 2014
- **COMPLETION OF PROJECT:** 2015
- **SOURCE OF FINANCING:** International financial institutions and company funds





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROJECT ON USE OF GEOTHERMAL ENERGY – BOGATIC, MATARUSKA BANJA, VRBAS

- **PROJECT LEADER: MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION**
- **LEGAL GROUND:** Geothermal energy has defined significance in the Energy Development Strategy of the Republic of Serbia and National Renewable Energy Action Plan.
- **PROJECT SIGNIFICANCE:** Project is of a LOCAL importance. Serbia has great potential in geothermal energy of warm waters that can be exploited at depths up to 400 m, where the heat of the water at the bore holes can be up to 75°C in the area of Bogatic municipality, and up to temperatures around 150°C at depths of approximately 2.000 m in the area of Vranjska banja. Areas in Vojvodina, especially Kupisina, Adorjan-Novı Knezevac and Banatsko Arandjelovo-Vrbica are also interesting.
- **VALUE OF THE INVESTMENT:** 4 – 3.2 – 22.1 million €
- **COMMENCEMENT OF PROJECT:** Planned investments – studies conducted
- **COMPLETION OF PROJECT:**
- **SOURCE OF FINANCING:** Private investors and public and private partnership





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROJECT OF CONSTRUCTION OF REGIONAL CENTRE FOR WASTE MANAGEMENT FOR THE REGION OF NIS

- **PROJECT LEADER: CITY OF NIS AND MUNICIPALITIES FORMING THE REGION**
- **STRATEGIC AND LEGAL GROUND:** Strategy of Waste Management, Law on Waste Management
- **PROJECT SIGNIFICANCE:** Decrease in environmental pollution, consolidation with EU directives referring to waste management, economic and social benefits from building of infrastructure
- **PROJECT RISK:** Founding of regional enterprise, location permit and participation of municipalities in the financing
- **VALUE OF THE INVESTMENT:** 23.500.000 €
- **COMMENCEMENT OF PROJECT:** 2013
- **COMPLETION OF PROJECT:** 2018
- **SOURCE OF FINANCING:** not defined





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

TREATMENT OF WASTE SURFACE WATERS FROM THE SOUTH AREA OF THE COPPER MINE MAJDANPEK

- **PROJECT LEADER: COPPER MINE MAJDANPEK**
- **STRATEGIC AND LEGAL GROUND:** National Plan of Environmental Protection
- **PROJECT SIGNIFICANCE:** Solving the problem of industrial waste waters containing high level of toxic metals, which were, so far, discharged into river Pek
- **PROJECT RISK:** Duration of period for obtaining permits
- **VALUE OF THE INVESTMENT:** 15.000.000 €
- **COMMENCEMENT OF PROJECT:** 2013
- **COMPLETION OF PROJECT:** 2014
- **SOURCE OF FINANCING:** Not defined





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

CLEANING AND REMEDIATION OF SLUDGE FROM THE LAKE PALIC

- **PROJECT LEADER: PARK PALIC D.O.O.**
- **STRATEGIC AND LEGAL GROUND:** National Program of Environmental Protection, Waste Management Strategy
- **PROJECT SIGNIFICANCE:** Solving the environmental issues, improvement of tourism
- **PROJECT RISK:** Method of extracted sludge treatment
- **VALUE OF THE INVESTMENT:** 25.200.000 €
- **COMMENCEMENT OF PROJECT:** 2013
- **COMPLETION OF PROJECT:** 2017
- **SOURCE OF FINANCING:** not defined





Republic of Serbia
MINISTRY OF ENERGY, DEVELOPMENT
AND ENVIRONMENTAL PROTECTION

PROMOTION OF MINISTRY OF ENERGY, DEVELOPMENT AND ENVIRONMENTAL PROTECTION PROJECTS

INFORMATION CONTACT :

projekti@merz.gov.rs

projects@merz.gov.rs

www.merz.gov.rs

