STATEMENT ABOUT SECURITY OF SUPPLY IN MONTENEGRO

Prepared by the Ministry for Economic Development

Podgorica, May 2009
I INTRODUCTORY NOTES

Realization of electricity balance in 2008 was accompanied with very complex conditions which are present in the electric power system of Montenegro over a long period.

Main characteristics of the energy sector that are particularly important for realization of the Energy balance in year 2009 are as follows:

- electricity demand of customers considerably exceeds generation possibilities of EPCG, both in terms of energy as well as in available capacity;
- complex situation in the energy sector of the region with respect to acquisition of required volumes of electricity as required to cover the electricity deficit;
- planned overhauls of generating capacities that will take several months (TPP „Pljevlja“ and HPP „Perućica“) in 2009 will result in considerable decrease in generation levels, requiring extremely high imports of electricity in the summer months.
- revitalisation and modernisation of power plants should result in total increase of annual generation of electricity of approximately 300 GWh;
- uncertainty of future demand of KAP, Steel Mill and other customers in the year 2009 is a considerable constraint for reliable demand planning, and accordingly for forecast of electricity and petroleum products deficit;
- according to the existing legal regulations, procurement of electricity is not exempted from provisions of the Public procurement law and due to that it is not possible to import electricity to cover the deficit on a short-term basis (daily and weekly), which is particularly important in a situation of unfavourable hydrological conditions, unplanned breakdowns of big generation capacities and abrupt increase in consumption caused by unfavourable weather conditions. Also, it is not possible to procure electricity through participating in tender processes of generators from neighbouring countries or on energy exchanges in the region, which would be more favourable both in terms of its cost-effectiveness and in terms of energy effects;
- introduction of high export taxes by the neighbouring countries, which significantly increases prices of imported electricity;
- congestions existing in transmission capacities in the region which are directly connected with the import of electricity in Montenegro – capacities are allocated on a bilateral basis pursuant to very strict UCTE rules on the basis of calculation of power flows two months in advance;

Such a situation in the energy sector requires additional efforts to be undertaken not only by energy undertakings but also by all businesses, as well as responsible authorities in Montenegro in order to secure required volumes of all energy fuels, in order to avoid a situation where their deficit could be a limiting factor for overall economic development of Montenegro.

However, having in mind all the above mentioned circumstances, it may be said that the level of security of the electric power system of Montenegro that was ensured in 2008 was very high, i.e. electricity supply to customers was good.
1. ELECTRICITY

1.1. Generation

Total net electricity generation realized in Montenegro in the year 2008 amounted to 2686.9 GWh, which is 136.1 GWh or 4.8% less than planned, i.e. 642.2 GWh or 31.4% more than realization from the previous year.

Highest monthly generation was realized in December (332.6 GWh) and lowest in May (103.5 GWh).

- **HPP "Perućica"** generated 878.2 GWh, which is 31.8 GWh or 3.5% less than planned, i.e. 139.6 GWh or 18.9% more than generated in the year 2007. Generation below the plan is a result of unfavorable hydrologic conditions throughout the year.
- **HPP "Piva"** generated 634.2 GWh, which is 127.8 GWh or 16.8 % less than planned, i.e. 111.2 GWh or 21.3 % more than realised in the previous year. There was no spilling of water in HPP "Piva".
- **Small HPPs** generated 19.1 GWh, which is 1.9 GWh or 9% less than planned, and more than the realisation in the last year by 2.4 GWh or 14.4%.
- **TPP "Pljevlja"** generated 1155.4 GWh, or 25.4 GWh or 2.2% more than planned, i.e. 389 GWh or 50.8% more than realisation in the previous year.

*Diagram 1: Graphycal presentation of realised generation per months*
1.2. Consumption

Gross electricity consumption in Montenegro, in the year 2008, amounted to 4584.5 GWh, i.e. 218.5 GWh or 4.5% less than planned, i.e. 62.2 GWh or 1.3% less than realisation in the previous year.

The characteristics of realized consumption are as follows:

- The highest monthly consumption on the transmission network was achieved in January (462.2 GWh), and the lowest in May (327.7 GWh);

![Electricity consumption per months](image)

- The highest daily consumption was achieved on February 17 (16187 MWh), and the lowest on May 20 (10215 MWh);

![Load diagram for day with the highest consumption in year 2008](image)

![Load diagram for day with the lowest consumption in year 2008](image)

![Load duration curve for day with the highest consumption in 2008](image)

![Load duration curve for day with the lowest consumption in 2008](image)
The highest average peak load was registered on February 17 in the 21st hour (791 MW), and the lowest on June 15 in the 5th hour (328 MW), excluding the days when lower loads were realized due to disruptions in the electric power system.

Consumption structure:

- The Aluminum Plant (KAP) realized a consumption of 1705.3 GWh, which is 315.7 GWh or 15.6% lower than planned, i.e. 244.7 GWh or 12.6% less than realised in the previous year;
- The Steel Mill realized a consumption of 228.2 GWh, which is 28.2 GWh or 14.1% more than planned, i.e. 46.1 GWh or 25.3% more than realised in the previous year;
- Railways of Montenegro realised a consumption of 21.6 GWh, which is 3.4 GWh or 13.6% less than planned i.e. 1.8 GWh or 7.7% less than consumption realised in the previous year.
- Gross distributive consumption amounted to 2472.9 GWh, which is 85.9 GWh or 3.6% more than planned, i.e. 139.1 GWh or 5.9% more than consumption realised in the previous year.

In the structure of the consumption the participation of individual consumers was as follows:

<table>
<thead>
<tr>
<th>Gross consumpt. (with trans. loss.)</th>
<th>Net consumption (without transmission losses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- KAP</td>
<td>37.2 %</td>
</tr>
<tr>
<td>- Steel Mill</td>
<td>5.0 %</td>
</tr>
<tr>
<td>- Railways MN</td>
<td>0.5 %</td>
</tr>
<tr>
<td>- Direct consum.</td>
<td>42.7 %</td>
</tr>
<tr>
<td>- Distr. gross</td>
<td>53.9 %</td>
</tr>
<tr>
<td>- Transmission loss.</td>
<td>3.4 %</td>
</tr>
</tbody>
</table>

1.3. Procurement

In 2008 the total amount of 2806.4 GWh was procured from other electric power systems, which is 554.8 GWh or 19.8% less than in the previous year.

For the purpose of covering the deficit in the balance, the EPCG, in accordance with the determined measures for realization of the Balance, after launching an annual tender, concluded the relevant contracts.

In order to cover the deficit that couldn’t have been envisaged in the annual balance, additional volumes of electricity were contracted and imported in certain periods of the year.
The total of 1220.4 GWh was procured from the Electric Power Utility of Serbia (EPS) based on the Agreement on LTBTC - Long-Term Business-Technical Cooperation (out of this amount, 1078.1 GWh in accordance with the Article 4 and 142.2 GWh in compliance with the Article 18, out of which 30.7 GWh were purchased).

Deviations from the electricity exchange program (compensation) and island supplying of the areas which are connected with 110 kV interconnector overhead lines, which are not in parallel operation (in the purchasing direction), amounted to 14.5 GWh in 2008.

From the electric power systems abroad, as well as from the independent dealers, i.e. from the import, the EPCG and the Aluminum Plant Podgorica purchased the total amount of 1571.5 GWh, which is 91.5 GWh or 5.5% less than the planned import. The import in the year 2008 was lower than the import in the previous year by 536.4 GWh, i.e. 25.4%. The import realized by the Aluminium Plant was 36.3% lower than planned, while the import by EPCG was 24% higher than the plan.

The EPCG imported 1084 GWh (taking into account also procurement from EPS in accordance with Article 18), out of which 1082.2 GWh was purchased and 1.8 GWh was procured on the basis of the exchange.

Import of the Aluminium Plant in the year 2008 was 518.2 GWh.

1.4. Delivery of electricity

During the year 2008 the electric power system of Montenegro delivered to other systems the total amount of 908.8 GWh, which is 149.7 GWh or 19.7% more than in the last year.

The Electric Power Utility of Serbia (“EPS”), based on the Agreement on LTBTC - Long-Term Business-Technical Cooperation, received 796.5 GWh which is 148.9 GWh or 23% more in comparison with the previous year. Out of this volume:

- On the basis of the Article 3 of the Contract on LTBTC (generation of the HPP “Pliva”) 634.2 GWh (16.8% less than planned) and
- On the basis of the Article 18 of the same Contract 162.3 GWh.

Total power debt of the EPCG towards the Electric Power Utility of Serbia (EPS) at the end of the year 2008 amounted to 19.4 GWh, whereof 16.3 remains as an obligation on the basis of exchange 1:1 as a breakdown assistance, and the remaining volume is a result of exchange. Deviations from the electricity exchange programs, compensations and island operation (Bileca and Cajnice) in direction of supplying to the Electric Power System (EPS), were realized with 5 GWh.

The EPCG delivered to the systems abroad the total amount of 107.3.

1.5. Transit

In the year 2008 a transit in the amount of 1050 GWh was registered and realized transit amounted to 1521.1 GWh.

1.6. Losses

a) Transmission Network:

Electric power losses in the transmission network of the EPCG in the year 2008 amounted to 156.6 GWh, which is 13.4 GWh or 7.9% less than planned i.e. 0.6 GWh, i.e. 0.4% less than the realization in the previous year.
According to the established methodology, the losses in transmission are given in relation to the total electricity in the transmission network, which amounted to 6049.5 GWh. The electric power losses in the transmission network have a downward tendency, i.e. in 2005 they amounted to 3.2%, in 2006 they amounted to 2.7%, in 2007 they amounted to 2.65% and in 2008 they amounted to 2.59%.

The transmission network losses in the 2009 are planned at 138 GWh which is 3.58% of the gross consumption in Montenegro. Part of losses in the transmission network are result of transit of electricity carried out for other power utilities. In relation to the total transit of electricity, these losses represent approximately 2.9%.

b) Distributive Network:

Total losses realized in the distributive network in 2008 amounted to 568.0 GWh, which is 116 GWh or 25.7% more than the plan, i.e. 37 GWh or 6.9 % more than the realization in the previous year. In relation to the total consumption of the distributive consumers, the losses make 22.97%. In relation to the total consumption in the system, distribution losses make 12.4%.

Distribution network losses in the year 2009 are planned at 421 GWh, i.e. 16.90% in relation to gross distributive consumption on the level of the year.

Table 1
REALISATION OF ELECTRICITY BALANCE IN YEAR 2008

<table>
<thead>
<tr>
<th>Balance elements</th>
<th>Realised year 2007</th>
<th>Realised year 2008</th>
<th>Plan 2008</th>
<th>INDEX (2)/(1)</th>
<th>INDEX (2)/(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GROSS GENERATION</td>
<td>2044,7</td>
<td>2686,9</td>
<td>2823</td>
<td>131,4</td>
<td>95,2</td>
</tr>
<tr>
<td>1.1. Generation HPPs - net</td>
<td>1278,3</td>
<td>1531,5</td>
<td>1693</td>
<td>119,8</td>
<td>90,5</td>
</tr>
<tr>
<td>HPP Perućica</td>
<td>738,6</td>
<td>878,2</td>
<td>910</td>
<td>118,9</td>
<td>96,5</td>
</tr>
<tr>
<td>HPP Piva</td>
<td>523,0</td>
<td>634,2</td>
<td>762</td>
<td>121,3</td>
<td>83,2</td>
</tr>
<tr>
<td>distributive HPPs</td>
<td>16,7</td>
<td>19,1</td>
<td>21</td>
<td>114,4</td>
<td>91,0</td>
</tr>
<tr>
<td>1.2. Generation TPP Pljevlja - net</td>
<td>766,4</td>
<td>1155,4</td>
<td>1130</td>
<td>150,8</td>
<td>102,2</td>
</tr>
<tr>
<td>2. PROCUREMENT FROM EPS</td>
<td>1235,2</td>
<td>1220,4</td>
<td>1079</td>
<td>98,8</td>
<td>113,1</td>
</tr>
<tr>
<td>- by Contract (basic volume)</td>
<td>1075,5</td>
<td>1078,1</td>
<td>1079</td>
<td>100,2</td>
<td>99,9</td>
</tr>
<tr>
<td>- Article 18</td>
<td>159,7</td>
<td>142,2</td>
<td>0</td>
<td>89,1</td>
<td>...</td>
</tr>
<tr>
<td>3. IMPORT</td>
<td>2107,9</td>
<td>1571,5</td>
<td>1663</td>
<td>74,6</td>
<td>94,5</td>
</tr>
<tr>
<td>3.1 Importer EPCG</td>
<td>1396,0</td>
<td>1053,3</td>
<td>850</td>
<td>75,5</td>
<td>123,9</td>
</tr>
<tr>
<td>- Procurement</td>
<td>1340,8</td>
<td>1051,5</td>
<td>850</td>
<td>78,4</td>
<td>123,7</td>
</tr>
<tr>
<td>- Exchange with other systems</td>
<td>55,2</td>
<td>1,8</td>
<td>0</td>
<td>3,3</td>
<td>...</td>
</tr>
<tr>
<td>3.2 Importer KAP</td>
<td>711,9</td>
<td>518,2</td>
<td>813</td>
<td>72,8</td>
<td>63,7</td>
</tr>
<tr>
<td>4. Deviation – receipt from system</td>
<td>18,0</td>
<td>14,5</td>
<td>0</td>
<td>80,7</td>
<td>.....</td>
</tr>
<tr>
<td>5. DELIVERY TO EPS</td>
<td>647,6</td>
<td>796,5</td>
<td>762</td>
<td>123,0</td>
<td>104,5</td>
</tr>
<tr>
<td>- By Contract (generation of HPP &quot;Piva&quot;)</td>
<td>523,0</td>
<td>634,2</td>
<td>762</td>
<td>121,3</td>
<td>83,2</td>
</tr>
<tr>
<td>- Article 18</td>
<td>124,6</td>
<td>162,3</td>
<td>0</td>
<td>130,3</td>
<td>.....</td>
</tr>
<tr>
<td>6. EXPORT</td>
<td>107,7</td>
<td>107,3</td>
<td>0</td>
<td>99,6</td>
<td>.....</td>
</tr>
</tbody>
</table>
2. Electricity net generation plan per power plants

Electricity generation planning in hydropower plants was carried out on the basis of existing hydrology data and overhaul plans that are delivered by responsible departments in power plants. Planned generation of TPP “Pljevlja” was prepared on the basis of planned time schedule for annual overhaul and winter maintenance of the plant that was delivered by responsible department of TPP.

Capital overhauls of TPP „Pljevlja” and HPP „Perućica” are planned for the next year, therefore they will be out of operation for several months. Implementation of planned overhaul activities in these generating plants in the next year will ensure considerable increase in electricity generation in the year 2010.

Total net electricity generation in Montenegro in the year 2009. godini was planned at the level of 2507 GWh, which is 11.9% less than planned for the year 2008.

Overview of planned net electricity generation per power plant as well as total generation, with comparison with the plan and with the estimated realisation for 2008, is given in the Table 2:

<table>
<thead>
<tr>
<th>Table 2 : Electricity generation (GWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power plant</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1 HPP “Perućica”</td>
</tr>
<tr>
<td>2 HPP “Piva”</td>
</tr>
<tr>
<td>3 Small HPPs</td>
</tr>
<tr>
<td>4 Total HPPs (1+2+3)</td>
</tr>
<tr>
<td>5 TPP “Pljevlja”</td>
</tr>
<tr>
<td>6 TOTAL (4+5)</td>
</tr>
</tbody>
</table>

Structure of planned generation per power plants is given in the Diagram 2.
Diagram 2: Structure of planned generation of per power plants in the year 2009


2.1. Generation of power plants

HPP “Perućica”

Net generation in the power plant is planned at the level of 944 GWh, which is 22.8% more than estimated generation in the year 2008.
Generation plan for HPP "Perućica" per months from inflow and from water reservoirs is shown on the Diagram 4.

**Generation of HPP "Perućica"**

![Diagram 4: Generation plan for HPP “Perućica” per months](image)

**HPP “Piva”**

Net generation of power plant is planned at the level of 762 GWh, which is at the level of the plan for the year 2008, i.e. 9% lower than the estimated realisation in the year 2008. In accordance with the Agreement on Long-Term Business-Technical Cooperation (hereinafter: Long-term Agreement), EPS is planning operation of HPP “Piva”.

**2.2. Small hydropower plants**

Electricity generation is planned at the level of 21 GWh, which is on the level of the plan for 2008, i.e. 18.6% higher than estimated realisation in 2008.

**2.3. Generation of TPP “Pljevlja”**

Generation of TPP “Pljevlja” in the year 2009 is planned on the basis of data delivered by responsible department in the Thermal power plant at 780 GWh, which is 36.1% lower than the estimated realisation in the year 2008. Overhaul of the power plant is planned for the period 01.05. – 30.09.2009. Result of full implementation of planned overhaul works in the year 2009 will be increase in installed capacity of this plant by approximately 10 MW.

**Table 3: Structure of electricity generation in Montenegro (2005-2025)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Only new</th>
<th>TPPI &amp; TPPII</th>
<th>Total</th>
<th>Only new renewables*</th>
<th>TPPI &amp; TPPII</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Renewables</td>
<td>renewals</td>
<td>renewables</td>
<td>Renewables</td>
<td>renewables</td>
<td>renewables</td>
<td>Renewables</td>
</tr>
<tr>
<td>2005</td>
<td>2,104</td>
<td>23</td>
<td>890</td>
<td>2,994</td>
<td>70</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2010</td>
<td>2,157</td>
<td>120</td>
<td>1,152</td>
<td>3,309</td>
<td>65</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>2015</td>
<td>3,288</td>
<td>296</td>
<td>2,369</td>
<td>5,657</td>
<td>58</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>2020</td>
<td>3,399</td>
<td>406</td>
<td>2,290</td>
<td>5,689</td>
<td>60</td>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td>2025</td>
<td>3,478</td>
<td>485</td>
<td>2,325</td>
<td>5,802</td>
<td>60</td>
<td>8</td>
<td>40</td>
</tr>
</tbody>
</table>

Note: *) New renewables: small HPPs (<10 MW), wind generators, biomas cogeneration, waste incineration TPP.
In the whole planning period 2010-2025, share of renewables will remain at 60%, while share of «new» renewables keeps increasing and at the end of the planning horizon in 2025 it will reach 8%. The remaining share are thermal power plants (TPP Pljevlja 1 and 2) which remain at approximately 40%.


Revitalization of the Montenegrin electricity transmission system has been undertaken through the realization of the following projects:

- extension of 400 kV substation Ribarevine and substation Podgorica 5, under a mixed-financing scheme (EPCG, loans, donations),

- construction of 110/35 kV substation Virpazar; projected deadline for the completion of works is 1 June 2009; financed by EPCG,

- extension of the substation Mojkovac and substation Andrijevica; projected deadline for the completion of works is 1 November 2009; financed from EPCG resources and loans,

- construction of 110 kV transmission line Tivat-Kotor and construction of 110 kV substation Kotor; projected deadline for the completion of works on the transmission line is the end of 2009 and on the substation the end of 2010; financed from EPCG resources and loans,

- construction of the telecommunication system (installation of optical fiber ground wires/OPGW on transmission lines by replacement of existing protective ropes with optical fiber cables); in 2008, OPGW have been installed on 400 kV transmission lines, and in 2009 installation of OPGW on 220 kV transmission lines is planned; financed from EPCG resources and loans.

Revitalization of existing generating capacities is underway through the realization of the following projects:

**HPP Perucica:**

- Reconstruction and rehabilitation of facilities; the project is to be financed from EPCG resources;

- Injection works on Krupac and Slano storage plants; the project is to be financed from EPCG resources;

- Installation of a turbine-generator unit No. 8; sources of financing have not yet been defined (probably, under a mixed financing model – from loans and EPCG resources); realization of the project is foreseen by the end of 2012.

**HPP Piva:**

- The second stage of HPP Piva Reconstruction and Modernization Project; the project is to be financed from EPCG resources, loans and donations.

**TPP Pljevlja:**

- In 2007 and 2008, the second stage of boiler house reconstruction was completed; financed from EPCG resources;

- Projects envisaged for completion in 2009 are:
replacement of the electrostatic filtering plant for flue gases; financed from loans;

modernization of the turbine plant; rehabilitation of raw water pipelines; funded from EPCG resources;

stabilization and re-cultivation of the existing ash and slag waste disposal area in Maljevac; funding from EPCG resources.

4. Strategy of exploitation of renewables

Strategy anticipates the use of renewables at least up to 20% of the total primary energy consumption until 2020-2025.

In January 2007, European Commission has published document titled: An Energy Policy for Europe. This document sets very ambitious commitments that should be accomplished by 2020; reaching 10% of the biofuels share in the total fuel consumption and even more important reaching 20% of share of renewables in the overall energy balance. This means additional increase of renewables in respect to goal from 2001, when it was foreseen that share of renewables in 2010, should be 12%.

a. Small HPPs: In period up to 2025, it is planned to build several small HPPs of total installed capacity of 80 MW (2010 - 20 MW, 2015 - 30 MW, 2020 - 20 MW and 2025 - 10 MW), with approximate production of 250 GWh/annually. Foreseen investments up to 2025, are 120 million EUR.

b. Wind-farms: Since the technical potential on the most attractive locations in Montenegro is estimated to 100 MW, it is necessary to conduct detailed measurements in order to determine micro-locations for potential projects and also to produce the study for development of the wind farms. With investment costs ranging from 1,000 EUR/kW and expected number of operating hours – 2,200 annually, the Strategy foresees minimum 60 MW: two wind-farms of total capacity of 10 MW (2x5 MW) expected to be operational in 2010, two times three wind-farms of total production capacity of 30 MW to be operational in 2015, and 2020, respectively, and four wind farms of total capacity of 20 MW in 2025. Foreseen investments up to 2025, are 60 million EUR. In case of expressed interest of the foreign investor, the Strategy allows for greater capacity and faster dynamics, as long as potential problems of introducing the wind-farms into relatively small power system of Montenegro are solved, the problems of reserves of power system solved and as long as there is an economic justification for such projects.

c. Solar energy: Large obstacle to more significant use of photovoltaic systems is the high installation cost ranging between 4,000 and 6,000 EUR/kW, while their conversion efficiency is relatively small. However, having in mind changes in technologies, it is necessary to make detailed analysis on this issue within the Action Plan. Therefore in period until 2025, there are no plans to use solar energy for generation of electricity (photovoltaic) that could be transmitted through distribution network, but rather direct use of solar energy for heating, hot water, and other low temperature processes, mostly in the service sector, including tourism and households. Photovoltaic is foreseen only in relatively small range and in special conditions (structures and applications for which construction of distribution network is not economic).

d. Biomass: Even though additional researches are required in order to obtain more reliable data, according to estimations the technical potential is adequate for at least 3 to 5 smaller power plants with specific capacity between 5 and 10 MW. For now, the Strategy anticipates construction of cogeneration facilities total capacity 5 MW (2020- 2 MW and 2025- 3 MW) and this is giving opportunity for potential private investors to express their interest. Foreseen investments until 2025, are 7.5 millions EUR.

e. Energy from waste: A construction of one such facility of capacity of 10 MW is envisaged until 2025, at the territory of the municipality of Podgorica, investment costs are approximately 3,200 EUR/kW. Planned investments until 2025 are 32 million EUR.
f. **Biogas:** At the moment the Strategy does not envisage introduction of significant biogas facilities until 2025.

g. **Biofuels:** Montenegro has obligation according to the Article 20 of the Treaty, to prepare a Plan to implement the Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. The Plan was prepared and adopted by the MC in June 2007, in Becici, during the Montenegro presidency.

Use of biofuels in the transport sector may be useful to contribute to the higher level of environmental protection. According to EU Directives related to biofuels (bioethanol, biodiesel) it is recommended that in the EU countries the share of biofuel in the overall consumption, at the end of 2005, should be 2%, and by the end of 2010, 5.75%. Use of biofuels in Montenegro is envisaged after 2010. In 2025, the consumption of biofuels would be approximately 0.68 PJ.

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**5. Natural Gas**

Natural gas market in Montenegro has not yet been developed, but Montenegro has assumed the obligation as a member of the EC to implement relevant primary regulation in compliance with Directive 2003/55/EC concerning common rules for the internal market in natural gas, Regulation 1775/2005/EC on conditions for access to the natural gas transmission networks and Directive 2004/67/EC concerning measures to safeguard security of natural gas supply. In October 2008, a Draft Gas Law was prepared and its provisions were included thereupon in the Draft Energy Law. The new Energy Law is expected to be adopted by the end of 2009.

The Ministry of Economic Development has drawn up a Law Proposal on the Exploration and Exploitation of Oil and Gas brought into accordance with Directive 94/22/EC on conditions for granting and using authorizations for the exploration and production of hydrocarbons. It is planned that the Law Proposal will be submitted to the Government for consideration and adoption in 2009.