Government of Montenegro

Ministry of Transport, Maritime Affairs and Telecommunications

Questionnaire

Information requested by the European Commission to the Government of Montenegro for the preparation of the Opinion on the application of Montenegro for membership of the European Union

21 Trans-European networks

Minister: Andrija Lompar

Podgorica, December 2009

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CHAPTERS OF THE ACQUIS - ABILITY TO ASSUME THE OBLIGATIONS OF MEMBERSHIP

Chapter 21: Trans-European networks

Speaking of **transport networks**, the Trans-European network contributes to a sustainable and multi-modal development of transport and removal of bottlenecks. In this sense, transport networks play a significant part in the securing of sustainable mobility by combining European competitiveness with the protection of its own citizens, in parallel with the securing of goods and passenger transport in Europe.

Integration of Montenegro transport into the Trans-European Transport Network shall be implemented by way of two motorways, the Adriatic-Ionian and the Bar-Boljare motorway, Port of Bar, reconstruction and upgrading of the railway line Bar-Belgrade, the airports of Podgorica and Tivat, and also by means of reconstructing and upgrading the road direction Tirana-Podgorica-Sarajevo.

Improved access to and from the neighbouring countries, and accordingly to the world market and economy, represents the main challenge for the transport infrastructure of Montenegro. The fact is that the existing connections have to be improved in order to facilitate the connection with TEN-T corridors.

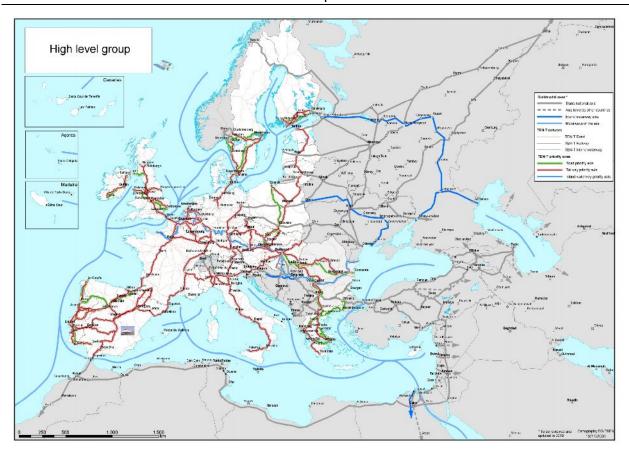
The primary regional transport network identified by the REBIS study, which was funded by the EU, provides a good framework for the promotion of signatory countries of the MoU (Memorandum of Understanding).

As emanating from the Spatial Plan of Montenegro until 2020, the corridors of future road directions include the following:

- Section of the Belgrade-South Adriatic highway through Montenegro: Boljare-Andrijevica-Mateševo-Bratonožići-west bypass of Podgorica-Tanki rt-Bar;
- Highway section from the intersection of Belgrade-Bar motorway to the border to Serbia (Kosovo and Metohija): Andrijevica-Murino-Čakor-Bjeluha;
- Section of the Adriatic-Ionian highway: border to Bosnia and Herzegovina (Trebinje area)-Čevo-Podgorica (north bypass- a more detailed investigation of the line marked out for construction is required)-Božaj (border to Albania)

Following the construction of highways, the position of Montenegro in terms of international transport shall be significantly improved, also ensuring an easier access to its tourism offer.

The Trans-European Transport Network is shown in the figure below.

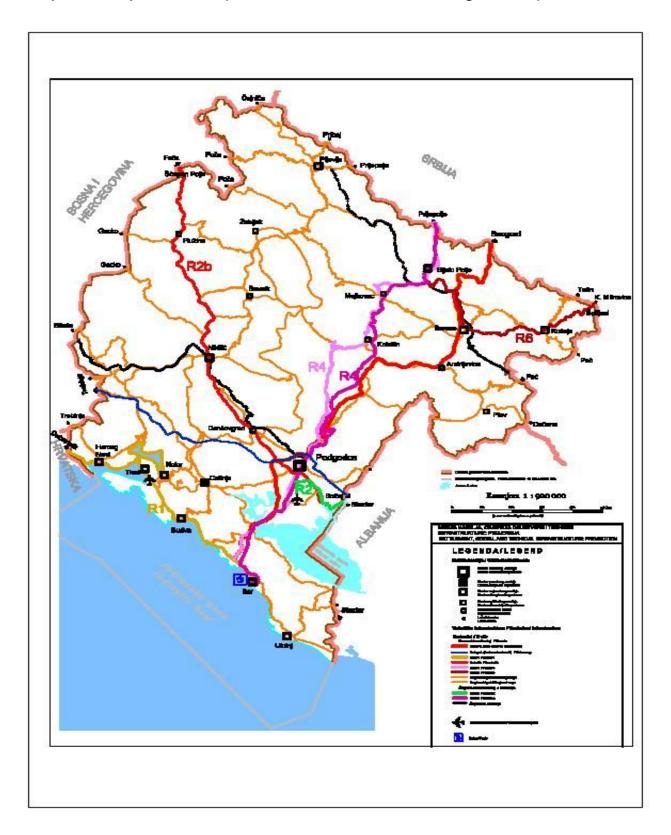


I. TRANSPORT NETWORKS

A. Transport infrastructure

Maps of the national network

1. Please provide maps of the national long distance transport network (road, rail, combined transport, ports and airports). The long distance network will be identified on the basis of the criteria laid down in the draft Community Guidelines for the development of the Trans-European Transport Network (see Decision n° 1692/96 on Ten-T guidelines).



Public expenditure and investments

2. Please provide data on public expenditure and investments by completing the tables in Annex 1.

The Budget Law, adopted on the State level following the applicable legal procedure, regulates adoption of the budget, record keeping and budget management, budget preparation and planning, execution of the budget of Montenegro (hereinafter referred to as the "State"), local government budgets, borrowings and guarantees, internal control, budget accounting, the State Treasury, budget operation and internal audit.

The budget is adopted for the fiscal year and is valid for the current year. A fiscal year equals a calendar year. The Budget Law for the Fiscal Year is adopted by the National Parliament. Decision on the Local Government Budget for the Fiscal Year is adopted by the Municipal Assembly.

Note: The data shown in the table (<u>Annex 159</u>) relate to the Ministry of Transport, Maritime Affairs and Telecommunications, by years and in euros; the official currency before the introduction of the Euro was the Deutsche Mark (DEM), and before that the Dinar, so that all sums were converted into euros. The data shown in the table were published as the official data in the Budget Law, by years.

Concerning the data that were not entered into the specified columns, relating to the railway links of >= 160 km/h, no train lines of such a speed exist in Montenegro, which is why no data were entered into the mentioned columns.

No data were entered for internal water-routes because no internal sailing routes are still sufficiently developed to be entered into the mentioned columns.

As for the air transport, Public Enterprise, the Airports of Montenegro, was established as a separate enterprise in 2003, funded from its own revenues, although initially, when the Company started performing its business activity, it received a subsidy of EUR 2.1 million from the State and ever since it has been funded from its own revenues.

No data relating to the border crossing points are available, because this issue became relevant only after Montenegro had regained its independence, based on the referendum of 2006, when the border crossing points were established, while the funds for their organization and improvement will be raised in the future.

Regional cooperation

3. What steps have you taken to implement the Memorandum of Understanding of the South East Europe Core Regional Transport Network?

Reference documents:

- The Second Sub-Committee for Transport, Chapter 1.5 Infrastructure of 17 February 2009, Podgorica;
- Additional information (2 June 2009) submitted after the meeting held in Brussels on 18-19
 May, relating to the negotiations for a Transport Community Treaty (Subject: Negotiations
 for the Transport Community Treaty, Document: Additional Information).

Furthermore, monitoring and implementation of the activities from the MoU continued; a meeting of the Steering Committee took place in July 2009, and of the National Coordinators in April 2009, preparation of the MAP 2010-2014, as a part of which a priority project list was identified.

NOTE:

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Legal framework

4. What are the procedures applicable to the development of a transport infrastructure project? Are there differences according to the mode of transport concerned?

The legal basis for the planning of development projects relating to the transport infrastructure was established according to the applicable regulations on particular types of transport, by rail, road, air and water.

By mid last year, the Montenegrin Transport Development Strategy was adopted by the Government of Montenegro for a period of 10 years. The Strategy included infrastructure projects and fundamental guidelines for the development of transport in Montenegro and also the schedules for project development, manner of implementation and the amounts and sources of future funding, respectively.

The projects were ranked by priority, identified according to the same selection criteria as those anticipated under the Memorandum of Understanding.

More particular and detailed Strategies for the development of each mode of transport respectively were prepared according to this document.

The corresponding short-term development plans are adopted on the basis of all foregoing documents; the funding for their implementation is secured according to and as regulated by the Budget Law (capital budget), from the loans of international financial institutions, through public - private partnership and concession arrangements.

5. What is the project cycle? How are local and/or regional authorities associated with transport infrastructure projects?

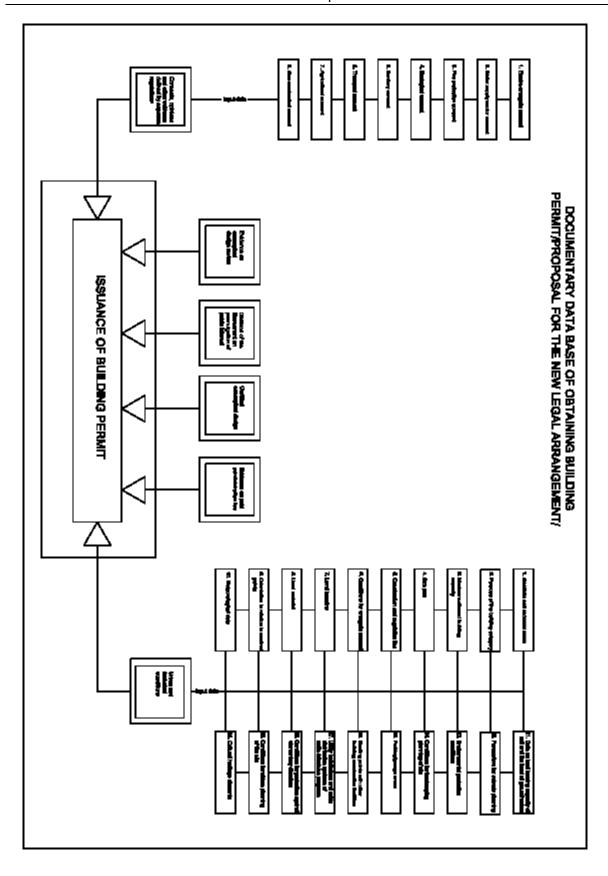
There is no uniform project cycle for the transport infrastructure projects, which would include all modes of transport.

The procedure for implementation of infrastructure projects, including the transport infrastructure and all phases from an idea to implementation, is regulated by the Law on Spatial Development and Construction of Structures (Official Gazette of Montenegro 51/08), which was harmonized with the EU legislation and came into effect on 30 August 2008 (Annex: An algorithm for the issuing of a building permit for the construction of infrastructure facilities). The cycle of immediate implementation of transport infrastructure projects is shown by the enclosed algorithm.

The strategic development documents, including implementation of infrastructure projects, within the competence of the Government are adopted through a procedure that includes organization of public meetings participated by the non-governmental sector, professional institutions, the public, in addition to the Union of Montenegrin Municipalities, and also any of the concerned municipalities in whose territory the related project within the municipal competence is implemented and also the manner of finance which, in case of larger projects, often include some participation by the Government.

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By analogy, development plans are adopted on the level of local governments, including specific projects within the competence of the Municipalities and also the financial requirements and level of funding, all in accordance with the applicable regulations on the competences and scope of activities of local governments.



6. Is there legislation on:

a) environmental impact assessment,

The procedure for environmental impact assessment is regulated by the Law on Strategic Environmental Impact Assessment (Official Gazette of the Republic Montenegro 80/05) and the Law on Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 80/05).

b) rules of competition,

The rules of competition are regulated by the Law on Protection of Competition (Official Gazette of the Republic of Montenegro 69/05) that came into effect on 1 January 2006.

By an amendment to the Law on Protection of Competition (Official Gazette of Montenegro 37/07), a legal framework was created for the establishment and operation of an independent operating body for the protection of competition, that is the Administration for Protection of Competition. The present Law on Protection of Competition satisfied the requirements from Articles 81, 82 and 86 of the EC Treaty.

c) public procurement?

On the occasion of implementation of infrastructure projects, a public procurement procedure is conducted by the competent national and local government authorities pursuant to the Law on Public Procurement of Montenegro (Official Gazette of Montenegro 46/06).

B. Transport research

7. Are there any research programmes on national transport operations?

Some research programmes relating to the functioning of national transport used to be conducted in the process of preparation of various studies, Strategies, the Master Plan for Montenegro Airports Development, Spatial Plans and similar. Such research work was conducted as a part of the Regional Balkans Infrastructure Study (REBIS), Feasibility Study for the Bar-Boljare Motorway, Strategy for the Reconstruction of the Montenegro Railways, Feasibility Study for the Procurement of Necessary Number of Electric Motor Sets for Local Rail Transport, Strategy for Development and Maintenance of National Roads, Spatial Plan of Montenegro, Special Purpose Spatial Plan for the Coastal Area of Montenegro.

8. Does research in the field of transport benefit from public and/or private funding, and if yes, what level of funding is allocated to transport related research?

According to the available information, the research works specified in the response to the previous question were funded from the public funds. In addition to this, we understand that some research work was conducted and funded by individual companies, for their own purposes.

- 1. Within the project of motorway construction in Montenegro, the consulting firm ECORYS Nederland BV was entrusted to develop the Study on Private Public Partnership options for the sector of motorways in Montenegro, the funding of which was provided, for the needs of the Government of Montenegro, from the Public Private Infrastructure Advisory Facility PPIAF of the World Bank, in the amount USD 164 000.00, and the contracted deadline for the development of the Study is August 2008. The objective of the Study on Private Public Partnership options for the sector of motorways in Montenegro is to assess all types of participation of the private and public sector in the stage of the implementation of the project of motorway construction in Montenegro and the analysis of comparative regulations and practice in the domain of public-private partnership (PPP).
- 2. The Feasibility Study for two motorways in Montenegro cost EUR 1.23 million and it was developed by the French consulting firm Louis Berger SAS, fully financed from the resources of the Government of Montenegro.

Since the researches were conducted within the development of the above-stated documents, about 20% of the projects value was allocated for the research.

9. What are the national priorities for transport related research?

The national priorities relating to the transport research work have been harmonized with the development of infrastructure projects, as defined by the Montenegro Transport Development Strategy and other relevant national-level regulations.

The priorities are mostly directed to the transport research work relating to the improvement of security in all modes of transport, infrastructure improvements, etc.

C. Pipeline transportation

10. Please provide a description of the national network, length and type of pipelines, quantities transported, capacities of existing installations, development policy, regional connections.

Montenegro has no national network for gas supply. Montenegro has no oil pipeline either.

The Energy Development Strategy of Montenegro until 2025 and the related Action Plan for its implementation for the period 2008-2012 anticipated the construction of the Adriatic-Ionian Gas Pipeline. Following the implementation of this Project, Montenegro will acquire its gas infrastructure to be connected to the main transmission pipeline interconnecting the gas networks of Bosnia and Herzegovina, Croatia and Albania, respectively.

The construction of oil pipelines was not anticipated by the Energy Development Strategy of Montenegro until 2025 and the related Action Plan for its implementation for the period 2008-2012.

11. Is there a specific legal framework for pipeline transportation?

No legal framework for the transport of gas and oil by means of pipelines is regulated by the existing Energy Law (Official Gazette of the Republic of Montenegro 39/03).

Following the adoption of a new Energy Law, which is expected in 2009, the basic legal framework for the transport of gas and oil by means of pipelines shall be created.

12. What environmental rules are applied?

In Montenegro, the following set of legal regulations completely regulating assessment of the possible impact that a project may have on the environment has been in effect since 1 January 2008: Law on Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 80/05), Decree on Projects Subject to Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 20/07), Rulebook on the content of documentation to be submitted together with request for determination on the need for Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 14/07), Rulebook on the content of documentation to be submitted together with request for determination of the scope and content of Environmental Impact Assessment (Official Gazette of Montenegro 14/07) and Rulebook on the content of Environmental Impact Assessment (Official Gazette of Montenegro 14/07).

The construction of energy infrastructure facilities is also regulated, inter alia, by the foregoing regulations.

II. Energy networks

13. Please, provide information, also in the form of maps, on the current status and on the major needs for energy infrastructures in your country. What are the major gaps/concerns in terms of infrastructures to fulfil with the obligations of security of supply in the internal markets?

Energy Infrastructure - Transmission Network

The transmission network of Montenegro is characterized by its mostly radial structure on all three voltage levels and a good connection with the neighbouring electric power systems of Serbia, Bosnia and Herzegovina and Albania. Adequate connection of the transmission network of Montenegro with the neighbouring systems increases the reliability of its electric power system and enables a significant level of exchange among the surrounding systems, although this also exposes the transmission network to a considerable transit of electric power.

The transmission network of Montenegro consists of 19 substations (TS) of total installed power capacity of 3,034.5 MVA, out of which 1400 MVA (46.14%) in 400/x kV transformer (400/220 kV and 400/110 kV), 575 MVA (18.95%) in 220/110 kV transformer and 1059.5 MVA (34.91%) in 110/xkV transformer (110/35kV and 110/10kV). The substations were mostly constructed during the period 1950- 1980. The substations are connected by the transmission lines of a total length of 1 322.7 km (400kV -255km, 220kV – 348.1km and 110kV -719.6km).

The downside of the transmission network of Montenegro concerns the parallel lines of 400kV and 220kV whose transmission capacity is unequal (1 330.00 MVA per line in the 400kV network, as opposed to 301 MVA per line in the 220kV network), so that in case of a breakdown in some particular sections of the 400kV network and particular operating conditions certain parts of the 220kV network become overloaded, which may cause the system to collapse.

The 110kV network is not interconnected in the entire territory of Montenegro. TS Pljevlja 1 (110/35kV), located in the North, is supplied through TS Pljevlja 2 (400/220/110 kV), and is also connected with TS Potpeć in Serbia and TS Goražde in Bosnia and Herzegovina (the delivery line operates under 35kV). The North-eastern part of the 110 kV network consists of the leg Bijelo Polje – Berane – Andrijevica – SS Trebješica, partly supplied via TS Mojkovac (220/110kV), and partly via TS Podgorica 1 (220/110kV). The Coastal region is supplied from TS Podgorica 2 (400/110kV) (by power lines Podgorica 2 – Bar and Podgorica 2-Budva, Podgorica 2 – Cetinje – Budva) and via TS 110/xkV Trebinje (by 110kV power line Trebinje – Herceg Novi). The TS 110/35 kV Danilovgrad is located in the West; it is supplied from Podgorica 1 and also connected with TS 110/35kV Nikšić, that used to be supplied from TS 220/110kV of HHP Perućica.

The main issues relating to secure and reliable electricity supply to customers concern the following:

- Radial power supply to the customers in Kotor, via a 35kV power line Tivat-Kotor, which
 places Kotor, a city with approximately 25,000 inhabitants and 13,000 customers, among
 the areas of most unstable electric power supply in Montenegro;
- Radial power supply to customers in Ulcinj, via a 110kV power line Bar-Ulcinj;
- Unreliable power supply to the Northeastern part of Montenegro, that is the customers supplied from the following transmission substations:
 - 220/110/35 kV TS Mojkovac;
 - 400 kV PDS (Power Distribution Substation) and 110/35 TS Ribarevine (Bijelo Polje);
 - 110/35 kV TS Berane and
 - 110/35 kV TS Andrijevica.

The reason for such unreliable power supply lies in the fact that any breakdown of the transmission line Podgorica 1- Pljevlja 2 (220 kV), that TS Mojkovac is connected to via T-connection, automatically results in a failure of the transformer (220/110 kV 150MVA) in TS Mojkovac, which in turn causes an overload of the power line Podgorica 1- Trebješica (110 kV) – T-connection

Andrijevica – Berane and the need to reduce power consumption in the consumption areas of Bijelo Polie, Berane, Rožaje, Andrijevica, Plav, Gusinje, Mojkovac and Kolašin.

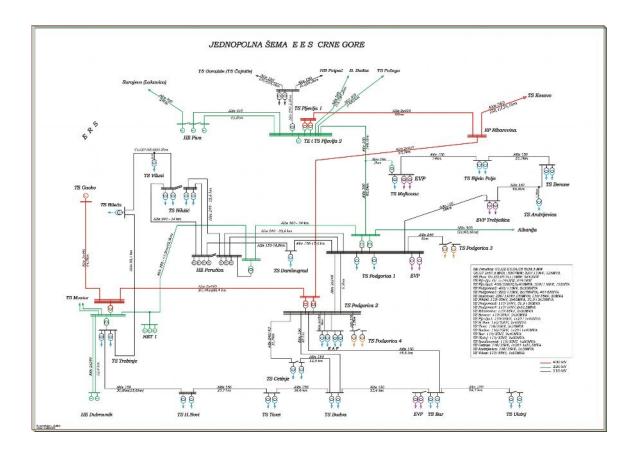
A significant number of 35 kV power lines (maintained and owned by the Electric Power Company of Montenegro), that were once used to support the neighbouring power distribution areas in this region, are no longer operational, so those cannot be used to mitigate the effects of absence of the mentioned transmission network components.

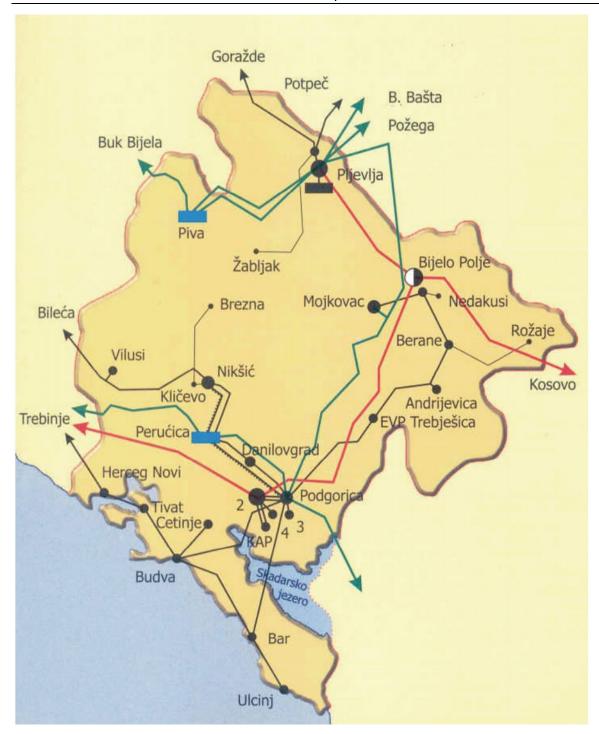
In order to ensure quality and more reliable power supply of customers based on an analysis and monitoring of power demand increases and interruptions in electricity supply, the following substations and power lines are currently under construction by the Company AD PRENOS (JSC for Electric Power Transmission):

- TS Virpazar (110/35kV, 2x20MVA) to be connected to the transmission network via the transmission line of Podgorica2-Bar (110kV), according to the principle "input-output", which will primarily ensure a reliable power supply to the facilities of JP Regionalni vodovod Crnogorsko primorje (Public Enterprise for Regional Water Supply in the Coastal Region of Montenegro). The value of this investment amounts to EUR 2.4 million, while the deadline for its completion is September 2009.
- TS Kotor (Škaljari) (110/35/10kV, 2x20MVA) and an 110kV power line Tivat-Kotor connecting the substation of Kotor to the transmission network. The value of this investment amounts to EUR 3.1 million, while it is due to be completed in autumn of the following year.
- TS Podgorica 5 (110/10kV) including a 110kV power line Podgorica 5 T-connection KAPI and 110 kV cable line Podgorica 3 Podgorica 5, in addition to an expansion of TS Podgorica 3 (110/10 kV). The value of this investment amounts to EUR 9 million; the completion of TS Podgorica 5 (110/10kV), including the 110kV power line of Podgorica 5 T-connection KAPI has been scheduled for the end of the current year, while the expansion of TS Podgorica 3 (110/10 kV) and the 110 kV cable of Podgorica 3- Podgorica 5 is expected to be completed until the end of 2010.
- Expansion of the existing distribution facility of Ribarevine (400kV), by installing a transformer of 400/110kV, 150MVA, which will ensure a more reliable and safer electricity power to the Central and Northern regions of Montenegro. The value of this investment amounts to EUR 4 million, while it is expected to be completed until the end of the current year.
- Expansion of TS Mojkovac (220/110/35kV) by constructing a new 220kV facility to be connected to the transmission network via the 220kV power line of Podgorica1-Pljevlja2, according to the principle "input-output". The value of this investment amounts to EUR 1 476 635.00, while it is due to be completed in July 2010.
- Expansion of TS Andrijevica (110/35/10kV) by constructing a new facility of 110kV, and connecting it to the 110kV power line of Podgorica1-PTS Trebješica-Berane, according to the principle "input-output". The value of this investment amounts to EUR 1 444 890.00, while the deadline for its completion is December 2009.
- A 400kV power line Podgorica2-Albanija improving the interconnection between the electric power system of Montenegro and the neighbouring systems. The value of this investment is EUR 14 million, while the deadline for its completion is November 2009.
- Replacement of the existing protection rope on the power lines with cable OPGW. The value of this investment is approximately EUR 10 million, while the deadline for the completion of the works is October 2010.

According to its development plan, AD Prenos plans to make additional investments into its network infrastructure, relating to the construction of a submarine cable between Montenegro and Italy.

The figures below show a single-pole diagram of the current electric power system of Montenegro and a map showing the spread of electric power facilities.





Energy Infrastructure - Distribution Network

The summary data below present an overview of the types and capacities of electric power distribution facilities managed by the Functional Unit of Distribution (FU Distribution):

_	TS 35/10 kV	items	87
_	10 kV facilities within in TS 110/10 kV	items	2
_	TS 35/0.4 kV and TS 35/0,6	items	24
_	TS 10/0.4 kV	items	1732
_	STS 10/0.4 kV	items	1987
_	35 kV overhead lines	km	1028
_	35 kV cable lines	km	48
_	10 kV overhead lines overhead lines	km	3544
_	10 kV cable lines	km	997

0.4 kV overhead lines
 0.4 kV cable lines
 km 11542
 km 1394

The structure of facilities, regardless of their respective condition, indicates very clearly that the concept of this distribution network is technologically outdated. Customers demand in terms of energy needs, maximum power and safety of supply, imply an application of other solutions relating to the development of high-voltage network.

Introduction of 110 kV cables in distributive consumption centres, their interconnection and direct transformation by application of modern technical solutions represents a preference and the only right choice for all power distribution units. This approach to development projects was adopted already during the 1980s, when two substations, TS Titograd III (110/10 kV) and Titograd IV, were constructed in addition to the 110 kV overhead lines of Smokovac – Tuzi, Kolašin – Mojkovac and Ribarevine – Nedakusi, Pljevlja – Žabljak, Kličevo – Brezna and Berane – Rožaje, which currently operate under the 35 kV voltage level.

All high-voltage power distribution facilities which have been constructed after the mentioned period of time do not relate to development, but only an extension of the existing 35 kV network. Such solutions are cheaper, although not far-reaching in terms of the future. Following the construction of new 35 kV cables, some local bottlenecks were resolved to ensure power supply to the existing or new 35/10 kV facilities, and possibly some reserve supply. Nevertheless, the development of a 35 kV network additionally complicated the operation of the existing 35 kV network relating to an increase in non-compensated power for earth wiring, because the 35 kV networks, except in the area covered by the Power Distribution Units of Tivat and Podgorica, operate as a separate system. On the other side, the existing transmission facilities - 110/35 kV transformers are additionally loaded.

Since the 110 kV network does not fall under the competence of the distribution function, while the 110/10 kV facilities only partly do (10 kV facilities), the power distribution component of the Electric Power Company of Montenegro (EPCG) is carried out via the 35 kV network, medium-voltage (10 kV) and low-voltage network.

The primary distribution network nominal voltage amounts to 35 kV, mostly consisting of overhead lines, more than 90 %, while the remaining part of the network consists of underground cables located mostly in the cities of the central and coastal region of Montenegro. The overhead network is mostly already amortized, not offering an adequate operating reliability. The cable network is not unified in terms of the existing cable types and categories. The 35 kV network operates under a regime of insulated neutral end, although in particular sections of the network no such regime should be tolerated.

Nominal voltage of the medium-voltage network amounts to 10 kV. The overhead network is mostly mounted on wooden poles, 80% of it in total. The number of customers supplied by the overhead 10 kV network is inversely proportional to its size, since it is exclusively used to supply power to suburban and rural areas. The 10 kV is not unified, while its configuration as a rule based on a previously established concept.

The low-voltage network, as the most extended peripheral part of the distribution system, due to its size and importance, represents the basic object of activities in all distribution centres, relating to both current and capital maintenance. Its quality is uneven, while a long-term reliability is hard to achieve due to constantly changing parameters of the demand. The main issues relating to the maintenance of medium and low-voltage networks concern the detection of line faults and pole replacements. A high number of crews, vehicles, machines and tools have to be engaged for the maintenance of low-voltage and 10 kV overhead power distribution networks on daily basis, in addition to high quantities of replacement parts, primarily the poles.

Over the previous 10-20 years, no investment activities relating to the primary network could be regarded as development activities, but only as an extension of the existing installations. This is when a significant number of 10/0.4 kV facilities was constructed, including the accompanying medium and low-voltage connections and fittings.

This shows that the distribution system, and first of all its primary component, operates at a very low level of operating reliability.

Concerning the status of its neutral end, the 35 kV network operates as a separate system, except for the distribution areas covered by the Power Distribution Units of Tivat and Podgorica. The earth wire currents are above the permitted values. Due to this fact, the operating reliability of the network is additionally and significantly reduced resulting in frequent and massive damages to the facilities, and especially the most expensive parts, transformers, switches and cables.

The 35 kV network is controlled in accordance with the technical solutions applied during the first phase of electrification. The network is controlled by duty dispatcher who issues orders to the fitters in manned facilities.

The systems for remote-control and monitoring of the network were installed by the Power Distribution Unit of Ulcinj, and to some extent by the Power Distribution Unit of Podgorica. Those systems were set into operation by the end of the 1980s, and from the aspect of modern technologies such solutions are already outdated.

In addition to two 10 kV facilities constituting a part of the 110/10 KV Podgorica II and Podgorica IV, the distribution system includes 87 facilities of 35/10 kV.

The facilities are on average older than 30 years. When assessing an average age and actual state of repair of those facilities, what should not be forgotten is the fact that a certain number of "new" facilities, set into operation over the previous 25 years, were assembled by using second-hand equipment, in some cases already even more than 20 years old.

According to the related statistical data, power transformers are the most unreliable component of a significant number of facilities. Those were often set into operation even more than 40 years before, and during their respective service life were exposed to overloads due to short circuits, atmospheric lighting and electrical discharge, mechanic overvoltage, incorrect manipulation, etc. Such transformers have been dismantled, transported to and repaired in various service shops dozens of times. Their replacement is the only technically and financially justified solution.

Electric power and energy losses have always been high in the power distribution network.

Real losses (constant and inconstant), that otherwise have a smaller share in total losses, are mostly inevitable.

The structure of losses is dominated by non-technical losses (commercial losses), which is caused exclusively by the human factor, and are mostly attributed to the end-component of the power distribution network, i.e. electricity meters, unless a classical method of stealing is applied where an electricity meter is bypassed by connecting the appliances directly either to a distribution or service connection cable.

Possible directions of distribution network development until the year 2025 have been identified under the Energy Development Strategy of Montenegro, the Study on 35 and 10 kV Distribution Network Neutral Points Grounding, and partly the Study on Losses. The solutions recommended by those studies have been only partly implemented so far. However, since the distribution network has not developed sufficiently to keep pace with the power demand and customer requirements, the implemented investment activities have to be urgently analyzed in order to establish the priorities, first of all in the primary distribution network.

The state of repair of the distribution network obviously imposes an imperative need to engage in implementation of serious investment activities aimed to increase the availability of the system and reduce the costs of demanding overhauls resulting from the lack of harmony between the capacity of the distribution system and customer demand.

The decisions on investment activities, especially the initial ones, must be preceded by a serious and analytical selection of priorities and recommended solutions.

The priorities are planned to be established and investment decisions made on the basis of the following fundamental commitments and criteria:

 Development of primary distribution 110 kV network up to reach all major consumption areas, primarily in Podgorica, including Zeta and Tuzi, Nikšić, Kotor, Berane, Andrijevica, Herceg Novi (Bijela or Igalo), etc.

- Proceeding with the reconstruction and upgrading of the 35 kV overhead network in suburban and rural areas, and the 35 kV cable network in urban areas, where based on long-term justified requirements and valid energy and financial analysis. The routes of the existing overhead lines (35 kV and 10 kV) that are amortized and not operational should be followed when constructing new 110 kV power lines, primarily multiple power lines, in order to protect valuable space as much as reasonably possible, especially in urban areas.
- Propose phased construction of electric power and distribution network facilities, under the condition that the effects of each phase are felt immediately upon its implementation.
- The proposed solutions need to contain modern technical solutions, to replace the obsolete ones such as preserved wooden poles, irregular overhead and cable lines, and classical 10 kV and 35 kV facilities with new technical solutions such as the following: concrete poles; self-supporting multiple cables; the facilities with gas insulation; vacuum switches and integrated processor protection, introduction of remote control and monitoring systems, etc.
- Initiate implementation of an neutral points grounding programme for the 35 kV and 10 kV distribution networks, according to the priorities set forth under the Study on 35 and 10 kV Distribution Network Neutral Points Grounding.
- Keep implementing the Radio-Relay Communication Project and start upgrading the distribution network control system, following a Study on Management of Distribution Network Facilities that needs to be adopted.
- Intensify the activities relating to the replacement of obsolete electric meters by remote control systems for electric meter reading and control.
- Improvement and upgrading of the procedure for issuing energy approvals that are required for new service connections to the distribution network, in order to make the process automated.
- Increase the level of technical equipment used for the maintenance and operation of distribution network (four-wheel and special-purpose vehicles, test devices and equipment, cranes, etc.).

Background for the preparation of an Investment Plan for the FU Distribution for the period 2009-2013 is the following adopted document: Energy Development Strategy of Montenegro until 2025 (Expert Basis, Book D, Montenegro Energy System Development Plan, Master Plan).

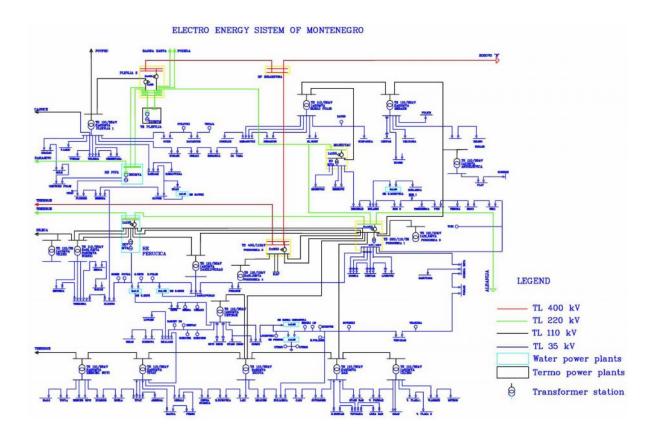
The Master Plan envisages an investment into the distribution system amounting to EUR 491 million over the following 20 years, which is approximately EUR 25 million per annum.

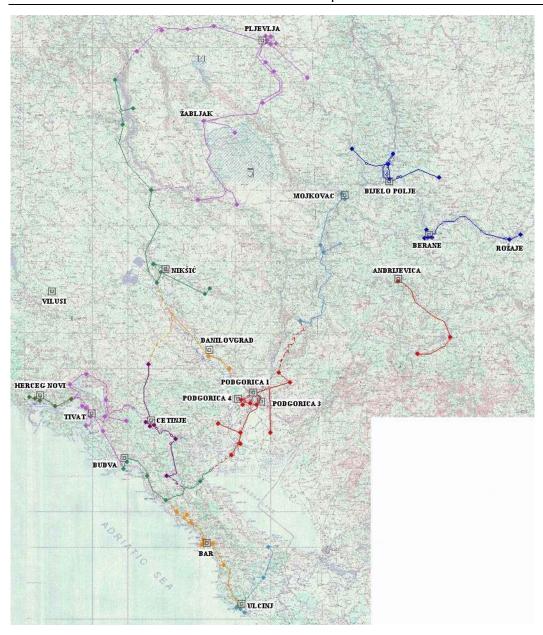
The FU Distribution currently conducts the following construction activities in order to ensure an improved quality and more reliable power supply to its customers:

- Reconstruction of TS Bistrica (35/10 kV), TS Humci (35/10 kV), TS Baošići (35/10 kV), TS Petrovac (35/10 kV), TS Škaljari (35/10 kV): French Government's loan;
- Reconstruction of a 10 kV facility in TS Podgorica 3 (110/10 kV): French Government's loan;
- Installation of 10 kV cable connections in TS Podgorica 5 (110/10 kV): KfW bank's loan;
- Preparation of an application for an EBRD loan for remote reading and meters control system. This system for remote reading meters shall add to a Pilot Project covering 4 000 meters, which was funded by the World Bank and had excellent results relating to a reduction in losses and increase in collection rates. An upgrade of the system is planned, including installation of 60 000 meters, reconstruction of low-voltage network and repairing of customer meters.
- Construction of the 35 kV power line Cetinje Podgor (17.5 km) in order to improve electricity supply to the water source of Podgor (supplies water to the municipalities of Cetinje and Budva);
- Preparatory activities relating to the distribution network on the coast, in order to ensure a higher-quality power supply during summer season;
- Activities to maintain the operational readiness of distribution facilities.

Annexes:

- Single-pole diagram of the transmission and distribution network (35 kV)
- Geographic map of the 35 kV network (single-pole diagram)





Energy Infrastructure - Power Generation

Elektroprivreda Crne Gore AD Nikšić (hereinafter referred to as the Electric Power Company of Montenegro AD Nikšić or EPCG) is the only company in Montenegro engaged in electric power generation.

The FU Generation, as a part of the Electric Power Company of Montenegro (EPCG), is responsible for electric power generation, including a group of hydro and thermal power generation facilities with 868 MW of installed power generation capacity.

The contribution of each power generation facility to the installed power generation capacity of the FU Generation is shown in the table below:

POWER PLANT	INSTALLED CAPACITY		Year of Setting into Operation	Average Production 2002 - 2007
	MW	%		MWh
HPP Perućica	307		1960	992 994.66
HPP Piva	342		1976	780 200.00
SHPP (Distributive)	9			20 549.50
TOTAL HYDRO POWER PLANTS	658	76		
TPP Pljevlja	210	24	1982	981 662.00
TOTAL HPP + TPP	868			

The EPCG pays full attention and respects the fact that a strategic management of the power generation process is the condition for enabling safe, reliable and environment-friendly electric power supply to Montenegro on long-term basis. And this is required the soonest possible due to the fact that Montenegro faces a electricity deficit since it can satisfy only 70% of total demand from its own sources.

Accordingly, and also due to the fact that almost all power generation facilities are nearing the end of their respective operating lives, it is required to have an integral strategy for the maintenance and increase of the current electric power generation, to serve as the basis for a review and establishment of measures, both present and future, to be undertaken with the objective of revitalization and full employment of the existing capacities, in addition to the construction of new facilities where the conditions have been or may be created with respect to unemployed natural potentials and spatial capacity.

According to the foregoing, an overview of the initiated activities and conducted works is presented in the text below, in addition to future works to be carried out with the objective of implementing the strategy of sustainable power generation and output increase, in agreement with economic, social and spatial aspects. Each component of the FU Generation is addressed separately.

HPP Perućica

A number of research studies, studies, analysis, designs, etc., has been prepared for the hydro power system of Gornja Zeta and HPP Perućica, addressing the possibility of increasing electric power generation at HPP Perućica, both through reconstruction and also rehabilitation and upgrade of the system. The text below contains the projects and measures that have been or need to be undertaken in that direction.

Until now, the hydro mechanical and electrical equipment of 4 out of 7 aggregates has been reconstructed and it can be stated with certainty that those facilities, after this rehabilitation, will be able to sustain another power generation cycle on the level of 40 MW, which is higher by 2 MW per unit than before their reconstruction.

An overview of other activities at the HPP Perućica, aiming to extend the power generation process and maximally use the exiting capacity, is shown below.

a) Reconstruction and Upgrade of Building Structures

The Phase I of Reconstruction and Upgrade of Building Structures Project, which is currently in the process of implementation, includes the following activities:

- Elevation of compensation reservoir;
- Installation of impermeable foil at the compensation reservoir bottom to prevent water leakage;
- Reconstruction of the Zeta I canal;
- Reconstruction and elevation of the Zeta II canal.

The Phase II of Reconstruction of Upgrade of Building Structures Project is planned to include the reconstruction and elevation of the Opačica canal and reconstruction of the Moštanica canal.

b) Abstraction and Utilization of Water from the Gračanica River

Considerable volumes of water from the Gračanica River could be utilized for the HPP Perućica provided that the required particular actions are taken and works carried out, which according to the designers includes the following:

- Collection of all wastewater from the Steel Works (Željezara Nikšic AD) and its discharge into the Zeta I canal;
- Reconstruction of the water supply tunnel and canal to Željezara (the Steelworks);
- Identification and implementation of an optimal regime for exploitation of the Liverovići reservoir, taking into account the current requirements of the Steelworks and water losses in this reservoir;
- Repair and upgrade of the injection curtain of the Liverovići reservoir.

c) Injection Works on the Reservoirs of Krupac and Slano

This includes the following:

- Reconstruction of injection curtains of the Krupac and Slano reservoirs; and
- Reconstruction of the Slano dam.

The purpose of the foregoing activities is to reduce water losses from the reservoirs of Krupac and Slano, by means of leakage through the injection curtains.

<u>d) Water Transfer from the Zeta River into Krupac and Interconnection of the Krupac and Slano</u> Reservoirs

Final Design of the Zeta River Optimum Utilization, prepared by the Company Energoprojekt in 2002, anticipates the transfer of water from the Zeta at a point beyond Sastavak and into Krupac, and interconnection of Krupac and Slano. According to the calculations, a maximum input capacity of utilizable water in the proposed system, interconnected by tunnels, amounts to 24 m³/s (tunnels Zeta-Krupac and Krupac-Slano), at the current operating regime of the HPP Perućica, while the emptying of Slano reservoir at the end of the dry season shows that on average the reservoir volume increases by 62.7 million m³/year, which equals an increase in power generation of 77.7 GWh/year. However, since the project documentation is incomplete and because some dilemmas regarding its economic efficiency are still present, it was agreed to perform some additional testing during the following year and make a final decision regarding this project.

e) Installation of aggregate No 8 at the HPP Perućica

The activities relating to installation of a aggregate No 8 at the HPP Perućica are currently in progress.

The purpose of these activities is the following:

- An increase in the total power generation capacity of the power plant from 307 MW to 357.4 MW;
- An increase in power generation by HPP Perućica;

- Higher flexibility of operation of the power plant and possible provision of systemic services (secondary tertiary regulation);
- Higher reliability of the power plant operation, since the aggregate No 8 may be treated as a reserve aggregate.

If compared to the base year of 2006, according to the updated project documentation, the power aggregate No 8 could generate approximately <u>20 GWh</u> of electricity by utilizing the available volumes of water.

f) Rehabilitation of the HPP Perućica System

The programme of rehabilitation includes all the necessary works enabling the capacity of the power plant to increase from 285 MW to 307 MW, and subsequently, when the aggregate No 8 is added to the system, to 357.4 MW.

Necessary rehabilitation activities include various surveys, research works and analysis, full installation of metering equipment, identification of stopper curves for the water stoppers at base outfalls of the reservoir, carrying out of repairs on particular power generation units, etc., which will, in addition to the reconstruction and elevation of the reservoir and input canals, enable the safety of start-up and sudden changes in the plant's power, ensure the required water-volume by regulation (in the super elevated compensating reservoir), as required for the system of secondary regulation of the strength of power frequency, and prevent water losses due to sudden dropping of the plant's power or in case it stops operating.

If compared to the base year of 2006 and the available volumes of water at that time, assuming that the aggregate No 8 has been installed and that the power plant is able to operate at the capacity of 357.4 MW (maximum capacity of the power plant), the foregoing rehabilitation would result in an additional generation of approximately <u>5 GWh</u> of electric power by the HPP Perućica.

HPP Piva

The HPP Piva has been operating since 1976, with three aggregates of total installed power of 342 MW, and has a significant role in the power generation system of the EPCG. Considering its age, the HPP Piva has to be reconstructed whereby its operating reliability and availability would be increased and the service life of its particular facilities extended, simultaneously with a reduction in power generation costs and possible increase in power generation.

a) Reconstruction of HPP Piva and Possible Increase in Power Generation

The Project of Reconstruction and Modernization of HPP Piva was initiated in 2004, to be implemented in a phase manner. The purpose of this Project is to have the entire equipment and building structures of the power plant reconstructed, and especially the following: turbines, power generating units, transformers, the 220 kV equipment, own power consumption, telecommunication system, protection, metering, control, input and output facilities, hydro mechanical equipment, dam, absorption basin, mechanical structure.

The **Phase I** of revitalization included the following: replacement of generator inductors, installation of electrical brake system, replacement of high-voltage switches in transformer fields and replacement of collecting dividers in power line fields of 220 kV distribution facilities.

The **Phase II** of revitalization and improvement of power generation capacities started in March 2008, when the preparatory works for the preparation of a feasibility study and conceptual design were initiated.

Following an overall testing of the equipment and facilities and the obtained results, in addition to the preparation and analysis of a number of studies, a Feasibility Study and Conceptual Design will be prepared by the consultant.

The Study shall, inter alias, assess the feasibility of replacement of the turbine circuit in order to increase the capacity of the HPP Piva, and also the potential for increasing power generation by operating the existing turbine.

Only following the preparation of a Conceptual Design and Feasibility Study and their approval by the EPCG and KfW bank, further actions relating to the facility and equipment will be identified, including the activities towards an increase in power generation.

The Study will analyze the existing and future conditions for the power plant's functioning, and also its role within the system, by taking into account the present characteristics of power units and a potential for improvement, from the aspect of their efficiency and operation under future conditions respectively. For the purpose of such analysis, a preliminary study will be prepared relating to the role of the power plant and electric power generation under the future conditions of power generation. The Study will establish whether a future operation of the power plant under the new conditions will enable an increase in power plant load and optimal utilization of the reservoir.

An increase in power generation by the HPP Piva may be competently discussed in terms of precise quantitative data only following the completion of the foregoing studies and preparation of project documentation.

b) The Project of Lowering of Tailwater Level of HPP Piva is an integral part of the activities to increase the production i.e. operating efficiency of HPP

The Company Energoprojekt – Hydro Engineering, Belgrade, prepared in October 2007 a Conceptual Design and Feasibility Study for Lowering of Tailwater Level of HPP Piva, having analyzed the effects of deepening of the Piva riverbed, downstream from the dam, from the aspect of augmentation of power generation.

TPP Pljevlja

The difference between installed and available power plant capacity is one of the indicators of cost-effectiveness of power generation. The causes for this may be several: inadequate technical state of repair of the equipment; actual versus designed coal quality; operating regime; restrictions relating to the state of the environment, etc.

Such causes may be eliminated by various measures whose economic justifiability needs to be proven, so that the construction priorities may be identified accordingly.

a) Historical Indicators of TPP Pljevlja Operation

The installed capacity of the TPP Pljevlja is not sufficiently utilized. Over the previous five years, an average capacity of the TPP Pljevlja's steam generator amounted to approximately 186 MW, with a threshold capacity of 166 MW and approximately 5 740 hours of operation per year. An average threshold power generation for the same period amounted to 952 GWh.

b) Causes of Active Capacity Deviation from the Nominal Values

The causes of active capacity deviation from the nominal values are several:

- Dominantly exterior (regime of the electric power system operation, quantity and quality of coal; open-air temperature, etc.);
- Interior (state of repair or the equipment and technological systems; state of repair of the cooling system, etc.).

Actual issues that have been recognized and actions towards their resolution are identified in the text below:

c) Measures for higher utilization of installed capacity

- Modification of maintenance strategy and ensuring of a quality maintenance and repair of the primary energy equipment;
- Introduction of modern control technologies aiming to extend the service life and rebuild the resources of primary energy equipment;
- Raising of exploitation efficiency through modernization of the system of control and operation of technological processes;
- Increase annual power generation by increasing the number of hours in operation;
- Coal distribution, storing and delivery;
- Increasing of boiler efficiency;
- Increasing of exploitation indicators for turbine equipment.

d) Capacity Increase Options

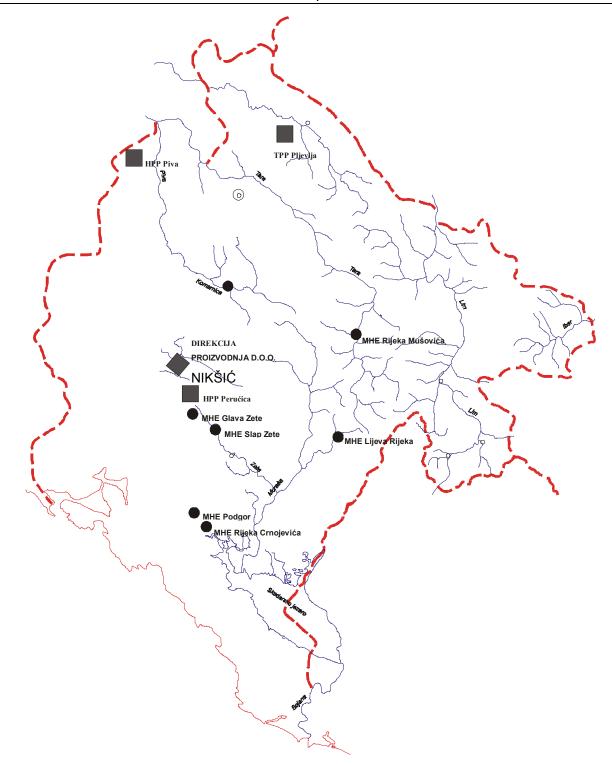
The current capacity may be increased by the following: increase in boiler steam generation and turbine steam flow, reconstruction and modernization of the turbine and system of control and operation, and also partly from the TPP Pljevlja's own-power consumption.

The effects of this Project are as follows:

- Extension of service life and higher reliability of the power plant; more hours in operation and a higher level of utilization of the installed capacity, i.e. a higher power generation, lower costs of driving fuel and maintenance costs;
- An increase in the installed capacity of turbo aggregate and its efficiency, as a result of reconstruction and modernization.

As a final effect of all planned activities in the TPP Pljevlja, the capacity of turbo aggregate is likely to increase by 19 MW, and the power generation by additional 400 GWh per year.

Regardless of the fact that by implementing the foregoing projects the conditions will be created for a significant increase in power generation by all three facilities, the issue of electric power deficit in Montenegro can be resolved only by the construction of additional major power sources, which is supported by the existence of considerable natural resources.



EPCG GEOGRAPHICAL STRUCTURE

14. Indicate what is the status of implementation and planning of the axes for priority projects relevant to Balkan countries in your country: "Electricity connection between Elbasan (Albania) and Podgorica (Montenegro)" and "Gas transport corridor in south-east Europe".

The project of energy interconnection between Elbasan (Albania) and Podgorica (Montenegro), known as **The Construction of 400 kV Transmission Line - Tirana and Extension of Podgorica 2 and Elbasan Transformer Stations,** includes, in Montenegro, the construction of a 400 kV transmission line from TS Podgorica 2 to the village of Rola at the border to Albania (approximately 28 km long, that is 79 poles) and reconstruction of TS Podgorica (2400/110 kV), including the construction of a new 400 kV line bay of Tirana and reconstruction of the existing 400 kV line bay of Ribarevine. The project will be funded from a KfW loan and grant, while the customs duties, taxes, land expropriation costs and other costs will be funded by FU Transmission. The works will be carried out by the Company Dalekovod Zagreb, Croatia.

The construction works on this transmission line are currently in progress, including excavation of pole holes (approximately 60% of pole posts were completed), foot-stall concrete works (approximately 40% of pole posts) and installation of steel lattice transmission line towers (approximately 10% installed). The equipment for the 400 kV line bay of Tirana was installed in TS Podgorica 2. Disassembling of the existing and installation of new equipment in the 400 kV line bay of Ribarevine has not been completed due to unresolved property issues in the vicinity of the transformer station, and for the same reason the land for 7 pole posts has not been repurchased along the transmission line route.

Due to property issues and also because of a slower than planned progression of the works, the anticipated deadline (November 2009) for the completion of the works will most likely not be met, and a new deadline cannot be precisely identified at the moment.

In Zagreb, on 25 September 2007, officials of Montenegro, Croatia and Albania signed an Intergovernmental Declaration for Ionian-Adriatic Gas Pipeline that is to be connected to the trans-Adriatic gas pipeline. Total length of the Adriatic-Ionian gas pipeline amounts to approximately 400 km, with a section of almost 100 km to be constructed in Montenegro. An estimated value of this project amounts to EUR 230 million in total, including a contribution to the project of EUR 60 million by Montenegro.

Following the construction of a transmission gas pipeline through Montenegro, the conditions for the construction of a distribution pipeline enabling gasification of Podgorica and Nikšić and of the entire Montenegro will be created. This will enable introduction of environment-friendly sources of energy in the region, a diversity of energy reserves and sources, potential connection to the gas pipeline Italia – Slovenia – Hungary and a financial gain for Montenegro. In December 2008, the Ministerial Declaration was also signed by Bosnia and Herzegovina.

With the objective of implementation of this project, the following activities have been implemented so far:

- Signing of a Memorandum of Understanding (PLINACRO and EGL);
- Appointment of a joint working group PLINACRO/EGL;
- Initiative for the establishment of an intergovernmental authority;
- Analysis and studies of conduit run options and configuration of the gas system (spatial, technical and financial options);
- Establishment of cooperation between the companies PLINACRO and EGL, in addition to their cooperation with the line Ministries of Montenegro and Albania, responsible for the energy sector;
- This Project was included into the Spatial Plan of Montenegro until 2020, Montenegro Energy Development Strategy until 2025 and Action Plan for its implementation for the period 2008-2012.

Both projects were included into the list of priority regional projects by the Energy Community.

15. What are the planning and authorisation procedures applicable to the development of an energy infrastructure project?

The Spatial Plan of Montenegro is a strategic document and general base for the spatial development and organization of Montenegro.

National objectives and spatial development measures were identified under the Spatial Plan of Montenegro, according to an overall economic, social, environmental, cultural and historical development of Montenegro.

The Spatial Plan of Montenegro especially includes the following: policy of spatial utilization and development of functions and activities in Montenegro; introduction to long-term policies of spatial organization; main infrastructure and technical systems and the manner of their interconnection with the neighbouring systems; guidelines for an increase in energy efficiency and utilization of renewable energy sources; financial - demographic analysis; basis for the protection of natural and landscape values and cultural heritage; guidelines for environmental protection; basis for the protection of national defence interests; basis for preventive measures and protection against natural and technical-technological accidents; areas and modalities of cross-border and international cooperation; postulates for the preparation of spatial documents for specific territorial units; identification of areas of special importance for Montenegro; concession areas; economic market projection; town planning — technical specifications or guidelines for development of national facilities of public interest; guidelines, measures, phases and implementation schedules for the Plan.

National facilities of public interest, according to Article 7 of the Law 51/08 (Official Gazette of Montenegro 51/08), include, inter alia, "roads (motorways, highways and regional roads), including the pertaining facilities; airports with the belonging infrastructure; public railway infrastructure, including the belonging facilities; sea ports and breakwaters; infrastructure facilities of importance for Montenegro (transmission gas and oil pipelines); international and regional water supply facilities; international and regional wastewater facilities); hydro and thermal power plants with the belonging facilities."

Since the present Spatial Plan was prepared according to the previous law, it contains no foregoing guidelines and town planning and technical specifications, so that the preparation of an adequate planning document needs to be initiated whereby the planning prerequisites for the development of energy infrastructure would be created.

The Plan will also include town planning and technical specifications, i.e. a separate section including necessary town planning and technical specification for the preparation of technical documentation.

The town planning and technical specifications will be published on the official website, so that they are available to all interested persons.

The procedure for the preparation of a spatial planning document is initiated following the adoption of a Decision on the Preparation of Spatial Planning Document by the Government of Montenegro, that is subsequently published in the Official Gazette of Montenegro and one printed media distributed on the territory of Montenegro and on the website of the Ministry or local government unit.

Terms of Reference, containing an initial orientation of the planning document, general requirements and the requirements of space users, represent an integral part of the Decision on the Preparation of Spatial Planning Document.

A Decision on the Preparation of Strategic Environmental Impact Assessment is adopted simultaneously with the Decision on the Preparation of Spatial Planning Document.

The author of the planning document is selected following a tender for procurement of services and subsequently in the process of bid opening and evaluation. The author shall comply with all requirements of the tender and contract signed with the Ministry.

The first phase includes the preparation of a Draft planning document which is submitted to the Ministry by the author. After that, the planning document is submitted to competent ministries and the Spatial Development Council for comments. If the received comments are positive, the planning document is submitted to the Government for approval. Following the approval by the Government, a process of public consultations is initiated. Subsequently, after the comments received during the process of public consultations are either accepted or rejected by the author, a final version of the planning document is prepared in the form of a Proposal. A planning document is adopted by the Government or National Parliament, while a local-level planning document is adopted by the local government authority.

The construction of infrastructure facilities and issuing of building permits is regulated by the Law on Spatial Development and Construction of Structures (Official Gazette of Montenegro 51/08).

Article 93 of the Law on Spatial Development and Construction of Structures stipulates that the following documentation shall be required for the issuing of a building permit:

- Conceptual Design, i.e. Final Design, submitted in four counterparts, one of which in protected digital form;
- Auditor's Report, according to this Law, on the Conceptual Design, i.e. Final Design;
- Proof of the rights relating to property ownership, i.e. construction land, proof of the right to build, or other structure-related rights in case of a reconstruction project.

In the process of issuing a building permit, it is confirmed whether a conceptual design or final design has been prepared and audited in line with the town planning and technical specification and the Law.

Article 94, paragraph 1 of the same Law stipulates that a building permit shall be issued within 15 days following that of the application, provided that the requirements from Article 94 of this Law are met.

Article 7 of the same Law stipulates that the facilities of national interest, inter alia, include the facilities of transmission and distribution networks of 35 kV and higher voltage levels. Building permits for such facilities are issued by the Ministry of Spatial Planning and Environmental Protection.

According to Article 93 of the Law on Spatial Development and Construction of Structures, the following is required for the issuing of a building permit: conceptual design, i.e. final design, prepared in four counterparts, one of which in protected digital form, auditor's report on technical documentation and proof of ownership or other rights to the construction land.

The procedure of building permit issuing for the construction of energy infrastructure facilities typically includes one of the following two legal situations:

1) Where the building permit is issued on the basis of conceptual design, the auditor's report shall include no applicable legal approvals (issued by the competent authorities pursuant to special regulations);

No construction works shall be initiated prior to the submission of an audited final design, where the building permit is issued on the basis of conceptual design, although the preparatory works may be initiated based on Project Analysis, pursuant to the Rulebook on contents of project analysis for preparatory works (Official Gazette of Montenegro 80/08), with reference to Article 5 of the Rulebook reading: "For the sites where the facilities representing an integral functional whole are constructed, as included into the planning document for which an environmental impact assessment was prepared, the Project Analysis may also include any area which is necessary for integral development of infrastructure facilities, where the investor holds ownership or other rights to the construction land and where the preparatory works are carried out".

Before the beginning of the construction works on transport and distribution network, pursuant to the Law and rulebooks, an audited final design shall be examined by a building inspector in order to confirm whether it was prepared according to the Conceptual Design based on which the building permit was issued.

2) Where the building permit is issued on the basis of a final design, all approvals issued by the competent authorities, according to special regulations, shall be included into the auditor's report, according to Article 90, paragraph 2 of the Law on Spatial Development and Construction of Structures stipulating that all approvals issued by the competent authorities, according to special regulations and the Rulebook on the manner of conceptual and final design auditing, shall represent an integral part of the audited final report referred to in paragraph 1 of this Article.

The construction activities, according to final design, shall be supervised by a building inspector in order to confirm if they are carried out, according to audited final design on the basis of which a building permit was issued. Conceptual or final design is prepared by a legally licensed design firm, at the investor's request. During the procedure of building permit, issuing it is confirmed whether a conceptual or final design was prepared and audited, according to the applicable town planning and technical specifications, the law and legal regulations or not.

Article 79 of the Law establishes mandatory components of a conceptual design, i.e. the following data: micro location of the building; technical, technological and exploitation characteristics of the building; approximate calculations regarding the stability and safety of the building; technical, technological and organizational elements of structure construction; an analysis of considered options for energy systems of the structures/ buildings, including an energy efficiency assessment; infrastructure solutions and an overview of analyzed options, structural and building solutions for the structures referred to in Article 7 of this Law and an approximate value of the construction works. Conceptual design, if applicable, due to the nature of investment, may anticipate a phased implementation of the project, i.e. construction of structures, which is favourable for the construction of energy facilities that are constructed over a longer period of time and in a phased manner.

Article 80 of the same Law stipulates that a final design shall especially include the following: architectural and structural solutions, structural calculations regarding the stability and safety of a structure and also calculations relating to structural physics and energy efficiency; detailed presentation of technical, technological and exploitation characteristics of structures, including the equipment and installations and energy characteristics of the structures/buildings; detailed overview of activities relating to the performance of construction works from the final design and also technical, technological and organizational solutions for the construction of structures; detailed specifications relating to the connection of structures to the applicable transport and other infrastructure and landscaping solutions; technical solutions for the protection of structures and nearby structures against fire and explosion accidents and other technical protective solutions; a detailed overview of measures for the prevention or mitigation of adverse effects on the environment; structure construction and maintenance costs and other designs and studies, according to the purpose of the structure.

The foregoing necessary approvals include the following:

- Energy approval;
- Fire-fighting approval;
- Environmental approval;
- Agricultural approval, for structures located within the boundaries of the Spatial Plan of Montenegro;
- Water approval and
- Sanitary approval.

An application for the issuing of a building permit for energy infrastructure facilities shall be addressed instantly, provided that all documentation referred to in Article 93 of the Law on Spatial Development and Construction of Structures is submitted and not later than within 15 days as of the date of the submission of complete documentation, pursuant to Article 94, paragraph 1 of the Law on Spatial Development and Construction of Structures.

As for the application for issuing utilization permit for energy infrastructure facilities, this procedure shall be carried out pursuant to Article 120 of the Law on Spatial Development and Construction of Structures (Official Gazette of Montenegro 51/08).

Specifically, the cited Article of the Law stipulates that before a structure is actually used, the investor shall apply for the issuing of a structure utilization permit not later than within seven days following its completion.

An application for the issuing of a structure utilization permit shall be enclosed with the following:

- 1. Declaration of the investor stating that the structure was built according to the building permit and audited final design;
- 2. Declaration of service engineer stating that the structure was built according to the building permit and audited final design;
- 3. Declaration of chief designer stating that the project was completed according to the audited final design;
- 4. Evidence on settlement of all obligations according to special regulations;
- 5. Evidence proving that the relations regarding the settlement of communal infrastructure fee referred to in Article 66 of this Law were regulated;
- 6. Audited final design, in case the building permit was issued on the basis of a conceptual design.

The service engineer and chief designer referred to in paragraph 2 of this Article may be the same person.

Structure utilization permit shall be issued in the form of a decision by the authority competent for building permit issuing.

Structure utilization permit shall be issued for the entire structure or a part of it, in case of phased construction according to the building permit.

Transparent and public nature of building permit issuing is established under this Law, since all requests for the issuing of building and structure utilization permits are published on the official website of competent State Administration authority.

Additionally, Article 121 of the same Law stipulates that a structure utilization permit shall be issued not later than within seven days following that of the submission of a report stating that the structure is ready for use, which has to be subsequently reconfirmed by technical inspection, pursuant to Article 122 of the Law.

Technical inspection includes verification of compatibility between the performed works and audited final design and also the compliance with valid regulations, standards, technical norms and quality requirements for specific types of the works, materials, equipment and installations, where an approval can be issued only if the structure or a part of it was built in accordance with the building permit and audited final design.

Accordingly, the Law on Spatial Planning, Article 123, paragraph 2 and Rulebook on the manner of performance of technical inspection (Official Gazette of Montenegro 33/09), stipulates that a performer of technical inspection shall be appointed by the authority competent for the issuing of building permits within 7 days as of the submission of application for the issuing of a structure utilization permit.

The investor shall bear the costs of technical inspection.

The same Article stipulates that a technical inspection shall be carried out by the company licensed for the preparation of technical documentation, i.e. the holder of a valid license for building activities or the performance of specific construction works on the object structure.

Specifically, a license issued by the Ministry - administration body shall be issued for a period of 5 years, provided that all requirements as stipulated by law are satisfied. In order to be authorized for the preparation of technical documentation or engage in building activities, or to carry out specific building works, a company must be entered into the Central Register of the Commercial Court and have a chief designer or chief engineer among its staff.

A further procedure for the issuing of structure utilization permit, including the foregoing energy infrastructure facilities, provided that a positive Report on the performed technical inspection of the

performed works was issued by the Commission, the Ministry, in case it issued the building permit, shall act immediately and issue a structure utilization permit not later than 7 days following that of the submission of complete documentation for the issuing of structure utilization permit, in the sense of the quoted Article 120 of the Law on Spatial Development and Construction of Structures.

In an opposite case, where a negative Report on the performed technical inspection of the performed works is issued by the Commission, i.e. where it contains a request relating to the repair of specific defects within a specified deadline, the investor shall, following the repairs, apply for another technical inspection. It should be noted that only the works that had to be repaired or additionally completed shall be subject to subsequent technical inspection.

Following the submission of a report on the repeated technical inspection, the Ministry shall issue a structure utilization permit in the form of a decision, provided that the report is positive, noting that the identified irregularities were corrected within the requested time limit.

In connection with this, it should be noted that according to Article 153(1), items 4 and 7 of the Law on Spatial Development and Construction of Structures, a building inspector shall be authorized, where a violation of the law or other regulation is confirmed, to ban the issuing of an utilization permit, in case it has not been already issued, or propose to the administrative authority to announce such permit issued contrary to this Law null and void.

For the first time, the Law on Spatial Development and Construction of Structures instituted the activity of "parallel technical inspection" for the facilities requiring Ministerial action. In this case, pursuant to Article 127 of the same Law, the investor is enabled to request technical inspection of a structure simultaneously in the process of performance of the construction works, which is recorded by the performer of the technical inspection in the disposition of the building permit.

A set of national regulations was adopted on and applied from 1 January 2008, completely regulating an impact of any specific project on the environment, as follows: The Law on Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 80/05), Decree on Projects Subject to Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 20/07 of 4 April 2007), Rulebook on the content of documentation to be submitted together with request for determination on the need for Environmental Impact Assessment (Official Gazette of the Republic of Montenegro 14/07 of 21 December 2007), Rulebook on the content of documentation to be submitted together with request for determination of the scope and content of environmental impact assessment (Official Gazette of Montenegro 14/07 of 21 December 2007) and Rulebook on the content of environmental impact assessment (Official Gazette of Montenegro 14/07 of 21 December 2007).

The Council Directive 97/11/EC was transposed into the Law on Environmental Impact Assessment, amending Directive 85/337/EC on the assessment of the effects of certain public and private projects on the environment. Additionally, Directive 2003/35/EC of the European Parliament and of the Council was transposed into the Law, providing for public participation in respect of the decision making and access to information. Montenegro ratified the ESPOO Convention on environmental impact assessment in the context of cross-border activities, including two amendments (Official Gazette of Montenegro 8/08).

Pursuant to Article 30 of the Law on Environmental Impact Assessment, in case a planned project may have an impact on the environment of another state or if so requested by another state, the state administration authority competent for environmental protection (Environmental Protection Agency), shall within the shortest possible time limit and not later than within the time limits for notification of local public established by the Law, deliver to the other state a letter of notification relating to the project enclosed with all available data on potential impacts, nature of the decision that may be adopted and also a time limit within which the other state may communicate its intent to participate in the procedure of environmental impact assessment. The decision whereby an environmental impact assessment is approved or rejected shall be communicated by the state administration authority competent for environmental protection (Environmental protection Agency) to the state that took part in the procedure for environmental impact assessment. The notification shall include the contents of the decision in addition to the specified requirements, where applicable; the reasons that the decision was based on, including those for accepting or rejecting the submitted comments, proposals, opinions of interested bodies and organizations and the public

of another state and the most important measures that shall be implemented by the bearer of the project.

Article 30 of the Law on Environmental Impact Assessment stipulates that notifications and consultations with other states regarding potential trans-boundary impacts shall be carried out on the basis of reciprocity, according to signed international treaties.

The Law on Environmental Impact Assessment regulates the procedure of environmental impact assessment for the projects that may have a considerable impact on the environment, the contents of environmental impact assessment, participation by interested bodies, organizations and the public, the procedure for making an assessment and issuing of approvals, notification regarding the projects that may have a significant impact on the environment of another state, supervision and other issues of importance for environmental impact assessment. The process of environmental impact assessment is implemented in three phases, as follows: deciding on the need for environmental impact assessment; determination of the scope and content of environmental assessment and issuing of approval of environmental impact assessment. The procedure for environmental impact assessment is conducted in three phases, as follows:

- Deciding on the need for environmental impact assessment (27 days);
- Determination of the scope and content of environmental assessment (69 days) and
- Issuing of approval of environmental impact assessment (77 days).

Determination of the scope and content of environmental assessment is not obligatory because of the adoption of the Rulebook on the content of environmental impact assessment, pursuant to the Law.

The Decree on Projects Subject to Environmental Impact Assessment specifies particular projects that are subject to obligatory environmental impact assessment and those that may be subject to environmental impact assessment, as requested. The project that are subject to obligatory environmental impact assessment are specified under List I, while those that may be subject to environmental impact assessment are specified under List II of this Decree.

The List 1, which has been harmonized with Annex to Decision III/7 of the ESPOO Convention, contains the projects subject to obligatory environmental impact assessment, i.e. where the preparation of Environmental Impact Assessment (EIA) is obligatory. Energy projects are, inter alia, included into this list, as follows:

- Plants for electric power generation, no matter for the type of fuel used, of a capacity of 300 MW or more;
- Dams and other facilities intended for stopping the flow and accumulation of water that water flows to, or where the volumes of additionally stopped or accumulated water exceed 10 million cubic meters;

For the projects from List 1, total duration of the impact assessment procedure initiated in front of the competent authority (not including the time required for the EIA preparation, possible amendments to the EIA, preparation of documentation for determination of the scope and contents of EIA and similar, which is the investor's obligation) shall be no longer than 146 days (including 2 phases: determination of the scope and content of EIA and issuing of EIA approval). Since the Law stipulates that the second phase may not be obligatorily administered by the investor (determination of the scope and content of EIA), the time required for the issuing of EIA approval, provided that the Commission evaluating the EIA has no objections, shall be no longer than 77 days following that of the EIA submission to the competent authority.

The List 2 contains the projects that may be subject to environmental impact assessment, as required, depending on the decision of the competent body (Environmental Impact Assessment). This list includes, inter alia, the following energy projects:

 Plants for electric power generation, no matter for the type of fuel used, of a capacity of less than 300 MW;

- Dams and other facilities intended for stopping the flow and accumulation of water that water flows to, or where the volumes of additionally stopped or accumulated water do not exceed 10 million cubic meters;
- Hydro power plants;
- Wind power plants;
- Transformer stations and inter-station ties of 220 kV and more;

For the projects from List 2, total duration of the impact assessment procedure initiated before the competent authority (not including the time required for EIA preparation, possible amendments to EIA, preparation of documentation for determination of the scope and contents of EIA and similar, which is the investor's obligation) shall be no longer than 173 days (including 3 phases: determination on the need for environmental impact assessment; the scope and content of EIA and issuing of EIA approval). Since the Law stipulates that the second phase may not be obligatorily administered by the investor (determination of the scope and content of EIA), the time required for the issuing of EIA approval for the List 2 projects (determination on the need for environmental impact assessment and issuing of EIA approval), provided that there is no amendment to the submitted documentation or objections by the Commission evaluating the EIA, shall be no longer than 104 days.

No project implementation shall be initiated by a project bearer without prior completion of the procedure for environmental impact assessment and issuing of EIA approval by the competent authority (Article 6 of the Law on Environmental Impact Assessment).

Please note that the Law on Spatial Development and Construction of Structures was adopted one year ago, as a reform law in the area of spatial development and construction of structure aimed at removal of business barriers.

The most important new characteristics compared to the applicable previous laws relate to the simplification and shortening of administrative procedure. Pursuant to new regulations, the procedure for issuing of building permits was shortened and simplified, so that the auditor of technical documentation is now selected directly by the investor; a building permit is issued by following a single administrative procedure and a structure utilization permit is issued by following a single administrative procedure.

Previously, investors had to follow seven administrative steps through (seven decisions in seven administrative procedures) and now only two. According to our assessment, the procedure for obtaining necessary documentation for the construction and utilization of structures was shortened by at least 4 months.

According to its legal authority, the Agency adopted a Rulebook on procedures and criteria for issuance of permits in energy sector of Montenegro (Official Gazette of the Republic of Montenegro 46/2007). This regulation specifies more detailed criteria for the issuing of permits for the construction of new power generation capacities, reconstruction of the existing ones with significant upgrades, new interconnections with other systems and the construction of a direct power line. Also, this Rulebook regulates the content of request and application procedure for the issuing of permits, terms and conditions for exemption and release from obligatory application for the issuing of a permit and the manner of exchange of documentation and information between the Energy Regulatory Agency and an applicant for the issuing of a permit and between the Agency and the entity that was issued a permit.

Obligatory criteria for the issuing of permits are the following:

- 1) Safety and security of energy systems, installations and equipment;
- 2) Environmental protection;
- 3) Use of land and building site:
- 4) Use of public assets;
- 5) Efficient use of energy:
- 6) Nature of primary resources;
- 7) Technical, economic, financial and operating capacities of the applicant.

The Agency shall issue a permit to the applicant who meets all legal, technical and economic requirements established by the Agency. Additionally, the construction and reconstruction activities are also subject to special laws regulating this matter, as follows:

- Energy Law (Official Gazette of the Republic of Montenegro 39/2003);
- 2. Concession Law (Official Gazette of the Republic of Montenegro 39/2003);
- 3. Law on Spatial Development and Construction of Structures (Official Gazette of Montenegro 51/2008);
- 4. Law on General Administrative Procedure (Official Gazette of the Republic of Montenegro 60/2003).

A permit shall be issued for no longer than two years, during which time the applicant shall be obliged to obtain a building permit from the competent authority.

The Ministry of Spatial Planning and Environmental Protection, continuing the reforms, is preparing proposed measures to eliminate business barriers in the area of planning, designing and construction of structures, resulting from regulations that do not fall within the area of responsibility of the ministry and yet have a direct effect on the planning, designing and construction of structures (regulations on water resources, water supply, sewerage, energy, fire-fighting activities, roads, etc.). The proposal shall be submitted to the Government of Montenegro by the end of the current year. The main objective of these reforms is to create a favourable environment for investment activities and eliminate barriers, primarily the administrative ones.

16. The TEN-E policy is currently under revision. What are your expectations in the new TEN-E guidelines/regulation?

Considering the basic postulates of the TEN-E policy, which should ensure good internal energy interconnections among the EU member states and also between the EU and the neighbouring countries, while complying with the principles of sustainable development and free market, our expectations relating to the revisions of guidelines and regulations concern exclusively the manner of implementation and identification of priority projects within the TEN-E programme.

Since the period of implementation of energy projects lasts for several years, we expect the projects that are of importance for Montenegro to be treated equally as those relating to internal interconnection of the EU member states, especially in the cases of obvious general interests of the concerned parties.

III. Telecommunication networks

17. Is there any intention of joining the ICT PSP specific programme of the CIP?

So far, Montenegro has not taken part in the ICT Policy Support Programme, as part of the Competitiveness and Innovation Programme. Considering that the Ministry for Information Society was established by the beginning of 2009, no initiative for membership of ICT PSP has been initiated yet. It has been planned to initiate the signing of a Memorandum of Understanding in the following period of time.

18. What are eventually your plans with respect to it?

At the meeting of the Minister of Information Society of the Government of Montenegro with the high representatives of the European Commission in charge of information society and media domain, the interest for participation in the ICT PSP was expressed. Preliminary activities for the accession to this programme are in progress. To that end the Letter of Interest was sent to the Commissionaire for Information Society and Media with the purpose to accede to this programme. Accordingly, further activities will be undertaken, in order to allocate the budgetary funds for the next year for the purpose of participation, as well as the possibility of co-financing from the funds of the IPA instrument.

ANNEX 1 Public budgets - Transport Infrastructure Investments

State Budget (in EUR million) Investments in Transport Infrastructure (Annex 159)

List of Annexes:

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