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TPP "PLJEVLJA" AND THE COALMINE PLJEVLJA – VISION OF FUTURE

Energy Conference
Kolašin, Montenegro, July 11th 2008
Coal reserves in Montenegro

- Coal reserves – in Pljevlja basin and Berane area
- Exploitation reserves in **Pljevlja area**:
  - in Pljevlja basin ~ 71.5 mill. t
  - in Maoče basin ~ 113 mill. t
  - total reserves in Pljevlja area 184.5 mill. t
- Average thermal value of coal from Pljevlja basin ~10.4 MJ/kg
- Average thermal value of coal from Maoče basin ~ 12.3 MJ/kg
- Characteristics of lignite from Pljevlja – extremely **low sulphur content** (below 1%) and relatively **low content of ashes and moisture**

- In **Berane area**:
  - geological reserves ~ 158 mill. t
  - exploitation reserves ~ 18.5 mill. t (estimate, due to insufficient research)
  - average thermal value of coal 13.68 MJ/kg
Use of coal – Energy Development Strategy

- Energy Development Strategy of Montenegro by 2025 envisages use of coal from Pljevlja area for *generation of electrical and thermal energy*
- **Construction of Block II of TPP "Pljevlja“ – project of a high priority**
- The Strategy envisages commissioning of TPP Pljevlja 2 in 2011
- **Coal reserves** in Pljevlja coal basin with its gravitating basins *sufficient to supply TPP Pljevlja 1 and TPP Pljevlja 2*
- Annual coal consumption for both blocks 2.5 – 2.8 mill. t
- The Strategy envisages *heating system for Pljevlja*
- According to the Strategy, *investments* by 2025 in TPP Pljevlja 2, the Coalmine Pljevlja and heating system for Pljevlja - **274 million €**
- The Strategy envisages *possible construction of TPP Berane*, ~100 MW capacity
- **Additional researched** are in progress as well as defining a level of exploitation reserves of the Brown coal mine Berane
Rudnik uglja AD Pljevlja

- Coal mine in Pljevlja area is managed by the company Rudnik uglja AD Pljevlja, with ~ **68.9% shares privately owned and ~ 31.1% state-owned shares.**
- Rudnik uglja – the company established in 1952
- First quantities of coal produced in the beginning of the ’80s
- Until 2006 ~ 53 million t of coal dug and ~ 128 mill. m³ of overburden removed.
- Coal mine **is the biggest company** on the territory of Pljevlja town, with **extremely important role for operation of the energy sector** of Montenegro.
Thermal power plant "Pljevlja"

- TPP "Pljevlja" designed as 2x210MW.
- First Block of TPP "Pljevlja" 210 MW commissioned in 1982
- During construction of the first block even more than 30% of joint facilities and infrastructure built for the second block of TPP.
- Since 1986 TPP "Pljevlja" operates as a part of EPCG.
- Since 31.03.2008, TPP "Pljevlja" a part of “Generation“Ltd.
- Possible annual electricity generation in TPP "Pljevlja" – 1,839.6 GWh
- Maximum generation of 1,367.8 GWh achieved in 1984
- Low generation levels in TPP "Pljevlja" over the last years result from inadequate coal supply by the Rudnika uglja AD Pljevlja.
Privatisation activities for Rudnik uglja AD Pljevlja and TPP "Pljevlja“ (I)

- On EPCG General meeting in December 2004 a Decision was made on initiation of privatisation procedure for TPP Pljevlja, through EPCG asset sale.
- Development and Privatisation Strategy for EPCG and Rudnik uglja AD Pljevlja, prepared in May 2005 by the Consulting company IPA Energy Consulting, suggested that state-owned shares in the Coalmine, should be sold simultaneously with the sale of TPP "Pljevlja".
- 2 Tenders for sale of TPP "Pljevlja" as a part of EPCG assets, together with sale of 31.1% of state-owned shares of Rudnik uglja AD Pljevlja, to a single buyer were published.
Privatisation objectives for TPP "Pljevlja" and Rudnika uglja

- Development and more efficient operation of TPP "Pljevlja" and the Coalmine
- Increased electricity generation through construction of the second block of TPP "Pljevlja"
- Investments into modernisation of TPP "Pljevlja" and the Coalmine
- Securing investment funds for the Electric Power System
- Solution for environmental issues
- Improved living standards for employees in the Coalmine
- Implementation of the heating system Project for Pljevlja town
- Faster economic development of the town Pljevlja
Privatisation activities for Rudnik uglja AD Pljevlja and TPP "Pljevlja“ (II)

- The first Tender published on 30.05.2005, and in October same year it was pronounced as unsuccessful.
- Second Tender for sale of TPP "Pljevlja" as a part of EPCG assets and 31.1% of shares in Rudnik uglja AD Pljevlja published on 16.12.2005
- The following companies participated in these Tenders:
  - ENEL Spa-Italija
  - Verbund AG–Austrija
  - Prisma Energy Ltd
  - ABS doo Holdings
  - ČEZ, a.s., Češka
  - EN+ Group Limited, Jersey Island
  - Belon JSC
  - Contour Global LLC, SAD
  - EnBW, Nemačka
  - Holding Slovenske Elektrarne
  - Javno preduzeće za energetiku (PPC), Grčka
  - Ost Elektra, Nemačka
Privatisation activities for Rudnik uglja AD Pljevlja and TPP "Pljevlja“ (II)

- Bids from 3 companies received on the second Tender:
  - Holding Slovenske Elektrarne, Belon and EN+ Group Limited.
- With the first ranked Bidder – the company EN + Group Limited, Contract negotiations conducted
- The Contracts were foreseeing:
  - obligation to build the Block II of TPP, 225 MW capacity, by the end of 2011;
  - obligation to invest and build primary heating system;
  - investments into existing block of TPP higher than the one proposed in Bid;
  - electricity supply from the Thermal power plant to KAP and other.
- GoM decided on June 12th 2007 to terminate privatisation process for TPP Pljevlja and 31.1% of shares in Rudnik uglja AD Pljevlja.
Activities following termination of privatisation process for TPP Pljevlja and the Coalmine

- In December 2007, GoM obliged EPCG to submit programs and plans for capital increase and to prepare documents for the project of construction of the second block of TPP Pljevlja, based on Joint Venture principle.
- In March 2008, GoM obliged EPCG to ensure that all necessary preconditions exist for Joint Venture for construction of TPP Pljevlja II and to begin with implementation of this Project.
- EPCG General Meeting on 31.03.2008 made a Decision to initiate a procedure for creating conditions for construction of new and rehabilitation of existing energy facilities, where the main financing models for those activities are as follows:
  - EPCG capital increase through new emission of shares;
  - Public Private Partnership model, which implies selection of a strategic investor (primarily for construction of the second block of TPP Pljevlja);
  - Preferential commercial association
- Privatisation Council made a decision on 09.07.2008 to initiate process of EPCG capital increase and it established the Tender Committee for implementation and monitoring of capital increase process.
Public Private Partnership model

- EPCG Board of Directors decided for a Public Private Partnership model for selection of a strategic partner for construction of a second block of TPP Pljevlja, as a priority new electricity source.
- EPCG’s investment into this energy facility would be the existing infrastructure in TPP Pljevlja and the Coalmine Pljevlja, and a strategic partner would secure funds for construction of the second block of TPP Pljevlja.
- In this way a single complex would be established, integrating the existing and newly constructed block of the Thermal Power Plant and the Coalmine, as essential part of this electric power complex.
- Initiative of EPCG Board of Directors was supported by the GoM and on their session from March 6th 2008 made conclusions concerning initiation of capital increase procedure and securing all necessary preconditions for joint venture for construction of the second block of TPP Pljevlja.
- Public Invitation for open public procurement procedure for selection of the best bid for preparation of Preliminary Design and Feasibility Study for construction of TPP "Pljevlja II" was published.
Activities implemented in TPP “Pljevlja” and the Coalmine

- In the period from 18.05. till 10.09.2007 general overhaul was implemented in the Thermal power plant as well as reconstruction of boiler unit.

- Reconstruction of boiler init of TPP, which began in 2001 created preconditions for increased generation by 150 million kWh.

- Total investments into reconstruction of boiler unit ~ 24.0 million €.

- Value of overhaul works implemented in TPP this year ~ 1.79 million €, while the value of contracted works is ~ 2.33 million €.

- In 2007 and 2008 mining mechanization acquired for Rudnik uglja AD Pljevlja of a total value ~ 2.4 million € and investment works for transfer of river Čehotina of a total value 10.8 million € were implemented.
Planned activities

- Development and verification of a Study on raw materials and coal reserves and other minerals in Pljevlja area, with economic assessment of exploitation of those reserves (with support of EAR, by 01.11.2008).
- Additional researches of coal reserves in Maoče basin, some 30 km from Pljevalja; estimate suggests that it would be possible to have independent opening of the coalmine Maoče and construction of a TPP with capacity 300 – 500 MW, in the vicinity of the coalmine.
- Exploitation of marl for production of cement (marl deposits exist in depot Jagnjilo and in the coalmine Potrlica); there is interest of international investors for construction of cement factory in Pljevlja area.
- Construction of railway from Pljevlja to Bijelo Polje
- **Action plan for Implementation of the Energy Development Strategy of Montenegro envisages development projects:**
  - Merger of Coalmine and TPP Pljevlja into a single company within EPCG - Generation.
  - Revitalization of TPP Pljevlja I;
  - Construction of TPP Pljevlja II, with heating system for the town Pljevlja.
Revitalization of TPP Pljevlja I Project

- The most important planned activities are as follows:
  - Block reconstruction;
  - Activities on supporting facilities – ecological rehabilitation;
  - Installation of a desulphurisation system;
  - Coalmine Revitalisation (Certain activities in the Coalmine are being implemented since 2006)

- Installed capacity of a generating unit will be increased by 15 MW during revitalisation of TPP Pljevlja I (from 210 to 225 MW) and electricity generation will increase for about 100 GWh (from 1,200 to 1,300 GWh) annually.

- Important effect from the Project implementation is reduced adverse environmental impact of the plant.
Project of construction of TPP Pljevlja II with heating system for the town Pljevlja

- The most important planned activities are:
  1. Preparatory phase (selection of a strategic partner, preparation of basis for spatial plan documents)
  2. Construction of Block II of TPP Pljevlja
  3. Construction of a heating system
  4. Capacity upgrade for the Coalmine

- Installed capacity of the second block is $1 \times 225$ MW, and planned annual electricity generation is 1,300 GWh.

- Construction of a heating system for the town Pljevlja will increase efficiency and reduce environmental pollution from the existing coal fired boilers.

- Required additional investments into the Coalmine, in order to increase generating capacity and enable parallel operation of the first and the second Block of TPP.

- Contributes to reduction of pollution in Pljevljima, increased energy efficiency and enhanced quality of life, therefore this Project is a first priority in the Strategy and AP.
THANK YOU FOR YOUR ATTENTION!

Energetska konferencija
Kolašin, Crna Gora, 11. jul 2008. g.