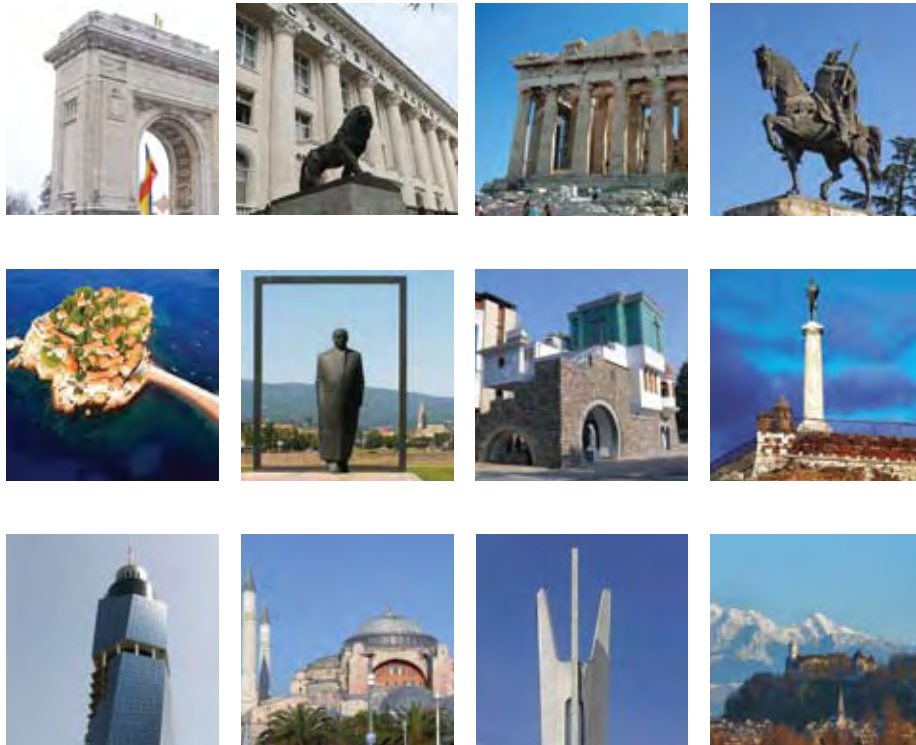


SEE Legal

South East Europe Legal Group

Energy Guide 2012



Preface

Dear Partners and Friends of SEE Legal,

South East Europe Legal Group ("SEE Legal") is a regional organisation of 10 leading independent national law firms covering the twelve jurisdictions of South East Europe. Established in 2003, SEE Legal is the largest regional legal force with more than 450 lawyers and an impressive client base of multinational corporations, financial institutions and governmental bodies. Over the last two decades, the member firms of SEE Legal have worked on major investment transactions and have successfully closed many of the landmark deals in the region. We have all been ranked each year as market leaders in our respective jurisdictions by all reputable legal directories such as Legal 500, Chambers & Partners, IFLR1000, etc.

SEE Legal is delighted to be publishing this first edition of the South East Europe Energy Guide. We hope that this practical guide will prove to be a helpful desk-book resource for in-house counsels, industry professionals and law firm practitioners in dealing with complex and highly regulated energy sector relations in the twelve jurisdictions of South East Europe.

We have aimed to highlight all the important aspects from our experience in the energy sector, such as market structures, licensing, price regulations, access to the grid, etc. The book is not meant to be a treatise on any particular country's energy legislation and is not exhaustive to the point of eliminating the need of professional advice, but it certainly serves its main purpose – to raise readers' attention as to the complexity of energy legislation and assist you in identifying the issues that might influence investment and business development decisions.

As a Group we decided to contribute this guide on energy matters as a part of various initiatives to promote our profile in the region and to develop further our relations with you.

Should you have specific queries regarding the energy sector or the region, we would be pleased to hear from you.

Sincerely,



Borislav Boyanov
Co-Chair of SEE Legal



Fethi Pekin
Co-Chair of SEE Legal

Disclaimer

This publication is intended to provide a general guide to the law and regulation in the individual jurisdictions described. The information contained herein is based on the respective legislation as of October 1st, 2011 (unless otherwise indicated) and is not intended to be a comprehensive study nor to provide legal advice. Legal advice should always be sought before taking any action based on the information provided.



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Design: Studio.K
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1. Introduction to the energy market

Albania has been a potential candidate for accession to the European Union since January 2003. It formally applied for EU membership on 28th April, 2009 and is in the process of harmonising its legal framework with that of the EU. The institutional and regulatory framework for energy and in general the energy market in Albania reflects the policy progress achieved over the last decade. In the context of the energy market, Albania is party to, *inter alia*, the Athens Memorandum, Kyoto Protocol, and the European Community Treaty and strives to comply with the targets set therein to create a unified and sophisticated market foreign investors can rely upon. The market has undergone liberalisation and indeed the recent restructuring of the state-owned electricity enterprise has enhanced its technical, economic and corporate performance.

In terms of energy sources Albania has both thermal and hydro power to generate electricity, with the latter being more significant and having a greater potential for development.

2. Electricity

2.1 Market overview

In 2008 the Government of Albania ("GoA") approved the Albanian Market Model ("AMM") partially developed in accordance with the EU Directives on Electricity and also adopting the requirements of the Energy Community Treaty. The AMM outlines the main responsibilities and relationships among the market participants and Energy Regulatory Entity ("ERE"). In simple terms, the AMM is characterised by bilateral contracts for electricity between and among market participants. Ancillary services for Transmission System are purchased by the Transmission System Operator ("TSO").

Until 2008, all energy operations (from production to supply) were in the hands of a single state-owned enterprise, the National Power Corporation ("KESH"). Following the unbundling of the TSO (which is still state-owned), the distribution arm was unbundled from KESH and subsequently a majority stake therein was sold through privatisation to CEZ in 2009.

In order to address importing capacity and to integrate Albania into the European energy network, the GoA has undertaken several projects and has licensed private companies to build interconnection lines. The new interconnection line between Albania and Montenegro 400 kV voltage, 50 Hz with a transmission capacity of 100MW is under construction and is expected to be finalised by 2010. In February 2010, the GoA received financing from KfW for the construction of the interconnection line 400 kV voltage between Albania and Kosovo and the 110 kV voltage ring line of the south of Albania. They are also financing the Albania-Montenegro line.

The government has also granted an authorisation for the construction of two merchant lines, 400 kV voltages undersea interconnection cable lines voltage, connecting Albania and Italy.

2.2 Regulatory overview

Law No. 9072, dated 22 May 2003 On the Power Sector, as amended ("Power Sector Law") constitutes the cornerstone of the Albanian power sector and has been regularly amended to reflect the developments in the market. The key objectives of this Power Sector Law include (a) the restructuring, commercialisation and ultimate privatisation of the KESH (76% stake of the distribution and retail supply having already been privatised); (b) the development of a competitive energy market; the encouragement of regional electricity trade; and (c) the improvement of investment conditions in the electricity sector.

The Power Sector Law and its subsidiary legislation regulates activities in the electrical power sector defining the rights and obligations of all parties involved in this sector as well as the procedures for selecting and developing a market model and the rules for an electricity market. An important element is that it provides for the oversight of the independent electrical energy regulator ("ERE") - a legal public entity that receives funding from annual regulatory fees that it sets itself. The ERE is, *inter alia*, responsible for:

- (a) setting the rules and requirements for the granting, modifying and revoking of licences to companies for the generation, transmission, distribution, supply, export and import of power;
- (b) setting, regulating and reviewing tariffs (which are to be set on a cost recovery basis) and the terms and conditions of service of electrical energy proposed by a licensee, or review them according to the circumstances;
- (c) resolving disputes between licensees and consumers, and between or among licensees; and
- (d) monitoring and controlling the operation of services by licensees, with powers of inspection, access, seizure of documentation or relevant information.

The Ministry of Economy, Trade and Energy ("METE") is the other important public stakeholder in this sector, particularly with regard to policy-making. The METE supervises the operation of the energy sector and has specialised internal Directorates dealing with electricity and hydrocarbons. METE plays a crucial role in drafting the development policies of the energy sector. METE also represents the state as the named owner of the remaining state energy companies and shall continue to be responsible for the effective management of these companies until their eventual privatisation.

2.3 Regulated electricity market activities

The Power Sector Law and the AMM define the participants in the energy market which include several operators and the ERE. All contracts and tariffs between the various market participants are regulated at their inception in the energy market. Pursuant to the provisions of the AMM, some contracts between market participants are not regulated; thus they are freely negotiable between the parties and these include:

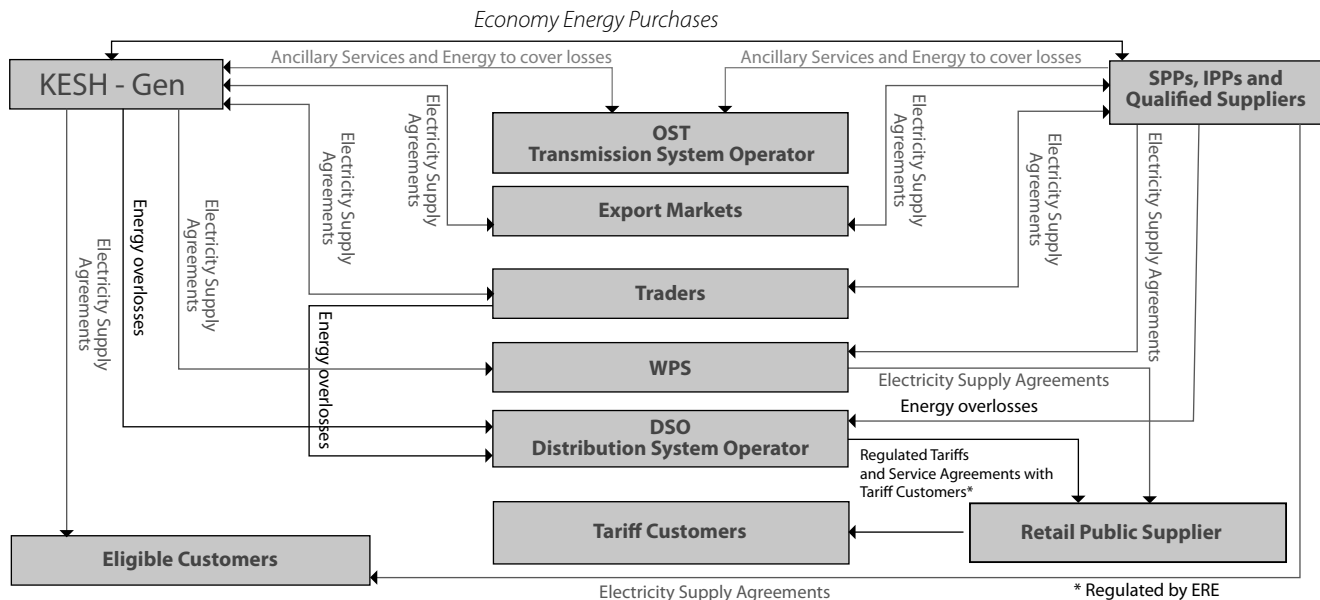
- (a) contracts between Traders or Qualified Suppliers (“QSs”) or the Wholesale Public Supplier (“WPS”) and Eligible Customers;

- (b) contracts between Small Power Producers (“SPPs”) or Independent Power Producers (“IPPs”) and Eligible Customers;
- (c) contracts between KESH Gen (i.e. the generating arm of the WPS) and QSs or Traders, to the extent permitted under the present or other restrictions on WPS sales; and
- (d) contracts between SPPs and IPPs and traders.

See Figure 1 below for the electricity market structure in Albania

Figure 1: Electricity Market Structure in Albania (Source: ERE)

Market Structure Energy Supply Agreements



2.4 Trading and supply of electricity

The AMM is a vertically integrated market model characterised by bilateral contracts for electricity between and among market participants. The AMM has directed that Wholesale and Retail Supply be public activities. Thus after the unbundling of KESH, three different entities now fulfil the activity of the wholesale production, supply and retail supply of electricity.

KESH Gen retains the licence for the generation of electricity and is entitled to sell electricity produced to the WPS at prices approved by the ERE. Sales are subject to and regulated through annual contracts (or based on different durations) as approved by the ERE. In all cases, the ERE is entitled to monitor the process of the exchange and sale of electricity, in order to ensure compliance with the rules and procedures of sale and exchange of electricity, as approved by the ERE.

The WPS, being a separate entity in possession of a licence for the wholesale supply of electricity is entitled to purchase from KESH Gen all the electricity produced by KESH Gen from its hydro power plant and other generation plants, as well as from IPPs, SPPs, QSs and Traders to fulfil its obligations to the Retail Public Supplier (“RPS”), i.e. to service all the Tariff Customers.

The AMM also comprises: the RPS - an entity licensed for the retail supply to tariff customers at regulated prices determined by the ERE; IPPs - entities producing electricity and are not connected with the grid; Grid System Operators which maintain, operate and upgrade the grid in high, medium and low voltage levels and SPPs which are entities licensed to produce electricity by hydro, wind or other sources which qualify for feed-in tariff if their installed capacity fulfils the legal requirements (for hydro sources - up to 15MW); and lastly, Traders and Tariff Customers conclude the list of participants of the AMM. All contracts and tariffs between the various market

participants are regulated upon inception in the energy market. Pursuant to the provisions of the AMM some contracts amongst market participants are not regulated and so are freely negotiable.

Under the AMM, Traders are licensed entities which buy and sell electricity with the exception of sales to the RPS and end-user customers. Traders should be established as legal entities and the scope of their activity should be the wholesale buying and selling of electricity. Traders can buy electricity from KESH Gen (*i.e.* surpluses), IPPs and SPPs to then sell on to Qs, WPS, or a Distribution System Operator (“DSO”) (covering the distribution losses). When IPPs or SPPs sell directly to the WPS or other Qs, they require only a production licence and not a trading licence.

IPPs, SPPs and Qs may also be Traders, engaged in wholesale transactions, on the condition they obtain the necessary trading licence. The ERE shall ensure that the licences and licensing procedures for Qs and Traders are transparent and non-discriminatory and do not create an undue burden on the entry of Traders into the Albanian market, subject to any reciprocity agreement.

2.5 Transmission and grid access

Transmission is regulated by the Transmission System Code - a document describing the relations between TSO and users and establishes procedures for the operation and development of the Transmission System according to the development of the Albanian and Regional Electricity Market. The Transmission System Code contains specific provisions which:

- (a) facilitate economic, efficient and coordinated development, operation and maintenance of the Transmission System according to the Albanian and Regional Electricity Market;
- (b) help the TSO comply with its obligations regarding electricity transmission with neighbouring countries;
- (c) eliminate discrimination in the preparation and application process of the Transmission System maintenance program.

As an indivisible part of the Transmission System Code, the Connection Code specifies the conditions, criteria and deadlines that users need to fulfil for connection to the Transmission System or modification of their existing connections. Any user which needs to use the Transmission System may file an application (in the format prepared by the TSO) to the TSO for connection. The TSO Connection Agreement should specify the general conditions of connection and all specific technical and financial conditions for connection. Currently, there is no approved standard form of a TSO Connection Agreement.

Distribution code and access to distribution grid

The Distribution Code regulates the use of the distribution network and promotes and imposes the minimum technical rules and requirements for the electricity market in the aims

of providing the reliable, stable and economic operation of the electricity distribution network, mandatory for the DSO, Retail Public Supplier and users connected to the distribution network.

The Distribution Code is applicable to all existing or prospective independent electricity generators directly connected to the distribution system, including co-generators, auto-producers and generators using renewable sources of energy. These requirements are prescribed in the DSO Connection Agreement for which there is currently no approved standard form (although a draft, which shall also serve as a TSO connection agreement, is believed to be under consideration and approval by ERE). It also is reported to be under negotiation between the two parties (including provisions on potential indemnity for undue failure of grid maintenance resulting in the failure to deliver to the WPS pursuant to a power purchase agreement with the WPS).

Any Distribution System user requiring a new connection or modification of existing connections and/or using the Distribution System must follow the procedures set out in the Distribution Code. The Distribution System users requiring connection to the Distribution Network or modification of the existing connection need to fulfil the minimum technical criteria of planning and operation in order to maintain a stable and safe operation of the Distribution System.

3. Renewable energy

3.1 Market overview

The Power Sector Law does provide some basic regulation and a basis for renewable energy sources and to some extent sets out the obligation to use renewable energy sources. It obliges every subject licensed for power generation with an installed capacity of more than 50MW to produce at least 3% of power through renewable sources. Currently with the assistance of international advisors, the GoA is finalising the draft Law on Renewable Energy which shall provide the much-needed detailed regulation and rules and clarify the support schemes available to encourage production of such energy.

The main priorities of the Albanian energy policy are energy efficiency and the promotion of renewable energy sources. Both these objectives are on track to be harmonised with European Community Directive 2001/77 as well as with the Energy Community Treaty principles concerning energy efficiency and renewable energy sources. Promotion of renewable energy is well-defined in the Albanian government energy policy and currently the government is considering the adoption of a Renewable Energy Law drafted with the assistance of IFC.

At present renewable energy makes up around 40% of Albania’s energy supply. This is largely due to the fact that virtually all electricity production is generated from hydro power. Many

concessions and licences have been granted over the years to private companies for the construction and operation of small hydro-power plants in particular, although only a small percentage have been constructed to date (many still requiring financing).

Other renewable sources are being explored, several licences have been issued for the construction and operation of wind farms (estimated total installed capacity of 1,000MW). Given the beneficial conditions of the Mediterranean climate, solar power and photovoltaic energy generation are viable options, in addition to biomass, for which some licences having been granted to date.

3.2 Support schemes

The Power Sector Law and legal framework provide for certain types of support mechanisms that are granted to investors exploiting renewable energy sources. These are summarised below:

- (a) **Custom Duties Exemptions:** a specific law has been approved to promote the construction of installations using renewable energy sources and which grants exemptions from custom duties for the import of machinery and other equipment to be used in the construction of installations using renewable sources;
- (b) **Feed-in Tariffs:** this is the most successful form of support scheme and although in the draft renewable energy law feed-in tariffs are to be applied to many renewable energy sources, currently the option is only available for new and existing small hydro power plants ("SHPP") (*i.e.* with installed capacity up to 15MW). The feed-in tariff is set by the ERE annually and any SHPP producer can upon request benefit from a 15-year power purchase contract with the WPS using the feed-in tariff for the entire term;
- (c) **Guarantee of Origin Certificates ("GOC"):** GOC's are official certificates issued as evidence that the power generated is from renewable sources. This certificate is issued after the qualification of the plant as being a generator from renewable sources and must be acquired prior to receiving a Green Certificate. The certificate shall include the amount of power generated by renewable sources, the name of the power plant and its capacity. GOCs can be transferred together with the power in accordance with rules and procedures defined by ERE;
- (d) **Green Certificate ("GC"):** GC's are official certificates proving that the power was generated through renewable sources or by a combined generating mode which can be transferred (*i.e.* traded), separately from the power it certifies. The GC certifies the owner and also the place of generation, date of generation and the generating plant. GCs can be transferred in accordance with the rules and procedures defined by ERE.

To date there is only one international agreement for the sale and purchase of GCs and GOCs: the Agreement between the Italian Ministry of Productive Activities, the Italian Ministry of Environment and Protection of Territory and the Albanian Ministry of Economy, Trade and Energy. With this agreement, Albanian and Italian power generators are able to sell their respective GCs and sell power with GOC to buyers from the other country.

4. Natural gas

4.1 Market overview

The development of the natural gas sector in Albania is one of the priorities set out in the National Strategy of Energy. Albania has a very low level of gas consumption, particularly with over 90% of its energy being produced from hydro-power. However, it is in a prime location to serve as a transit country and is not yet connected to the international gas networks. The following three options are currently under consideration for Albania:

- (a) To serve as a terminal for the regional gas pipeline for Russian natural gas from Macedonia or Greece;
- (b) To serve as a transit point for the gas pipeline designated for the supply of Western Europe, through Italy, with natural gas coming from the Caspian region via the "Transadriatic" or otherwise known as the "TAP"; or
- (c) To serve as a terminal for liquefied natural gas ("LNG") on the Adriatic coast.

The TAP project is considered the optimal solution for Albania and is regarded as the most efficient gas pipeline of the 4 project corridors of supply to Southeast Europe. It includes the option of developing the storage of natural gas in Albania which will increase the security of gas supply.

4.2 Regulatory overview

In line with the objectives of the National Strategy of Energy, the Albanian Parliament approved Law No. 9946, dated 30 June 2008, On Natural Gas Sector ("Gas Law"). The Gas Law defines two main roles:

- (a) The METE is the supreme institution responsible for: (i) developing policies and plans for sustainable development; (ii) approving new Natural Gas Infrastructure; (iii) preventing and managing crisis situations; (iv) approving technical and safety rules;
- (b) The ERE is responsible for regulations of natural gas activities (except for natural gas exploration and production, which is regulated under Law No. 7746, dated 28 July 1993 On hydrocarbons (exploration and production), as amended, ("Hydrocarbon Law")).

With the enactment of the Gas Law, the ERE has expanded its scope of regulation to cover gas and has begun the preparation of the regulatory framework for the Natural Gas Sector. To date it has amended its Rules of Practice and Procedures and with the assistance of international advisors and donors it has completed the Licensing Procedures for the Natural Gas Sector and is working towards completing the set of rules and regulations to ensure proper functioning of the sector.

4.3 Regulated natural gas market activities

As noted above the natural gas market is largely regulated and supervised by the ERE. Under the Gas Law the following activities require a licence: (a) transmission; (b) distribution; (c) supply (retail sale); (d) trading (wholesale); (e) operation of natural gas storage facilities; (f) operation of LNG facilities. Each activity requires its own separate licence and the licensing procedures are regulated by the ERE Decision of February 2011 on Natural Gas Sector Rules and Procedures on Licensing, Modification, Partial/ Full Transfer, Revocation and Renewal of Licences which is comprehensive.

In accordance with the abovementioned ERE decision, the duration of the validity of a licence for the transmission, distribution, storage and LNG issued by the ERE shall be for a term of 30 years with the right to apply for renewal. The duration of validity of a licence for the supply and trading shall be for a term of 5 years with the right to apply for renewal.

An application for a licence for any of the activities in the natural gas sector must be filed by companies which have a legal presence in Albania (by their duly authorised representative) through the completion of the relevant application forms provided and published by ERE. Together with the application form a set of legal, financial and technical documents must be submitted to the ERE (ensuring the criteria determined by the ERE for each type of activity is met). In the cases when a licensee does not comply with the provisions of the Gas Law, the ERE is entitled to take the necessary administrative measures ranging from the imposition of a fine to the revocation of the licence.

4.4 Exploration and production

The exploration and production of natural gas are separately regulated under the Hydrocarbon Law.

4.5 Transmission and access to the system

As provided for under the Gas Law, the criteria for ensuring that users receive equal treatment and freedom of access to the gas transmission/ distribution network are defined by the ERE. The activity of natural gas transmission and distribution is of public interest and is performed respectively by a Transmission System Operator ("TSO") and DSO.

These operators own, operate, construct and maintain the transmission/ distribution systems. They act with transparency and

objectivity avoiding discrimination between the system users. The system operators must enter into grid connection and grid access agreements with third persons seeking access. The grid access can only be refused if such access is technically or economically impossible or unreasonable. Upon a request from interested parties and in cases when a TSO/ DSO refuses third party access to the grid, the ERE can intervene and review such decisions and, in the event of an unjustified refusal, will order granting of access. The TSO/ DSO publishes the terms and conditions approved by the ERE for the granting of access to the transmission/ distribution system to the third parties.

There is, however, currently no DSO or TSO in the gas sector nor any Codes published in this respect.

In order to operate a distribution network, a distribution licence issued by the ERE is required in accordance with the Gas Law. This licence is issued on a case-by-case basis and shall contain such terms and conditions as are deemed necessary, convenient or prudent by the ERE. For a distribution licence application an environmental permit, construction site and construction permit are required.

A DSO should provide the efficient and stable distribution of natural gas in accordance with the licence terms. The DSO must connect local customers upon request, in a non-discriminatory manner, to its grid, provided that the operator has sufficient capacity and that the work necessary to make the connection is technically and economically feasible according to the criteria issued by the ERE. The ERE is entitled to order the DSO to provide capacity to new customers in cases where the operator has rejected access in violation of the rules issued on this matter. However, it cannot order the operator to expand its system if this is economically unreasonable. Additionally, the DSO and TSO will prepare long-term investment plans for the development and expansion of the distribution and transmission network for natural gas and such plans will be approved by the ERE based on cost recovery analysis.

4.6 Trading and supply

As provided for by the Gas Law, the ERE is authorised to regulate the procedures and principles for tariff-setting. Accordingly, the regulated activities for which the ERE is empowered to determine the tariffs are: entry into the transmission/distribution network, connection with the distribution/transmission network, entry into the deposit areas and LNG installations, auxiliary services, balancing and supply of the tariff consumers. Other activities such as the wholesale trade of natural gas between suppliers and retail trade between suppliers and eligible customers are non-regulated activities and the prices are adjusted on the basis of market demand. The ERE tariff methodology shall include prices, terms and tariff conditions, which are transparent, non-discriminatory to all users by taking into account the need for integrity of the gas system and reflecting the costs incurred to include an adequate return on investment ratio.

5. Upstream oil market

5.1 Market overview

All natural resources in Albania (inland and offshore) are owned by the state which has the right to explore, develop, extract, exploit and utilise natural resources. Pursuant to the Hydrocarbon Law, the state acting through METE is entitled to grant a Petroleum Agreement to a person (one type of which is a Production Sharing Agreement ("PSA")) the right to explore, develop and exploit hydrocarbons in a defined area as agreed in the PSA.

The governmental objective is to negotiate the terms of the PSA with the oil industry in a fair and balanced manner, by taking into consideration the typical risks associated with exploration and the state's legal entitlement to revenue as the owner of the natural resources.

The Natural Agency for Natural Resources ("NANR") was created back in 2006 to deal, *inter alia*, with hydrocarbon activities on behalf of the Albanian state. The NANR is a specialised institution dealing with the negotiations of the PSA, the monitoring of petroleum activities and policy-making.

Albania is home to the largest onshore oil field in Europe (*i.e.* Patos Marinza with 7.5 billion barrels original oil in place). A number of foreign investors have already entered this market, most notably Bankers Petroleum which operates and has a 100% interest in the development of the Patos Marinaz oil field.

5.2 Regulatory overview

Petroleum operations are regulated under the Hydrocarbon Law which together with the Presidential Decree on the Fiscal System in the Petroleum Sector, as amended, forms the legal framework for the exploration, development and exploitation of petroleum in Albania.

Any person wishing to carry out petroleum operations must firstly obtain either a Prospecting Permit or enter into a PSA with terms and conditions which will be negotiated with the NANR. In the latter case there is no separate licence *per se*; all matters are regulated and encompassed in the PSA.

5.3 Regulated oil market activities

With the exception of activities conducted pursuant to a Prospecting Permit, no person can engage in petroleum operations without being authorised by METE in accordance with the agreed terms and conditions stipulated in a Petroleum Agreement/ PSA.

A Prospecting Permit authorises the holder to carry out the following activities:

- (a) To perform prospecting activities in the areas covered by the permit by means of aerial, geophysical, geochemical,

paleontological, geological, topographical and seismic surveys and to study their interpretation; and

- (b) To file an application for a PSA, if petroleum is discovered.

The law states that the permit shall be valid for a two-year term, shall be not exclusive, shall not authorise the drilling of exploration wells and shall not grant to the permit holder any priority right (over any other party/ person) to enter into a Petroleum Agreement/ PSA with METE, except when expressly stated so in the Prospecting Permit.

The PSA is a contract entered into between the NANR acting on behalf of the METE and the Contractor allowing for the exclusive rights for the Contractor to undertake explorations within the contract area for a period of 5 years (subject to extension as noted below) and exclusive rights to exploit for a period of no more than 25 years.

The PSA provides for the recovery of Contract Costs from petroleum produced in the defined area or from a proportional part thereof. It also provides for the division between the State and the Contractor of the balance of petroleum remaining after the recovery of Contract Costs, in accordance with a scale or formula specified in the PSA. Other typical provisions in a PSA relate to:

- (a) Contractor property rights and right to construct and operate required infrastructure subject to third party rights and access under the law;
- (b) Contractor right to trade and export petroleum exploited under the terms of the PSA;
- (c) Fiscal regime applicable to operations (and exemptions applicable under the law);
- (d) Obligation to perform a minimum work program backed by a performance guarantee;
- (e) Obligation to present an annual work program and budget;
- (f) Preference given to local employment and supplies during petroleum operations, where these are competitive in terms of quality, availability and cost;
- (g) Change of law indemnities measures;
- (h) Obligation of the Contractor to carry out the Petroleum operations in a safe and proper manner in accordance with the generally accepted international petroleum industry practice and by causing minimal damage as is reasonably practicable to the general environment including, *inter alia*, the surface air, seas, lakes, rivers, marine life, animal life, plant life, crops, other natural resources and property, and shall forthwith repair any damage caused to the extent reparable, and shall pay reasonable compensation for all damage which is beyond repair.

Under the PSA the Contractor is authorised to conduct petroleum operations during an Initial Exploration period which can be extended twice. It is preferred that the Exploration Period includes a drilling commitment by the Contractor. The duration of the exploration period is up to 5 years and can be extended only up to 7 years according to the Hydrocarbon Law. The phases of the Exploration Period are subject to negotiation. In the event that the Contractor declares a commercial discovery during the exploration period, it has the right then to proceed and extend for a development/ production period of twenty-five years, which can also be extended. During the exploration period, the Contractor is subject to minimum work programs and expenditure obligations.

Exploration expenditures and capital expenditures are recoverable only in the case of a commercial discovery but not before the start-up of production. Operating expenditures are recoverable during the year in which they are incurred. Reasonable and necessary administrative expenditures of the Contractor are also recoverable. The Contractor is subject to tax on profit at a rate of 50% of the realised profit and the royalty at typically 10% of sales revenues.

1. Introduction to the energy market

The central location of Bosnia and Herzegovina in the Balkans makes it the intersection of all major infrastructure related projects. In spite of its relatively complex legal and political system, Bosnia and Herzegovina represents an increasingly interesting market for foreign investors. The strong hydrological and wind potential of Bosnia and Herzegovina gives it a natural predisposition in the development of renewable energy, making it one of the few non-EU countries that has already met EU standards in the amount of electricity produced from renewable energy sources. The latest political changes in Bosnia and Herzegovina have been followed by announcements of new legislation, aimed at simplifying and re-organising the complex legal and administrative framework related to the construction of energy facilities.

2. Electricity

2.1 Market overview

Prior to the dissolution of the former Yugoslavia and the subsequent war in Bosnia and Herzegovina, only one electrical utility company existed in the territory of Bosnia and Herzegovina. It was called Elektroprivreda BiH, and was part of the state-owned monopoly over electricity production and distribution. During and after the war, together with its production and distribution capacities the company was divided into three public companies – Elektroprivreda BiH in Sarajevo, Elektroprivreda Republike Srpske in Banja Luka and Elektroprivreda Hrvatske zajednice Herceg-Bosna in Mostar, which led to severe difficulties in unifying the power grid on the state-level and connecting Bosnia and Herzegovina with the power grid of the neighbouring countries. In order to resolve these problems and enable Bosnia and Herzegovina to function as a normal state in regards to electricity production and distribution, on 10th April, 2002, the Parliamentary Assembly of Bosnia and Herzegovina passed the Law on Electricity Transfer, Regulator and System Operator in Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina No. 07/02, 13/03 and 76/09). The law established the State Electricity Regulatory Commission ("DERK"), the Independent System Operator ("NOS") and the electricity transfer company (Elektroprivreda BiH) as integral parts of the state-wide electricity distribution system.

2.2 Regulatory overview

DERK has been given a regulatory role in the overall state-wide system. It is in charge of electricity transfer through the high-voltage grid, supervising the operating of the electricity transfer system and managing international electricity trade. Furthermore, DERK is in charge of monitoring the electricity market and preventing any monopolistic or uncompetitive behaviour in the market. Most importantly, DERK has the exclusive jurisdiction in determining electricity pricing criteria and the conditions for access and connection to the power grid.

NOS was established by the abovementioned Law on Electricity Transfer, Regulator and System Operator in Bosnia and Herzegovina, and the Law on Founding the Independent System Operator for the Transfer System in Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina No. 35/04). It is an independent legal entity, co-owned by the Federation of Bosnia and Herzegovina and Republika Srpska, responsible for the managing and dispatching of the electricity transfer system at state-level, with the goal of organising and maintaining a stable and reliable power supply within Bosnia and Herzegovina. Its role is one of a technical service, operating the Central Control Centre and supervising the power grid on a daily basis. It also establishes and maintains obligatory technical standards, making proposals to DERK for their approval. Furthermore, it acts as an independent system manager ensuring non-discriminatory relations between electricity transfer system users. NOS is subordinated to DERK, and coordinated with Elektroprivreda BiH. Most importantly, NOS provides Elektroprivreda BiH with technical advice and opinions on connecting the electricity producers and suppliers to the grid. The technical solution for the grid connection of the Ivan Sedlo wind park must receive NOS approval in order to be carried out.

2.3 Regulated electricity market activities

The electricity market in Bosnia and Herzegovina is regulated by both state-level and entity-level laws on electricity, including production, trade (purchase and selling), and delivery of electricity. In that sense, there are four types of electricity licences:

1. Production licence – obligatory for all companies which own electricity generating facilities and operate them commercially;
2. Distribution licence – necessary for all companies which technically z(currently issued only to state-owned public electricity companies);
3. Supply licence – necessary for companies which supply electricity to buyers, implying calculation and charging activities; and
4. Trading licence – issued to companies which trade in electricity ("electricity brokers").

2.4 Material provisions of the electricity market law and licensing regulations

Only those companies which have been established in accordance with the laws of Bosnia and Herzegovina, and on the condition that they have been licensed to perform the activities determined by these laws, may perform one or more electricity market activities. Therefore, these activities can be carried out only by a local company registered at the appropriate registers in Bosnia and Herzegovina and which have obtained the specific licence.

The four types of electricity licences listed in section 2.3 (Regulated electricity market activities), are regulated as follows:

- (a) In the Federation of Bosnia and Herzegovina - by the Licensing Rule (Official Gazette of Federation of Bosnia and Herzegovina No. 29/05);
- (b) In the Republic of Srpska - by the Rulebook on Issuance Licences (Official Gazette of Republic of Srpska No. 39/10);
- (c) In Bosnia and Herzegovina - by the Regulation on Licences (Official Gazette of Bosnia and Herzegovina No. 38/05).

The Licensing Rule (Official Gazette of Federation of Bosnia and Herzegovina No. 29/05) and the Rulebook on Issuance of Licences (Official Gazette of Republic of Srpska No. 39/10) proscribe the procedures for decision-making on licence application, the contents of licence applications, criteria for licence issuance, the conditions for licensing, contents of licences, the requests for modification, amendment, transfer and revocation of licences, registry of licences and conditions of monitoring.

The Federation of Bosnia and Herzegovina

(a) Production Licence

Together with the application for a licence for generation or distribution, the documents defined in Article 19 of the Licensing Rule must also be submitted.

A production licence may be issued to an Applicant if the Applicant demonstrates the following:

- It has fulfilled all technical, operational, safety, and other conditions in accordance with applicable regulations and standards;
- It has fulfilled all established criteria for the protection of the environment and will ensure continuous control over the impact on the environment;
- It has provided high-quality power generation, from the point of view of safety, reliability, energy efficiency, and auxiliary services, and high-quality electricity for customers, in accordance with applicable regulations and standards;
- It has sufficient employees with expert qualifications for the performance of the activities;
- It or its management have not been found culpable of economic crime or convicted under criminal laws for fraud or financial impropriety, and have not been found liable for any significant licence violations or environmental infractions in the Applicant's electricity activities;

- It has provided the appropriate financial guarantees of performance to assure that the licensee will fulfil all licence conditions;
- It has demonstrated that it will comply with all market rules prescribed for the electricity market;
- It has demonstrated the capacity to provide accounting reports to the Federal Electricity Regulatory Commission ("FERK") in the format and detail required by FERK or other authorities;
- It has demonstrated the financial and technical capacity to dispose of all generation-related waste and to decommission and/or remove all generation facilities in compliance with technical and environmental requirements.

(b) Distribution Licence

A power distribution licence may be issued to an Applicant if the Applicant proves the following:

- It has fulfilled all the technical, operational, safety, and other conditions in the operation of its distribution plants, devices and equipment;
- It has metering devices on electricity delivery points;
- It has fulfilled all established criteria for the protection of the environment and will ensure continuous control over impact on people and environmental protection;
- It has provided quality services regarding safety, reliability, energy efficiency, and quality electricity for customers, in accordance with the applicable regulations and standards;
- It has sufficient employees with expert qualifications for performance of the activities;
- It has established an efficient system of meter readings for the purpose of electricity billing;
- It or its management have not been found culpable of economic crime or convicted under criminal laws for fraud, financial impropriety, significant licence violations, or environmental infractions in the Applicant's field of activities;
- It has provided the appropriate financial guarantees of performance to assure that the licensee will fulfil all licence conditions;
- It has demonstrated that it will comply with all the prescribed market rules specified for the electric power market;

- It has demonstrated the capacity to provide accounting reports to FERK in the format and detail required by FERK or other authorities;
- It has proved the financial and technical capacity to decommission and/or remove all distribution facilities in compliance with technical and environmental requirements after the expiration of licence validity, and in the cases specified in the licence.

(c) Supply Licence

There are two types of power supply licences:

1. "Tier 1 Supply Licence" is required for a distributor which supplies the electricity for non-eligible (tariff) customers and who has a separate trade activity;
2. "Tier 2 Supply Licence" is required for any legal person engaged in supply other than the distributor required to obtain a Tier 1 Supply Licence. A Tier 2 Supply Licence may also be granted to a distributor who holds a Tier 1 Supply Licence at the sole discretion of FERK but with sufficient licence conditions to ensure that the interests of non-eligible (tariff) customers are fully protected.

Together with the application for a Supply Licence (Tier 1 and 2), the documents defined in Article 29 of the Licensing Rule must be submitted.

The Tier 1 Supply Licence may be issued to a distributor who supplies electric power to non-eligible (tariff) buyers if the Applicant proves the following:

- It has fulfilled all the technical, operational, safety, and other conditions in the operation of its supply facilities and equipment;
- It has fulfilled all the established criteria for the protection of the environment and will ensure continuous control over any impact on the environment;
- It has provided high-quality service relating to safety, reliability, energy efficiency, and high-quality electricity to customers in accordance with the applicable regulations and standards;
- It has sufficient employees with expert qualifications for the performance of activities;
- It or its management have not been found culpable of economic crime or convicted under criminal laws for fraud, financial impropriety, significant licence violations, or environmental infractions in the Applicant's field of activity;

- It has provided the appropriate financial guarantees of performance to assure that the licensee will fulfil all the licence conditions;
- It has demonstrated that it will comply with the regulated electric power market rules;
- It has demonstrated the capacity to provide accounting reports to FERK in the format and detail required by FERK or other authorities;
- It has established an efficient system for reading, accounting, billing, and collection of supplied electricity;
- It has established an efficient system for providing information concerning electricity supply to non-eligible customers, including plans for the improvement thereof;
- It has provided evidence that it will be able to contract adequate supplies of electricity to supply its customers.

The Tier 2 Supply Licence may be issued to an Applicant who demonstrates the following:

- The Applicant fulfils all the technical, operational, safety and other conditions in its operation;
- The Applicant provides high-quality services related to safety, reliability, energy efficiency and quality electricity for customers, in accordance with applicable regulations and standards;
- The Applicant has sufficient employees with expert qualifications for the performance of activities;
- The Applicant or its management have not been found culpable of economic crime or convicted under criminal laws for fraud, financial impropriety, significant licence violations, or environmental infractions from the Applicant's field of activity;
- The Applicant has provided appropriate financial guarantees of performance to assure that the licensee will fulfil all licence conditions;
- The Applicant has demonstrated that it complies with regulated electric power market rules;
- The Applicant has demonstrated the capacity to provide accounting reports to FERK in the format and detail required by FERK or other authority;
- The Applicant has provided evidence that it will be able to contract adequate supplies of electricity to services its customers.

FERK issues all licences for a limited time period. The licensee is obliged to file an application for licence renewal no later than 180 days before the expiry of the current licence validity.

Procedures for the modification or amendment of a licence can be initiated upon the request of the licensee or on FERK's own initiative.

FERK may revoke the licence in the cases stipulated in Article 43 of the Licensing Rule.

If the licensee requests the transfer of the licence to another entity, it must obtain prior approval of FERK. The new licensee must obtain an operational licence or approval for transfer from FERK prior to commencing activities. If there are concerns regarding the guarantee of the security of supply, such as financial insolvency, FERK at its own initiative may start a licence transfer procedure, in order to ensure that the licence is transferred to a third party which will provide regular security of supply to the customers.

Republic of Srpska

Together with the application for a specific licence, the documents defined in Article 23 - 27 of the Rulebook on Issuance Licences must be submitted.

The general criteria for licensing are set out in Article 28 of the Rulebook on Issuance Licence. In addition, the Applicant must fulfil additional criteria for the specific licence.

The licence for production of electricity is issued to the Applicant which in addition to the criteria defined in Article 28, can prove that:

- It meets the conditions for the safe operation of the plant and facilities with regard to the health and life of people and functioning of equipment and installations;
- It possesses water-management acts;
- It possesses the environmental and other acts defined by the law on protection of the environment;
- It possesses the prescribed rules on the maintenance and exploitation (operation) of the electric power structures and facilities (if there is no certificate on introduced system of the quality control and system of control of the environment protection following ISO standards);
- It has fulfilled the conditions for connection of the generation facility to the electric power network;
- It achieves energy efficiency in using primary sources, namely that it undertakes measures for improvement of efficiency;

- It possesses the approval for using new generation facility.

The licence for distribution of electricity is issued to the Applicant which in addition to the criteria defined in Article 28 can prove that:

- It fulfils the requirements for the safe operation of the distribution infrastructure and facilities for the health of people and the functioning of the equipment and installations;
- It possesses an environmental licence and other acts defined by the law on the protection of the environment;
- It possesses the prescribed rules on the maintenance and exploitation (operation) of the electric power structures and facilities (if there is no certificate for an approved quality control system and environment protection control system, fulfilling ISO standards);
- It fulfils the standards related to the quality of the electricity supply;
- It achieves energy efficiency while transferring electricity through the distribution system and that it undertakes measures for improvement of efficiency;
- It has established an efficient system of meter reading for measuring and recording the amount of electricity consumed.

The licence for the supply of tariff customers with electricity is issued to the Applicant which in addition to the criteria defined in Article 28, can prove the following:

- That it has established an efficient system of informing customers, including plans for its improvement;
- That it has established an efficient system of calculation, delivery of bills and payment for the electricity delivered.

Any licensee which intends to continue to perform the activity defined in its licence shall, submit an application for the extension of a new licence no later than 3 months before the expiry of the licence.

The amendment of the licence is made at the proposal of the Republika Srpska Electricity Commission ("RERS") or the licensee.

During the licence validity period, the licence may be transferred to a third party if the licensee sells his business or if he asks to transfer his licence or controlled (managerial) interest to that party.

The licensee must obtain consent from the new licensee regarding the acceptance of the licence requirements for which the transfer has been requested, before obtaining the approval from RERS for the licence transfer. The new licensee should possess the licence for

performing activities in the energy sector in order to obtain RERS approval for transfer of the licence.

Licence transfer to a third party is preceded by a procedure for the transfer of the right for the use of the assets required for the realisation of the activity of the respective licence to that party.

RERS initiates the procedure of compulsory transfer of the licence to a third party in cases of financial incapacity or bankruptcy of the licensee or non-fulfilment of conditions related to the obligation to offer a public service to the consumers regulated with the issued licence.

RERS may cancel a licence if the licensee during a procedure for the issuance, extension, amendment or transfer of the licence, gives incorrect information based on which RERS made its final decision.

Bosnia and Herzegovina

The Regulation on Licences (Official Gazette of Bosnia and Herzegovina No. 38/05) defines procedure and criteria for licence issuing by the DERK, including the procedure for filing the application, review of the application and its issuing, as well as deadlines for decision making on the application, and criteria required for the approval or rejection of the application, for obtaining the licence and the content and requirements of the licence. The Regulation on Licences further defines the manner of modification, suspension, and revocation of the licence, as well as procedures for sale, granting, lease or transfer of the licence.

Together with the application, the documents defined in Article 18 and 19 point c) of the Regulation on Licences must be submitted.

The general criteria for licensing are stipulated by Article 21 of the Regulation on Licences. In addition, the Applicant must fulfil specific criteria related to the licences for international trade prescribed by Article 22 point c). The specific criteria for the licence for international trade are as follows:

- The Applicant has had no history of criminal or civil adjudications for fraud, financial impropriety or serious licence violations at electricity markets inside and outside of Bosnia and Herzegovina;
- The Applicant has a proved ability to provide appropriate financial and performance guarantees for his/her business activity;
- The Applicant has given a statement that he/she will comply with the market rules;
- The Applicant has registered capital to the amount of at least BAM 1 million, equivalent to EUR 511,291.88;
- The Applicant has provided evidence that he/she will obtain the appropriate trading licence from the FERK or the

REERS prior to the commencement of the activity of the international trade in accordance with the DERK licence.

DERK issues licences for a defined time period. A licensee who intends to extend the licensed activity must file an application at least 180 days before expiration of the licence.

DERK may re-open and modify a licence either upon a request by the licensee or, as a result of clear and unpredictable changes in circumstances and the licensee has been provided with reasonable notice and the possibility of a hearing.

DERK may suspend the licence for a definite or an indefinite period, or revoke the licence permanently in the cases stipulated in Article 30 of the Regulation on Licences.

If the licensee wishes to sell, grant, transfer, lease or in another manner perform the transfer of his/her licence, the activities which are subject to the licence or assets from the licence, he/she must obtain permission from DERK for such an act. The new licensee must obtain permission for transfer of the licence issued by DERK before he/she starts performing the activity.

2.5 Trading and supply of electricity

Under the existing legal framework of Bosnia and Herzegovina, the following tariffs are subject to state- and entity-level regulation:

- (a) Electricity sales tariff – regulated by entity-level governing bodies for the three state-owned public utility electricity companies (EP BIH Elektroprivreda of Bosnia and Herzegovina, ERS Elektroprivreda of Repulika Srpska, EP HZHB Elektroprivreda Hrvatske Zajednice Herceg-Bosne);
- (b) Electricity transfer tariff – regulated by the state-level authority (DERK);
- (c) NOS operation tariff – a joint contribution for the operation of the Independent System Operator (NOS), regulated by the state-level governing body;
- (d) Auxiliary services tariff – determined and regulated by the state-level authority.

The balancing and settlement of electricity demand and supply in the electricity market and the power grid is regulated by the state-level Law on Electricity Transfer, System Regulator and Operator. The distribution of respective competences is explained in section 2.2 (Regulatory overview).

2.6 Transmission and grid access

The third element of the unified power grid in Bosnia and Herzegovina is the state utility corporation Elektroprenos BiH a.d. Banja Luka. It was established by the Law on Founding the Electricity Transfer Company in Bosnia and Herzegovina (Official

Gazette of Bosnia and Herzegovina No. 35/04), as a public joint stock corporation, co-owned by the Federation of Bosnia and Herzegovina and Republika Srpska. This corporation is the actual owner of the high voltage installations and systems involved in electricity transfer on the state-level. While the NOS controls and manages the high voltage grid, Elektroprenos BiH owns, builds and maintains it. In this sense Elektroprenos BiH provides its consent for the connection of the Ivan Sedlo wind park to the grid, as the grid owner, based on the technical proposal and the previous approval provided by NOS. Prior to providing its final consent for the proposed grid connection, Elektroprenos BiH will perform a review of the proposal, giving its positive or negative opinion on it.

3. Renewable energy

3.1 Market overview

The legal system in Bosnia and Herzegovina for the matters referred to herein consists of two separate legal regimes. The country is divided into two political entities: the Federation of Bosnia and Herzegovina ("FBiH") and Republika Srpska ("RS") whereas FBiH and RS hereinafter, are sometimes referred to as the "entities", each possessing in general terms its own legislation. In those matters expressly conferred to the entities for regulation, the entities have adopted their own legislation. Even though the entities' legislation is to a certain extent harmonised, some legal issues may be resolved differently. In the FBiH, cantons may also adopt their own legislation in legal matters that are of local relevance.

There are visible shifts in the development of energy strategies in Bosnia and Herzegovina, at entity- and state-level. The RS adopted its Energy Law in 2009 ("Energy Law of RS"), whereas FBiH adopted a Regulation on the Use of Renewable Energy Sources and Cogeneration in FBiH (Official Gazette of FBiH dated 16 June 2010 No. 36) ("Renewable Energy Law of FBiH"). The energy development strategy in the RS is defined as follows: long-term aims of development of certain energy activities, priorities of development, determination of energy needs of RS, sources and method of providing necessary quantities of energy, including long-term planning of the energy sources structures, a share of renewable sources, required levels of energy efficiency and energy savings, necessary investments in energy, measures for encouragement and method of providing means for investment in renewable energy sources and cogeneration, measures and mechanisms for increase of energy efficiency, improvement of protection of environment and prevention of climate changes, encouragement of competition and gradual liberalisation of the power market, mechanisms for providing protection of end users, mechanisms and measures for protection of vulnerable customers under the circumstances of liberalised market and other elements which are important for achievement of the aims of the energy policy. The objective of the Renewable Energy Law of FBiH is to encourage greater production and consumption of electricity from renewable energy sources in the internal electricity market and the development of a regulatory and technical infrastructure for renewable energy.

With Bosnia and Herzegovina's great natural and energy potential, it is apparent that first and foremost energy production from renewable resources will become a practice in this country. With the prospect of joining the European Union, the production of energy from renewable resources will become an obligation which Bosnia and Herzegovina, as a potential member, will have to take seriously. Thus, manufacturers will be obliged to apply those standards and procedures which comply with environmental conservation.

Bosnia and Herzegovina has four different public power utility companies, each responsible for its own sector of the country. The utilities are EP BiH Elektroprivreda of Bosnia and Herzegovina, ERS Elektroprivreda of Repulika Srpska, EP HZHB Elektroprivreda Hrvatske Zajednice Herceg-Bosne and Brčko District of BiH. Thus, renewable energy has a tremendous impact on the future development of the energy sector in Bosnia and Herzegovina.

3.2 Support schemes

Within the framework of the Electricity Market Law of FBiH, power plants based on renewable energy sources are mainly supported by the mechanisms summarised below:

- (a) Groups of plants and the use of renewable energy and cogeneration ("REC"): depending on the installed capacity REC plants are divided into:
- Micro-systems: up to and including 150 kW;
 - Mini plants: from 150 kW up to and including 1MW;
 - Small-scale plants: from 1MW up to and including 10MW;
 - Large plants: more than 10MW.

Depending on the type of renewable source used for electricity production, the aforementioned plants are divided into the following groups:

- Group 1 - Micro plants connected to the distribution grid;
- Group 2 - Mini plants connected to the distribution grid;
- Group 3 - Small plants connected to the distribution grid or transmission grid;
- Group 4 - Large plants connected to the transmission grid;
- Group 5 - REC plants which are not connected to the transmission or distribution grid, or which operate in isolated regime;
- Group 6 - Cogeneration plants which are not connected to the transmission or distribution grid, or which operate in isolated regime;

- Group 7 - Cogeneration plants with installed power up to and including 1MW connected to the distribution grid;
- Group 8 - Cogeneration plants with installed power capacity of over 1MW connected to the transmission or distribution grid.

Within each group above, several plants are defined including their tariff price.

(b) Fees, payment and encouragement of electricity production from REC: in order to establish the institutional structures needed for the operational production of electricity from REC, a REC Operator must be established. The production of electricity from REC by eligible producers which have entered into a compulsory purchase agreement is encouraged by the application of the following measures:

- Priority of delivery or acceptance of electricity produced from REC to the grid;
- Obligation of purchase of electricity produced from REC;
- Guaranteed prices.

(c) Connection to the Transmission System: a qualified producer which has entered into a compulsory purchase agreement has the advantage that it is able to dispatch electricity within the reported daily work schedule (timetable) of the network operator to which the plant is connected. The network operator must take the electricity from the qualified producers if it does not endanger the operation of the power systems.

(d) Priority in Energy Sales: a qualified producer is entitled to enter into a contract for the obligatory purchase of electricity from REC with the REC Operator at a guaranteed price determined in accordance with the Renewable Energy Law of FBiH. The contract, *inter alia*, defines the duration, the amount of electricity subject to the purchase and is concluded for a period of 12 years. A payment fee for the encouragement of REC is paid by all customers of electricity in the Federation of Bosnia and Herzegovina as a supplement to the price of electricity.

(e) Building of plants: for the construction of REC energy the approval of the competent Ministry is needed. This approval is issued after the registration in the register of RES projects - projects under construction. Mandatory criteria for the issuance of the energy approval include:

- Registration of the applicant in the territory of the Federation of Bosnia and Herzegovina in accordance with applicable regulations;

- Compliance of the Project with the strategic plan and program of development;
- Professional competence, technical infrastructure and financial capability;
- The application and installation of new technology and new (unused) equipment.

(f) RES Certificate: Certificate of guarantee of origin of electricity produced from REC ("Certificate") is issued by the REC Operator on the basis of data obtained from producers of REC electricity and network operators. The Certificate is issued at the request of an eligible producer which has been granted such status by a decision issued by FERK in accordance with the Law on Electricity.

The RS Law on Energy defines two types of certificates which the generator of electricity receives upon installation. Pursuant to Article 29 of the RS Law on Energy, the generator of electricity may, upon its own request, receive a certificate of origin for electricity generated in generation installations which have a valid certificate (declaration) on the condition that it can prove that during the period for which the certificate is granted, it has been operating in such a way that it meets the terms and conditions prescribed for efficient cogeneration, *i.e.* generation of electricity from renewable sources.

The certificate (declaration) for generation installations may be granted to a generator of electricity if such generation installations generate electricity from renewable energy sources in an economically appropriate way, protecting the environment or in efficient cogeneration.

The certificates are defined as follows:

1. Certificate of electricity origin – a document which enables the generator of electricity to prove that the electricity generated in its installation was generated from renewable energy sources or in co-generation with a high level of efficiency, duly containing the amount of electricity, energy source which was used for its generation, place and date of generation as well as other data which contribute to the accuracy and reliability of the document;
2. Certificate (declaration) of generation installation - a document which is issued to generator of electricity for a single generation installation certifying that such an installation fulfils the prescribed terms and conditions for the concurrent generation of electricity and heat with a high level of efficiency, or for the generation of electricity using waste or renewable energy sources in an economically appropriate way, harmonised with the regulations related to the protection of the environment.

4. Natural gas

Market overview

Unfortunately, the gas market in Bosnia and Herzegovina is not specifically regulated by any particular law. This is due to the fact that there are no known gas sources in the territory of the country. Nevertheless, given the specific geo-political position of Bosnia and Herzegovina and the currently existing plans for the construction of several new international pipelines, it would be reasonable to expect a more active approach of the Bosnia and Herzegovina authorities to this energy source.

5. Upstream oil market

Market overview

During the 1970s several studies have been performed on the territory of Bosnia and Herzegovina, in search of potential oil reserves. Unfortunately, however, these studies have found only symbolic amounts of hydrocarbon deposits which have no exploitation value. Accordingly, the oil market in Bosnia and Herzegovina has remained relatively undeveloped and almost all oil derivatives are imported. The only domestic oil production facility is the oil refinery in Modriča. However, this refinery produces sub-standard fuel and its participation in the oil market is practically insignificant.

The research and exploitation of hydrocarbons is regulated by the entity-level laws on mining, and, treating hydrocarbons as mineral deposits.

1. Introduction to the energy market

The Bulgarian energy sector is one of the most dynamic sectors of the local economy. It has undergone serious transformation in the last decade and continues to attract a lot of foreign investments in Bulgaria even in times of current economic slowdown. Bulgaria is one of the few countries in the region with nuclear power facilities and due to its geo-economic location it is a focal point for a number of strategic energy infrastructure projects.

The sector is mostly privatised and the market is (at least in legal terms) fully liberalised. The Bulgarian state still holds substantial energy assets by way of a holding company named "Bulgarian Energy Holding". The Bulgarian Energy Holding controls some large electricity generation capacities, the electricity transmission and system operation, the natural gas transmission and supply and most of the lignite coal production.

Similarly to many of the countries in the region the Bulgarian energy sector faces a lot of challenges, which will be also a source of major business opportunities in the future:

- (a) High energy intensity of the economy (still the highest in the European Union);
- (b) High dependency on imports of fuels (Bulgaria covers more than 70% of its gross energy demand by imports);
- (c) Competing goals of ensuring security of energy supply and of meeting environmental requirements (serious investments required for reduction of greenhouse gas emissions in power plants using local lignite coal);
- (d) Practical implementation of the market liberalisation, etc.

In June 2011 the Bulgarian Parliament adopted the Energy Strategy of the country until 2020, which acknowledges the challenges and sets out five priorities for the sector aiming to ensure energy needs and protect consumer interests: guaranteeing the security of supplies; boosting energy from renewable sources; improvement of energy efficiency; development of a competitive energy market.

2. Electricity

2.1 Market overview

Bulgaria is a major player and a leading exporter of electricity in South East Europe, covering at times around 80% of the electricity shortages in the neighbouring countries. For instance, according to official data for electricity exported for the year 2005, Bulgaria was the fourth (after France, Czech Republic, and Poland) largest player on the European electricity market and according to the Quarterly report on European electricity markets for Q1 of 2011 Bulgaria is a net exporter with 966 GWh.

After the liberalisation of the market and the implementation of Directive 2003/54/EC of the European Parliament and of the Council of 26th June, 2003, concerning common rules for the internal market in electricity, the only asset (and activity) which has remained 100% owned by the State is the national transmission grid. Currently, the national transmission network is owned by the National Electricity Company EAD ("NEC") which is 100% owned by the State through a specially incorporated holding company. The same holding company is the owner of some project pipeline, mining and heat production companies, the nuclear power station Kozloduy, the Electricity System Operator company ("ESO"). The ESO deals with the operational regime planning and control of the electrical power system of Bulgaria, the synchronisation of the Bulgarian electrical power system operation in parallel with the electrical power systems of the European countries member of the Union for the Coordination of Transmission of Electricity ("UCTE") and coordination of the joint operation with other electrical power systems.

The distribution and end supply networks were privatised and beyond the control of the State, albeit under a licence regime only. The production of electricity is currently performed by both the State and privately owned companies. The indicative goals for the energy mix until 2020 are in accordance with the EU goals for broadening the share of renewable energy and reduction of the CO₂ emissions.

2.2 Regulatory overview

The regulation of the electricity sector has several layers.

The first layer is the core energy regulatory framework covering, among other things, the regulation of electricity generation activities, the encouragement of the production of electricity from renewable sources, relations between the investor and the distribution/ transmission companies, etc. Those issues are regulated mainly by the Energy Act of 2003 (State Gazette No. 107 of 9 December 2003, as amended from time to time). Special rules applicable to renewable energy projects are set out under the Energy from Renewable Sources Act of 2011 ("Renewables Act") (State Gazette No. 35 of 3 May 2011), the Energy Efficiency Act of 2008 (State Gazette No. 98 of 14 November 2008, as amended and supplemented from time to time). There are also a number of secondary level regulations issued by the Council of Ministers or competent ministers (such as the Minister of Economy, Energy and Tourism) regulating various aspects such as price regulation, security and safety requirements for electricity equipment, connection to the grid, etc. The State Energy and Water Regulatory Commission (the "Commission") also issues secondary level regulations such as Rules on trading electricity, Rules for access to electricity networks, etc.

The second layer is the general regulatory framework governing the construction processes including the construction of electricity generation facilities. These processes are regulated mainly by the Territory Development Act of 2001 (State Gazette No. 1 of 2 January 2001, as amended from time to time), the Protection of the Agricultural Lands Act of 1996 (State Gazette No. 35 of 24

April 1996, as amended from time to time), the Protection of the Environment Act of 2002 (State Gazette No. 91 of 25 September 2002, as amended from time to time), as well as by a number of secondary pieces of legislation.

Amongst the government bodies and institutions which are granted powers to monitor and regulate the Electricity sector are:

- (a) The Parliament – according to the Energy Act the Parliament of Bulgaria approves the Energy Strategy of Bulgaria which determines the main goals, strategies, milestones, means and stages for development of the energy sector;
- (b) The Council of Ministers of Bulgaria – the Council drafts and implements the Energy Strategy approved by the Parliament;
- (c) The Minister of Economy, Energy and Tourism (the “Minister”) amongst others (i) approves short -, medium and long-term prognostic energy balances of Bulgaria in accordance with the Energy Strategy; (ii) proposes for approval by the Council of Ministers a list of the strategic enterprises in the energy sector; (iii) approves the obligatory criteria for the reliability of the electricity supply and gas supply; (iv) approves programmes and strategies for restructuring in the energy sector; (v) determines the annual overall quota for obligatory purchase of electricity from producers which use local primary electricity sources; (vi) grants permissions for search and research of energy resources and organises the activities related to granting of concessions for extraction of energy resources; (vii) issues ordinances for the purpose of implementation of the laws approved by the Parliament, etc.;
- (d) The State Energy and Waters Regulatory Commission – this is the main regulatory body for the energy sector as well as the water and sewage sector and is an independent specialised state authority which regulates the activities related to the production, transmission and distribution of electricity, the transmission and distribution of natural gas, the trade with electricity and natural gas, the production and transmission of heating power; the powers of the Commission, amongst others, include: (i) issuing, amendments and cancellation of licences, when such are required under the Energy Act; (ii) approval of general terms and conditions; (iii) control for observation of the applicable legislation in the sector; (iv) regulation of the prices, when so provided by the law, determination of preferential prices for purchase of electricity from renewables included; (v) approval of rules for trade with electricity and natural gas as well as of the technical requirements for the networks; (vi) approval of rules for supply with electricity and natural gas; (vii) approval of rules for determination of the prices of the balancing electricity; (viii) approval of the rules for access to the

electricity and gas networks; (ix) issuance of certificates for origin of electricity generated by combined production of electricity and heating power; (x) granting of consents for corporate restructuring of companies which are holders of licence/s; (xi) granting of permissions for disposal with assets of companies which are holders of licence/s, etc.;

- (e) The Agency for Sustainable Energy Development – this is a state authority which is responsible for the implementation of the State policy on encouragement of the production and consumption of electricity and heating power produced from renewables, the production and consumption of gas from renewables as well as the production and consumption of biofuels; the powers of this Agency include coordination, monitoring and control over matters related to the usage of renewables in the Energy sector as well as issuance of certificates of origin for electricity produced from renewables;
- (f) Electricity System Operator EAD – this is a company which is indirectly 100% owned by the State. Despite the fact that the company is a commercial entity as per the meaning of the Commerce Act of Bulgaria, the Energy Act and the applicable ordinances empower ESO to have some regulatory functions in the Energy sector, which include: (i) operational regime planning and control of the electrical power system of Bulgaria; (ii) synchronisation of the Bulgarian electrical power system operation in parallel with the electrical power systems of the European countries member of the UCTE and coordination of the joint operation with other electrical power systems; (iii) operation, overhaul and maintenance of the transmission network; (iv) organisation of the balancing energy market;
- (g) National Electricity Company EAD - this is a company which is indirectly 100% owned by the State. Currently the NEC is the only owner of the transmission electricity network in Bulgaria and has certain powers and obligations in terms of connection to the grid of producers of electricity, development of the network, purchase of electricity produced, etc.

2.3 Regulated electricity market activities

The Energy Act provides for licensing regimes in the Electricity, Gas and Water supply and sewage sectors. Subject to licensing are:

- (i) Electricity generation (generation from hydro-installations above 10MW and for the rest of the sources – above 5MW of installed capacity) (Electricity and/or Heat);
- (ii) Transmission (Electricity, Heat & Natural Gas);
- (iii) Transmission system operation (Electricity & Gas);
- (iv) Trade of electricity and supply (Electricity & Gas);

- (v) Distribution/ distribution grid operation (Electricity & Gas);
- (vi) Public/ end Supply (Retail) (Electricity & Gas);
- (vii) Organising of an electricity market;
- (viii) Transit transmission of natural gas, pulling power electricity distribution over the railroad transportation distribution networks.

Subject to price regulation are the following activities:

- (a) Electricity/ heat generation (including renewable energy sources feed-in tariffs, availability and the prices of the balancing energy);
- (b) Heat transmission;
- (c) Public provision of electricity for consumers connected to the transmission network/ to the distribution companies, for the purpose of covering the technological costs of transmission and to end suppliers;
- (d) Prices at which the public provider sells natural gas to public suppliers of natural gas, to consumers connected to the natural gas transmission network and selling natural gas to end suppliers of natural gas;
- (e) Prices at which end suppliers sell electricity and natural gas to consumers connected to the respective distribution networks or to public suppliers and at which end suppliers sell electricity and natural gas to households consumers and companies with less than 50 employees and less than BGN 19.5 million annual turnover;
- (f) Prices for transmission of electricity and natural gas to consumers through the respective transmission and/ or distribution networks and for the prices of transit transmission and cross boarder transmission tariffs, respectively for connection and access to the electricity transmission and electricity distribution networks.

2.4 Material licences for electricity generation

As mentioned above, according to the Energy Act, any company which owns or intends to construct electricity generation facilities with a capacity of over 5MW must obtain a generation licence from the Commission. The requirements for the persons applying for a licence are set forth in the Energy Act and the Ordinance for licensing of the activities in the energy field, State Gazette No. 53 of 22 June 2004, as amended and supplemented ("Licensing Regulation").

The licence may be issued with a term of validity between 1 and 35 years taking into account the service life of the generation assets and the financial status of the applicant. The term of the

licence may be extended for a period not longer than the initial term, provided that the licensee meets the requirements of the Energy Act and duly performs all its obligations and complies with the requirements under the licence. An extension may be granted based on a written request of the licensee made at least 1 year prior to the expiry of the initial term of the licence.

Generally, the preconditions for issuance of a licence under the Energy Act are the following:

- (a) The applicant should be a legal entity registered in compliance with the Bulgarian Commerce Act or the legislation of any EU or EEA Member State. Such entity should not be insolvent or in liquidation;
- (b) The applicant should have technical and financial capabilities, material and human resources and organisational structure necessary for performance of the licensed activity;
- (c) The energy facilities for carrying out the licensed activity should comply with the environmental protection and safety operation requirements; and
- (d) The applicant should have property rights over the energy facilities (if they are constructed). An application for a licence may also be filed before the facility is constructed.

Amongst the documents and information which should be submitted with the application to evidence the applicant's compliance with the abovementioned requirements are: (i) business plan for at least 5 years; (ii) application for approval of prices if the licensed activity is carried out under prices regulated by the Commission; (iii) information on the sources for financing the activity and evidence of their availability; (iv) distribution of the applicant's share capital; (v) information on the applicant's or its controlling shareholders' experience in carrying out an activity similar to the licensed one; (vi) information on the applicant's management and organisational structure and the education and qualifications of the management personnel, including the availability, number and qualifications of the personnel involved in carrying out the licensed activity.

A licence preceding the construction of the energy production facility can be issued upon request of the applicant, provided that it can prove the necessary financial means to construct the facility. In this case the licence shall provide for the terms and conditions for construction of the facilities (*i.e.* the wind turbines and the infrastructure thereof) and commencement of the licensed activity. The period for completion of the facility is not included in the term of the licence. In addition to the general documents required for the licence's issuance, the applicant shall submit: (i) the design of the energy facilities and a declaration coordinated with the respective Regional Environment and Waters Inspectorate or Basin Directorate that the requirements

of the environmental law necessary for the design's approval have been complied with; (ii) an approved detailed construction time schedule; (iii) a proposed term of validity of the licence and substantiation thereof; (iv) an investment analysis and financial model, including the forecast prices of the service. The Commission's approval of these financial models is a precondition for the licence's issuance.

Upon completion of the facilities' construction, the licensee should request that the Commission issue a special permit for the facilities to enter into commercial operation.

The above licences and permits are without prejudice to any other ancillary requirements which may be prescribed by the general legislation, such as building permits, health and safety approvals, environmental impact assessments, etc.

2.5 Trading and supply of electricity

(a) Trading

As of January 2007 the stakeholders in the Electricity market are subject to unbundling requirements (functional and legal unbundling). The legal framework provides for the full liberalisation of the Electricity market as of 1 July 2009. In practice however, only high voltage and partially middle voltage customers are participating on the free/ liberalised market.

No power exchange is available and only dual contracts have been concluded between producers and traders and/or eligible customers, traders and traders and/or traders and eligible customers. According to the data of ESO at present there are 156 market participants of which 8 producers, 2 auto-producers, 85 privileged consumers, 60 traders and 1 public provider.

The Commission in accordance with its powers has approved Rules for trade with electricity (State Gazette No. 59 of 28 July 2009). The Rules regulate (i) the rules for trade with electricity under freely negotiated prices; (ii) the transition from trade under regulated prices to trade under freely negotiated prices; (iii) the terms and conditions for participation and functioning of the market of balance energy; (iv) the mechanisms for balancing of the participants on the market of balance energy and (v) the manner for determination of the prices for balance energy.

According to the Rules the ESO can administrate deals with electricity as well as organising the balance energy market. As of 1 July 2009 a day ahead scheduling is applied.

As of present each year the Commission issues decision for determining quotas (quantities) of electricity to be produced and sold to NEC by the producers at prices determined by the Commission. If the actual electricity produced exceeds the quota so determined, the producers can sell this electricity at freely negotiated prices. The decision of the Commission determines the overall quota of the producer and the Rules impose a few

obligations for the NEC (i) within a certain period of time to enter into an electricity sale and purchase agreement with the producer and (ii) on a monthly basis to inform the producer of the actual quantities of electricity needed to be generated.

Please note that in the event of the production of electricity from renewables the NEC/ the respective distribution company (as the case may be) has the obligation to purchase at preferential prices all the electricity generated (*i.e.* the Commission does not determine quotas for electricity generated from renewables).

(b) Supply

In accordance with Directive 2003/54/EU the supply and distribution of electricity were separated as different activities. As a result there are four distribution and four end supply companies in Bulgaria. The end suppliers are licensed entities which supply electricity to household consumers and companies with less than 50 employees and less than BGN 19.5 million annual turnover. The engagements of the end suppliers are related to the procurement of electricity under regulated prices to both household consumers and companies with less than 50 employees and less than BGN 19.5 million annual turnover and privileged consumers who have not exercised their right to choose a different supplier.

2.6 Transmission and grid access

The transmission and the grid access are regulated by the Energy Act and a special Ordinance No. 6 of 9th June, 2004, for the connection of producers and consumers of electricity to the distribution and transmission electrical networks (the "Connection Ordinance"). Connection to the grid shall be performed by either the NEC (the owner of the national transmission grid) or the respective company owner of the regional distribution network (depending on whether the generation capacity is below or above 5MW). In any case, even if the connection to the grid is to be procured by the regional distribution network company, a positive statement by NEC is required for the presence of capacity for evacuation of the electricity to be produced.

According to the applicable rules, the procedure consists of three stages:

(a) Official statement on the terms and conditions for connection

Under the Connection Ordinance, the company shall file before the respective network owner an application for issuance of an official statement on the terms and conditions for the possible connection of the generation facility with the network.

The network owner must issue a statement on the terms and conditions under which it shall connect the generation facility to the network. The statement describes the technical requirements for the facilities of the project and the facilities which have to be constructed in order for the connection to be made.

Special rules apply to connection of renewable projects. According to the Renewables Act, effective as of 1 January 2012, the distribution network owners shall on an annual basis deliver to NEC information on the possible capacities for connection in the different regions for connection. NEC, based on a 10-year plan for development of its network and the information from the distribution network owners, on an annual basis (not later than 30th April each year) shall inform the Commission on the foreseen available capacities for connection to the grid in the different regions for a period of one year. The forecast shall be based on concluded preliminary agreements, actual and foreseen electricity consumption, the capabilities of the networks, etc.

Not later than 30th June each year the Commission approves and publishes on its internet page the forecasts for the next 12 month period (as of 1st July) for available capacities for connection in the different regions of renewable projects.

Effective as of 1st July, 2012, any company willing to construct a project or to increase the capacity of an existing project shall submit to the respective network owner an application for connection within the capacities per region as approved by the Commission. An application could be submitted after the date of approval by the Commission of the capacities by regions and shall be relevant only to the respective one-year period (no transfer of applications is possible for subsequent periods).

Upon submission of the application, the company shall make a guarantee deposit in favour of the network owner to the amount of BGN 5,000 per MW of the capacity for which the company is applying.

(b) Preliminary connection agreement

A company must file an application with the network owner for the signing of a preliminary agreement for connection to the network based on the terms described in the statement for connection.

The Renewables Act provides for obligatory payments to be made upon conclusion of the preliminary connection agreement, the payments for which are considered as part of the connection price. In the event that the actual costs for connection exceed these payments, the project company shall pay the excess. The payments made cannot be refunded (for instance in the event that the actual connection costs are lower) thus, it may be considered as minimum price for connection. The payments due are as follows:

- BGN 50,000 per MW of planned capacity, when the planned capacity exceeds 5MW and
- BGN 25,000 per MW of planned capacity, when the planned capacity is equal or below 5MW.

The term of the preliminary agreement cannot exceed one year and the company must submit an application for the conclusion of a final connection agreement prior to the expiry of this term or

otherwise the connection procedure is terminated and must be started from the beginning.

(c) Final connection agreement

After the issuance of a Construction Permit, the company shall file an application to the respective network owner for conclusion of a final Connection Agreement. Along with the application the company shall submit a set of documents which include, amongst others: (i) certificate of current legal status; (ii) documents proving the rights of the company for construction; (iii) the approved design schemes – section architecture which is for the installation of the facilities for connection and the way to them and section electrical installations and facilities; and (iv) construction permit.

The network owner shall prepare the Connection Agreement and invite the company to sign it within 15 days of filing the Application. The term of the final connection agreement cannot exceed two years as of its execution and it is terminated upon commissioning of the project.

(d) Access to the Grid Agreement

Upon commissioning of the project an access to the grid agreement shall be concluded prior to a power purchase agreement. The access to the grid agreement must be subject to general terms and conditions approved by the Commission. The agreement shall deal with the indemnification payable by the owner of the network to the company in case of limitations of the evacuated electricity.

3. Renewable energy

3.1 Market overview

In recent years the existing legal regime has resulted in a huge amount of applications for connection of new renewable energy generation facilities – according to certain information from ESO – more than 5 GW of installed capacity. In many cases those have been speculative projects the owners of which do not have the required financial and technical capacities to complete the projects. This has created a situation in which the electricity grid owners are unable to plan the expansion of their grids.

Many projects have been approved in environmentally sensitive areas resulting in the initiation of a procedure against Bulgaria by the European Commission for breach of EU rules on NATURA 2000 protected sites. Therefore, currently the environmental authorities apply much more stringent practices in assessing new projects and they even have begun revision of environmental approvals issued for some projects already in construction which affect NATURA 2000 sites.

Certain deficiencies of the current framework have proven to restrain investment by serious strategic investors in feasible projects, and namely:

- (a) the possibility for applicable prices to be decreased with almost 5% per year;
- (b) the lack of effective legal mechanism to assure that grid owners comply with their obligation to expand the grid to make possible the connection of renewable energy plants;
- (c) the lack of effective legal mechanism for priority dispatching of renewable energy plants – in this way even if connected with priority renewable energy plants may be restrained from operating at full capacity because of alleged dispatching constraints by the ESO;
- (d) the lack of public information about grid capacities and plans for its expansion about grid capacities already “pledged” to projects in development, about resources of renewable energy, etc.

The above issues have been repeatedly declared by the business as a major hurdle for sustainable investments in the renewable sector in the last years.

In response, the Bulgarian government declared at the beginning of 2010 its will to adopt an entirely new law on renewable energy in Bulgaria where to resolve the problem of the chaotic increase in projects as well as other problems which limit the development of feasible and serious investment initiatives. After more than a year of public discussions and several changes in the principles of the proposed new law, the new Renewables Act has been adopted and entered into force on 3 May 2011. The Renewables Act, amongst others, explicitly states and sets out a road map for achieving the EU goals in terms of share of electricity produced from renewables in the electricity mix.

Some of the main and newly introduced principles of the Renewables Act include:

- (a) Establishment of a new specialised body entitled “Agency on Sustainable Energy Development” (the “Agency”), which will be responsible for (i) implementation and coordination of measures for encouragement of renewable energy generation and for the maintenance of a public information database about renewable energy projects and developments and (ii) issuance of certificates of origin for electricity generated from renewable sources;
- (b) *(to enter into force in 2012)* Requirement that grid owners publicly announce each year the available connection capacities and the developers of new renewable projects deposit an application to obtain a positive statement that a connection to the grid is possible within such available capacities. The project owners have to make a monetary deposit of BGN 5,000 per MW planned capacity upon submission of the application;
- (c) Requirement that the owner of a project deposits a cash

guarantee with the respective grid owner upon signing a preliminary connection agreement to the amount of BGN 50,000/ 25,000 per MW of planned capacity (depending on whether the planned capacity of the project exceeds 5MW or not);

- (d) The opportunity for the project owner to avoid the above restrictive procedures with respect to obtaining positive statement for available connection capacity/ payment of deposits, in the event that the project owner opts out of the feed-in tariff system, *i.e.* declares that he does not want to benefit from the preferential prices for purchase of electricity. In this event the electricity generated is to be sold on market terms.

The Renewables Act basically preserves the principles of the previous system of encouragement and provides for some additional mechanisms for the encouragement of investments in renewable energy generation:

- (a) Long-term for the obligatory evacuation of electricity at preferential prices – 20 years for photovoltaic (“PV”) projects (reduced from 25 under the abolished law on renewables) and 12 years for wind energy projects (reduced from 15 under the abolished law on renewables), where the term starts to count: (i) from the moment of commissioning of the power plant, if the commissioning is prior to 31 December 2015 and (ii) from 31 December 2015 if the commissioning is after 31 December 2015;
- (b) Preferential prices which are fixed for the whole period of obligatory evacuation at the level, which is approved by the Commission at the moment of completion of the construction works;
- (c) Express obligations of grid owners for the compensation of damages to project owners in the event of failure to fulfil their obligations for priority connection or dispatching of renewable energy generation plants.

Express obligation of grid owners to report annually to the Commission on the progress of their programs for expansion of grid for the purposes of connection of renewable energy projects.

3.2 Support schemes

The Renewables Act preserved the system of encouragement of generation of electricity from renewables based on feed-in tariffs. The system comprises the following key elements:

- (a) The owners of the national transmission grid and/or regional transmission systems are obliged to connect renewable energy generation facilities, subject to compliance with the special procedures under the Renewables Act. The interconnection costs associated with interconnection facilities up to the boundary

of the electrical facilities are borne by the generation company. General costs associated with the expansion of the capacity of the grid are borne by the grid owner;

- (b) The owners of the national transmission grid and/or regional transmission systems are obliged to provide guaranteed access to the grid and transmission as well as priority dispatching of electricity generated from renewable sources subject to relevant technical requirements for the security of the system;
- (c) The national supplier (NEC) and the regional suppliers (end suppliers) are obliged to purchase all electricity generated from renewable sources, which is certified with a generation (origin) certificate (see below). This obligation is to be reflected in long-term power purchase agreements signed with the respective purchaser; and
- (d) Special preferential prices are set by the Commission at which electricity from renewable sources is purchased (see below).

Mandatory buy-out of electricity

According to the Renewables Act, the requirement for mandatory long-term buy-out of electricity from renewable generation facilities shall be applicable only for projects, for which a connection to the grid is requested not later than the date of issuance of a report by the Minister of Economy, Energy and Tourism, stating that the binding national target for the share of energy from renewable sources in the gross final consumption of energy in 2020 (in accordance with Annex I of Directive 2009/28/EC), which is 16%, has been met. There will be no mandatory buy-out for projects applying for connection after that date.

The electricity generated shall be subject to obligatory purchase of feed-in tariffs approved by the Commission for the following periods:

- (a) Twenty years – for electricity produced from geothermal and sun power energy as well as for electricity produced from biomass;
- (b) Twelve years – for electricity produced from wind power;
- (c) Fifteen years – for electricity produced from hydro-electric plants with installed capacity below 10 MW as well as for electricity produced by other renewables.

The period for obligatory buy-out shall commence from the date of commissioning the respective project, provided that the commissioning has taken place prior to 31 December 2015. In case a project is commissioned after 31 December 2015, the term shall count as of 31 December 2015.

Particularly, the buyer of the electricity (NEC or a regional end supplier) shall be obliged to purchase all the electricity for which a guarantee of origin has been issued, except for the electricity which is used by the owner of the project for his own needs.

Feed-in tariff

The Renewables Act explicitly provides for the following rules in terms of determining the feed-in tariff at which a project would be entitled to sell the generated electricity:

- (a) The feed-in tariff for the electricity produced from renewables shall be determined for the whole period of the power purchase agreement and shall remain unchanged until the expiry of the term for compulsory buy-out; the only exception from this rule refers to electricity produced by biomass where prices will be adjusted annually to take account of changes in prices of biomass, salaries and transportation costs;
- (b) The feed-in tariff applicable for a specific project shall be the feed-in tariff in force as of the date of completion of construction and obtaining an official certificate to that end as per the Territory Development Act;
- (c) In the event that a project is to be built in a single stage and it is not commissioned within two years of the conclusion of a final connection agreement, the applicable feed-in tariff shall be that in force as of the date of commissioning of the project;
- (d) In the event that the power plant is to be commissioned in stages and the commissioning of the whole power plant (all stages) is not implemented within two years of the conclusion of a final connection agreement, the applicable feed-in tariff shall be: (i) the one in force for the relevant year - for the period until the expiry of the two-year deadline and (ii) the one in force as of the date of commissioning of the whole project for the rest of the period until the expiry of the obligatory buy-out term under the power purchase agreement;
- (e) Upon the expiry of the compulsory buy-out term the feed-in tariff shall not be applicable, *i.e.* electricity shall be sold at market prices.

Under the Renewables Act the Commission has the obligation to determine feed-in tariffs by the end of June each year and they remain in force for 12 month periods as of July 1 until June 30 next year.

The most recent decision of the regulatory Commission for setting the prices for renewable projects was taken on 20th June 2011. It sets the following prices for some of the main renewable projects for the first period as mentioned above:

Type of project	Price (EUR per MWh, VAT exclusive)
Wind parks with annual hours of operation of up to 2,250 hours	97.73
Wind parks with annual hours of operation of more than 2,250 hours	88.55
Wind parks with a-synchronic generator with a cage rotor	70.13
PV parks equipped with PV modules of up to 30 kWp	295.00
PV parks equipped with PV modules of more than 30 kWp up to 200 kWp	290.34
PV parks equipped with PV modules of more than 200 kWp	248.48
Installations working with biomass from wood waste with up to 5MW of installed capacity	130.74
Installations working with biomass from wood waste with up to 5MW of installed capacity and a combined cycle	144.38
Installations working with biomass from wood waste with over 5MW of installed capacity	116.26

Guarantees of origin

It should be noted that under the wording of the Renewables Act, the compulsory buy-out obligation is conditioned on the issuance of the so-called guarantees of origin¹, issued by the newly established Agency (the terms and conditions for issuance of such guarantees of origin are to be established by regulations, which are still to be adopted). This means that the public suppliers will be obliged to purchase only that electricity for which a guarantee of origin has been issued. In this way the Renewables Act assigns an important role to such guarantees of origin (if for some reason the issuance of a guarantee of origin is refused or delayed, the project company would not be entitled to sell the electricity generated) and represents an additional administrative restriction for generation companies (it is unclear what would be the amount of fees payable for the issuance of the guarantees of origin and how the rules for their issuance will fit with commercial terms for purchase of electricity under long-term power purchase agreements). This role goes far beyond the concept of Directive 2009/28/EC which envisages that such instruments will be only used for proving to final customers the percentage or quantity of energy from renewable sources in an energy supplier's energy mix in accordance with Article 3(6) of Directive 2003/54/EC (*i.e.* they are

by no means viewed as a condition for benefiting from the relevant encouragement system of obligatory purchase of electricity at preferential prices) and also that the issuance of such instruments will be only optional and at the request of the generation company.

The specific terms and conditions for issuance, transfer and cancellation of certificates of origin shall be set out with an ordinance of the Minister of the Economy, Energy and Tourism which ordinance shall be issued within six months as of entry into force of the Renewables Act.

4. Natural gas

4.1 Market overview

The Bulgarian natural gas market is still in process of development. The country has a well-developed gas transmission network (mostly build during the socialist era), which is operated by the state-owned company Bulgartransgas, transiting gas to Turkey, Greece and Macedonia and supplying large industrial consumers and power plants (accounting in 2008 for about 87% of local consumption).

Currently the system is fed with gas from Russia only through the Ukraine under long-term supply agreements which are currently in process of renewal. Therefore, after the Russia-Ukraine gas crisis of 2009, which resulted in a cut of supplies to Bulgaria, the government intensified work on building interconnection lines with the systems of Romania, Serbia, Greece and Turkey. These are planned to be operational by 2014. Projects for construction of a terminal for liquefied natural gas ("LNG") or use of the existing terminal in Greece as well for supply of compressed natural gas ("CNG") from Azerbaijan across the Black Sea have been also discussed even though no practical steps for their implementation have been made so far.

Bulgaria participates (through the state-owned company Bulgarian Energy Holding) in the strategic natural gas transmission projects crossing the region – the Nabucco Gas Pipeline and the South Stream Gas Pipeline.

Local distribution to household and small and medium business consumers is a relatively new sector, the actual development of which started in 2000 by issuance of a number of regional and municipal distribution licences. This sector accounts for only about 13% of local consumption in 2008 figures but registers a steady growth in last years and has a big potential.

The market is heavily dependent on imports from Russia which account for more than 90% of local consumption. Since 2004 Melrose Resources has exploited the Galata local deposit which is now to be converted into a storage facility. In 2010 it received concessions for another two deposits which should supply more than 10% of local demand in the next years. In 2011 the government granted a permit for exploration of shale gas to Chevron. The government is hoping that shale gas may become a major contributor to local gas production in the coming years.

¹ As envisaged by Article 15 of Directive 2009/28/EC

The market has been fully liberalised in theory since 2007 (including exports and imports) but due to various constraints the share of deals on the free market is still negligible and more than 90% of sales are made by the public supplier Bulgargas and the regional suppliers at regulated prices.

4.2 Regulatory overview

The natural gas sector is regulated by the Energy Act and a number of Ordinances and Rules issues on its basis by the Council of Ministers and the Commission. This legislation conforms to the fundamental EU guidelines in the sector. Among other things, the law provides for:

- (a) The unbundling of services through the establishment of an independent system operator to undertake the transportation activities that were previously performed by the company Bulgargas;
- (b) The free development by private investors of transit and gas distribution networks and storage facilities under a licence;
- (c) The liberalisation of supply;
- (d) Third party access to the national transportation system, including storage facilities, on the basis of tariffs approved by the Commission.

4.3 Regulated natural gas market activities

According to the provisions of the Energy Act the supply and distribution of natural gas, as well as the construction and operation of gas transit, transmission and distribution networks and gas storage facilities, are permitted after issuance of a respective licence, which is granted by the Commission. No licence is required for trading with natural gas including for import and export of natural gas.

Only one licence for operation of the transmission network (high-pressure pipelines) and for public supply of electricity is issued for the territory of Bulgaria. The company Bulgartransgas (under the control of the Bulgarian government) holds the licence for the operation of the national transmission network and the company Bulgargas (also controlled by the Bulgarian government) holds the licence for the public supply of gas. Bulgartransgas holds also the only currently effective licences for transit of natural gas and for operating a gas storage facility (Chiren).

Similarly only one licence for operation of a distribution network and for supply of gas to end consumers is issued for a particular licensed territory. Currently 5 licences have been issued for distribution of natural gas in regions comprising several towns and 26 licences have been issued for distribution on the territory of separate towns.

In principle licences are issued on a "first come, first serve basis" provided that the applicant meets the relevant requirements for obtaining a licence. If there is more than one applicant interested in a particular territory, the Commission must organise a competition procedure for granting the licence.

The initial term of these licences depends on the licensed activity and is up to 35 years. Upon request of the licence holder, the licences may be renewed for the same time period.

4.4 Exploration and production

All underground natural resources including hydrocarbons are exclusive public state property. The state provides rights for prospecting and exploration on the basis of a special permit. Rights for the extracting of natural resources are granted by way of a concession.

The intensification of local production of gas is one of the priorities of the Bulgarian government. Until now commercial exploitation of local deposits of gas has been modest and has represented less than 10% of local consumption (mainly the Galata deposit, which has been operated since 2004 by Melrose Resources and is now depleted and in the process of being licensed as a gas storage facility). In 2010 Melrose Resources received two new concessions for the exploitation of local deposits. A number of exploration permits have been issued in recent years, including to Chevron for shale gas exploration and the government is hoping significantly to increase the share of local gas in local consumption in the next decade.

The exploration of oil and gas deposits may be carried out only on the basis of an exploration permit issued by the Council of Ministers ("CoM") after a proposal by the Ministry of Economy, Energy and Tourism. For that purpose, the CoM institutes a tender procedure and the bidder ranked in first place shall be granted an exploration permit with a term of up to 5 years (with an option for up to three extensions and the total duration of all extensions can be up to 5 years, *i.e.* maximum 10 years in total). Based on the exploration permit the respective bidder concludes an exploration agreement with the CoM outlining the terms and conditions for conducting exploration activities including minimum investments and business programme, fees payable to the government, etc.

The exploration rights require its holder to register geological discovery and commercial discovery of oil and gas deposits. The geological discovery reveals the quantities and qualities of the oil and gas of the respective deposit and the exact location of the deposit, while the commercial discovery contains technical and commercial evaluation of the deposit and proposed methods for extraction of the underground resources.

A holder of an exploration permit which has registered a commercial discovery and has obtained a certificate for that commercial discovery may submit an application to the government for direct (*i.e.* without conduction of any tender procedure) granting of oil and

gas concession within 6 months as of the issue of the certificate for commercial discovery.

If no certificate for commercial discovery has been issued upon expiry of the exploration permit or if the holder of the certificate does not apply for a concession within the 6 month term, the CoM will be free to issue a new exploration permit or an extraction concession for the respective territory following a tender procedure.

After the issuance of a decision of the CoM for granting the concession, the concessionaire shall conclude a Concession agreement with a maximum term of 35 years (which term may be prolonged with up to 15 years). During the concession the concessionaire has the right to extract and process oil and gas from the deposit and to sell the oil and gas products to third parties. The concessionaire is obliged to pay to the state a concession fee (the amount of which is to be determined in the concession agreement), to carry out the annual working programme and to recultivate the concession area after the conclusion of the extracting and processing works.

4.5 Transmission and access to the system

The national natural gas transportation system (high-pressure pipelines) is owned and operated exclusively by Bulgartransgas. Currently there are three entry points – one from the pipeline from Romania supplying Russian gas and two points connecting local deposits. As mentioned, a number of interconnection lines with the systems of neighbouring Greece, Romania, Turkey and Serbia are in process of development which will substantially diversify the transmission opportunities of the system.

By law Bulgartransgas and the licensed regional distribution companies are obliged to allow free and non-discriminatory access to the transmission systems to all users (consumers, traders, local producers and licensed owners of gas storage facilities) under terms and conditions established by Rules adopted by the Commission and pursuant to access agreements under general rules approved by the Commission. The fees for access and transmission are determined by the Commission.

Access to the system may be refused only on technical reasons - lack of capacity or hazard to the integrity and security of the transmission system. Refusal for access on the basis of potential serious economic and financing difficulties for another user of the system owing to contracts containing 'take or pay' clauses is also possible but only on the basis of an express derogation issued by the Commission, which must be notified to and is subject to control by the European Commission.

The same obligation to provide access applies to the operators of gas storage facilities.

4.6 Trading and supply

The prices under which the public supplier of natural gas supplies the

final suppliers and customers are approved by the Commission. The prices at which final suppliers supply protected consumers are also approved by the Commission and transactions are concluded under general terms approved by the Commission. All other transactions are concluded at market prices under Rules approved by the Commission. The transmission system operator (part of Bulgartransgas) is responsible for the balancing and administration of the transactions.

Even though in theory the market is fully liberalised, virtually all supplies to large consumers are performed by the public supplier Bulgargas with few deals realised between industrial consumers and the operator of local deposits and a trader. It is expected that the liberalised market will grow significantly in the next years.

4.7 LNG and storage capacity

There are no operating LNG terminals in Bulgaria. The government has discussed ideas for the construction of a local LNG terminal or signing arrangements for the use of the existing LNG terminal in Greece for supplies to Bulgaria but no specific steps have been taken so far.

Bulgaria has one operating gas storage facility, Chiren, which is operated under a licence by the transmission operator Bulgartransgas. The capacity of the facility is about 450 million m³ and about 4.3 million m³ of daily supplies. Currently a process of upgrading the facility is underway which will increase its overall capacity and capacities for daily supplies.

It is expected that the depleted Galata natural gas field, which was exploited by Melrose Resources under concession which expires in 2026, will be converted into a new gas storage facility which will contribute greatly to the energy security and the liberalisation of the market. However, that project is pending for some years mainly because of lack of clear legal rules in respect of the rights over the depleted field and the procedure for choosing an operator for the facility.

5. Upstream oil market

5.1 Market overview

Currently local production of oil in Bulgaria is negligible and virtually 100% of oil is imported from Russia. In the last year the government has prioritised the exploration for local oil and gas deposits and has issued a number of exploration permits to international companies hoping to increase domestic production.

5.2 Regulatory overview

In respect of the legal regime for oil exploration and production, please refer to section 4.4 above.

1. Introduction to the energy market

Croatia has done a lot in the past decade with respect to the development of energy legislation and the liberalisation of the energy market. However, certain energy activities, as explained in the sections below are still not liberalised or privatised. Also, Croatia has successfully closed the Energy chapter within the negotiation process for its accession to the EU. Nevertheless, due to certain developments on the energy markets of the European Union, additional adjustments of Croatian energy legislation in relation to the EU legislation are still necessary. This primarily refers to the adoption of the new Electricity Market Act, Gas Market Act and Act on Regulations of Energy Activities expected to occur in the autumn of 2011.

With respect to Croatia's relations regarding the energy issues in the regions and beyond, by ratifying the Energy Charter Treaty, Croatia has undertaken to comply with the principles of market economy in the energy sector, enhancing energy efficiency and environmental protection. Also, being a part of the Kyoto protocol, it has undertaken to ensure that 20% of all energy consumed in Croatia comes from renewable energy sources. Thus Croatia has been experiencing in the last few years the development of renewable energy projects such as wind farm power plants, bioethanol and biomass factories, etc. Investors are hoping that the somewhat rigid administrative procedure regarding the development of the subject projects will adjust to the market conditions in the years, hopefully months, to come.

2. Electricity

2.1 Market overview

The Croatian electricity market is only partially liberalised and partially privatised. Non-liberalisation and non-privatisation exist, from both the legislative and market points of view, in relation to electricity transmission and distribution. All transmission and distribution capacities in Croatia are owned by the state-owned company HEP d.d., and operated by one of the HEP Group companies – HEP Transmission System Operator (“HEP-TSO”) and HEP Distribution System Operator (“HEP-DSO”). On the other side, generation, supply and trade of electricity is liberalised and privatised¹.

The Croatian energy regulatory agency (“CERA”) has as of August 2011 issued 18 energy licences for generation of electricity. According to CERA's latest yearly report, 89% of all generation facilities in Croatia were owned by HEP d.d. and managed by HEP Generation Ltd. Also, domestic electricity generation has satisfied 68% of energy needs. The biggest share in electricity generation is divided between hydro (*i.e.* 56.31%) and coal power plants (*i.e.* 43.35%), followed by wind power plants comprising 0.34% of all electricity generation. In addition, 15% of the energy is received from the Nuclear Power Plant Krško in Slovenia, which is half owned by Croatia.

¹ There have been some discussions on the privatisation of HEP - Group of companies, or only some of the companies in the group.

With respect to supply and trade, CERA has, in total, issued 6 energy licences for trade and 8 energy licences for supply of electricity. The latest developments show that former monopolist of electricity supply - state-owned company HEP d.d. (*i.e.* HEP Supply Ltd) has lost public tenders for the supply of some 50 towns across Croatia and some of the biggest state-owned companies. This is an excellent example of further liberalisation of the electricity market.

2.2 Regulatory overview

Electricity activities in Croatia are mainly regulated with the following legal acts:

- Energy Act (Official Gazette No. 68/01, 177/04, 76/07, 152/08, 127/10);
- Electricity Market Act (Official Gazette No. 177/04, 76/07, 152/08, 14/11);
- Act on Regulation of Energy Activities (Official Gazette No. 177/04, 76/07);
- Statute on Licences for Undertaking of Energy Activities (Official Gazette No. 118/07, 107/09);
- General Terms and Conditions for Electricity Supply (Official Gazette No. 14/06);
- Rules on Functioning of Electricity Market (Official Gazette No. 135/06, 146/10);
- Statute on the Charges for Grid Connection and Increase in Connecting Power (Official Gazette No. 28/06);
- Decision on the Amount of Fees for Grid Connection and Increase of Connecting Power (Official Gazette No. 135/06, 146/10);
- Decision on the Fee for Organising of Electricity Market (Official Gazette No. 94/07);
- Statute on Energy Balance (Official Gazette No. 33/03);
- Rules on Balancing of Electro Energy System (Official Gazette No. 133/06);
- Methodology on Providing of Services of Electricity Balancing in Electro Energy System (Official Gazette No. 37/11).

The Energy Act determines the (i) measures for the safe and reliable supply of energy and its efficient usage, (ii) legal acts used for the promotion of national energy policy, planning of energy development, and undertaking of energy activities. The Electricity Market Act regulates the following energy activities: (i) production, (ii) transfer, (iii) distribution, (iv) supply of electricity, and (v) organisation of electricity market.

The body in charge of regulating energy activities is the CERA, established by the Act on Regulation of Energy Activities in 2004. The CERA is an autonomous, independent and non-profit public body established for the purpose of determining and implementing the regulation of energy activities in the electricity, heating, gas and petroleum sectors. Some of the CERA's functions refer to the issuance of energy licences, or eligible producer statutes. The CERA's work is public. Its work is partly financed from the fees collected for the issuance of the energy licences. The CERA is responsible to the Ministry of Economy, Labour and Entrepreneurship (the "Ministry").

HROTE - Croatian Operator of Electricity Market (the "Market Operator") is a company with public competencies whose basic activities are organisation of the electricity market and promotion of generation of electricity from renewable energy sources ("RES"), cogeneration heating plants ("CHP")¹ and biofuels. The major Market Operator's obligations are (i) signing the Feed-in Tariff ("FIT") Power Purchase Agreements, (ii) signing the agreements with the suppliers for the collection of minimum share of renewable electricity, (iii) collection of the incentive fee from the suppliers, and (iv) calculation and division of financial means based on the signed agreements.²

2.3 Regulated electricity market activities

The Electricity Market Act differentiates between the market-based and regulated energy activities. Regulated activities are undertaken as public services. They are as follows: (i) generation of electricity for tariff electricity consumers, (ii) transmission and distribution of electricity, (iii) organisation of the electricity market, and (iv) supply of electricity for tariff electricity consumers. Market-based energy activities are (i) generation and supply of electricity for eligible electricity consumers³, and (ii) trade of electricity.

There is only one transmission system operator and one distribution system operator in Croatia, *i.e.* respectively HEP-TSO and HEP-DSO. They are part of a vertically integrated company – HEP Group, and are independent from one another with respect to their form, organisation and decision making. However, they are owned by HEP d.d. which is also the owner of the grid. The Electricity Market Act sets forth conditions for legal (not ownership) unbundling. Although the vertically integrated company approves financial plans of TSO and DSO and sets the limits for their debentures, it must refrain from giving instructions regarding their everyday work.

The TSO is responsible for the (i) construction of grid connection and connecting of electricity generation facilities, (ii) continuity and reliable functioning of electricity supply system, (iii) securing of third party access to the grid, (iv)

taking over the total electricity produced by eligible producers, (v) maintaining a certain quality of electricity, (vi) securing energy necessary to cover the losses in the transmission system grid, etc. The DSO is responsible for (i) securing the energy necessary to cover the losses in the transmission system grid, (ii) reliable, safe and efficient drive of the distribution grid, etc.

2.4 Material provisions of electricity market law and licensing regulations

In order for any private or legal entity to undertake energy activities, it must obtain an energy licence issued by CERA. The issuance is subject to providing evidence of the following:

- (i) the entity is registered for undertaking energy activity with the court registry of the respective commercial court;
- (ii) the entity has sufficient technical and financial qualifications, and expertise for undertaking the subject activity; it is considered that the entity is technically competent to perform energy activities if it owns a building and equipment, as well as all necessary documents pursuant to which the building and the equipment can be used, *i.e.*, pursuant to which energy activities can be performed;
- (iii) statement of the responsible person of the entity that the members of the management board have not been convicted for an economic crime in the last five years;
- (iv) proof of payment of the fee for issuance of an energy licence determined by the Decision on the Amount of the Fees for Undertaking Works of Regulation of Energy Activities.

The issued energy licence determines the period of its validity which can be extended if an application is made three months prior to its expiry. In the event that the entity withdraws its request for the issuance of an energy licence, it is entitled to recover the fee. The fees are as follows: (i) HRK 20,000+VAT (EUR 2,661.37)⁴ for electricity generation, (ii) HRK 15,000+VAT (EUR 1,996.03) for electricity distribution and organisation of electricity market, (iii) HRK 10,000+VAT (EUR 1,330.69) for electricity supply and trade.

The Agency is entitled to revoke the energy licence on a temporary basis if the energy operator no longer fulfils the conditions of technical qualifications and competencies, financial or any other conditions pursuant to which the licence to perform energy activities had been issued.

Please note that the applicable Croatian energy legislation does not set forth specific legal rules on the minimum share capital or share transfer restrictions different from the general corporate rules regulating the same issues. For example, the minimum share capital of an entity undertaking an energy activity is HRK 20,000 (EUR

¹ Cogeneration heating plants produce both electricity and heating.

² Please see Section 3 below for detailed explanations.

³ Eligible buyers, unlike tariff buyers, are entitled to choose their own supplier.

⁴ Please note that all Croatian Kuna (HRK) conversions into Euro therein are in accordance with the conversion rate of HRK to EUR as of 18 October 2011.

2,661.37) for a limited liability company and HRK 200,000 (EUR 26,613.71) for a joint stock company. However, the energy licence holder needs to have sufficient financial means as determined by law (HRK 30,000 (EUR 3,992.06) for organisation of electricity market and supply, HRK 300,000 (EUR 39,920.56) for distribution, HRK 100,000 (EUR 13,306.85) for transmission, HRK 50,000 (EUR 6,653.43) for generation and HRK 20,000 (EUR 2,661.37) for trade of electricity).

The Statute on Licences for Undertaking of Energy Activities stipulates the possibility of transfer of the energy licence in case of division of an energy licence holder. Transfer is possible to only one legal entity which is the universal successor of the energy licence holder in question, subject to the filing of the request for such transfer to CERA within 30 days from the day of registration of such new legal entity. Also, in the event of merger or acquisition of an energy licence holder to another legal entity, the energy licence may be transferred to the entity taking over the initial energy licence holder, subject to the filing of the request for such transfer to CERA within 30 days of the registration of the acquisition, or of the registration of the new legal entity in case of merger.

As for the market share restrictions, please refer to Section 2.3 according to which there is only one transmission system operator and one distribution system operator. They are natural monopolies. Also, the only organiser of the electricity market is the Market Operator. Such restrictions do not apply to the (i) generation and supply of electricity for eligible electricity consumers and (ii) trading of electricity.

2.5 Trading and supply of electricity

The Croatian electricity market is based on bilateral trade. Any energy entity wishing to undertake activities on the electricity market is obliged to obtain Energy Identification Coding scheme, sign an Energy Balancing Agreement with HEP-TSO (and provide a financial guarantee to cover the costs of balancing), and an Agreement on Regulation of Mutual Obligations on the Electricity Market with HROTE. The producer may sell electricity to a trader or supplier within its generation facility. The supplier may (i) purchase electricity from the producer, trader or another supplier, and (ii) sell electricity to eligible electricity consumers according to the market regulated price, to tariff electricity consumers according to the regulated price, and to a trader or another supplier. Producer, supplier and trader may also sell electricity to HEP-TSO and HEP-DSO for the balancing of electricity demand and supply system. The trader may (i) purchase electricity from the producer, supplier or another trader, and (ii) sell electricity to the supplier or another trader.

The producer, supplier and trader provide HROTE with "agreed schedules" of sale and purchase of electricity which need to be balanced in such a way that the hourly plan of total take-over of electricity corresponds to the hourly plan of total delivery of electricity. The subject balancing is regulated with the Energy

Balancing Agreement concluded with HROTE and the Rules on Balancing of Electro Energy System (the "Rules"). The Rules determine the (i) entities responsible for deviations, *i.e.* producer, supplier and trader (the "Responsible entities"), (ii) entities in charge of providing the balancing services, (iii) way of calculation of energy needed for the balancing (the "Balancing energy"), and (iv) way of paying for such Balancing energy. In case of imbalance, HEP-TSO guarantees the balance in energy. Whichever entity is responsible for the imbalance pays for the balancing according to the unit price of the Balancing energy according to the Rules and the Methodology on Providing of Services of Electricity Balancing in Electro Energy System. The Methodology stipulates the method of calculation of unit price based on determination of the referent price.

The existing Croatian legislation differentiates between the eligible electricity consumers entitled to choose their own supplier¹ who pay the price of electricity determined by the market, and the tariff electricity consumers who have not chosen their supplier and who pay the regulated price according to the applicable tariff system. All other electricity activities, *i.e.* electricity generation (with the exception of eligible consumers), electricity transmission and distribution, as well as supply (with the exception of eligible consumers), require application of tariff systems.

2.6 Transmission and grid access

Electricity generation facilities have a right to connect to and use the transmission grid, and those which are already connected can have their connecting power increased. TSO reviews technical possibilities for carrying out such connection and calculates the connection fee in accordance with the methodology and amounts regulated within the Statute on the Fees for Grid Connection and Increase in Connecting Power, and the Decision on the Amount of Fees for Grid Connection and Increase in Connecting Power.

A successful grid connection process includes the (i) issuance of the Preliminary Electro Energy Approval (the "PEEA") and the Electro Energy Approval (the "EEA"), (ii) conclusion of the Grid Connection Agreement, (iii) preparation for the construction of the connection, (iv) conclusion of the Grid Usage Agreement, (v) trial connection period, and (vi) connection itself. The connection is also preconditioned with the fulfilment of all obligations from the Grid Connection Agreement.

The Grid Connection Agreement is concluded between the TSO and the producer of electricity in accordance with the General Terms and Conditions of Electricity Supply, the Grid Code, and other legal acts mentioned previously within this section. The connection fee is payable by the producer and covers the costs of the connection construction and securing of adequate technical conditions of the grid. The Grid Usage Agreement (also concluded between the TSO and the producer) governs the terms and conditions of the grid usage. No fee is payable for the grid usage.

¹ According to the Electricity Market Act, all electricity buyers have been entitled to choose their own supplier as of 1 July 2008.

According to the Electricity Market Act, TSO and DSO are obliged to secure third party access to the grid in accordance with the General Terms and Conditions of Electricity Supply and the Grid Code. Such third party access may be denied only due to the limited technical conditions of the grid in which case the refusal must be elaborated. The party which has been denied the access may file an appeal to the CERA whose decision on the issue is final.

2.7 General approvals and permits for electricity generation facility project implementation

There is a set of interdependent regulatory steps essential to the constructing and running of an electricity generation facility. Apart from the energy licence issued by CERA, each electricity generation facility construction also requires energy approvals (a requirement in addition to the regular construction-permitting process). Before obtaining the necessary approvals and licences, a new company has to be incorporated or the existing company's incorporation deed needs to be changed; in both cases the generation of electricity as a business activity of the company must be registered with the court registry of the respective commercial court. Also, in the events of renewable electricity generation, the investor/ project developer should choose the appropriate project site bearing in mind the investment feasibility with regards to the optimal usage of RES, and difficulties regarding the grid connection, both of which depend on the location of generation facility. Also, the investor's decision on the location should be based on the respective construction possibilities provided for in the spatial plans, current land ownership status, as well as on other technical and economic factors.

Please note that the list of necessary licences and approvals will also include those approvals required for the renewable electricity generation facilities.

Licences and approvals

- (a) Preliminary energy approval ("PEA") is required for renewable electricity generation facility with more than 30 kW only. It entitles the investor to carry out potential measurements regarding the RES, and to resolve the title status related to the state-owned land.¹
- (b) Preliminary electro energy approval ("PEEA") is used to determine the potentials of the grid connection as well as technical, economic and other conditions for grid connection, grid usage and facility construction. It is a precondition for the issuance of a location permit.
- (c) Location permit is issued by the local county government where the facility is to be constructed or by the Ministry of Environment, Spatial planning and Construction (in case of a facility with more than 20MW).
- (d) Securing the Grid Access – during the location permit issuing process, a grid access agreement or pre-agreement needs to be concluded. For more explanation, please refer to Section 2.6 above.
- (e) Energy approval² ("EA") - the (final) energy approval is a requirement for the construction of the facility. It is a precondition for the issuance of the construction permit (similarly as the preliminary energy approval is a precondition for location permit issuance).³
- (f) Construction Permit/ Main Design Confirmation – must be obtained within 12 months as of the validity of the (final) energy approval.
- (g) Preliminary Eligible Producer Status ("PEP Status") – applies to renewable electricity generation facility only. It gives its holder the right to a feed-in tariff price (the "FIT price") for the produced electricity.⁴
- (h) Electro energy approval ("EEA") is a precondition for the grid connection of the generation facility. It is issued by the TSO for a period of 2 years, with possible extension of an additional 2 years. It becomes invalid with the termination of the grid usage agreement.
- (i) A usage permit is issued by the same body which issued the construction permit/ main design certificate, once the construction is complete. It is a precondition for the usage of the facility. The usage permit confirms that the construction has been completed and fully complies with the construction regulation.
- (j) The energy licence entitles its holder to undertake energy activities. It is issued by CERA which also keeps a registry of issued energy licences. The energy licence is issued for a period of validity of 5-30 years. Before the licence term expiry, the holder can apply for an extension (licence fee is paid once more).⁵
- (k) Eligible Producer Status ("EP Status") is preconditioned by the issue of the energy licence, valid usage permit and grid usage agreement. When these are met and the EP Status is issued, the eligible producer may start engaging in market activities and collecting the FIT price for the power generated according to the FIT Agreement with the Market Operator.⁶
- (l) Grid Connection is carried out by TSO. It is preconditioned by the completion of construction works, EEA, conclusion of the grid usage agreement and fulfilment of all obligations from the grid connection agreement.

1 Please see Section 3.1 for more detailed explanation on preliminary and (final) energy approvals.

2 For individual renewable electricity generation facilities which are not connected to transfer or distribution grid, obtaining of the preliminary and (final) energy approval is not mandatory (e.g. individual solar panels on buildings' rooftops and alike).

3 Please see Section 3.1 for more detailed explanation on preliminary and (final) energy approvals.

4 Please see Section 3.2 for further explanation on the PEP Status and the FIT Power Purchase Agreements.

5 For more information on energy licences, please refer to Section 2.4 above.

6 For more information on the EP Status, please refer to Section 3.2 below.

3. Renewable energy

3.1 Market overview

The Croatian Energy Development Strategy defines that the Republic of Croatia ("RoC") has good natural conditions for the usage of RES and sets forth the following goals:

- (a) to fulfil obligations from the 2009/28/EZ Directive on the promotion of the use of energy from RES in the amount of 20% of direct gross energy consumption;
- (b) to secure the amount of 10% of energy consumed in transport from RES; and
- (c) to ensure the electricity production from RES to stay at 35% by 2020.

The Energy Act¹ determines the usage of RES and CHP to be of interest for the RoC. The Ordinance on Minimum Share of Promoted Electricity Produced from RES/CHP² (the "Ordinance") stipulates that the minimum share of electricity produced in the installations using the RES will be 13.6% of all direct consumption of electricity by 31 December 2020. This Ordinance does not apply to the production of electricity generated in (i) hydroelectric power plants with installed power of more than 10MW and (ii) CHP power plants in the category of public heating plants producing electricity and heating power for the supply of the customers, and not for its own consumption.

The Statute on the Usage of RES/CHP³ determines the RES, terms and conditions of their usage, and form and procedure for registration of the projects/ power plants using the RES. Depending on the type of the RES used, the Statute covers solar, hydro, wind, biomass, geothermal, biogas, liquid biofuels, landfill gas or gas from the plants used for wastewater treatment, tidal, and wave power plants. The Registry for registration of the RES power plants projects (the "RES Registry") is kept by the Ministry. A precondition for the subject registration is the issuance of the PEA. The PEA is issued for a period of 18 or 48 months. It entitles the potential project developer to examine potentials of the RES and regulate title issues. PEA is a precondition for the issuance of the EA necessary for the construction of the power plant. Therefore, project developer is obliged to (i) initiate energy potential examinations within 6 months as of the PEA's final validity, (ii) apply for the issuance of location permit within 36 months as of the PEA's final validity, (iii) provide the Ministry with the respective proofs for both issues, and (iv) apply for the EA during the validity of the PEA. In addition, project developer is obliged to obtain a construction permit within 12 months as of the final validity of the EA.

The RES Registry's current status shows significant interest for the RES power plants, especially wind farms. However, only a

smaller part of the registered projects have been issued with energy approvals. The most common pitfalls concerning the developments of the RES power plants refer to the (i) inability to obtain location and construction permits in a timely manner, and the (ii) environment protection requirements. However, the Act on the Procedure of and Construction Conditions for the Promotion of Investments⁴ should speed up the preparatory construction phase. Aside from the wind farm projects, other interesting projects refer to the (i) greenfield development project of bioethanol factory in Eastern Croatia, (ii) geothermal project, (iii) construction of power plants on biomass, etc.

3.2 Support schemes

A system of incentives, *i.e.* feed-in tariffs, for the production of renewable electricity⁵ was developed in 2007, primarily by the Ordinance on Feed-in Tariffs for the Promotion on Electricity Production from RES/CHP⁶. Production of renewable electricity will be incentivised until the development of equipment and the market creates such market conditions which would enable the sale of renewable electricity with no need for FiTs. Only those producers of renewable electricity who have gained the EP Status are entitled to the FiT price.

The Statute on Obtaining Eligible Status of Renewable Electricity Producer⁷ regulates the conditions and procedures for obtaining such EP Status. The EP Status is issued by the CERA for a period of 12 years and is preconditioned with the issuance of the PEP Status, energy licence, valid usage permit and conclusion of the grid usage agreement. PEP Status is also issued by CERA, for a period of 2 years, with a possible extension of an additional 12 months; it is also preconditioned with the energy approval and construction permit. According to the latest available data, the number of registered eligible producers as of 19 September 2011 is twenty-eight. Most of those are producers of electricity that use wind and solar energy, followed by hydro and biomass energy.

The Market Operator buys renewable electricity based on the Feed-in Tariff Power Purchase Agreement (the "FiT Agreement") concluded with producers holding the EP Status. In fact, only those renewable electricity producers holding the EP Status and being a party to the FiT Agreement are entitled to the FiT price, comprising of the electricity market price and the incentive fee. The FiT price is provided for in the Tariff System for the Power Production from RES/CHP, which provides for a tariff calculation method and the tariff items value (dependant on the power plant energy source), all in accordance with the stipulated formulas. The formula is to reflect the reasonable investment, operation and maintenance costs as well as a reasonable return of investment.

The conclusion of the FiT Agreement is preconditioned by the (i) conclusion of the Grid Connection Agreement or Pre-Agreement, and the (ii) issuance of the PEP Status. The FiT Agreement becomes applicable as of the final validity of the EP Status and is valid for a

1 Official Gazette No. 68/01, 177/04, 76/07, 152/08, 127/10

2 Official Gazette No. 33/07, 8/11

3 Official Gazette No. 67/07

4 Official Gazette No. 69/091

5 Renewable electricity is electricity produced from the RES.

6 Official Gazette No. 33/07, 155/08, 155/09

7 Official Gazette No. 67/07, 35/11

period of 12 years. The renewable electricity generation facilities that exist for more than 12 years as of enacting of the Ordinance on Feed-in Tariffs for Promotion on Electricity Production from RES/CHP, are not entitled to a FiT.

When buying electricity from the supplier, the power consumer pays to the supplier the average market price increased by the incentive fee. The incentive fee is then collected by the Market Operator (pursuant to the agreement concluded between the Market Operator and each and every one of the suppliers)¹ and used for the payment of the FiT price to the renewable electricity producers holding the EP Status. On the other hand, renewable electricity bought from the producers holding the EP Status is proportionally divided among the suppliers by the Market Operator, for an average market price.²

The Market Operator is entitled to FiT Agreements until a total planned production of renewable electricity reaches the minimum share of produced electricity as determined by the Ordinance on Minimum Share of Promoted Electricity Produced from RES/CHP. In addition, TSO or DSO is obliged to take over all renewable electricity generated by eligible producers.

4. District heating

4.1 Market overview

The energy market in Croatia is liberalised. There are three types of energy activities in the heat industry:

- (i) Production of heat energy which is defined as the process of transforming fuel or renewable energy sources into heat energy;
- (ii) Distribution of heat energy which is defined as the transmission of heat energy to customers;
- (iii) Supply of heat energy which is defined as the sale of heat energy to customers.

Heat energy production and supply for (i) eligible customers is performed pursuant to the rules regulating market relations and for the (ii) tariff customers are subject to the regulations. Distribution of heat energy is organised as a public service activity.

The heat energy sector prices are regulated at a national level. The tariff system determines the tariff items on the basis of regulated cap revenue in a regulated year within a regulatory period. In this system a maximum amount of annual revenues that an energy entity is allowed to receive from performing a heat energy activity is determined. The amounts of the tariff items are set out by the decision of the Croatian Government.

¹ The suppliers guarantee to the Market Operator the payment of the amount corresponding to the collected incentive fee.

A total of 24 companies hold licences for the production of heat energy while 17 companies hold licences for heat energy distribution, and 23 companies for heat energy supply. The highest percentage of production, distribution and supply of heat energy is performed by HEP Toplinarstvo d.o.o., a national electricity company and a member of HEP Group which supplies heat energy to up to 80% of customers using district heating services in the RoC.

4.2 Regulatory overview

By ratifying the Energy Charter Treaty, Croatia has undertaken to comply with principles of market economy in the energy sector, enhancing energy efficiency and environmental protection.

The legal acts regulating the heat energy issues are:

- Energy Strategy of the Republic of Croatia (Official Gazette No. 130/2009);
- National Strategy for Environmental Protection (Official Gazette No. 46/2002);
- Energy Act (Official Gazette No. 68/2001, 177/2004, 76/2007, 152/2008, 127/2010);
- Act on Regulation of Energy Activities (Official Gazette No. 177/2004, 76/2007);
- Act on Production, Distribution and Supply of Heat Energy (Official Gazette No. 42/2005, 20/2010);
- Heat Tariff System without Tariff Item Amounts (Official Gazette No. 57/2006, 154/2008, 22/2010, 46/2010, 50/2010);
- General Conditions for District Heating Supply (Official Gazette No. 129/2006);
- Decision on the Tariff Item Amounts in the Heat Tariff System (Official Gazette No. 154/2008);
- Ordinance on Allocation and Calculation of Costs for Supplied Heat Energy (Official Gazette No. 139/2008);
- Statute on Licences for Undertaking of Energy Activities (Official Gazette 130/2009).

The Act on the Production, Distribution and Supply of Heat Energy is the umbrella law for the heat energy sector in Croatia. It defines the conditions for the performance of production, distribution and supply of heat energy. All energy operators in the heat energy sector should obtain a licence for undertaking their activities from CERA.

² The incentive is also used for the payment of the balancing of the total electro energy system, where unbalance is created with the deviations between the amounts of the planned and the produced electricity.

It is not necessary to obtain a licence for heat energy production for one's own needs or in production facilities with power below 0.5MW. Moreover, the companies performing heat energy activities need to fulfil the requirements set out by the Statute on Licences for Undertaking of Energy Activities, *i.e.*:

- (a) The entity is registered for undertaking the energy activity with the court registry of the respective commercial court;
- (b) The entity has sufficient technical and financial qualifications, and expertise for undertaking the subject activity; it is considered that the entity is technically competent to perform energy activities if it owns a building and the equipment as well as all necessary documents pursuant to which the building and the equipment can be used, *i.e.*, pursuant to which energy activities can be performed;
- (c) A statement from the responsible person of the entity that the members of the management board have not been convicted of an economic crime in the last five years;
- (d) Proof of payment of the fee for issuance of an energy licence determined by the Decision on the Amount of the Fees for Undertaking Works of Regulation of Energy Activities.

The issued energy licence determines the period of its validity which can be extended if an application is made three months prior to its expiry. In the event that the entity withdraws its request for the issuance of an energy licence, it is entitled to recover the fee. The fees are as follows: HRK 15,000 (EUR 1,996.03) for the production of heat energy; HRK 15,000 (EUR 1,996.03) for distribution of heat energy; HRK 10,000 (EUR 1,330.69) for heat energy supply; and HRK 20,000 (EUR 2,661.37) for energy activities regarding trading, intermediation and representation on the energy market.

The Agency is entitled to revoke the energy licence on a temporary basis if the energy operator no longer fulfils the conditions of technical qualifications and competencies, financial or any other conditions pursuant to which the licence to perform energy activities had been issued.

The Statute on Licences for Undertaking of Energy Activities stipulates the possibility of transfer of the energy licence in the case of an energy licence holder. Transfer is possible to only one legal entity which is the universal successor of the energy licence holder in question, subject to the filing of the request for such transfer to CERA within 30 days from the day of registration of such a new legal entity. Also, in the case of merger or acquisition of an energy licence holder to another legal entity, the energy licence may be transferred to the entity taking over the initial energy licence holder, subject to the filing of the request for such transfer to CERA within 30 days of the registration of the acquisition, or of the registration of the new legal entity in case of merger.

4.3 Generation

Only a legal or private entity which has been granted a licence to perform heat energy production activities from CERA may carry out heat energy production. Energy operators are entitled to produce heat energy in their own plants or in the plants they use on the basis of an agreement concluded with the plant owner. An energy operator which produces heat energy is entitled to negotiate the sale of heat energy directly with eligible customers. An agreement on heat energy sale is executed after the energy operator that distributes heat energy grants the parties an approval.

4.4 Distribution

Around 10% of the total number of households in Croatia are connected to the District Heating System in Croatia. A large proportion of production capacities and heat distribution networks are technologically outdated and energetically inefficient. Losses in heat energy distribution are therefore high and amount to as much as 12% for hot water distribution and 15% for water vapour. Some of the equipment is over thirty years old which results with the capacity efficiency of the system below the efficiency of such systems in the developed western countries. The total length of the heating network in RoC is about 460 km. 14 cities have heating systems in Croatia, including the capital of Zagreb.

The right to perform heat energy distribution is acquired pursuant to a concession right to distribute heat energy or a concession to build energy facilities for heat energy distribution and the licence for distribution of heat energy. An energy operator performs heat energy distribution by using its own energy facilities for heat energy distribution or energy facilities used pursuant to an agreement executed with the facility owner.

The Act on Production, Distribution and Supply of Heat Energy prescribes the criteria according to which the selection of the concession for the distribution of heat energy is based. The concessionaire is obliged to pay a concession fee in the amount and in the manner stipulated by the concession agreement. The financial amount of the concession fee is determined as a variable amount of the concessionaire's income from heat energy production, distribution and supply in the previous year regarding the distribution territory for which the concession was granted. Other terms for connection to the distribution network and for the issuing of thermal energy approval are regulated by the General Conditions for District Heating Supply.

5. Natural gas

5.1 Market overview

The Gas Market Act enacted in 2007 led to the liberalisation of the gas market. However, the liberalisation depends on the particular

energy-gas activity. Certain energy-gas activities such as gas transportation are monopolies, whereas others such as distribution and supply are liberalised. In 2008 and 2009, the gas sector has undergone a restructuring process involving restructuring of 39 companies. The result is the existence of the following market participants undertaking gas energy activities in Croatia:

- (a) Transportation of natural gas is undertaken by the state-owned company Plinacro d.o.o. designated as an operator for a period of 30 years within the Gas Market Act from 2007. Plinacro owns and manages the system of gas pipelines used for transportation of home produced and imported gas;
- (b) Storage of natural gas is undertaken by the company - Podzemno skladište plina d.o.o which also owns, currently, the only storage in Croatia – PSP Okoli which secures 38% of the total gas consumption in Croatia;
- (c) Distribution and supply of gas is undertaken by a total of 77 companies;
- (d) Shipping of natural gas is undertaken by the company Prirodni plin d.o.o.;
- (e) The gas market operator is the Market Operator;
- (f) Other market participants are the producers, consumers, agents and traders of gas. Gas Market Act anticipates an operator of a Liquefied Natural Gas (“LNG”) terminal; no entity has still been appointed as an operator.

5.2 Regulatory overview

Gas energy activities are mainly regulated in the following legal acts:

- Energy Act (Official Gazette No. 68/01, 177/04, 76/07, 152/08, 127/10);
- Act on Regulation of Energy Activities (Official Gazette No. 177/04, 76/07);
- Statute on Licences for Undertaking of Energy Activities (Official Gazette No. 118/07, 107/09);
- Gas Market Act (Official Gazette No. 40/07, 152/08, 83/09, 91/11);
- Statute on Organisation of Natural Gas Market (Official Gazette No. 50/09, 126/10);
- General Conditions on Supply of Natural Gas (Official Gazette No. 43/09);

- Ordinance on Security of Natural Gas Supply (Official Gazette No. 112/08, 153/09, 92/09);
- Transportation System Grid Rules (Official Gazette No. 50/09);
- Gas Distribution System Grid Rules (Official Gazette No. 50/09);
- Rules on Usage of Gas Storage System (Official Gazette No. 50/09);
- Mining Act (Official Gazette No. 75/09, 49/11);
- A set of tariff systems for transportation, distribution, supply and storage of natural gas, etc.

The Gas Market Act regulates (i) rules and measures for undertaking energy activities in the sector of natural gas, including LNG, (ii) rights and obligations of the gas market participants, (iii) unbundling issues, (iv) third party access, and (v) liberalisation of natural gas market.

The body in charge of regulating all energy activities in Croatia is CERA, established by the Act on the Regulation of Energy Activities in 2004. CERA is an autonomous, independent and non-profit public body established for the purpose of determining and implementing the regulation of energy activities in the electricity, heating, gas and petroleum sectors. Some of CERA's functions refer to the issuance of energy licences. Its work is public and partly financed from the fees collected for the issuance of the energy licences. CERA is responsible to the Ministry.

5.3 Regulated natural gas market activities

The Gas Market Act differentiates between the market-based and regulated energy activities within the gas market. Regulated activities are undertaken as public services. They are as follows: (i) transportation, (ii) distribution, (iii) storage, (iv) shipping (Croatian: *dobava*) of gas, (v) supply of the tariff gas consumer, (vi) managing of LNG terminal and (vii) organisation of gas market. Market-based activities are: (i) production, (ii) delivery and sale of natural gas from self production, (iii) supply of eligible gas consumers, and (iv) undertakings of an agent on the gas market.

Any of the abovementioned activities require an energy licence which is explained in more detail in section 5.4 below. However, the activity of gas distribution, in addition to the energy licence requires obtaining of the concession for (i) distribution of gas and/or (ii) construction of distribution system. The concession is awarded following a public tender procedure in which the provider of the best offer signs the concession agreement for a period of no less than twenty and no more than thirty years. The Croatian Government determines the concession fee with the Ordinance on Fee and Manner of Payment for Concession for

Distribution of Gas and Construction of Gas Distribution System. Special terms and conditions for termination of the concession agreement are stipulated in the Gas Market Act.

5.4 Material provisions of the natural gas market law and licensing regulations

In order for any private or legal entity to undertake gas-energy activities, it must obtain an energy licence issued by CERA. The issuance is subject to providing evidence of the following:

- (i) The entity is registered for carrying out the energy activity with the court registry of the respective commercial court;
- (ii) The entity has sufficient technical and financial qualifications and expertise for carrying out the subject activity; it is considered that the entity is technically competent to perform energy activities if it owns a building and equipment as well as all necessary documents pursuant to which the building and the equipment can be used, *i.e.*, pursuant to which energy activities can be performed;
- (iii) Statement of the responsible person of the entity that the members of the management board have not been convicted of an economic crime in the last five years;
- (iv) Proof of payment of the fee for the issuance of an energy licence determined by the Decision on the Amount of the Fees for Undertaking Works of Regulation of Energy Activities.

The issued energy licence determines the period of its validity which can be extended if an application is made three months prior to its expiry. In the event the entity withdraws its request for the issuance of an energy licence, it is entitled to recover the fee. The fees are as follows: (i) HRK 5,000+VAT (EUR 665.34) for gas production, (ii) HRK 15,000+VAT (EUR 1,996.03) for gas distribution and organisation of gas market, (iii) HRK 10,000+VAT (EUR 1,330.69) for gas supply, shipping and trade, and (iv) HRK 20,000+VAT (EUR 2,661.37) for transportation, storage and managing of an LNG terminal.

The Agency is entitled to revoke the energy licence on a temporary basis if the energy operator no longer fulfils the conditions of technical qualifications and competencies, financial or any other conditions pursuant to which the licence to perform energy activities had been issued.

Please note that the applicable Croatian energy legislation does not set forth specific legal rules on the minimum share capital or share transfer restrictions different from the general corporate rules regulating the same issues. For example, the minimum share capital of an entity undertaking energy activity is HRK 20,000 (EUR 2,661.37) for a limited liability company and HRK 200,000 (EUR 26,613.71) for a joint stock company. However, the energy licence holder needs to have sufficient financial means as determined by law (HRK 50,000

(EUR 6,653.43) for production, shipping, storage, distribution of gas, managing of an LNG terminal, and delivery and sale of natural gas from own production, HRK 100,000 (EUR 13,306.85) for transportation of natural gas, HRK 30,000 (EUR 3,992.06) for supply, HRK 20,000 (EUR 2,661.37) for trade of gas and intermediation in the gas market, and HRK 30,000 (EUR 3,992.06) for organisation of gas market).

The Statute on Licences for Undertaking of Energy Activities stipulates the possibility of transfer of the energy licence in case of division of an energy licence holder. Transfer is possible to only one legal entity which is the universal successor of the energy licence holder in question, subject to the filing of the request for such transfer to CERA within 30 days from the day of registration of such new legal entity. Also, in the case of merger or acquisition of an energy licence holder to another legal entity, the energy licence may be transferred to the entity taking over the initial energy licence holder, subject to the filing of the request for such transfer to CERA within 30 days of the registration of the acquisition, or of the registration of the new legal entity in case of merger.

In relation to the market share restrictions, please refer to Section 5.1 according to which there is only one transmission system operator, one Market Operator, one operator of the storage of natural gas, etc.

5.5 Exploration and production

The exploration, exploitation and production of natural gas are mainly regulated by the Mining Act and the Gas Market Act. The Gas Market Act regulates that the production of gas requires an energy licence for the production of gas, whereas natural gas production requires an energy licence for the delivery and sale of natural gas from self production. The Mining Act regulates the (i) issuance of the approvals for exploration of minerals, and (ii) exploitation and concessions for exploitation. The law covers the minerals found under and above the earth's surface, on the river/lake/seabed or below it, within the internal waters and territorial sea of Croatia, and on the seabed of the Adriatic Sea beyond the state boundaries. Gas (as well as oil) being a hydrocarbon is defined as a mineral of a special interest for Croatia. The principle document on the managing and exploitation of the minerals is the Strategy on the Managing of the Minerals.

The exploration and exploitation of gas is possible only upon obtaining an approval for exploration and concession for exploitation which can be issued to a private or legal entity registered in Croatia, or whose branch is registered in Croatia.¹ Transfer of the approval and concession is possible in extraordinary circumstances, and only upon obtaining such permission from the body that issued the approval. The approval/ concession holder may be held liable for the damage incurred during the exploration or exploitation. A private or legal entity carrying out exploration and/or exploitation activity without the necessary approval/ concession may be held liable to the owner of the land for the damage suffered and to the RoC to the amount equal to the value of the minerals in question.

Both the approval and the concession are awarded within the public tender procedure. Exploration is allowed only within the area determined for exploration and defined as such in the spatial planning documents. Exploitation is allowed only within the area determined in the concession agreement and defined in accordance with the location permit. An exploration approval holder and exploitation concession holder are obliged to pay the fee for exploration/ exploitation. The annual exploitation fee is determined by the Government. Concession for exploitation is issued by the Ministry to the eligible candidate who (i) is registered for exploration and exploitation of gas, (ii) is the owner of the exploitation field or has another right to the field (such as right to build, lease, usage right, etc.) for a period of concession, and who (iii) is in a possession of a respective mining project. The concession can be issued for a maximum period of 40 years. Concession holders are obliged to rationally exploit the field in question and undertake the actions of the field recovery and of the environment protection.

5.6 Transmission and access to the system

The transmission of gas takes place within the gas transportation and distribution systems. The usage, technical requirements, managing, development, and connection with other parts of gas system are regulated in the Grid Rules of Transportation System and Grid Rules of Gas Distribution System. The transportation system operator shall provide to the user of the transportation system delivery and takeover of gas within the limits of the reserved capacity defined for each particular entrance into and exit from the transportation system. The distribution system operator is obliged to take into the distribution system, gas of a certain quality as determined in the General Conditions on Supply of Natural Gas. It is also in charge of the distribution system balancing.

The usage of the transmission system is preconditioned in the Transportation/ Distribution Connection Agreement pursuant to which the respective system operator is obliged to connect to the system (i) the machinery of the gas producer, or (ii) another operator of gas distribution system, or (iii) the consumer. They all are obliged to pay the connection fee. The connection is preconditioned by the issuance of the Energy Conditions which determine the possibility of connection to the system in question. The subject Energy Conditions are issued by the respective system operator and are valid for two years, with a possible two year extension, if justified, and requested by the applicant. Another precondition of the connection is the issuance of the Energy Approval which can be obtained only upon the issuance of the construction permit and which is issued by the transportation/ distribution system operator. The Energy Approval expires if the respective connection agreement is not concluded within the two years period as of its issuance. The respective operator is obliged to carry out the connection based on the obtained Energy Approval, but only when the applicant has fulfilled all financial and other obligations from the connection agreement and has signed the gas supply or gas sale contract.

5.7 Trading and supply

The basic gas price elements include natural gas shipping rate, transmission price and the supplier's and distributor's revenue cap. Transport, distribution and supply of tariff customers are regulated by the tariff systems defined by CERA. The valid price for natural gas shipping for all tariff customers' suppliers is defined by the Decision on Gas Shipping Price for Gas Suppliers of Tariff Consumers as is set at 1,70 (EUR 0.23) HRK/m³/33,338.35kJ excluding VAT. The gas transmission price for the use of transport system is defined by the Tariff for Natural Gas Transport, without the Amounts of Tariff Items. The price is expressed as compensation for use of transportation system. Compensation is established according to the customer's requested capacities (requested highest daily load) for each user of the transmission system and independent of its actual utilisation. The share of transmission price within the end price depends on the level of reserved capacity utilisation and the characteristics of natural gas consumption by a particular customer. At the end of the financial year the final fee for use of the transmission pipeline system in the financial year is calculated as the difference between booked and actual maximum daily load in a particular month. Natural gas storage price is defined by the Decision on Tariff Items for Storage of Natural Gas. The price for natural gas distribution is regulated in the Decision on Tariff Items in the Tariff System for Natural Gas Distribution, without Tariff Items, and the price of natural gas supply to tariff consumers is regulated in the Decision on Tariff Items in the Tariff System for Natural Gas Supply, with the Exception of Eligible Customers, without Tariff Items. On 8 August 2011, the Government approved a Decision on the Highest Price of Gas for Eligible Consumers who undertake production activity with a yearly consumption of less than 100 million m³ of gas. Such high level of the gas price will apply until 31 December 2011.

A range of contractual relations exists among the participants of the gas sector. A Gas Distribution Agreement is signed between the gas supplier and the gas distribution system operator who acts in the name of and on behalf of the final consumer connected to the system. The Gas Transportation Agreement is signed between the supplier or the trader of gas on one part and the transportation system operator on the other. The Gas Shipping Agreement is signed between the provider of gas and the supplier of gas who supplies gas as public service. The Gas Sale Agreement is an agreement between the supplier of gas, or the trader of gas, or the producer of gas on one side, and another supplier of gas or trader of gas on the other. The Gas Supply Agreement is signed between the supplier and the final consumer. The Gas Storage Agreement is an agreement between the gas storage operator and the (i) supplier which supplies other suppliers and/or gas customers with gas from the transportation system, or (ii) a trader of gas which uses the service of gas storage for its customers.

5.8 Liquefied natural gas

On 2 July 2009, the Croatian Government approved a Decision on Determination of Interest of the Republic of Croatia for the

¹ Private or legal entities registered in the EU member countries will become eligible for the approval and/or concession upon Croatia's succession to the EU.

Construction of an LNG Terminal – Krk, for the purpose of planning and construction of the LNG terminal on the Croatian Island of Krk. The ADRIA LNG consortium postponed the final decision on the development of the LNG terminal for after 2013. Nevertheless, Plinacro, as the operator of the Croatian gas transportation infrastructure, is considering other possible solutions to cover the period until the realisation of the LNG Terminal project. One of the possible solutions is the usage of the LNG RV – gas liquidation vessels which are suitable for the direct connection to the gas transportation system. The level of the investment in the LNG RV is much lower and the time frame of the construction of such terminal much shorter.

The Gas Market Act regulates that the operator of the LNG terminal will be private or legal entity holding a licence for undertaking of an energy activity of operating with the LNG terminal. In order to be issued with the licence, such private or legal entity has to fulfil all conditions explained in section 5.4 above; in particular, it has to be able to provide a certificate confirming the ability to secure necessary financial means in the amount of HRK 30,000 (EUR 3,992.06).

6. Upstream oil market

6.1 Market overview

Oil is the main source of energy in Croatia. Croatia consumes above the European average amount of oil as a percentage of the total amount of energy consumed.

Energy activities relating to the production of oil products in the RoC are performed by INA d.d., a national company owned by the Hungarian company MOL (47,26%) and the RoC (44,84%). However, the monopoly of the INA in the production of oil products has recently ended and the market has been liberalised. Raw materials used for the production of oil are imported crude oil and crude oil and condensates produced on domestic oil and gas fields.

The energy companies in charge of oil transportation by oil pipelines and other means of transportation are JADRANSKI NAFTAVOVOD d.d., a joint stock company with mixed ownership and predominantly state capital ("JANAF") and HŽ CARGO d.o.o., a national company for railway cargo transport management in the RoC.

Pursuant to the Oil and Oil Products Market Act, JANAF is obliged to guarantee access to the transportation system to legal and natural persons in an impartial and transparent way, as regulated by the Technical Terms for the Access to JANAF Transportation Capacities (VRED Journal No. 3-4/03). The highest price of oil transportation by oil pipeline is stipulated by the Tariff system for Oil Transportation Using Oil Pipelines (Official Gazette No. 39/07), issued by CERA. The transportation of oil products using product pipelines and other means of transportation is performed by HŽ CARGO d.o.o. and two other private companies.

As of 2011, a total of 22 companies hold licences for oil and oil products storage. Oil products wholesale trade in 2011 was performed by 25 energy companies, whilst liquefied petroleum gas ("LPG") wholesale was traded by five energy companies. As of 2011, three companies hold licences for retail sale and wholesale of LPG.

The price of oil products is not regulated, *i.e.*, it is determined by market principles. However, the highest allowed price of oil products is regulated by the Ordinance on Establishment of Maximum Retail Prices of Oil Products (Official Gazette No. 37/11), while the highest allowed price of LPG is regulated by the Ordinance on the establishment of price of liquefied petroleum gas (Official Gazette No. 147/10 and 59/11).

6.2 Regulatory overview

The market for oil and oil products and pertaining energy activities is regulated by the Energy Act, the Act on Regulation of Energy Activities, and the Act on Oil and Oil Products Market. Furthermore, the relevant provisions of the Act on Air Protection (Official Gazette No. 178/04, 60/08) regulate the requirements for the quality of oil products placed on the domestic market or used for own purposes. The main document regulating energy policies and energy development plans is the Strategy for energy development. The Strategy of energy development must be in accordance with the Program of physical planning of the Republic of Croatia and the Plan for the Development of the Republic of Croatia.

The body in charge of regulating all energy activities in Croatia is the CERA, established by the Act on Regulation of Energy Activities in 2004. CERA is an autonomous, independent and non-profit public body established for the purpose of determining and implementing the regulation of energy activities in the electricity, heating, gas and petroleum sectors. Some of CERA's functions refer to the issuance of energy licences. Its work is public and partly financed from the fees collected for the issuance of the energy licences. CERA is responsible to the Ministry. The regulatory institutions in charge of oil and oil products, besides CERA, are Croatian Compulsory Oil Stock Agency and the Committee for Monitoring Regular Market Supply of Oil and Oil Products.

6.3 Regulated oil market activities

A licence must be obtained from CERA for the production, transport, storage, and wholesale of oil and oil products and the wholesale of LPG. Additionally, in order to perform the wholesale activity, an approval must be obtained from the Ministry, as stipulated by the Regulation on Terms for Wholesale Trade and International Trade of Specific Goods (Official Gazette No. 58/09, 27/10). It is not necessary to obtain a CERA licence for the retail sale of oil products. CERA's work is subject to the Ministry's inspection. The State Inspectorate and other competent inspectors control the implementation of the respective energy laws.

Energy operators authorised to perform transportation of oil via oil pipelines, or transportation of oil products via product pipelines, are obliged to secure negotiated third party access, in an objective and transparent manner, for legal or private entities who apply for access to such transportation systems, and who fulfil the technical conditions for access and connection, in accordance with special regulations. The storage of oil and oil products must be organised in an appropriate manner - in special areas for one's needs (manufacturers, consumers and transporters) - in order to secure supply and/or trading of oil and oil products. The storage price of oil and oil products is not regulated, *i.e.*, it is determined by market principles.

The following regulations refer to the supply and market of oil and oil products:

- (a) Decision on the Quantity and Structure of Compulsory Oil and Oil Product Stocks (adopted annually);
- (b) Ordinance on the General Terms and Tariffs for Storage of Compulsory Oil and Oil Products Stock (Official Gazette No. 68/03);
- (c) Ordinance on the Maximum Retail Prices of Oil Products (Official Gazette No. 37/11);
- (d) Ordinance on Compulsory Oil and Oil Products Stock (Official Gazette No. 27/03, 151/05);
- (e) Decision on the Quantity and Structure of Compulsory Oil and Oil Products Stocks for 2011 (Official Gazette No. 33/11);
- (f) Plan on Safety, Dynamics of Forming and Replenishing of Compulsory Oil and Oil Products Stocks, Organisation of Storage and Regional Distribution (Official Gazette No. 149/09);
- (g) Regulation on Terms for Wholesale Trade and International Trade of Specific Goods (Official Gazette No. 58/09, 27/10).

Oil products trade is connected with energy activities of oil products and LPG wholesale and retail sale. Oil products placed on the market must meet certain conditions stipulated by the regulations on the quality of LPG and other regulations in effect at the time the oil products are placed on the market.

Energy operators performing wholesale and/or retail sale of oil products; oil products importers for one's needs and energy operators performing retail and/or wholesale of liquefied petroleum gas are obliged to submit data on oil and oil products import relating to the quantity, origin, price and quality of oil products as well as the price of oil products without duties or taxes and the prices of oil products including fees, duties and taxes. Energy operators which produce oil products, storage oil and

oil products, transport oil via oil pipelines and product pipelines are obliged to deliver to the Ministry data relating to planned, commenced and completed investment projects, data on the plants and plant parts in the event that they are temporarily or permanently inoperable, data on the planned regular inspection of energy plants as well as data on all other events that might influence market supply of oil and oil products.

All legal and private entities which, in the previous calendar year, had a net import of at least 24 tons of oil and oil products are obliged to secure compulsory oil and oil products supply stock. The compulsory supply stock of oil and oil products is used to ensure regular oil and oil products supply in the event of energy threats to the country's safety due to extraordinary interruptions in supply. The Agency for compulsory supply stock keeps record and statistical summaries on the quantity, structure, distribution and availability of compulsory oil and oil products stock. Pursuant to the Minister's proposal, the Croatian Government, before the 28th February of each year, prescribes the quantity and structure of compulsory supply stock for the current year, based on the consumption of oil products in the previous year. The Agency for compulsory supply stock is the central body of the RoC in charge of oil and oil products supply stock and the only institution entitled to accumulate, maintain and sell compulsory supply stock.

Furthermore, energy operators which produce or import oil and oil products (transit excluded) are obliged to keep and renew operative supply stock, along with the compulsory supply stock. The operative stock of oil products is kept in order to ensure the stability and safety of technological refinement and processing of oil and oil products, production of electrical and heat energy for the market and customers who require special security and quality of supply, as well as to ensure safety of air traffic.

6.4 Material provisions of the oil market law and licensing regulations

A licence must be obtained from CERA for the production, transportation, storage and wholesale of liquefied petroleum gas in the RoC. The issuance is subject to providing evidence of the following:

- (a) the entity is registered for carrying out the energy activity with the court registry of the respective commercial court;
- (b) the entity has sufficient technical and financial qualifications, and expertise for undertaking the subject activity; it is considered that the entity is technically competent to perform energy activities if it owns a building and the equipment, as well as all necessary documents pursuant to which the building and the equipment can be used, *i.e.*, pursuant to which energy activities can be performed;
- (c) statement of the responsible person of the entity that the members of the management board have not been convicted of an economic crime in the last five years;

- (d) proof of payment of the fee for issuance of an energy licence determined by the Decision on the Amount of the Fees for Undertaking Works of Regulation of Energy Activities.

The issued energy licence determines the period of its validity which can be extended if an application is made three months prior to its expiry. In the event that the entity withdraws its request for the issuance of an energy licence, it is entitled to recover the fee.

Please note that the applicable Croatian energy legislation does not set forth specific legal rules on the minimum share capital or share transfer restrictions different from the general corporate rules regulating the same issues. For example, the minimum share capital of an entity undertaking energy activity is HRK 20,000 (EUR 2,661.37) for a limited liability company and HRK 200,000 (EUR 26,613.71) for a joint stock company. However, the energy licence holder needs to have sufficient financial means as determined by law (HRK 300,000 or EUR 39,920.56 for the production of oil products; HRK 40,000 or EUR 5,322.74 for wholesale of oil products; HRK 10,000 or EUR 1,330.69 for transportation of oil and oil products and biofuels with the motor vehicle; HRK 70,000 or EUR 9,314.80 for the transportation of oil products with oil pipelines and other means of transport).

The Statute on Licences for Undertaking of Energy Activities stipulates the possibility of transfer of the energy licence in the event of division of an energy licence holder. Transfer is possible to only one legal entity which is the universal successor of the energy licence holder in question, subject to the filing of the request for such transfer to CERA within 30 days from the day of registration of such new legal entity. Also, in the event of a merger or acquisition of an energy licence holder to another legal entity, the energy licence may be transferred to the entity taking over the initial energy licence holder, subject to the filing of the request for such transfer to CERA within 30 days of the registration of the acquisition, or of the registration of the new legal entity in case of merger.

The Agency is entitled to revoke the energy licence on a temporary basis if the energy operator no longer fulfils conditions of technical qualifications and competencies, financial or any other conditions pursuant to which the licence to perform energy activities had been issued.

1. Introduction to the energy market

Greece's strategic geo-economic location, between energy producers in the Middle East, North Africa, and the Caspian Sea region, as well as on the vital transport routes of the Aegean Sea and the Eastern Mediterranean, characterises it as an expanding hub between East and West. Greece has initiated crucial, major ventures in oil, gas, and alternative sources that literally put the country at the heart of the Southeast European energy axis.

Greece's comprehensive energy policy which seeks to establish sustainable, competitive, and secure sources of energy offers an encompassing regulatory and market framework for the energy sector. This, in combination with Greece's wide-ranging investment regulatory framework, provides for exceptional opportunities for investment in a number of areas.

2. Electricity

2.1 Market overview

Greece embarked on electricity market liberalisation in 1999. Subsequently the legal framework was revised in order to comply with the provisions of European Union legislation and to incentivise private investment and competition. The electricity law established a mandatory pool system and a capacity assurance mechanism.

The Public Power Corporation ("PPC") controls Greece's electric production, transmission, and distribution. Since the entry into force of the Electricity Market Liberalisation Law, 37% of the Greek power market has been legally opened to competition. The law enabled the entry of third-parties to compete with the PPC and required that tariffs cover all costs and provide a reasonable profit. As a result, the generation, distribution, and retail operations of the PPC were unbundled, and the independent transmission system operator, the Hellenic Transmission System Operator, was established.

However, the Greek government recently passed a new energy law which, amongst other things, implements the EU's Third Energy Directive and paves the way for increased competition in the country's energy markets by advancing the unbundling of the incumbent public companies as well as by giving the country's regulator much stronger powers. As a result, and as from 22 August 2011 when the new energy law entered into force, the responsibilities of the Hellenic Transmission System Operator and the Public Power Corporation were unbundled and distributed to new subsidiaries.

Since the domestic market is still in its infancy, the development of the network is viewed as the first priority. Therefore, and taking into account the present conditions, the model of the Independent Transmission Operator was deemed appropriate.

For that reason the market's progress cannot directly be comparable to already matured markets.

Under the current economic conditions and pursuant to the agreement which Greece has entered into with the IMF and EU regarding financial assistance, complete market liberalisation has been highly prioritised and is one of the main pillars of the immediate economic model in Greece. This liberalisation is to be achieved through privatisation of state-owned assets (including a large stake in the PPC) and through fully opening of the electricity market to private investors.

2.2 Regulatory overview

The main legislative acts regulating the Electricity market in Greece are Law 2773/1999 On the liberalisation of the Electricity Market, Law 3175/2003 which amended Law 2773/1999, the Grid Control and Power Exchange Code for Electricity of May 2005, Law 3426/2005 On the Acceleration of Electricity Market Liberalisation, Law 3468/2006 On the Production of Electrical Energy from Renewable Energy Sources, Law 3851/2010 On the Acceleration of the development of RES and the Climate Change and finally Law 4001/2011 On the Operation of the Electricity and Natural Gas Energy Markets and for the Research, Production and Transmission Networks for Hydrocarbons and other provisions. These are accompanied by a series of secondary legislation in the form of Regulations, Ministerial Decisions and other Administrative Acts, issued on the basis of the provisions of these Laws, which set the electricity market rules (organisation and operation) and the fundamentals and restrictions of the market organisation, whilst they also establish the power exchange.

The government bodies and institutions which oversee and regulate the Electricity market are:

- (a) The Regulatory Authority for Energy ("RAE") established under Law 2773/1999, which is the independent authority promoting and safeguarding the liberalisation of Greek Electricity and Natural Gas markets; supervising and monitoring the operation of all sectors of the energy market, and advising the competent authorities on the necessary changes to be made to secure compliance with competition rules and consumer protection;
- (b) The Ministry of Environment, Energy and Climate Change, which is principally responsible for the formulation and implementation of Greece's energy policy vis-à-vis its international and Community obligations;
- (c) The Ministry of Regional Development and Competitiveness, which can indirectly affect energy matters through its monitoring of prices of petroleum products and, perhaps more significantly, through its responsibility of administering European Union Cohesion Funds;

- (d) The Public Power Corporation (“PPC”), Greece’s dominant electricity producer and supplier, and owner of the Distribution Network;
- (e) The Hellenic Distribution Network Operator, a wholly owned subsidiary of the PPC in the form of a Société Anonyme, which shall be the operator of the Distribution Network and as such shall be responsible for all activities relating to electricity distribution activities;
- (f) The Independent Transmission Operator (“ITO”), a wholly owned subsidiary of the PPC in the form of a Société Anonyme, which shall be the owner and operator of the High-Voltage Transmission System, responsible for its operation, exploitation, development and maintenance. In accordance with the relevant EC Regulations, special provisions have been included in the Energy Law securing the independent and non-discriminatory operation of the ITO;
- (g) The Electricity Market Operator (“EMO”), a Société Anonyme owned by the Greek State (51%) and the PPC along with the private electricity producers (49%), which is responsible for the operation of the electricity exchange market.

2.3 Regulated electricity market activities

According to Law 2773/1999, as amended and in force, the main activities which fall under the general term “Electricity market” are the sale and purchase of electricity and all related commercial activities (such as the generation, transmission, distribution, supply, import and export etc.). In order for these activities to be lawfully performed, interested parties must obtain the relevant licensing.

2.4 Material licences for electricity generation

Under Greek electricity legislation, the development, construction, commissioning and operation of a power plant is extensively regulated by a number of legislative acts (including voluminous secondary legislation).

More specifically, Law 4001/2011 On the Operation of the Electricity and Natural Gas Energy Markets and for the Research, Production and Transmission Networks for Hydrocarbons and other provisions (the “Energy Law”) together with Law 2773/1999 on the Liberalisation of the Electricity Market (the “Electricity Law”) as amended and in force today, transposed the relevant EU Legislation into domestic law and set out the framework for the licensing of power generation facilities in Greece.

Against the above legal framework (the Energy Law, the Electricity Law and subsequent secondary legislation), the licensing process can be divided into three basic phases (milestones):

- (a) 1st Milestone: the issuance of the Electricity Generation Licence;

- (b) 2nd Milestone: the issuance of the Installation Licence, in conjunction with the Environmental Licensing of the respective facilities; and finally,
- (c) 3rd Milestone: the issuance of the Operation Licence, which follows the connection of the power plant with the Grid, its physical completion and successful trial operation.

The above milestones and associated licences are without prejudice to any other ancillary requirements which may be prescribed by the general legislation, *e.g.* building permits, health and safety legislation etc., which run in parallel and as a prerequisite to reaching the next milestone.

2.5 Trading and supply of electricity

The operation of the electricity market is mainly regulated by the Grid Code, as in force, which establishes a mandatory wholesale daily market (“Pool”) for power exchanges between market participants (*i.e.* Power Producers, Electricity Suppliers and Eligible Customers, as defined in the Grid Code, the latter two being the Load Representatives) and a capacity assurance market. According to the provisions of the Grid Code, all Power Producers holding power generation licences for power plants (“Units”) registered with the Registry of Units are required to submit, for each Dispatchable Unit, a separate and fully binding Energy Injection Offer for each Dispatch Period of every Dispatch Day and for the entire available generation capacity of the Unit. The energy produced by a Power Producer has to be injected into the National Grid. No private Transmission Systems exist in Greece.

In short, the operation of the Pool is comprised mainly by the following functions:

- (a) Day Ahead Scheduling (“DAS”), which precedes each Dispatch Day (24h divided into twenty-four equal hourly Dispatch Periods beginning 00:00) and is conducted by the EMO based primarily on the following parameters:
 - Load Nominations (MWh/h) from Load Representative (on behalf of their Customers), from Suppliers for Exports (EUR/MWh/h) etc.;
 - Energy Injection Offers (EUR/MWh/h) from Producers with Dispatchable Units per Unit for the entire available generation capacity of the Unit, from Suppliers and Self-supplied Customers for Imports, and from the EMO regarding the RES Units of the RES Law with dispatch priority against feed-in tariffs;
 - Water Resources Management Statements from Hydro and Hydro Pumping Units;
 - Reserve Energy Injection Offers from Producers with Dispatchable Units and from the EMO itself for Ancillary Services Contracted Units;

- Total or Partial Non-Availability Statements from Producers with regard to their Units;
 - Techno-Economic Statements from Producers regarding their Generation Units; and
 - Estimated System Constraints, Foreseeable Reserve Needs and Ancillary Services, including Interconnections available capacity etc.
- (b) Dispatch Procedure, which comprises the scheduling for the operation of Generation Units (Dispatch Schedule) and the real time Dispatch of Generation Units by virtue of Dispatch Instructions from the EMO.

The EMO prepares the Day Ahead Schedule on a daily basis where the total anticipated load during the following Dispatch Day per Dispatch Period is contrasted to the Energy Injection Offers submitted by Producers for the same period. In particular, Energy Injection Offers by thermal power Producers should reflect no less than their Minimum Variable Cost, meaning mainly their fuel cost, which should be open to auditing by RAE, and for which there is currently an administrative upper limit set at 150 EUR/MWh by RAE.

Day Ahead Scheduling thus results in a uniform System Marginal Price ("SMP") per Dispatch Period (SMP in EUR/MWh/h).

2.6 Transmission and grid access

The Electricity market is divided into two different systems: the mainland, interconnected grid and, as they are referred to, "non-interconnected islands". However, several islands of the Cyclades group are scheduled to become interconnected with the mainland grid system through submarine cables by 2015. The distinction between the two systems is important because different rules are applicable for each system (for instance, authorisations in the non-interconnected islands are granted upon tender procedures, whereas such a procedure is not necessary for the mainland grid system).

According to the provisions of the Grid Control and Power Exchange Code for Electricity all power producers are entitled to gain access to the System or the Network under specific financial and technical terms concerning the connection of the power plant to the electricity grid, as such, are determined by the relevant Operator in the Connection Terms Offer.

At a later stage, power producers enter into a Connection Works Agreement with the relevant Operator of the System or the Network, which describes in detail the connection works required for the connection of the generation facilities to the grid, along with the financial and technical terms of the connection.

The Power Exchange Agreement with the EMO or the relevant Operator is deemed necessary to be entered into by the Producer by means of and upon its registration in the relevant Pool Market

Participants' Register and is covered by the provisions of the Grid Control and Power Exchange Code for Electricity.

The abovementioned contracts are grouped as "regulated contracts", since they are concluded with public or quasi-public bodies and/or they are based on standard and (largely) non-negotiable terms.

3. Renewable energy

3.1 Market overview

Renewable energy plays a significant part in the Greek energy production, and was initially based primarily on large scale hydro power stations operated by the PPC.

To establish security and diversification of its energy supply, as well as ensuring environmental protection and sustainable development, Greece has established key priorities and binding policies related to the production of electricity from renewable sources, and it promotes the establishment of power using renewable energy sources.

Increasingly, renewable energy sources play an important role in Greece's energy production profile and account for approximately 5% of electricity production, not including an additional 5% contributed by hydro power stations.

The present investment framework calls for a striking increase in production from wind, solar, and geothermal sources, along with biomass/ biofuels which are expected to contribute increasingly as a transport fuel.

For the first eight months of 2011, the total installed capacity of RES stood at 1710.3MW, 75% of which came from wind energy production, 11.5% from solar, and the remaining 13.5% from biomass and hydro-electric production units.

Based on the EU mandate (Eel, 140/2009) and the latest law on RES Development (3851/2010), the national target for RES by 2020, states that the energy produced by RES will contribute 20% of the gross final energy consumption, whereas the electric power produced by RES will contribute at least 40% of the gross electric consumption.

The Ministry of Environment, Energy and Climate Change has estimated that the implementation of these targets would require an investment of EUR 16 billion over the next decade. The recent global economic crisis generally, and Greece's debt crisis specifically, affect the country's growth rate. However, based on recent developments, the changes in the energy sector and its related investments, especially on RES, seem to continue unaffected. Greece follows a long-term plan to reform and modernise its energy sector and it has taken several steps along this direction by revealing a number of competitive advantages, such as:

- (a) Favourable regulatory framework for energy investment;
- (b) Excellent potential of every renewable energy resource;
- (c) Generous investment incentives;
- (d) Renewable energy project development at competitive costs; and
- (e) Continued expansion of the energy market for spin-off markets in manufacturing energy technologies.

3.2 Support schemes

In Greece, electricity generation through renewable energy sources is mainly promoted through a guaranteed feed-in tariff. Law 3468/2006, as amended and in force, differentiates RES electricity producers according to whether or not they are located on a Greek island *i.e.* whether or not they are connected to the mainland grid. RES power plants also enjoy dispatch priority to the Grid.

Part of the costs of the feed-in tariff system are borne by the consumers of electricity, who are obliged to pay a RES duty, which is added to their electricity bills. This duty for 2011 depends on the system type and varies from 0.74 to 2.49 EUR/MWh.

Law 3851/2010 on RES Development aims at rationalising the existing feed-in tariff scheme in order to, on the one hand, be able to keep projects financially attractive while, on the other hand, not overburden consumers.

The feed-in tariff is limited in time. The power purchase agreement has duration of twenty (20) years and may be extended by agreement between the parties. This additional agreement shall be concluded three months prior to the agreement's expiry date at the latest. Agreements regarding solar-thermal systems have duration of twenty-five (25) years.

The tariffs are adjusted on the basis of the weighted adjustment of the approved tariffs of the PPC. "Weighted adjustment" of the PPC's tariffs means the average of the separate changes per category of pricing, weighted according to the type of electricity consumption during the previous year. The above adjustment regulation shall remain in force as long as the PPC's electricity supply tariffs are subject to prior approval by the Minister of Development, meaning, as long as PPC retains a market share (in the electricity supply market segment) above 70%. Following the deregulation of the PPC's tariffs, the feed-in tariffs for renewables will be adjusted by a decision of the Minister of Development to reflect 80% of the consumer price index, as this index is determined each time by the Central Bank of Greece.

This adjustment shall be universal and shall be applied to all tariff rates except for the tariff for photovoltaic energy, which is governed by a separate scheme according to which the FIT decreases every six months pursuant to a published tariff formula.

Another financial instrument umbrella for the promotion of RES (with the exemption of PVs) in Greece, which covers all private investments in Greece in all sectors of economic activity is the National Development Law (Law 3299/2004) which governs the terms and conditions of direct investment in Greece and provides for incentives, available to domestic and foreign investors, dependent on the sector and the location of the investment. In February 2011, the new Development Law for supporting Private Investment for Economic Growth, Entrepreneurship, and Regional Cohesion, was voted and passed by the Greek Parliament in order to improve the tax benefits for investors selecting this option of investment support, and is to be implemented following the relevant Presidential Decrees and Ministerial Decisions. This Law has a strong regional character, in that the level of public support strongly depends on the particular geographic region, within which a private investment is planned to be implemented. To date, investors can select one of three forms of investment support: cash grants/ leasing subsidies, wage subsidies for new employment created by the investment of up to 60% of the overall investment cost, or non-taxable income of up to 100% of the investment at a 25% tax rate. This has translated into a tax benefit of up to 25% of the investment. Now the tax benefit has been increased to match the level of the cash grants/ leasing subsidies; a substantial benefit for investors.

4. Natural gas

4.1 Market overview

The Greek Natural Gas market is still in the early stages of development and the Greek State is heavily involved in the industry through direct or indirect ownership. Natural Gas is a relatively new fuel in Greece, introduced into the Greek energy market a little over a decade ago. Natural Gas demand is projected to increase significantly over the next few years (to 20% of the total energy demand in 2015) as it gains a progressively more important market share in power generation, as well as in the industrial, residential and commercial sectors.

Piped Natural Gas sales from Russia began in 1996 and from Turkey in November 2007, while Liquefied Natural Gas ("LNG") sales from Algeria began in 1999 on the basis of respective long-term supply contracts. Prior to this, the establishment of the high-pressure Natural Gas transmission system ("NNGTS") and LNG terminal facilities resulted from a decision by the Greek State in 1992 to modernise its energy industries and diversify the country's energy sources through the introduction of Natural Gas.

Greece is seeking to broaden its natural gas imports by sourcing Natural Gas from countries such as Iran and Azerbaijan, and is cooperating with several nations that are constructing pipelines. Azeri gas is scheduled to be transported through Turkey by the Southern Caucasus Gas Pipeline, while a pipeline connecting Turkey and Greece is already in operation. Greece and Italy also plan to construct an undersea link to extend the latter pipeline to Italy. Another project,

known as the Trans-Adriatic Pipeline, has been announced by TAP AG, a subsidiary of EGL and Statoil Hydro.

In addition, there have been agreements on the implementation of the Greek part of the South Stream pipeline as well as on the Interconnector for Greece-Bulgaria pipeline. This can potentially be used as a starting pipeline for exporting Arabian LNG from Egypt, Algeria and the Persian Gulf to the Balkans and Central Europe.

In 1988 a state-controlled Natural Gas company named Public Gas Company ("DEPA") was established and was granted by virtue of Law 2364/1995 the rights for planning, constructing and exploiting the national Natural Gas transportation system ("NNGTS") and the regional distribution networks, the rights to import and export Natural Gas, as well as the rights to sell Natural Gas to the regional gas distribution and to supply companies of large end-users.

However, following the introduction of Law 3428/2005, (the "Gas Law") in 2005, all rights related to the construction and exploitation of the national Natural Gas transportation system have been conferred to an independent system operator ("DESFA"), which was established in 2007, while all of DEPA's exclusive rights pertaining to the import, export and trade of Natural Gas have been abolished. These activities have been rendered available to any party interested in such "main natural gas activities", without any licensing requirements.

Pursuant to the gas sector legislation, the exercise of Natural Gas activities within the territory of the Greek State constitutes a public utility and is performed under the supervision and regulation of the Minister of Environment, Energy and Climate Change. In general, the Greek policy regarding gas related issues focuses on the following main directions:

- (a) ensuring security and continuity of supply;
- (b) protecting consumers;
- (c) ensuring the promotion of free competition and environmental protection; and
- (d) promoting the implementation of energy-efficient and economical, effective practices by the licensees.

The above supervision and regulation competencies of the Minister of Environment, Energy and Climate Change are exercised in consultation with RAE, as the independent administrative authority for the energy sector. Following the enactment of the Energy Law, RAE's role is now considered compatible with the role of the Natural Gas market regulator provided by the third EU Gas Directive (EU 73/2009). The competencies granted to RAE refer to the regulation of both the electricity and Natural Gas market, in compliance with the respective EU Directives.

Finally, pursuant to the Energy Law, DESFA is vested with exclusive authority for the operation of the national natural gas transportation

system and is granted the exclusive and non-assignable rights of programming, constructing, owning and exploiting the system. Under the same law, DESFA also enjoys the rights of storage (including the management of LNG terminal facilities that constitute part of the national natural gas transportation system) and the processing of natural gas by means of this system. Therefore, DESFA, upon its establishment, was granted a single ownership and an operation licence with regard to the National Natural Gas Transportation System for an initial period of fifty (50) years.

Currently, since the market has been liberalised, DEPA is no longer the only entity which imports and trades in Natural Gas. New market players have entered, and the interest in doing so is high; Greece offers a unique advantage for those involved in the business of Natural Gas, because of its own increasing consumption needs, and because of its potential to act as an access point for the needs of Southeast and mainland Europe.

4.2 Regulatory overview

Until recently, the Greek Natural Gas market was essentially regulated by Law 2364/1995 (as amended by Laws 2528/1997 and 2992/2002). This legislation arguably conformed, to a certain extent, to the fundamental EU guidelines in the sector. However, the most crucial and significant step towards Natural Gas market liberalisation came with the relatively recent enactment of the Gas Market Law (Law 3428/2005), which implemented the EU Second Gas Directive (2003/55/EC) before the lapse of the derogation period granted to Greece as an emerging market under Directive 98/30/EC. The Energy Law which was enacted in August 2011 transposed the third EU Energy Package into national legislation and replaced some of the provisions of the Gas Market Law. Among other things, the abovementioned laws provide for:

- (a) the unbundling of services through the establishment of an independent system operator to undertake the transportation activities that were exclusively allocated to DEPA;
- (b) the development by private investors of independent Natural Gas transportation systems, LNG installations and storage facilities;
- (c) the liberalisation of supply on the basis of an authorisation procedure;
- (d) third party access to the national Natural Gas transportation system, including LNG and storage facilities, on the basis of published tariffs;
- (e) accounting unbundling;
- (f) the establishment of a Natural Gas spot market; and
- (g) the extension of the regulator's powers with respect to the Natural Gas market.

Although a lack of specific details relating to the Natural Gas legislative framework proved to be a critical factor in delaying the full liberalisation of the market, it appears that this framework has now been completed with the approval of a series of secondary legislation such as the Gas System Code, the Users' Registry, standard contracts and tariffs regulations. This brings further uniformity and stability in the Natural Gas market.

4.3 Regulated natural gas market activities

According to the provisions of the Gas Law and the Natural Gas Licences Regulation the supply and distribution of Natural Gas to Eligible and non-Eligible Customers, as well as the construction and operation of Independent Natural Gas Transmission Systems, are permitted only to the holders of the respective Licence, which is granted by RAE.

The initial term of these licences depends on the licensed activity and ranges from twenty (20) to fifty (50) years. Upon request of the licence holder, the licences may be renewed for the same time period.

Any other sale, purchase, import and export of natural gas activities are conducted freely.

4.4 Exploration and production

Natural Gas represents over 7% of Greece's primary energy consumption, but demand is projected to increase significantly, rising to 20% by 2015, as it gains a larger market share in power generation and the industrial, residential and commercial sectors. Although Greece's Natural Gas demand by population size is significantly below that of other European countries, its projected 10-year compound annual growth rate for Natural Gas consumption is the highest among the EU-15 states. Greece's Natural Gas needs are met exclusively through imports, since indigenous production comes from primarily the largely depleted offshore Prinos field.

The state enjoys exclusive rights for the prospect and exploitation of hydrocarbons, and exercises such rights for the public benefit, even though such activities until now were negligible in the Greek market. However, the revised form of the Hydrocarbons Law (2289/1995) about the establishment of Agency for Hydrocarbons Research and Utilisation Rights came into force in August 2011, including details about announcement of tenders and tax motives to attract investors.

Foreign and Greek companies may submit their requests for implementation of researches directly to the Agency, since the Agency will announce the relative tenders in short notice on companies' requests. The law refers also to the "open door" tender procedure. Last but not least, the new law includes flexible motives to attract investors.

For more information on the exploration and production of Natural Gas please see below (Upstream Oil) the description of the relevant legislative framework applicable to all types of hydrocarbons.

4.5 Transmission and access to the system

The national Natural Gas transportation system (high-pressure pipelines) has already been commissioned but the distribution system (medium and low-pressure pipelines) is still in the development stage.

The NNGTS includes the main high-pressure Natural Gas transmission pipeline from the Greek-Bulgarian borders to the prefecture of Attica, the high pressure branches linking various areas of the country with the main pipeline, including the branch connecting the main pipeline with the Greek-Turkish borders, the LNG facility at the island of Revythoussa, as well as additional facilities and infrastructure that service the entire Gas Transmission System.

Natural Gas is injected to the NNGTS through the following three entry points:

1. Sidirokastro located at the Greek-Bulgarian border;
2. Kipi Evros located at the Greek-Turkish borders;
3. Agia Triada on the coast opposite of the island of Revythoussa.

The Energy Law requires DESFA to provide system users with access to the national Natural Gas system in the most economic, transparent and direct way for as long as they wish. It must conclude contracts with system users for transportation and the use of storage and LNG facilities. Such contracts are based on model contracts, the provisions of which are determined by means of Ministerial Decisions following the approval of the tariffs by the relevant minister and authority.

Access to the System may be refused if:

- (a) there is a lack of capacity (pursuant to the special provisions in the system's operating code, which will be adopted soon);
- (b) access to the system could prevent DESFA from fulfilling its public service obligations; or
- (c) serious economic and financing difficulties occur owing to contracts containing "take or pay" clauses.

DESFA must specifically substantiate such a refusal and must communicate its decision and reasons to the authority and the user. DESFA is responsible for balancing the system load - these duties are specified in the system's operating code. In addition, DESFA may conclude load-balancing contracts with suppliers following a tender, according to non-discriminatory and transparent procedures and with due respect for market rules. DESFA will also carry out congestion management at the entry and exit points of the system based on market mechanisms and in accordance with transparent criteria, as defined in the operating code, in order to promote non-discriminatory competition between users.

With regard to independent Natural Gas transportation systems and storage facilities, the operator must conclude contracts for the use of such systems with users, pursuant to a model contract prepared and published by the operator following the approval of the authority and in accordance with the provisions of the respective system's operation code. Access to such systems may be refused only for reasons of capacity or where such access might prevent the operator from fulfilling its public service obligations (unless it is exempt by law from offering such third party access).

DESFA is required to prepare periodical 10-year system development studies for the expansion of the national Natural Gas system. Such plans must be submitted to, and approved by, the Minister and RAE.

Distribution

The Greek residential and commercial market for Natural Gas is relatively new when compared to most EU countries. There is a limited distribution network which has existed for town gas in Athens dating back to the 19th century, which has been used to distribute natural gas since January 1998.

With the support of funding from EU programs, DEPA has already undertaken and completed the construction of substantial medium and low-pressure pipeline infrastructures in the country's three most densely populated regions (Attica, Thessaloniki and Thessaly), which have since been transferred to regional gas distribution and supply companies ("EPAs"), established jointly by DEPA's wholly owned holding companies ("EDAs") and private investors (Cinergy, Shell and Italgas), following a tendering process.

DEPA is adopting a similar approach, supported by the Greek state and EU-funded programs, to develop distribution networks in new regions of the country (the north and central part).

The construction and operation of distribution networks in the rest of Greece require a distribution licence, issued following an application under the Energy Law. RAE may grant a distribution network licence upon the application of the interested party, unless state aid or other applications for the same area are involved, in which case the law provides for a tender process, rather than a simple evaluation of the respective application.

All distribution and supply companies are required to provide suppliers with access to their distribution networks for the supply of eligible customers, provided that such access does not violate the legislation in force or the respective distribution licences and does not endanger the safe operation of the network.

4.6 Trading and supply

Natural Gas supply companies as well as distribution companies are entitled to supply customers with Natural Gas in their respective areas of jurisdiction pursuant to the terms and conditions of their respective supply and distribution licences.

Other activities, including wholesale trading and the import and export of Natural Gas, are not subject to licensing requirements. The Minister's oversight and the RAE's opinions and market monitoring in relation to each licensee's compliance with the terms of its licence constitute the official supervisory framework.

Physical trade in Natural Gas is determined on the basis of specific provisions in the NNGTS operation code prepared by the operator of the relevant transportation system (*i.e.* the national transportation system or an independent system). Further conditions are determined by the model transportation contracts which give to a gas enterprise access to the national system in order to supply an eligible customer. Given the relatively undeveloped state of the domestic gas market, financial trade in gas follows the principles that apply to physical trade under Natural Gas supply contracts. Thus, the physical delivery of a quantity of Natural Gas (as certified by the system operator) determines the basis upon which the related financial trades are carried out.

System users (*e.g.* importers or suppliers) are able to procure transmission services from the respective system operators irrespective of the Natural Gas, while customers will pay an access charge for the use of distribution and transportation networks bundled with the commodity. Retail consumers located within the operating areas of a particular distribution and supply company will purchase Natural Gas and the related transmission and distribution services as a bundled product, as the company will act as both the local distribution system operator and the regional supplier of non-eligible customers.

Cross-border sales and deliveries

DEPA no longer enjoys the exclusive right to purchase, import and export Natural Gas. Such activities are open to any party interested in the principal Natural Gas activities that can be undertaken without a licence.

4.7 LNG and storage capacity

LNG terminals constitute energy infrastructures of strategic importance for Greece, as they allow the further diversification of supply sources, provide further supply security and strengthen Greece's impact on the energy environment of the wider region.

Greece has one LNG import terminal. The terminal is located on the island of Revythoussa, 45km west of Athens. Historically, LNG supplies were imported solely by DEPA under a contract with Algeria's Sonatrach; however, in the spring of 2010 the first two privately owned LNG shipments entered the system. The LNG is stored in two (2) tanks with a total capacity of 130,000m³. It is then regasified in special installations and afterwards it supplies the NNGTS.

The Revythoussa LNG facility is another entry point of the NNGTS and contributes significantly to the security of supply, through its storage capacity, as well as through the possibility

it offers to the Greek market to diversify its supply sources. The LNG facility consists of:

- (a) two storage tanks, with a total capacity of 135,000m³ LNG (useful capacity 126,500m³);
- (b) vaporisation units with total capacity of 1,000m³ LNG/hour (approximately 14 million Nm³/day (normal cubic meters));
- (c) a twin offshore pipeline 600m long and 24 inches in diameter, which connects the LNG terminal with the NNGTS; and
- (d) facilities for unloading ships with maximum length of 290m, draught which does not exceed the difference (12.7m – 10% of vessel draught) for berthing and under-keel clearance (distance between the keel and the sea bottom) of at least one meter.

In July 2007, DESFA completed the expansion of the infrastructure and upgrading of the facilities so as to increase gasification capacity. Following the liberalisation of the Natural Gas market, the first two privately owned LNG shipments entered the system through Revythousa terminal during the spring of 2010.

The Ministry of Environment, Energy and Climate Change examines the possibility of international partnerships for the construction of a second LNG Terminal in Northern Greece.

A private company which holds a licence from the Greek state to drill for oil at Prinos, is in the process of converting the depleted South Kavala Gas field into an Underground Gas Storage Facility utilising the existing infrastructure.

The proposal for the subterranean storage facility was submitted to the Ministry of Environment, Energy and Climate Change by DEPA and the company Aegean Energy.

DESFA, however, stressed that the investment and management of the storage facility should be managed by itself, or by a consortium in which it holds a minimum of 51% shares, since the South Kavala underground space is public property and its conversion into a Natural Gas storage facility creates added value that belongs to the state and not the private company holding a concession to use the specific space for other purposes.

Studies have shown that the South Kavala site can store up to one billion cubic meters of gas and supply up to four million cubic meters of Natural Gas to the network per day (or 40% of the daily consumption in the country) for a period of 90 days.

Furthermore, RAE recently also approved a floating LNG terminal in the northern Aegean, comprising of an offshore delivery and regasification station, which will inject the natural gas into the NNGTS through an underwater pipeline.

According to DESFA, the storage facility will contribute greatly to the energy security in Greece and in neighbouring countries linked to its gas network.

5. Upstream oil market

5.1 Market overview

In Greece, 99.5% of the petroleum used is imported, while only 0.5% is locally produced. Even though Greece has had legislation governing the research, exploration and exploitation of hydrocarbons for many years, it only recently started taking more advanced steps in order to improve its productivity in this area.

The rights to research, explore and exploit hydrocarbons located in the national soil, lakes or sea reside solely with the State's public sector, and the use of these hydrocarbons must always benefit the State. The Greek State has the power to assign research rights to third parties; exploration and exploitation rights however, are granted through a tender process.

Hydrocarbons research may be conducted through any possible means, including drilling. Exploitation of hydrocarbons refers to their mining and treatment, while exploitation does not include refinement procedures.

The areas designated for research, exploration and exploitation are set out by the Minister of Environment, Energy and Climate Change and they usually have a rectangular shape. They can be determined by using the geographic coordinates of latitude and longitude, though in some cases the areas are determined from the shape of the country's border as well as from the coastline.

5.2 Regulatory overview

The research, exploration and exploitation activities for hydrocarbons are regulated by Law 2289/1995 which was significantly revised by the Energy Law, introduced in August 2011.

A Greek company named the Hellenic Hydrocarbon Resources Management S.A. ("H.H.R.M.") shall be concerned with all matters relating to hydrocarbons and shall publish, following approval by the Minister of Environment, Energy and Climate Change, the invitation for offers for hydrocarbons research in the Official Gazette of the Government and in the Official Journal of the European Union. The deadline periods for the submission of applications may not be shorter than ninety (90) days, and the application must include:

- (a) the specified area;
- (b) the terms and obligations of the licensee;

Greece

- (c) the reasons (criteria) for the applicant's choice;
- (d) the price of the submitted state fee;
- (e) letter of guarantee of good performance from a bank which operates lawfully in a European Union Member State;
- (f) the deadline to grant the licence;
- (g) any other relevant information.

The exploration area for hydrocarbons may not exceed 4,000 km² when it comes to land based research, and 20,000 km² for aquatic research. The relevant licence is valid for eighteen (18) months.

Upon receipt of the research licence, its holder must submit to the Ministry of Environment, Energy and Climate Change the following:

- (i) the research programs divided into specified periods;
- (ii) upon the expiration of the research programs, the licensee must submit copies of the technical and scientific information and findings acquired during this research;
- (iii) three (3) months from the expiration of the licence, the licensee must submit an analytical report accompanied by official data and information, along with the analytical search result.

The State may lease the right to research and exploit hydrocarbon areas either through a stand-alone contract agreement or a distribution agreement for the ultimate production which included the research and exploitation rights.

5.3 Hellenic Hydrocarbon Resources Management S.A.

A Presidential Decree issued by the Ministers of Economy, Development, Competitiveness and Maritime Affairs and of Environment, Energy and Climate Change establishes the Hellenic Hydrocarbon Resources Management S.A. ("H.H.R.M."), an agency concerned with all matters relating to hydrocarbons.

H.H.R.M.'s terms shall be for ninety-nine (99) years from the time of publication of the Presidential Decree establishing it. Its tasks include indicatively the following:

- (a) to act on behalf of the Greek State, and to manage on its behalf the exclusive rights of research, exploration and exploitation of hydrocarbons in land and the waters;
- (b) to manage, control and monitor the agreements signed by the State or for the benefit of the State with third parties;
- (c) to submit opinions to the State concerning the exclusive

right to manage the research, exploration and exploitation of hydrocarbons;

- (d) to collect and evaluate information concerning the country's hydrocarbons capacity;
- (e) to collect, process, save, evaluate and manage data and information which has been acquired in the past or which will be acquired in the future during research on the country's hydrocarbons capacity, its uses and potential development;
- (f) to submit proposals to the Minister of Environment, Energy and Climate Change on areas to grant licences for hydrocarbons research, exploration and exploitation, as well as storage areas for Natural Gas and CO₂;
- (g) to prepare and conduct tenders, and to publish them in the international energy market in order to attract petroleum companies;
- (h) to evaluate applications submitted for these tenders;
- (i) to grant the research licences;
- (j) to negotiate the terms for the granting of licences for hydrocarbons research, exploration and exploitation;
- (k) to make suggestions to the Ministry of Environment, Energy and Climate Change on the approval of annual works schedules and budgets, on drilling, geophysical and other research programs of the development project, as well as on the sponsor's obligation;
- (l) to perform economic valuations of the areas which are to be licensed in the future, to estimate potential investment dangers and to perform studies for the development of oil reserves;
- (m) to cooperate with the Ministry of Environment, Energy and Climate Change, the relevant competent authorities of the European Union and other organisations and educational institutions;
- (n) additional obligations may be assigned to it by the Ministry of Environment, Energy and Climate Change.

The establishment of the H.H.R.M. is considered as the first basic step towards the exploitation of the oilfields of Greece.

5.4 Material provisions of the oil market law and other licensing regulations

- (a) The sponsor(s) may be individuals (physical person(s)) or legal entities, operating on their own or in cooperation with one or more other such individuals or legal entities.

In addition, they must be nationals of Greece, a European Union member or of a third country as long as this third country has a reciprocity agreement with Greece;

- (b) By entering into the lease (agreement to rent), the sponsor(s) undertakes the responsibility to perform studies and to take actions necessary to research, explore and exploit hydrocarbons and their by-products. The sponsor(s) also undertakes to assume all the costs (materials, staff etc.) and risks associated with the project;
- (c) Part of the annual hydrocarbons production is given to the sponsor(s) to cover expenses. The remaining is divided among the sponsor(s) and the employer according to specified and agreed upon percentages;
- (d) The research period, which is specified in the lease, may not exceed seven (7) years for land areas and eight (8) years for sea/ underwater areas. This time period may be renewed by half of the originally granted time period.

1. Introduction to the energy market

The Kosovo Assembly in April 2010 approved the latest revised Energy Strategy for Kosovo for 2010-2018.

Kosovo's main sources of energy are imported petroleum products for transport purposes and domestically produced electricity, under the monopoly of the state-owned Kosovo Energy Company ("KEK"). The main power system has two mine mouth generation plants (Kosovo A and B), fed by lignite mines at Bardh and Mirash supplying approximately 7 million tons of lignite per year. There are also several small hydropower plants. Kosovo has a large domestic future energy potential in coal/ lignite and also further potential in hydropower production.

Kosovo's Energy Market is predominantly a regulated market. Kosovo has signed the Athens Treaty for the establishment of the Energy Community Treaty of South East Europe that entered into force in July 2006 (the "Athens Treaty") and is obliged to create a free market for electricity and promote competition in the energy market. The government of Kosovo is very much committed to developing as far as possible the energy sector in compliance with *acquis communautaire* of the Energy Community Treaty and EU.

2. Electricity

2.1 Market overview

The electricity supply in Kosovo is currently unable to effectively meet Kosovo's demand for power. Insufficient investment in new plant capacity and inadequate maintenance of existing plant capacity has led to a substantial shortfall in the supply of power in Kosovo. Some of the existing capacity is reaching the end of its life cycle. Simultaneously, demand for power has been growing and has increased the pressure on the system. The overall effect is that Kosovo currently has to import power which is much more costly than relying on domestic production.

In 2006 steps were taken to begin the restructuring or unbundling of the Kosovo electricity sector. The Transmission and Dispatch Division was the first to be unbundled from KEK, and the Transmission System and Market Operator of Kosovo ("KOSTT") was established, which is licensed by the Energy Regulator Office ("ERO"). The remainder of KEK has been restructured in several divisions, such as that of distribution, supply, mining and generation. The process of spinning off the energy pyramid continued in 2008, with the separation of coal and energy production from its distribution and sale. This resulted in the establishment of a new public company for energy distribution and supply, the Kosovo Energy Distribution and Supply Company J.S.C. ("KEDS"), the shares of which were also held by the government of Kosovo. The government of Kosovo has already initiated steps for the privatisation of distribution and supply, while the same process is expected to take place with the generation and mining.

Private sector participation in the network distribution and supply side of KEK is anticipated to improve and expand the distribution network, increase billing and collections, reduce electricity losses, and improve the security of supply and overall service quality.

2.2 Regulatory overview

The Electricity Market in Kosovo is mainly governed by Law No. 03/L-201 "On Electricity" which establishes common rules for performing generation, transmission, distribution and supply of electricity, Law No. 03/L-184 "On Energy" and Law No. 03/L-185 "On Energy Regulatory Office".

The objective of the Law on Electricity is to:

- (a) Develop a competitive and sustainable electricity market, with common rules for generation, transmission, distribution, and supply of electricity, and for access to the market;
- (b) Guarantee conditions for a safe, reliable and permanent generation, transmission, distribution and supply of electricity, adhering to principles of energy efficiency;
- (c) Set out procedures for the granting of licenses, for activities in electricity and for authorisations and tendering for new capacity;
- (d) Provide that all household customers and, when technically and economically feasible to do so, non-household customers, enjoy a universal service, that is the right to be supplied with electricity of a specified quantity and quality, at a reasonable tariff; and
- (e) Provide appropriate measures to protect final customers, in particular, adequate safeguards to protect vulnerable customers and customers in rural areas including measures to help them avoid disconnection.

The ERO which is an independent administrative body (institution) established by Law on ERO and is responsible, *inter alia*, for issuing licences for private energy enterprises such as: (i) generation; (ii) transmission; (iii) distribution; (iv) supply of electricity (export or import); and (v) market operations.

ERO also monitors the unbundling and restructuring activities of the licensees in the energy sector and their compliance with the technical codes issued: technical rules, market rules, rules for access to land and premises etc. Further the electricity market participants in Kosovo such as licensed companies for the production, distribution, public supply and electricity supply/trade; production, distribution and district heating public supply, and the Transmission System Operator and Energy Market enterprise, report their compliance to ERO on a quarterly and annual basis in accordance with the Reporting Manual.

2.3 Licensed electricity activities

The performance of the following activities involving electrical energy will require the acquisition of the following licenses for:

- (a) The generation of electricity (the maximum term of licence is 40 years);
- (b) The co-generation of heat and electricity (the maximum term of licence is 40 years);
- (c) The transmission of electricity including Transmission System Operation (the maximum term of licence is 30 years);
- (d) The distribution of electricity including Distribution System Operation (the maximum term of licence is 30 years depending on the lifespan of assets);
- (e) The supply of electricity (the maximum term of licence is 30 years);
- (f) Export or import (the licence terms shall not be less than 1 year and not more than 5 years);
- (g) Market operations (the terms of licence will depend on competitive selection process opened by the government).

The activities that do not require a licence are: (i) the generation of electricity lower than 5MW and (ii) the generation of electricity for personal consumption.

2.4 Functions of the market operator

The duty for the implementation of a competitive market model for the electricity sector is in the domain of KOSTT, a duly licensed state-owned entity by the ERO. The Market Operator operates independently from any enterprise engaged in any electricity activity other than transmission. The Law on Electricity does provide that the Market Operator will be a legal entity responsible for the organisation and administration of the market for trade of electricity and payment settlements among producers, suppliers, and customers. The Market Operator balances financial supply and demand ahead of time.

KOSTT is responsible for the economic management of the electricity system and its primary functions, *inter alia*, include:

- (a) keeping records for all contractual obligations between suppliers and eligible customers;
- (b) notifying participants in trading and the transmission system operator of the settlement process, planning network access based on the settlement and the price of the remaining energy offered;

- (c) accepting information from the transmission system operator regarding the settlement changes required based on technical capacity and any exceptional situations in the transmission or distribution network;
- (d) setting the final price of energy for each specified time period and notifying all parties involved in trading;
- (e) establishing the accounting system for trading at the final price achieved, and providing information on the actual operation of the generators and availability of generation capacity for each time period;
- (f) public announcement of market trends for any required time interval.

KOSTT performs its functions with due respect to the principles of transparency, objectivity and independence.

2.5 Trading of electricity

According to Energy Legal Instruments, trading energy prices shall comply with tariff-setting methodology by the ERO which is entitled to set the methodology of the following tariffs: Transmission and Distribution System Connections; Wholesale Price Tariff and Retail Sales Tariffs, Coal Royalty which are proposed by energy enterprises.

2.6 Transmission and grid access

As provided under the law on electricity, the Grid Code is drafted by the KOSTT and approved by the ERO. The Grid Code covers the operating procedures and principles governing the interactions between the KOSTT and the users of the Kosovan transmission system. It covers the processes of planning, connection, operation and system balancing in both normal and exceptional circumstances. The Grid Code is a mandatory document for both the KOSTT and the users. Also the KOSTT has drafted a Metering Code aimed at establishing clear rules for the instalment and use of metering devices to ensure that production, transfer and consumption data are available to support an efficient process of electricity transactions. Another important document prepared by the KOSTT is the Distribution Code, which is a set of provisions defining all technical aspects of the work between the Distribution System Operator ("DSO") and all users of the Distribution System, in order to provide an efficient, coordinated and economic system for distribution of electricity. Also this code enables DSO to comply with the responsibilities arising from the Distribution System Operator License, the Grid Code and the Metering Code.

3. Renewable energy

3.1 Market overview

Kosovo has substantial potential for expanding the use of renewable energy sources in electricity generation. The biggest potential

sources are wind, hydro power and biogas. Other potential sources include solar, geothermal and biomass.

The issue of renewable energy is a relatively new practice in Kosovo, taking into consideration that over 90% of the electricity relies on thermal power plants. For the time being hydropower and biomass in the form of wood are the only renewable energy sources used, which contribute substantially to the energy supply in Kosovo. The use of solar energy is still in the very early phase (few pilot projects for water heating situated in some public buildings, financed by Ministry of Economic Development ("MED"), are on the way)¹.

Currently in Kosovo there are two active hydro power plants ("HPPs") with small generation capacities. The HPP Ujmani is administered by publicly owned company Iber-Lepenc and HPP Lumbardh administered by one private company. Based on the Energy Strategy, the Government policy is to develop small hydro power plants ("SHPPs") with private investments by granting concessions on the right to use the water for power generation in order to fulfil the objectives of the EU Plan 20-20-20 by 2020, *i.e.* to increase the use of renewable energy sources to 20%.

Moreover, there are two wind farms in Kosovo in operation that are below the generation capacity that requires the licence under the Energy Legislation.

3.2 Support schemes

Pursuant to the Energy Strategy, the goal of the Government is to attract private investments in the development of projects on renewable energy sources in line with EU directives on Energy Efficiency and Renewable Energy Resources. To date the Government has not adopted any incentive package for development of Renewable Energy Resources, despite Government promises to develop incentives with concrete fiscal measures. It is likely that feed-in tariff system may be applied as it is internationally recognised as one of the most beneficial incentive schemes.

4. Natural gas

4.1 Market overview

Currently there is no internal gas market in Kosovo. The Natural Gas Market in Kosovo is isolated and is not connected with natural gas networks of other countries. Moreover, Kosovo has no natural gas reserves and the development of the gas infrastructure has stalled, hindering the establishment of a natural gas market. Kosovo is not linked to any operational natural gas supply networks².

Kosovo does not produce natural gas, except as an associated product from lignite mining at the Kosovo A thermal power plant. The quantities are quite insufficient and cannot meet the domestic

demand. With international assistance Kosovo is developing a legal and policy framework for gas supply networks.

4.2 Regulatory overview

Kosovo Law No. 03/L-133 on Natural Gas ("Gas Law") establishes a legal framework for the granting of authorisations for the transmission, distribution, supply, usage and storage of natural gas. Under this Law, the responsible body for developing and implementing policies in the natural gas sector is the MED. The MED is also responsible for implementing EC directives and obligations deriving from the Athens Treaty. ERO is the regulatory body responsible for, *inter alia*, issuing licences for activities in the gas market.

4.3 Licensed natural gas market activities

As there are no natural gas reserves in Kosovo, the Gas Law contains no rules or provisions regarding the exploration or exploitation of gas.

The activities related to this energy source that are regulated by, pursuant to the Law on Energy, and for which the ERO issues licences, include:

- (a) transmission of natural gas (the maximum term of licence is 40 years);
- (b) distribution of natural gas (the maximum term of licence is 40 years);
- (c) storage of natural gas - only if over 10,000 cubic meters (the maximum term of licence is 40 years);
- (d) supply of natural gas (the maximum term of licence is 30 years);
- (e) transit, import or export of natural gas (the term of licence is from 1 to 5 years);
- (f) transmission or distribution system operation of natural gas (the maximum term is 30 years);
- (g) operation of a market for electricity or natural gas.

The ERO is permitted to issue only one licence for the distribution of natural gas for each licensed territory in Kosovo, and there may be one or several licensed territories for the distribution of natural gas. The Gas Law also envisages that an energy enterprise which holds a licence as a distribution system operator of natural gas may not obtain a licence for any other activity in the natural gas sector. In order to obtain a construction permit for a natural gas "distribution network", an environmental permit is required. The Ministry of Environment will examine whether an impact assessment report is required for the construction of a distribution network. A construction permit shall also be required.

¹ Source: <http://www.euroqualityfiles.net/AgriPolicy/Report%202.2/AgriPolicy%20WP2D2%20Kosovo%20Final%20Rev.pdf> (dated 18/10/2011)

² Source: Statement of Security of Supply for Kosovo issued by Ministry of Energy and Mining, on June 2010 complied in accordance with article 29 of the Energy Community Treaty

4.4 Natural gas storage

The principles relating to the storage of natural gas (including LNG) include:

- (a) The operation, maintenance and development of each storage system operator of natural gas or LNG under economic conditions ensuring secure, reliable and efficient storage facilities with due regard to environment, based on the Law on Natural Gas requirements;
- (b) The non-discrimination between system users, particularly in favour of its related undertakings;
- (c) The provision of any other storage operator with sufficient information to ensure that the storage of natural gas may take place in accordance with secure and efficient operation of the interconnected system;
- (d) The provision of system users with necessary information for efficient access to the system;
- (e) The autonomy of storage system operator;
- (f) The confidentiality principle.

4.5 Transportation and infrastructure

Upstream pipelines are primarily regulated by the Gas Law. Third party access shall be regulated in a similar manner by ERO to that for transmission and distribution networks. Specific operation and ownership issues related to the upstream pipeline network are not specifically regulated but are expected to be dealt with in more detail in the secondary legislation and in accordance with obligations deriving from the Energy Community Treaty.

The access for third parties to natural gas transportation pipelines should be non-discriminatory including facilities for supplying technical service. This access shall be provided in the aims of achieving a competitive market in the natural gas industry taking security and regularity of supplies capacity which is or can reasonably be made available and environmentally protected. In accordance with this paragraph the following should be taken into account:

- (a) the need to refuse access where there is incompatibility of technical specifications which cannot be reasonably overcome;
- (b) the need to avoid difficulties which cannot be reasonably overcome and could prejudice the efficient, current and planned future production of hydrocarbons, including that from fields of marginal economic viability;
- (c) the need to respect the duly substantiated reasonable needs of the owner or operator of the upstream pipeline network for the transport and processing of gas and the interests of

all other users of the upstream pipeline network or relevant processing or handling facilities that may be affected; and

- (d) the need to apply their laws and administrative procedures, in conformity with the legislation in force, for the grant of authorisation for production or upstream development.

If access agreements cannot be secured, the ERO is entitled to approve rules for dispute settlement related to access or refusal to allow access to every facility set forth in this law.

4.6 Trading of natural gas

Energy trade, including natural gas trading, is regulated by the Athens Treaty as it creates a single regulatory space for trade in Network Energy that is necessary to match the geographic extent of the relevant product markets.

This treaty has created a single energy market among signatory parties (the signatory parties to this treaty are the European Community Members, Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Kosovo as UNMIK). The primary governing legislation is the Gas Law and the Law on Energy; and a licence is required for this activity.

5. Upstream oil market

5.1 Market overview

All oil products that are imported are consumed within the country. Kosovo has no domestic oil supply and no pipelines, thus there is no upstream oil market.

Oil products are imported approximately 80% by trucks and 20% by rail¹. Current oil legislation obliges all petroleum product storages and sale points to possess at least 5% of the storage capacity for state emergency purpose. Over 60% of oil products in Kosovo come from the refinery of OKTA, a private oil company located in Skopje, Former Yugoslav Republic of Macedonia. From there mostly diesel, petrol, kerosene, and residual fuel oil (mazut) are imported. In recent years there has been an increase in import of diesel and petrol from Albania through their ports².

5.2 Regulatory overview

The current law regulating and requiring the licensing of activities in the oil sector is the Law on Trade of Petroleum and Petroleum Products in Kosovo (Law No. 2004/5) for wholesale, retail, transport, storage or sale of petroleum and/or petroleum products in Kosovo.

Persons registered with the Business Registration of Kosovo for the purposes of operating in the petroleum sector or vehicle servicing, with gross annual sales not exceeding EUR 50,000 per annum, may transport, store and sell or offer to sell lubricating oil, motor oil, anti-freeze and brake fluid without a licence.

¹ Statement of Security of Supply for Kosovo (Electricity, Natural Gas and Oil) – July 2011

² Statement of Security of Supply for Kosovo (Electricity, Natural Gas and Oil) – July 2011

The responsible Ministry supervises and is responsible for ensuring a safe, regular and quality supply of petroleum and petroleum products. Strategic reserves of petroleum and petroleum products are determined as intervention stocks in case of basic disasters, epidemics or technological disasters. At present licensees holding a General Petroleum Licence or a Petroleum Storage Licence shall retain and earmark 5% of their storage capacity as a strategic reserve until the creation of material reserves of Kosovo. There is a contractual relationship between the licensee and the Ministry for the purpose of dealing with the strategic reserves.

A new law on the oil sector is in the process of being drafted and is expected to be finalised by the end of 2011. This new law should open the possibility for the creation of emergency oil storages and for meeting the total storage obligation of 90 days of net import by the end of 2020.

1. Introduction to the energy market

The Montenegrin energy market is characterised by high dependency on electrical energy, mainly because of a lack of infrastructure for the utilisation of natural gas and oil. Its isolated geographical position will be dramatically changed by the construction of the undersea cable between Montenegro and Italy and by the development of the regional gas pipeline connecting Greece and Croatia through Albania and Montenegro.

2. Electricity

2.1 Market overview

The Montenegrin electricity market suffers from a persistent lack of available electricity. However, despite this no new generation capacities have been brought into operation in the past two decades, with the exception of couple of small hydro power plants ("HPPs"). On the other hand, there are several important projects in the pipeline, most of them aimed at utilising the power generation potential of Montenegrin rivers. Strategic ties with Italy have resulted in reaching the agreement on the development of undersea High-Voltage, Direct Current power cable between Italy and Montenegro which will connect the electricity markets of Italy and South East Europe. Similarly to Serbia, controlled energy prices and a weak economy are the main obstacles in developing new production facilities.

In 2009, the Montenegrin Government sold a minority package with management rights in Elektroprivreda Crne Gore AD Nikšić ("EPCG"), the Montenegrin vertically integrated energy undertaking, to A2A, a relatively unknown, Milan-based, energy company. In early 2011, the Montenegrin transmission system operator ("TSO") was also partially sold to Terna, the Italian state-owned TSO.

2.2 Regulatory overview

The most important piece of legislation in the electricity sector is the Energy Law ("*Zakon o energetici*", Official Gazette of Montenegro, No. 28/2010). It regulates all the relevant energy sectors, *i.e.* the sectors of electricity, district heating, oil and gas. In the electricity sector it specifically regulates: a) issuance of authorisations for performance of energy activities; b) issuance of licences for the construction of energy facilities (energy licence – "*energetska dozvola*"); c) regulated prices, tariffs, fees; d) renewable energy; e) specific rules for various activities in the electricity sector; f) access to the electricity system, *i.e.* transmission and distribution systems; g) supply of energy; h) safeguard measures in the event of market disruption.

The Government, the Ministry of Economy and the Energy Regulatory Agency have adopted a number of implementing regulations. The most important of those secondary regulations are: Temporary Transmission Grid Code ("*Privremeni kodeks mreže*", Official Gazette of Montenegro, No. 13/2005), Temporary

Distribution Grid Code ("*Privremeni distributivni kodeks*", Official Gazette of Montenegro, No. 13/2005), Electricity Supply Rules ("*Pravila za snabdjevanje električnom energijom*", Official Gazette of Montenegro, No. 54/2009), Market Rules ("*Tržišna pravila*", Official Gazette of Montenegro, No. 2/2009), Rule on Third Party Access ("*Pravila o pristupu treće strane prenosnoj distributivnoj mreži*", Official Gazette of Montenegro, No. 13/2/2007). Almost all of the important secondary regulations were adopted prior to the adoption of the new Energy Law and it is expected that new regulations replacing the old ones will be adopted in the near future.

The key stakeholders in the Montenegrin electricity market are:

- (a) Ministry of Economy - which is in charge, *inter alia*, of preparing the energy strategy and its implementation, preparation and the assessment of prospective investment projects, industrial production, energy policy, energy efficiency, determining the direction and dynamics of energy development, preparation of the energy balance of Montenegro, sales of petroleum products, concessions, competition, encouraging foreign investment and others;
- (b) Regulatory Energy Agency of Montenegro ("REA") - an independent, non-profit organisation, functionally independent of the state authorities and energy companies, exercising public authority in the field of energy, established pursuant to the Law on Energy. Its primary tasks are the development and enhancement of the electricity and gas market based on the principles of non-discrimination and effective competition by creating a stable regulatory framework;
- (c) Transmission system operator – "*Crnogorskielektroprenosni sistem*" – a majority state-owned company in charge of the development, safe and reliable functioning of the transmission system, enforcement of non-discriminatory and economical access to the transmission system;
- (d) Montenegrin electricity market operator - "Operator tržišta električne energije" ("Market Operator") - an entity in charge of the management of the electricity market established in August 2011 and still not completely operational at this moment.

2.3 Regulated electricity market activities

The Energy Law prescribes for the following energy activities in the electricity sector:

- (a) The production of electricity;
- (b) The transmission of electricity;
- (c) The distribution of electricity;
- (d) Electricity supply;

- (e) The operation of the electricity market;
- (f) Trading, brokerage and representation in the energy market.

Energy-related activities may be performed only upon when the relevant licence is obtained. The licence is issued at the request of the energy entity separately for each energy activity. The licence is issued for a period of 15 years and may be extended or shortened under certain conditions.

The following energy activities may be performed without licence:

- (i) The production of electricity for individual consumption;
- (ii) The production of electricity in buildings with installed capacity up to 1MW;
- (iii) Electricity trading for the purpose of further sale, excluding the sale to the final customers, agency and representation on the energy market.

Energy activities of public interest in the electricity sector are:

- (a) The production of electricity;
- (b) The transmission of electricity;
- (c) The distribution of electricity;
- (d) The organising the electricity market;
- (e) Trading with electricity for supply of electricity as a public service;
- (f) Any supply that represents a public service.

Activities under (e) may be performed only by the public electricity supplier.

The following activities in the electricity sector are carried out as public services in order to ensure a regular, safe, reliable and quality energy supply at reasonable prices:

- (i) The transmission of electricity;
- (ii) The distribution of electricity;
- (iii) The supply of electricity, in certain cases.

The provision of public services in the electricity sector must be on non-discriminatory basis, transparent and under controlled prices.

Energy activities which are not performed as public services are carried out in accordance with market principles.

2.4 Generation

The development of generation capacities is subject to obtaining among others, the energy permit (*"energetska dozvola"*). The energy permit is issued at the very outset of the development process even before the acquisition of the requisite land on which the development will take place and prior to obtaining the act on urban technical conditions. The request may be submitted by a domestic or foreign entity and the permit is issued by the Ministry of Economy. The energy permit is not required in the event of the granting of a concession for the development of a generation facility.

An energy permit may be issued for a generation facility which is in accordance with the energy strategy and action plan for the implementation of the energy strategy. The following criteria are taken into account when deciding on the issuance of the energy permit: safe and unobstructed functioning of the energy system, conditions regarding the location and the usage of land, environmental conditions, health and safety of people and property, energy efficiency, usage of primary energy sources, conditions related to technical and financial capability of the applicant to realise the development of the energy facility, reduction of CO₂ emission.

The energy permit is issued with a validity of two years and may be extended for one additional year.

In addition to the energy permit, the interested investor will have to obtain numerous other permits.

2.5 Trading and supply of electricity

According to the Energy Law, electricity trading for the purpose of further sale, with the exception of sale to final customers, agency and representation on the energy market does not require an energy licence.

According to the Energy Law, all consumers are entitled to choose their supplier, with the exception of households which will have that right as of 1st January, 2015. REA is in charge of approving the regulated tariffs for supply of electricity to qualified consumers and end-consumers supplied by the public supplier.

The activity of distribution of electricity and public supplier activity as currently handled by EPCG was planned to have been divided into separate companies by 22nd May, 2011 but the division has not been yet effectuated.

Participants in the electricity market determine their relations in accordance with Market Rules. The electricity market is operated by the market operator *"Operator tržišta električne energije"* d.o.o. Podgorica, formed in August 2011 and is still not completely operational. According to the Energy Law, the market operator is obliged to adopt Market Rules and submit it for approval to REA within six months after its establishment.

Cross-border capacities are allocated pursuant to Rules for Award of Available Transmission Capacities on Montenegrin Interconnections with Adjacent Areas for 2011 enacted by the Montenegrin TSO. According to this regulation, available cross-border transmission capacities are awarded at annual and monthly auctions, with the possibility of allocation of the remaining transmission amounts in the daily auctions or by applying on the basis of „first come - first served“ principle.

Prior registration with TSO is a prerequisite for participation in the auctions for the allocation of cross-border transmission capacities. The allocated capacities may be further transferred and such transfers must be reported to TSO within two days after the annual/monthly auction at the latest or until 9.45am day ahead for daily allocations at the latest.

All participants in the allocation procedure are treated either as suppliers (entities licensed for supply of electric energy in Montenegro) or as transporters (entities which are transporting electric energy through the Montenegrin transmission system; usually these entities are registered as traders).

The most important criteria for the allocation of the available cross-border transmission capacity is the category of the participant (supplier or transporter), where the supplier always has priority over the transporter. The second criteria is congestion price (price per MWh of transported electric energy in case demand exceeds cross-border capacities) and the third criteria is the time of bid submission (the earlier bid has priority).

Failure to use at least 90% of the allocated capacity leads to penalties equivalent to the highest congestion price on the relevant interconnection in the relevant period and may not be less than EUR 1 per MWh.

The Energy Law provides for the possibility of forming an entity for the coordinated auctions of cross-border capacities at a regional level outside the scope of REA's supervision.

2.6 Transmission and grid access

Access to the transmission/ distribution system may be granted only to a participant licensed for performing electrical energy activity in the Montenegrin electricity market.

Pursuant to Article 99 of the Law on Energy, TSO is obliged to enable third party access to the transmission system on a non-discriminatory basis, within its transmission capacities and in accordance with technical rules. The access may be denied only on technical grounds in the event of lack of capacity or danger to public services in the electricity sector. The unsatisfied party has the right to appeal to REA.

Pursuant to the previous Energy Law, REA has adopted the Rules on Third Party Access to the Transmission and Distribution Network (*„Pravila o pristupu treće strane prenosnoj i distributivnoj mreži“*,

Official Gazette of Montenegro, No. 13/07) (*“Rules on Third Party Access”*), which further elaborates the principles and procedure for third party access. Rules on Third Party Access remain applicable only to the extent they are not in contravention of the new Energy Law which also has comprehensive provisions on this issue. The interested party submits a request for access to the transmission/distribution network. TSO and the interested party are required to enter into an agreement on access to the transmission system which details special conditions related to calculation of access fees, the point of access, approved power, place and manner of measuring the electricity, termination grounds etc.

The Energy Law also regulates the connection of production and consumer facilities to the transmission system. The right to connect to the transmission system may be denied only in the event of technical impediments and/or if the equipment and installations do not fulfil the technical and other requirements. The deadline for the issuance of the connection approval is 30 days and, in case of more complicated connections - the deadline is 120 days. The unsatisfied party may appeal to REA within 15 days. The decision of REA is final in the administrative proceedings but may be challenged before the Administrative Court in the administrative accountancy proceedings. The connection approval determines, *inter alia*, conditions for connection, costs of connection, connection point, the manner, costs, technical conditions and deadline for connection, place and manner of measurement of delivered electricity. Based on connection approval the TSO and the interested party enter into a connection agreement. The costs of connection are borne by the interested party.

3. Renewable energy

3.1 Market overview

Montenegro has not yet formally set the goal for gross final energy consumption from renewable sources by 2020, but it is expected that it will be set at 29.5%. The latest available data indicate that this percentage is 23% and Montenegro is making efforts to increase it in the following years.

In the hydro power sector the Ministry of Economy has finished the second round of tenders for the award of a concession for development of small HPPs. In the large hydro sector, there are two pending procedures: Moraca project with envisaged installed power of 230MW and Komarnica project with installed power of 168MW.

In the wind sector, the Ministry of Economy has entered into two land lease agreements for the development of wind farms of estimated installed power of approximately 100MW. Currently, the environmental impact assessment is being performed for these projects.

Biomass, geothermal and solar energy sources are currently not used for power generation although there is a potential for all of them.

3.2 Support schemes

(a) General

The Montenegrin Energy Law generally prescribes that production from renewable resources may be increased, *inter alia*, by determining the minimum mandatory percentage of production from renewable resources, by reducing the investment costs and by prescribing feed-in tariffs.

A privileged producer is defined as a producer which uses renewable energy resources or waste or is involved in cogeneration, in an economically suitable manner and in compliance with environmental protection requirements. The status of privileged producer is acquired by a decision of REA subject to fulfillment of the following requirements: the production facility a) is connected to the transmission or distribution system; b) is producing energy from renewable resources or highly effective cogeneration; c) has its own measuring point; d) does not endanger the stability of the system. The status of a privileged producer is acquired for a period of 12 years.

Privileged producers are part of a balancing group which is not charged by the Market Operator for deviations. Privileged producers have priority in dispatching generated electricity subject to technical conditions of the system.

Each supplier of electricity is obliged to purchase electricity from privileged producers in the percentage equal to the percentage in which the renewable electricity participates in the total amount of electricity produced in Montenegro.

(b) Feed-in tariff

A feed-in tariff regime has been instituted for small HPPs and wind generators.

Pursuant to the Instruction on Methodology for the Calculation of the Purchase Price for Electricity Produced in Small HPPs ("*Uputstvo o utvrđivanju metodologije obračuna otkupne cijene električne energije iz malih hidroelektrana*", Official Gazette of Montenegro, No. 46/2007) ("*Methodology*") a feed-in tariff for small HPPs may be applied only to those small HPPs, commissioned until the overall participation of electricity generated in small HPPs achieves 3.5% of the overall annual needs for electricity in Montenegro. The Methodology prescribes for the adjustment of purchase price as a consequence of adjustment of tariffs. According to the decision of REA from 2008, the purchase price for renewable energy from small HPPs is 6,8976 cEUR/kWh.

The Government of Montenegro has adopted a Decree on Wind Generators ("*Uredba o vjetroelektranama*", Official Gazette of Montenegro, No. 46/2007) and a Rulebook on Methodology for Calculation of Purchase Price of Electricity from Wind Generators ("*Pravilnik o metodologiji za obračun otkupne cijene električne*

energije iz vjetroelektrana", Official Gazette of Montenegro, No. 27/2010). According to the methodology the purchase price for renewable energy from wind generators is approximately 9,599 cEUR/kWh.

(c) Certificates of origin

The Energy Law also stipulates the possibility of issuing certificates of origin by REA. The Government of Montenegro recently adopted the Decree on the Manner of Issuing, Transfer and Withdrawal of Guarantees of Origin for the Energy Produced from Renewable Sources and High-efficiency Cogeneration ("*Uredba o načinu izdavanja, prenošenja i povlačenja garancija porijekla energije proizvedene iz obnovljivih izvora energije i visokoefikasne kogeneracije*", Official Gazette of Montenegro, No. 37/2011).

The guarantees of origin are issued on a monthly basis and a request for their issuance must be submitted by the 15th day of the month for energy produced in the previous month. The request should contain information on the producer, production facility, type of primary energy being produced, data on the support schemes applicable to the facility and in case of high efficiency generation - additional data on the minimum calorific value of the fuel, its consumption and savings of primary energy. The first request is accompanied by a connection agreement, main design of the energy facility and a schematic overview of the measuring points.

The guarantees of origin are transferrable, both within Montenegro and abroad, and may be used by the supplier to prove the percentage of renewable energy in the overall quantity of the energy it sold.

4. Natural gas

4.1 Market overview

The natural gas market in Montenegro has a marginal influence on the overall energy market. Montenegro does not have any natural gas infrastructure and thus there is no access to any international gas transportation system. On the other hand, there is no domestic natural gas generation. Certain exploration projects reveal indications of natural gas reserves in the coastal area.

However, certain steps are expected to be taken, as Montenegro has formed partnerships with Croatia, Albania and Bosnia and Herzegovina on a project to develop a 400 km (of which 100 km will be through Montenegro) Ionic-Adriatic gas pipeline, which is intended to be a separate arm of a larger trans-Adriatic gas pipeline. The value of the gas infrastructure to be developed in Montenegro as part of the project is estimated at EUR 60 million. A contractor on behalf of Montenegro is expected to be appointed through a public tender by the end of 2012. Montenegro would then have a constant supply of natural gas from Italy and would be able to utilise more adequately its own underwater natural gas capacities.

4.2 Regulatory overview

Legal framework

The natural gas sector in Montenegro is covered by the Energy Law and bylaws purporting it as a principle piece of legislation. The following important laws may be applied in the natural gas sector:

- (a) Law on Mining ("*Zakon o rudarstvu*", Official Gazette of Montenegro, No. 65/08 and 74/10);
- (b) Law on Hydrocarbon Exploration and Exploitation ("*Zakon o istraživanju i proizvodnji ugljovodonika*", Official Gazette of Montenegro, No. 41/10);
- (c) Law on Spatial Planning and Construction of Buildings ("*Zakon o uređenju prostora i izgradnji objekata*", Official Gazette of Montenegro, No. 51/08, 40/10 and 34/11).

4.3 Regulated natural gas market activities

The Energy Law regulates the following licensed activities: (i) purchase of natural gas, (ii) storage, (iii) transportation, (iv) distribution and (v) supply. Any entity wishing to perform any of the natural gas activities must be a local entity registered with the Montenegrin Commercial Register and must apply for a licence to be issued by REA as the main regulatory body in the gas sector. The licences are issued for a period of up to 15 years with a possibility of renewal.

The Energy Law provides for the possibility of suspending a licence, upon request of the interested entity. REA is also entitled to cancel the licence: (i) upon the request of an energy undertaking, (ii) in the event that an energy undertaking is not fulfilling the conditions imposed by the licence, (iii) non-compliance with the material conditions for carrying out the energy activity, (iv) non-compliance with orders from the energy inspectorate. REA may also temporarily cancel a licence if the energy undertaking does not fulfil specific conditions for a particular gas activity, does not maintain gas facilities properly, and does not determine prices against methodologies adopted by REA, etc. REA shall leave an additional remedy period, no longer than 60 days, for compliance and shall cancel the licence permanently should the energy undertaking fail to remedy the breach.

4.4 Exploration and production

The exploration and production of natural gas and other hydrocarbons in Montenegro is regulated by the Law on Hydrocarbon Exploration and Exploitation ("*Zakon o istraživanju i proizvodnji ugljovodonika*", Official Gazette of Montenegro, No. 41/10) ("*Hydrocarbons Law*").

According to that recently adopted piece of legislation, natural gas may be explored and produced only based on concessions awarded by the Government through concluding a concession agreement

on gas exploration or a concession agreement on gas exploitation and exploration.

This law lays down the conditions, manner and procedure for research and production of hydrocarbons and regulates a number of other related issues. The Law excludes the application of other laws potentially applicable to exploration and production of carbons, such as the general Concessions Law, the Law on Mining and the Law on Geological Exploration.

The activities of research and production of hydrocarbons may be performed only with a concession awarded by the Government of Montenegro (for research) or the Parliament (for production) in accordance with the Hydrocarbons Law.

The Ministry of Economy ("*Ministry*") is in charge of all legal, administrative and technical issues related to the application of the Hydrocarbons Law.

The Hydrocarbons Law foresees two types of concession: for exploration and for production of hydrocarbons. However, the concession for production may also cover an exploration phase.

The procedure for the award of concession is almost identical for both concession types. The public invitation by which the procedure is initiated contains, *inter alia*, the following elements:

- (a) subject-matter of the concession;
- (b) existing technical information;
- (c) conditions to be fulfilled by the prospective concessionaire;
- (d) bidding criteria;
- (e) deadlines for submission and withdrawal of bids;
- (f) bid bond details.

Interested bidders are provided with tender documents comprising the instructions for the preparation of bids, including on the content of bids and the manner of bid submission as well as other information of relevance for the award of concession. The Hydrocarbons Law specifies that one of the mandatory elements of the bid is a proposal of a working program.

Tender commission, formed by the Ministry, prepares the ranking list which is delivered to the Ministry and then published on the Ministry's website. The bidders are allowed to review the documents in the period of 8 days and submit an appeal within an additional 8 days deadline. The Ministry is required to reach a decision on the appeal within 8 days as of submission of the appeal.

The Ministry then submits to the Government a detailed report, the ranking list and the proposal of the concession contract ("*predlog ugovora o koncesiji*").

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The decision on the award of concession for exploration is rendered by the Government, whereas in the event of a concession for production - the decision is rendered by the Parliament upon the Government's proposal.

A concession for exploration assumes the right of the concessionaire to perform geological, geophysical or other detailed analysis, in order to determine tectonic and structural features of the land or seabed and evaluate existence of hydrocarbons.

The concession for exploration is awarded by the Government of Montenegro for a period of up to 2 years. Within 6 months following the end of the research works, envisaged by the working program, the concessionaire is obliged to deliver a report containing research results. The mandatory content of this report is supposed to be prescribed by the Ministry.

A concession for production allows the concessionaire to produce hydrocarbons in accordance with the law.

A concession for production consists of the following phases:

1. Exploration phase and verification of reserves - the maximum duration is 6 years and can be extended for up to 2 additional years upon a decision of the Government;
2. Development phase - based on the development and production plan submitted by the concessionaire to the grantor in accordance with the concession contract;
3. Production phase - starts on the day of first extraction of the hydrocarbons from the well, and may last up to 20 years with the possibility of extension for half of the initial period of the concession.

The main features of the concession arrangement:

- (a) The surface area of the production field is determined by the concession contract and the maximum surface area is 150km²; exceptionally, it may be increased to 300km². Any surplus surface area should be returned to the grantor once the production phase starts;
- (b) The Law prescribes two types of royalties: (i) one is payable on the annual level based on the surface area covered by the concession and (ii) the other one is determined as a percentage of the quantity of oil/gas produced by the concessionaire and can be paid as a monetary amount, in accordance with the concession agreement;
- (c) The concessionaire is obliged to incorporate a Montenegrin company to pursue the concession project;
- (d) The concessionaire is obliged to allow third party access to the facilities and upstream network for joint use provided

that it does not interfere with the regular operations of the concessionaire. The manner and conditions of access are supposed to be regulated in detail by implementing bylaws to be adopted by the Ministry;

- (e) If a well is located on territory belonging to two concessionaires, the grantor may request from the concessionaires to propose a program of joint development and production;
- (f) The Law prescribes detailed obligations of the concessionaire regarding the protection of the environment, safety of production, revitalisation of the affected environment and the plan for conservation of the well and removal of the equipment following the completion of production phase;
- (g) The concessionaire is obliged to procure insurance for the duration of the concession contract in accordance with the best international practice in this industry and provide evidence thereof to the grantor. The Law prescribes for the obligation of the concessionaire to indemnify the grantor and third parties for all the damages incurred as a result of concessionaire's actions during the concession agreement. The concessionaire is specifically obliged to compensate all environmental damages caused in the course of execution of the concession contract for production;
- (h) Engagement of contractor and subcontractors is subject to the Ministry's approval;
- (i) The Law specifically prescribes for the grantor's right to impose mandatory purchase of part or all of the oil and gas produced, at a price equal to the international market price for that quantity and quality;
- (j) If the concessionaire is a consortium, each member is jointly and severally liable for all the obligations arising from or in connection with the concession agreement;
- (k) Pledge or mortgage over the assets obtained under the concession contract or over production facilities is possible only with the grantor's approval;
- (l) Disposal of stakes or other ownership interest in the project company as well as disposal of ownership or other rights of the concessionaire may be performed only with the grantor's approval.

Government is expected to announce a public tender for the award of a concession for the exploration and production of oil and gas in 2011. Already 18 reputable gas and oil companies have sent an expression of interest for the award of a concession, since recent geological explorations have revealed the possible presence of nearly 425 billion m³ of a natural gas in the coastal area of Montenegro.

4.5 Transmission and access to the system

(a) General

Since gas infrastructure is rather undeveloped, there is no gas transportation system in Montenegro for the time being. Nevertheless, the Energy Law sets out rules for the potential future gas transmission and gas transmission systems.

(b) Access to the gas transmission system

A gas transmission system operator ("GTSO") is obliged to provide access to the gas transmission system ("GTS") to all customers based on non-discriminatory principles. A GTSO shall be appointed in 2013 but no later than 90 days after the acquisition of a construction permit for the development of a gas transmission system in Montenegro.

GTSO is entitled to reject access to the system in the event of: (i) lack of transportation capacity, (ii) if access would endanger performance of public services, (iii) GTS technical incompatibility, (iv) severe economical and financial problems caused due to the take or pay obligations (upon the request of the supplier that has entered into the take or pay gas supply agreement).

Major new gas infrastructure such as interconnectors, transportation gas lines, LNG and LPG facilities and storage facilities, may, upon request, be exempted, from the obligation to provide access or to apply regulated tariffs and conditions under certain conditions.

On the other hand, even the natural gas supplier is entitled to request exemption of the GTSO, in the event that it can envisage severe financial and economic difficulties due to undertaken take or pay obligations.

4.6 Storage

Since Montenegro still does not have any gas storage facilities, the storage sector appears under-regulated. However, the public gas supplier and GTSO, storage facility operator shall be appointed by the Government in 2013, but no later than 90 days after the acquisition of the construction permit for the development of a gas transmission system in Montenegro. Operating and storing shall be subject to a licence issued by the REA. The rules applicable to the GTSO access shall be *mutatis mutandis* applied to gas storage and access to gas storage.

4.7 Liquefied natural gas and liquefied petroleum gas

The Energy Law regulates the following activities related to liquefied natural gas ("LNG") and liquefied petroleum gas ("LPG"): (i) transportation and storage of LNG, (ii) operation of LNG system, (iii) operation of LPG system, (iv) wholesale and supply of LNG and (v) wholesale and supply of LPG.

Performance of any of the above activities is subject to obtaining a licence from the REA.

Under the previous energy law, the energy companies mostly held licences for the commercial transport, storage and supply of LPG, while under the new Energy Law, 4 licences for supply of LPG, 4 licences for storage of LPG and one licence for the wholesale trade of LPG are to be issued by the REA.

Since a LNG/LPG system is expected to be developed, the Energy Law provides that the LPG/LNG system operator should be appointed in 2013 but no later than 90 days as of the day of obtaining of the construction permit for the development of a gas transmission system in Montenegro. The Energy Law regulates LPG/LNG system operator's duties and responsibilities and access to the LNG/LPG system. According to the Energy Law, the same company may simultaneously operate as GTSO, gas distribution system operator and LNG/LPG system operator.

The LNG/LPG system operator shall be obliged to provide access to the LNG/LPG system to all customers based on non-discriminatory principles under regulated prices approved by the REA. The LNG/LPG system operator may reject access under conditions of potential danger to people and property, technical difficulties, maintenance of the LNG/LPG system etc. As mentioned under section 4.2 above, new LNG/LPG facilities may be exempted from obligations to provide access by resolution of REA.

5. Upstream oil market

5.1 Market overview

Currently there are no oil exploitation capacities in Montenegro. However, years of undersea exploration indicate that there are significant reserves of oil and gas in the seabed near the Montenegrin coast. The Government of Montenegro is preparing to launch a tender for the award of concession for further exploration and exploitation of oil.

5.2 Regulatory overview

Similarly to the natural gas sector the oil sector is governed by the Energy Law as well as Law on Mining, Law on Hydrocarbon Exploration and Exploitation and Law on Spatial Planning and Construction of Buildings.

5.3 Regulated oil market activities

The Energy Law regulates the following licensed activities: (i) oil transportation; (ii) transport of oil derivatives; (iii) wholesale trading; (iv) retail trading and (v) storage of oil and oil derivatives. Any entity wishing to perform any of the natural gas activities must be a local entity registered with the Montenegrin Commercial Register and must apply for a licence to be issued

by REA as the main regulatory body in the gas sector. The licences are issued for a period of up to 15 years with a possibility of renewal.

The Energy Law provides for the possibility of suspending a licence, upon request of the interested entity. The REA is also entitled to cancel the licence: (i) upon the request of an energy undertaking, (ii) in the event that an energy undertaking is not fulfilling the conditions imposed by the licence, (iii) non-compliance with the material conditions for carrying out the energy activity, (iv) non-compliance with orders from the energy inspectorate. The REA may also temporarily cancel a licence if the energy undertaking does not fulfil specific conditions for a particular gas activity, does not maintain gas facilities properly and does not determine prices against methodologies adopted by REA, etc. The REA shall leave an additional remedy period, not longer than 60 days, for compliance and shall cancel the licence permanently should the energy undertaking fail to remedy the breach.

5.4 Exploration and production

The Law on Hydrocarbon Exploration and Exploitation governs the exploration and exploitation of oil and all the abovementioned with regards to the exploration and exploitation of natural gas also applies to the exploration and exploitation of oil.

1. Introduction to the energy market

As a candidate country for EU membership, the Republic of Macedonia is facing the challenges of harmonising its laws with EU Directives and complying with the Stabilisation and Association Agreement.

The Republic of Macedonia is a signatory to the Energy Charter Treaty and Energy Community Treaty which further harmonise its energy legislation with the EU *acquis communautaire* with regards to the energy sector, environment, competition, renewable sources of energy, energy efficiency and oil reserves. The Republic of Macedonia has also signed and ratified the UN Framework Convention on Climate Change and the Kyoto Protocol, as a non-Annex I country. With this status it may use the Clean Development Mechanism for attracting foreign investments in projects for the reduction of greenhouse gas emissions.

These developments resulted in the passing of a new Energy Law, in February 2011 ("Energy Law") which led to important changes in the legal regime governing the energy market. It is aimed at achieving further harmonisation with the Energy Community Treaty, with ultimate goal of further liberalisation of the energy market and providing for a sustainable energy sector.

The Energy Law has achieved high compliance with the EU Directives in the energy sector. It has managed to partially delegate the secondary regulations to the system operators (with the grid codes). The law also deals with issues of no relevance to the Republic of Macedonia at this stage but which will apply once full EU membership is achieved.

Full liberalisation of the electricity and natural gas energy markets shall be achieved as of 2015 when all customers shall be able to purchase energy or natural gas from generators, suppliers or traders, at their choice and preference.

1.1 Regulatory overview: Energy Regulatory Commission

For the purpose of securing efficient, competitive and uninterrupted operation of energy markets, the Energy Regulatory Commission of the Republic of Macedonia ("ERC") was set up as an independent legal entity, authorised to regulate matters pertaining to energy activities performance stipulated under the Energy Law. It is composed of five members, elected by the Parliament of the Republic of Macedonia, after nominations by the Government. It has specific duties and obligations, as well as rights and authorities on the energy market related to energy market participants on the implementation of legally stipulated obligations of entities performing regulated energy activities in order to secure reliability of electricity, natural gas and heating energy supply.

The ERC passes bylaws (regulations, decisions, resolutions), approves documents (plans, programs) of the market participants, monitors the functioning of the energy markets, resolves disputes among performers of the regulated energy activities and consumers, adopts

methodologies and tariffs for the services of the regulated energy activities and tariff systems for energy sale and passes decisions on the tariffs and the prices.

The ERC issues all licences for the performance of energy activities.

The Energy Law regulates the manner of financing of the ERC by determining that, in addition to the payment for the issued licences, a certain annual amount of the profit made by the licence holders shall be paid to the ERC but no more than 0.1% of the total revenue. By means of tariff-setting regulations and methodologies for services provided as regulated energy activities, the ERC stipulates the manner of calculation, approval and control of revenue generation from the performance of regulated energy activities. Electricity and natural gas price-setting regulations for consumers supplied by the supplier of last resort and the means by which the ERC sets out the manner of determination, approval and control of electricity and natural gas end prices to be paid by consumers. These shall include electricity or natural gas generation or purchase price, relevant tariff on use of energy systems and markets, balancing costs, supply charge, as well as financial and other forms of reimbursements awarded for the purpose of implementing the obligations on public service provision. Price-setting regulation and methodology for oil derivatives and fuels for transport are the means by which the ERC stipulates the manner of setting, approval and control of refinery and retail prices for petrol, diesel fuels, light fuel oil and heavy oil (mazut), as well as retail prices for blends of fossil fuels and biofuels for transport.

1.2 Market overview

Macedonia's energy demand amounts to approximately 79,567 TJ per year and is increasing annually at a rate of approximately 3%. Energy sources comprise electricity (37%), oil derivatives (43%), renewable (13%) and natural gas (5%). Macedonia imports all of its oil and gas demands. Macedonia does not have any nuclear energy production capacity.

The medium and long-term supply is expected to be met by domestic lignite reserves, imported gas, renewable resources such as hydro electricity, and electricity imports.

In 2010, approximately 80% of total electricity consumption in Macedonia was met by domestic production and 20% was imported.

Macedonia has a total installed power generation capacity of 1,538MW, of which 1,010MW is thermal power generation and the rest is hydro power capacity.

2. Electricity

2.1 Market overview

The main functions of the electricity system of the Republic of

Macedonia are generation, supply, transmission and distribution of electric energy.

Participants in the electricity markets are the electricity generators, electricity transmission system operator, electricity distribution system operator, electricity market operator, suppliers and trades with the electricity and the consumers. Each have certain rights and obligations, as well as stipulated conditions on undertaking activities and use of the electricity system.

The process of restructuring the Electric Power Company of Macedonia ("ESM") commenced in 2004 and was completed by September 2005. As part of the Government's program to liberalise the electricity market, the restructuring resulted in the unbundling of the vertically integrated ESM into four legally separate enterprises. The Macedonian Electricity (Transmission) System Operator ("MEPSO") is owned and controlled by the Government and is responsible for transmitting electricity and managing the high voltage transmission network, operating the electricity central dispatching system and implementing market operations. Electricity generation is performed by JSC Electric Power Plants of Macedonia ("ELEM") which is owned by the Government, and JSC TPP Negotino – a thermal power plant owned by the Government. ESM, now EVN AD Makedonija, joint stock company, performs distribution and retail supply for tariff consumers and was privatised in 2006 through a sale of 90% of its shares to the Austrian company EVN AG.

The Energy Law imposes further requirements on the legal unbundling of the electricity transmission system operator and the electricity distribution system operator. The aim is to secure independence in the electricity transmission and distribution activity performance, as well as for the purpose of implementing the obligation on the public service provision in a non-discriminatory, objective and transparent manner. These legal entities cannot hold licences on electricity generation, transmission or distribution as applicable, trade, supply or supply of last resort activities. Each of these operators must adopt a compliance program on prevention of discriminatory behaviour as well as securing independence in the decision making on the assets required for the system operation, maintenance and development, which must be made independently of the interests of the vertically integrated company to which the operator belongs or the interests of the related company. This program must be submitted for approval to the ERC.

The electricity market operator is responsible for the electricity market organisation, efficient operation and development, pursuant to the principles on publicity, transparency, non-discrimination and competitiveness. It is also obliged to provide the services falling under its competences, pursuant to the Energy Law and the terms and conditions stipulated in the licence. It keeps the records on physical transactions of electricity, based on the information on electricity purchase/ sale and transit transactions submitted by electricity market users. It further calculates the electricity consumed, transited or delivered between electricity market participants, as well as the imbalances occurring with regard to announced and realised transactions and submits these calculations

to the electricity transmission system operator.

All the customers are designated as eligible electricity consumers, with the right to choose the electricity supplier of their own preference. Full market liberalisation will be achieved gradually by year 2015.

2.2 Regulatory overview

In accordance with the Energy Law, the following energy activities in the electricity market are regarded as regulated energy activities:

- (a) electricity transmission;
- (b) electricity market organisation and operation;
- (c) electricity distribution;
- (d) electricity supply of last resort; and
- (e) electricity generation for the needs of the electricity supplier of last resort.

A licence on regulated energy activity performance can be issued only to companies or public enterprises registered in the Republic of Macedonia.

Entities which perform regulated energy activities are obliged to comply with the obligations on the provision of public service. The ERC determines or approves the prices and terms and conditions for providing public service. The additional obligations on providing public service, imposed by the ERC must be clearly stipulated, easily verifiable and non-discriminatory, and should be defined in the relevant licence and published on the website of the ERC.

The services provided by entities performing regulated energy activities should secure reliable, high-quality and uninterrupted energy and energy fuel delivery to consumers, under equal terms and conditions, prices and tariffs, taking into due consideration the need for energy efficiency improvements and environmental protection and promotion.

The ERC is authorised to pass the Electricity Market Code and the Supply Rules, in addition to the regulation described above.

2.3 Generation

The Energy Law stipulates that an electricity generator may sell electricity and/or ancillary services to domestic and foreign traders, electricity suppliers, electricity transmission system operator and electricity distribution system operators. This is to assist in the liberalisation of the energy market and creating the framework for competitive energy market, which is the main idea of the revisions in the Energy Law.

The electricity generator can sell electricity and/or ancillary services to domestic and foreign traders, electricity suppliers, electricity transmission system operator and electricity distribution system operators. The electricity generator is obliged, *inter alia*:

- (a) to secure the availability of agreed energy and/or ancillary services at the receipt point in the transmission or distribution system, pursuant to the licence;
- (b) to operate in compliance with the laws, other regulations, as well as Transmission Grid Code or Distribution Grid Code, Market Code and terms and conditions stipulated in the licences;
- (c) to submit to the electricity market operator and the electricity system operator data and information on electricity purchase and sale contracts, as well as the availability of generation capacity and/or ancillary services; with the exception of commercial and financial data, pursuant to the Market Code; and
- (d) to secure electricity for own consumption from its facilities or on the open market.

The Energy Law stipulates that electricity generation for the needs of the electricity supplier of last resort is a regulated energy activity. Such an electricity generation licence includes the obligation to provide a public service by electricity generation aimed to meet the demand of households and small consumers supplied by the electricity supplier of last resort. An electricity generator which already holds a licence to provide public service for tariff consumers, as granted under the previous law, is obliged on the day of entry of the Energy Law to comply with the obligation stipulated for this regulated energy activity.

The generator and electricity supplier of last resort must submit to the ERC for approval electricity purchase and sale contracts for the forthcoming year. The duration of these contracts cannot be less than one calendar year. If the parties fail to submit the contract within the given deadline or if the ERC does not approve the contract within a period of ten days from its submission, the ERC shall by 15th December in the calendar year at the latest, adopt a decision setting out the relations between the generator and the electricity supplier of last resort.

When the demands of consumers defined under the contracts with the electricity supplier for last resort have been met, the generator can sell excess electricity in the electricity market pursuant to the rules previously approved by the ERC. The rules for the sale of excess electricity in the electricity market shall be prepared by generator setting out the terms and conditions, manner and procedure concerning the sale, and shall be based on the principles of transparency and non-discrimination.

Liberalisation of the electricity market shall be achieved by 31st December 2014. Until this time households shall remain tariff consumers. An electricity generator licensed for the regulated energy activity shall, therefore, be further obliged at that time to generate electricity for the demands of tariff consumers, and to provide ancillary services, operational reserve and balancing energy to the transmission system operator, within the limitations and possibilities of its generation units, under the prices approved and published by ERC.

2.4 Trading and supply of electricity

The electricity trader may purchase electricity in the country and from abroad, for the purpose of selling it to other traders, suppliers, the electricity transmission system operator and electricity distribution system operators, as well as for the purpose of selling it to consumers abroad. The electricity trader in the role of supplier can sell electricity to consumers which meet the requirements for independent participation on the electricity market, as stipulated under the Electricity Market Code. They must also submit to the electricity market operator information on the electricity quantities and relevant time schedules relating to all electricity purchase/ sale contracts, as well as related to contracts on cross-border transactions through the transmission grid. An electricity trader when performing cross-border electricity transactions must provide sufficient interconnection transmission capacity and/or distribution capacity and regulated services, pursuant to the relevant bylaws (Electricity Market Code, Transmission and/or Distribution Grid Code, Rules on Awarding Cross-Border Transmission Capacity) for the electricity it has undertaken to deliver to its consumers.

The electricity supplier purchases electricity in the country and from abroad, for the purpose of selling it to consumers, traders, other suppliers, the electricity transmission system operator or the electricity distribution system operators, as well as to consumers abroad. For the electricity it has committed to deliver to its consumers, the electricity supplier should secure the necessary transmission and/or distribution capacity from the relevant operators, pursuant to the applicable tariffs, Electricity Market Code, Transmission and Distribution Grid Codes.

The electricity supplier shall invoice the consumers for the electricity delivered under the agreed price and the electricity market use charge. When the supplier has signed a contract with the electricity distribution system operator on charging the distribution costs, the electricity supplier shall also invoice the consumers for the transmission and/or distribution system charges. The invoices shall be issued on the basis of active and/or reactive electricity consumed and engaged power, as metered by the relevant system operator.

The electricity supplier of last resort purchases electricity to address the demands of households and small consumers which have selected the supplier of last resort. The purchase prices and relevant contracts with the generator are approved by the ERC.

In order to address the demands of its consumers, the electricity supplier of last resort shall guarantee the necessary transmission and/or distribution capacity, as well as the services of the electricity market operator. The electricity supplier of last resort shall invoice its consumers for the electricity delivered and services provided pursuant to the Tariff System on electricity sale to households and small consumers. As an exemption, it may purchase electricity at market and below market prices provided that (i) market terms and conditions and market prices are more favourable compared to terms and conditions and prices set for the generator; or (ii) at given periods, the electricity generated by the generator is insufficient to meet the electricity demand of households and small consumers.

As an exception, electricity consumers which meet the requirements for independent participation on the electricity market as set out in the Market Code can purchase electricity directly from electricity traders.

The relevant system operator shall discontinue electricity supply to consumers without signed electricity supply contracts, unless the consumers in questions come into the categories of households and small consumers which are to be supplied by the electricity supplier of last resort.

For the purpose of the transparent, efficient and competitive trade in electricity and ancillary services, electricity market participants can conduct trade in electricity or ancillary services on the electricity exchange in the Republic of Macedonia established pursuant to the law or on the regional electricity exchange.

2.5 Transmission

The electricity transmission system operator shall maintain, upgrade and expand the transmission grid, operate the electricity transmission system of the Republic of Macedonia and secure connection of the transmission system to the transmission systems in the neighbouring countries. The charge for the use of the electricity transmission system is regulated by electricity consumers in the Republic of Macedonia, pursuant to the published tariff. The electricity transmission system operator shall invoice the system use charge to:

- (a) consumers directly connected to the electricity transmission system who act independently on the electricity market;
- (b) suppliers or traders, for the consumers directly connected to the electricity transmission system, who do not act independently on the electricity market;
- (c) electricity distribution system operators or electricity suppliers for the consumers connected to the electricity distribution systems.

The electricity transmission system operator shall invoice the electricity market participants for the deviations from announced

physical transactions, in accordance with prices calculated pursuant to the price-setting methodology for balancing services.

The electricity transmission system operator is obliged, *inter alia*, to connect generators, consumers and distribution system operators to the transmission grid, as well as to allow third party access for electricity transmission system use, pursuant to the present law and the Transmission Grid Code. Based on the principles of objectivity, transparency and non-discrimination, it is obliged to construct new interconnection capacities with neighbouring countries, taking due consideration of the efficient use of existing interconnection capacities and the balance between investment costs and benefits for the consumers, to provide cross-border electricity flow through the transmission grid of the Republic of Macedonia within the available transmission capacity, as well as to develop, upgrade and maintain the transmission system, for the purpose of safe and efficient system operation.

In order to cover losses in the electricity transmission system electricity is purchased under market terms and conditions and in a transparent, non-discriminatory and competitive manner, as well as to purchase ancillary services and relevant operation reserve, under market terms and conditions and in a transparent, non-discriminatory and competitive manner, pursuant to the Electricity Market Code.

The electricity transmission system operator is obliged to adopt and publish the Rules on Interconnection Transmission Capacity Awarding.

2.6 Distribution

The electricity distribution system operator is responsible for the maintenance, upgrading, expansion and operation of the distribution system used to perform its activity, and shall be obliged to secure its connection to the electricity transmission system. The distribution system use charge shall be payable by electricity consumers connected to the distribution grid. The electricity distribution system operator shall invoice the electricity distribution system use charge to consumers connected to the electricity distribution system, as well as the electricity transmission system use charge, pursuant to the published tariffs. As an exception, the electricity distribution system operator can sign contracts with electricity suppliers or traders by means of which it shall authorise them to collect these charges.

2.7 Access and connection to grids

The Energy Law sets out the obligation for the transmission and/or distribution system operators, on the basis of the published tariffs, to allow access to the relevant system for eligible customers, in a transparent and objective manner that prevents discrimination of system users.

The transmission and/or distribution system operators shall be obliged to allow connection to the relevant system, pursuant to the relevant Grid Code:

- (a) to all electricity consumers and users of the electricity transmission system and the distribution systems on the territory of the Republic of Macedonia;
- (b) to all natural gas or heating energy consumers and users of the natural gas or heating energy transmission and distribution systems on the territory where the service is provided, when deemed cost-effective.

The electricity transmission or distribution system operators shall provide priority access to electricity systems for the electricity generated from renewable sources, taking into due consideration the limits stemming from the possibilities in the electricity system.

The relevant energy or natural gas transmission or distribution system operator shall be obliged to allow existing and new grid users access to the relevant energy transmission or distribution grid, pursuant to the relevant Grid Code and Supply Rules:

- (i) in an objective, transparent and non-discriminatory manner;
- (ii) based on the principles of regulated third party access; and
- (iii) in accordance with prices and tariffs previously approved and published by the ERC.

The relevant energy transmission or distribution system operator can deny access to the relevant grid only in cases of electricity or natural gas transmission or distribution capacity shortage. It shall be obliged to inform the access applicant in writing, with detailed and unambiguous explanation of the reasons for the access denial. The natural gas transmission system operator can deny access to the system also in cases of risks to the reliability of supply in the Republic of Macedonia.

The relevant energy transmission or distribution system operator, as part of the relevant Grid Code, shall be obliged to set out the connection rules for the relevant grid and the connection charge-setting methodology. The connection rules shall take into due consideration the consequences caused by the connection and which affects other grid users, the connection points at plants, facilities and devices and type of installation required for grid connection.

3. Renewable energy

3.1 Market overview

The legal framework in the Republic of Macedonia is aimed at stimulating investments in renewable energy and the greater

involvement of renewable energy resources in total energy consumption and increasing energy efficiency. There are favourable conditions for the use of hydro energy, geothermal energy, solar and wind energy as well as energy derived from biomass.

The Energy Law strengthens the legal and institutional aspects of promoting the use of renewable energy sources.

Of all renewable sources of energy in Macedonia, hydro power is used for the production of electric power, biomass is most frequently used in the form of firewood for households, and geothermal energy is mostly used for heating greenhouses. Solar thermal energy is used for heating domestic hot water. The most common renewable sources of energy are hydro power, wood and geothermal energy which together contribute approximately 16% of the total annual consumption of energy in Macedonia.

(a) Small hydro power plants ("SHPPs")

SHPPs offer attractive opportunities for the production of electric power from renewable sources of energy. In Macedonia 400 locations are determined as suitable for the construction of SHPPs, with individual installed capacity of up to 5MW, or an aggregate installed power of approximately 250MW and expected annual production of 1,200 GW/h.

(b) Solar thermal

Solar energy in Macedonia is already used for domestic water heating. However, given Macedonia's geographic position and climate, there is even greater potential for the use of solar energy. The total annual solar radiation varies from minimum 1250 kWh/m² in the northern part of the country to a maximum 1530 kWh/m² in the south-western part and provides an average annual solar radiation of 1385 kWh/m². The annual average daily solar radiation varies between 3.4 kWh/m² in the northern part of the country (Skopje) and 4.2 kWh/m² in the south-western part (Bitola). Climatic conditions – high solar intensity and duration, temperature, humidity – provide favourable conditions for the successful development of solar energy. The continental climate with hot and dry summers classifies Macedonia among the countries with high potential for use of solar energy, compared to the average European countries.

(c) Geothermal

The territory of the Republic of Macedonia belongs to the Alps-Himalayas region with a sub-zone characterised by no contemporaneous volcanic activity. At the moment, 18 geothermal fields are known with more than 50 geothermal springs and wells. The total flow is about 1000 l/sec at a temperature of 20-78 °C. The hot waters are predominately of hydrocarbon nature, with dominant anion and mixed structure with equal presence of sodium, calcium and magnesium. Dissolved minerals are within the range of 0.5 to 3.7 g/l. All thermal waters in Macedonia are of meteoric origin. The hot spring is the regional flow of heat, and in the Vardar area it accounts for 100 mV/m², under earth layer thickness of around 32 km.

(d) Biomass

Biomass has a significant contribution to the energy balance of the Republic of Macedonia. It comprises 166 ktoe (1930 GWh; 6950 TJ), accounting for 11.5% of the total energy generated in the Republic of Macedonia (2006 data), that is 6% of total primary energy consumed and 9.5% of total final energy consumed. Biomass for combustion accounts for 59% in the use of renewable energy sources in Macedonia.

(e) Biodiesel

The oil and gas retailer JSC AD Makpetrol opened the first biodiesel plant in Macedonia in August 2007. The plant has an annual capacity of 30,000 tonnes. The privately-held joint stock company, AD Makpetrol, financed the project from its own funds. The biodiesel plant is expected to meet European standards EN 14214 and AD Makpetrol aims to sell its production both at home and abroad. It will use non-refined rapeseed oil imported from the EU.

(f) Wind

According to the geographic location and landscape configuration, favourable sites for wind power plants construction in Macedonia include the valley of the river Vardar, in the Povardarie region, Ovce Pole in the vicinity of Sveti Nikole, as well as higher mountains characterised by high wind speeds.

At the present time there are eight registered power plants for the generation of electricity from renewable energy sources and sixteen preferential electricity generators (generators which have the right to sell electricity under feed-in tariffs). The electricity market operator is obliged to purchase the electricity generated by preferential electricity generators. At the request of the preferential generator, the electricity market operator is obliged to sign an electricity purchase contract for the purchase of electricity from the above-mentioned generators. The electricity market operator shall sell the electricity to electricity suppliers and traders supplying electricity to customers who meet the requirements for independent participation in the electricity market as stipulated under the Market Code.

3.2 Support schemes

The Strategy on Renewable Energy Sources sets out the policy on the use of renewable energy sources which set the targets on the use of renewable energy sources and the manners for attaining these targets, in particular:

- (a) renewable energy sources potential;
- (b) feasibility of the use of renewable energy sources;
- (c) target volume and dynamics for increasing the share of electricity from renewable sources and share of biofuels in the gross final energy consumption; as well as the share of biofuels in the total consumption of fuels for transport; and

- (d) incentives for the use of renewable energy sources, aimed at: (i) reducing the costs for electricity generation from renewable sources and production of biofuels; (ii) increasing the prices of electricity generated from renewable sources or prices for biofuels; or (iii) obligations for purchasing the electricity generated from renewable sources or the obligation for blending fossil fuels and biofuels in the fuels for transport.

These incentives include in particular: investment support, tax credits, obligation of the electricity suppliers to purchase electricity generated from renewable sources and obligation on mandatory placing on the market of blends of fossil fuels with biofuels, issuing guarantees of electricity origin, feed-in tariffs for generated electricity purchase, and increased prices for the consumers, as regards the use of energy from renewable sources.

In the aims of stimulating the construction of new power plants using renewable energy sources or high-efficiency cogeneration plants, the said generation facilities can obtain the status of a preferential generator, and thereby the right to sell electricity under feed-in tariffs.

The Energy Law has simplified the procedures for acquiring the status of preferential electricity generator by authorising the ERC to issue a decision on granting the status and maintaining the relevant registry while the Government is authorised to determine the feed-in tariff and duration. In order to stimulate investments in renewable sources, temporarily status of preferential electricity generator may be awarded if the investor has obtained the construction authorisation for the energy facility in question, or has obtained a construction permit for the energy facility, when the construction thereof does not require a construction authorisation or has signed a concession contract for the use of natural resources or has acquired the right to construction of the energy facility in an open call procedure, pursuant to the Energy law.

Preferential generators are entitled to apply the feed-in tariff under terms and conditions in effect on the day when the temporary decision was issued. The ERC shall delete the entry of the power plant from the Registry of Preferential Generators if the power plant in question has not come into operation within the deadline stipulated in the temporary decision and thus shall terminate its status of preferential generator.

The electricity market operator purchases the generated electricity from the preferential electricity generators and incorporates the costs arising from the difference between the regulated price of electricity and the feed-in tariff in the transmission tariff paid by all consumers. Thus, any increase in the cost of electrical power system required to bring these generators on line is socialised to all consumers of electricity. The Government of the Republic of Macedonia passed an Act on Electricity Feed-In Tariffs, which stipulate, for each type of preferential generator separately, the following:

- (i) the specific terms and conditions to be met by the power plant in order to obtain the status of preferential generator;
- (ii) the upper threshold for the power plant installed capacity required for obtaining the status of preferential generator; and
- (iii) electricity feed-in tariffs and period for their application.

The Energy Agency issues, transfers and revokes guarantees of electricity origin from renewable sources. The guarantee of origin is a document issued by the Agency for the purpose of securing evidence for consumers that a particular energy quantity has been generated from renewable sources. The guarantees of electricity origin issued by foreign states can also be recognised if they fulfil certain conditions prescribed by law. This also represents one of the incentives applied for purpose of promoting renewable energy sources. The guarantees of electricity origin from renewable sources issued by foreign countries shall be recognised under the terms and conditions and in a manner stipulated pursuant to the present law.

4. District heating

4.1 Market overview

Market participants are defined by the Energy Law as generators, operator of the distribution system and district heating suppliers, following the market model for the electricity market with the necessary differences arising from the energy type in question.

Municipalities, as units of the local self-government, are obliged to enable the performance of the following energy activities for the purpose of reliable, safe, uninterrupted and quality heating energy supply to the consumers on their territories:

- (a) heating energy generation;
- (b) heating energy distribution; and
- (c) heating energy supply.

The heating energy supplier is obliged to provide the consumers with which it has signed contracts, with reliable, uninterrupted and quality heating energy supply, pursuant to the Heating Energy Supply Rules, the supply contracts signed and the licence issued. For all heating energy systems where it supplies the consumers, the heating energy supplier is obliged to sign annual contracts with the heating energy distribution system operator for the heating energy purchase intended to address the consumers' demand, as well as a contract on distribution system use, under prices and tariffs previously approved and published by the ERC. These contracts

are subject to approval by the ERC, and stipulate in detail the mutual rights and obligations of suppliers and distribution system operators, based on the Distribution Grid Code and Heating Energy Supply Rules.

The supply of thermal energy is fully liberalised. Heating energy consumers connected to the distribution system in places where a heating energy system is already established are entitled to choose their supplier at own preference. The heating energy supplier, based on data from reading metering devices and local allocation devices, presents invoices and collects the heating energy delivered to consumers under the price calculated comprising the average price for heating energy for the regulatory period, the tariff on distribution system use and the heating energy supply charge.

The threshold of the supply charge is determined by the ERC by means of a decision adopted prior to the beginning of any calendar year.

4.2 Regulatory overview

Under the Energy Law, the distribution of thermal energy and the regulated generation of thermal energy are regarded as regulated energy activities. A licence for the regulated heating energy generation activity is granted on the basis of an open call procedure by the ERC. In the distribution systems in which there is only one generator of thermal energy, it shall by exemption be granted a licence for regulated generation of the thermal energy.

At the request of the regulated generator, the ERC shall set the charge to be paid to the regulated generator for the services provided in the heating energy system. When setting the charge, due consideration shall be taken of the fixed and variable costs of the regulated generator, as well as the reasonable return of capital. The charge shall comprise two portions - charge for the provision of ancillary services and system reserve and regulated price for the heating energy generated.

The ERC shall adopt the Price-Setting Rulebook for Heating Energy and Ancillary Services, by means of which it shall stipulate the manner, procedure and price-setting methodology for ancillary services and system reserve charges, the regulatory price for the heating energy generated, as well as the manner of calculating and the regulatory period for which the average price for heating energy is calculated.

The licence holder on regulated heating energy generation cannot hold a licence on heating energy distribution, supply activities, heating energy generation and supply activities.

The regulatory regime on the thermal energy supplier is explained in section 4.1 (Market overview).

4.3 Generation

Independent generators generate thermal energy as secondary products in the combined thermal electricity and regulated

generators of thermal energy which, in addition to the requirement to provide public service, are obliged to provide energy to cover losses in the system, system reserve and system services. The charge of the regulated generator for the ancillary services is stipulated by the ERC.

The regulated heating energy generator shall be obliged to provide the public service of heating energy generation in order to meet the consumers' demand and provide energy to cover system losses, ancillary reserves and services for the purpose of maintaining the required operational parameters (temperature and pressure) within the heating energy system to which it is connected.

The heating energy generator shall own and operate the heating energy generation plant pursuant to the law, other regulations, grid code and the terms and conditions and criteria stipulated in the licence and shall sell the heating energy to the heating energy distribution system operator to which it is connected, under the terms and conditions stipulated in the Energy Law. The heating energy generator can also sell the heating energy to consumers which are not connected to the heating energy distribution system but are directly connected to its generation plant.

4.4 Distribution

Heating energy distribution is performed by (i) legal entities which own heating energy distribution systems, or (ii) legal entities which operate, use and maintain the existing heating energy distribution system, on the basis of concession contracts on new system construction or concession contracts on the public service - operation, use and maintenance of the existing heating energy distribution system, or (iii) public enterprises established by the local self-government units. Heating energy system users are the heating energy generators, suppliers and consumers.

The distributor is obliged, *inter alia*, to maintain, upgrade and expand the heating energy distribution grid in the system.

The heating energy distribution system operator shall purchase the heating energy generated by the generators connected to the distribution system and shall be obliged, upon previously obtained approval from the ERC, to sign a contract with the regulated heating energy generator for a period not shorter than one year. It is obliged to purchase the heating energy produced by the (heating energy) generators to the distribution system, on the condition that the heating energy price offered by the generator is lower than the regulated price for the heating energy generated by the regulated generator.

The heating energy distribution system operator shall be obliged, upon previously obtained approval from the ERC, to sign contracts with heating energy suppliers on heating energy sale intended to address the consumers demand.

5. Natural gas

5.1 Market overview

The usage of natural gas in Macedonia started in 1997. In the absence of its own natural gas deposits, Macedonia's needs for natural gas are met by the connection of a single gas pipeline from Russia through International corridor No. 8. The magistral gas pipeline enters Macedonia near the border crossing Deve Bair and extends to Skopje, with a length of 98 km. GA-MA AD Skopje is the sole natural gas transmission network operator in Macedonia.

Energy Law provides the legal basis for the development, stability and economic functioning of the natural gas system in the Republic of Macedonia. Again, as a model for this market, the electricity market system is used, and, therefore, the distribution and transmission systems of the natural gas have the same obligations of the electricity transmission and distribution operators. The other subjects (suppliers, supplier of last resort and traders) have the same rights and obligations as in the electricity market.

Taking into consideration the possibility for building smaller regional systems for transmission and distribution of the natural gas in the Republic, the law allows for the institutionalising of a combined operator of transmission and distribution systems.

With the passing of the Energy Law, all consumers of natural gas are regarded as eligible customers, with the exception of current tariff consumers which shall acquire the status of eligible consumers once regulations for the supply, new grid regulations for transmission, new tariff system and tariff system for transmission and distribution are set (Natural Gas Supply Rules, Rules on Natural Gas Supply of Last Resort, Price-Setting Regulation for the Natural Gas Supplier of Last Resort, Natural Gas Market Code and the Natural Gas Transmission and Distribution Tariff Systems).

Until these activities are completed the present tariff consumers shall be supplied through the supplier for tariff consumers. A new feature of the Energy Law is a supplier of natural gas of last resort which supplies all consumers connected to the natural gas system if the same have not or cannot conclude an agreement with other suppliers. In this section of the energy market, special market rules are not allowed but they shall be a constituent part of the grid regulation for the transmission of natural gas. As in the section for electricity, the activities of transmission of natural gas and operating the natural gas system are merged, and a single licence is issued. In the event that the operators of the transmission systems do not fulfil the obligations of the development plans, the ERC may intervene as appropriate. In this market, the legal unbundling of the operators of the systems in relation to the performing of other energy activities is stipulated.

5.2 Regulatory overview

The ERC is the main regulatory body in the segment of natural gas energy market. It approves the Natural Gas Market Code, regulates

the natural gas market organisation, terms and conditions to be met by natural gas market participants, manner and terms and conditions for grouping of natural gas customers and/or sellers into balancing groups for the purpose of reducing balancing costs, establishes the organisation and control of natural gas and ancillary services trading, including cross-border trading. It also regulates the methodology for setting the balancing charge and manner of charge collection, as well as financial guarantees for the liabilities of natural gas market participants related to the settlement of balancing services.

By means of natural gas price-setting regulations for consumers supplied by the supplier of last resort, the ERC regulates the manner of setting, approving and control of electricity and natural gas end prices to be paid by consumers. This shall include the electricity or natural gas generation or purchase price, relevant tariff on use of energy systems and markets, balancing costs, supply charge, as well as financial and other forms of reimbursements awarded for the purpose of implementing the obligations on public service provision.

The regulated energy activities on the natural gas market are:

- (a) natural gas transmission;
- (b) natural gas transmission system operation;
- (c) natural gas distribution;
- (d) natural gas supply of last resort.

5.3 Exploration and production

According to the Strategy for Energy Development in the Republic of Macedonia by 2030, Macedonia does not have its own natural gas deposits.

With regard to the abovementioned, the Energy Law contains no provisions regulating the production and exploration of deposits of natural gas in Macedonia.

5.4 Transmission and access to the system

The natural gas transmission system operator is a public enterprise or company owned by the Republic of Macedonia or a company where the Republic of Macedonia is the dominant owner which operates the natural gas transmission system and connects it to the transmission systems in the neighbouring countries.

The natural gas transmission system operator shall be obliged to adopt and publish Transmission Grid Code for the system which it operates.

The natural gas transmission system operator shall invoice the natural gas market participants for the deviations occurred from the announced physical transactions, under prices calculated pursuant to the price-setting methodology for balancing services, which is an

integral part of the Natural Gas Market Code. A legal entity which holds a licence for natural gas transmission cannot hold licences for transmission system operation, natural gas trade, natural gas supply and supply of last resort activities. A legal entity which holds a licence for natural gas transmission system operation cannot hold licences for natural gas transmission, natural gas trade, natural gas supply and supply of last resort activities.

Obligations to allow third parties access to the grid are set out in the same manner as those for the operator of the electricity transmission system. These are described in section 2.7, Access and connection to grids.

5.5 Trading and supply

The natural gas supplier shall sell natural gas to consumers, traders, other suppliers, electricity and/or heating energy generators, natural gas transmission or distribution system operators, as well as to consumers abroad. With regards to the natural gas which it has committed to deliver to its consumers, the natural gas supplier shall secure the relevant transmission and/or distribution capacity and regulated services pursuant to the applicable tariffs, Natural Gas Transmission Grid Code and Distribution Grid Code.

The natural gas supplier of last resort shall supply the consumers in the Republic of Macedonia connected to the natural gas transmission or distribution system who have not signed contracts with any natural gas supplier or whose previous supplier has discontinued the implementation of obligations from the supply contracts. In order to meet the demand of its consumers, the natural gas supplier of last resort shall secure the necessary transmission and/or distribution capacity and other services from the transmission and distribution system operators, under prices and tariffs approved and previously published by the Energy Regulatory Commission.

The natural gas trader shall purchase natural gas for the purpose of selling it to other traders, suppliers, electricity and/or heating energy generators, natural gas transmission and distribution system operators, as well as consumers abroad.

As an exception from the abovementioned, the trader in the capacity of natural gas supplier can sell natural gas to consumers which fulfil the requirements for independent participation in the natural gas market, as stipulated under the Natural Gas Market Code. Mutual rights and obligations between the trader and consumer, as well as the obligations regarding the transmission system operator and/or distribution system operators shall be stipulated by means of a contract.

All natural gas customers shall be deemed eligible natural gas customers. They can sign natural gas supply contracts with natural gas suppliers pursuant to the terms and conditions stipulated in the Supply Rules. As an exemption, consumers which meet the requirements for independent participation in the natural

gas market, as stipulated under the Natural Gas Market Code, as well as electricity and/or heating energy generators can purchase natural gas from traders and from abroad. For the purpose of meeting their own demand, the natural gas consumers shall secure relevant transmission and/or distribution capacity or shall transfer this obligation to their suppliers.

5.6 Storage

Wholesale traders in fuels must own or have the right to use storage premises for crude oil, oil derivatives, biofuels and/or fuels for transport. Storage facilities or reservoirs for crude oil, oil derivatives, biofuels or fuels for transport must be constructed and used pursuant to the stipulated requirements related to their construction, maintenance and safe operation. Owners or leasers of storage facilities for crude oil, oil derivatives or fuels for transport which are not used for own needs or are not an integral part of petrol stations, must obtain a licence for the storage of crude oil, oil derivatives, biofuels and/or fuels for transport activity.

5.7 Liquefied natural gas

The Energy Law contains no provisions regulating the production and exploration of deposits of liquefied natural gas in Republic of Macedonia.

6. Upstream oil market

6.1 Market overview

Macedonia does not have any oil and gas deposits. Republic of Macedonia imports all of its needs of oil and oil products. Since 2004 there has been an increase in consumption as well as import of the crude oil in comparison to the oil products. Most oil products are used as final energy sources, mostly in the traffic sector. There is one crude oil refinery in Skopje. Oil is transported via the 212 km Thessalonica-Skopje pipeline. The refinery has a total capacity of 2.5 million tons annually and produces heavy oil (mazut), unleaded gasoline, diesel fuel, heating fuel and liquefied petroleum gas ("LPG"). Annual oil production ranges from approximately 1-1.2 million tons, depending on domestic demand. Refined crude oil is also available for export, mainly to the southern parts of Serbia and Kosovo.

OKTA AD Skopje refinery has a nominal refining capacity of 2.5 million tons per annum and a storage capacity of 330,000 m³ which covers most of the Macedonia's fuel market and that of Kosovo. The refinery is supplied with crude oil through the Thessaloniki-Skopje pipeline which has been in operation since July 2002. OKTA's production is mostly gasoline, diesels and fuel oils; LPG is also produced but in small quantities. Demand for products for which OKTA's production does not suffice is met with imports from the Thessaloniki refinery.

The Energy Law stipulates that energy activities related to the oil market are non-regulated activities, *i.e.* none of the energy activities involving transmission, storage and/or trade with crude oil and

derivatives is regarded as an energy activity by means of which the public service is provided.

Entities performing energy activities related to:

- (a) crude oil processing and oil derivatives production;
- (b) biofuels production;
- (c) production of fuels for transport by blending fossil fuels and biofuels;
- (d) transport of crude oil or oil derivatives through oil pipelines or product pipelines;
- (e) storage of crude oil, oil derivatives, biofuels and fuels for transport;
- (f) trading in crude oil, oil derivatives, fuels for transport and biofuels

are obliged to use and maintain the facilities, devices and plants intended for performance of energy activities, pursuant to the technical regulations and standards and other regulations on reliable and safe operation and environmental protection.

Under the Energy Law any entity performing crude oil and/or oil derivatives transport through the oil pipeline and/or product pipeline activity must adopt the rules governing the operation of the oil pipeline or product pipeline and publish them on its website.

A wholesale trader in fuels shall purchase crude oil, oil derivatives, biofuels and/or fuels for transport from the producers, trade with other wholesale traders in fuels and supply the retail traders in fuels and consumers. A wholesale trader in fuels should own or have the right to use the storage premises for crude oil, oil derivatives, biofuels and/or fuels for transport. It is further obliged to hold operational reserves in oil derivatives and fuels for transport at all times in a quantity sufficient to cover at least a five-day average volume of trade, calculated on the basis of actual trade in each oil derivative separately for the previous year.

A wholesale trader in crude oil, oil derivatives and fuels for transport can fill and distribute pressure vessels with LPG for single or multiple use provided it has already constructed or obtained the right to use the LPG filling facilities which fulfil the stipulated requirements and standards related to construction, maintenance and safe operation.

Consumers can purchase oil derivatives and fuels for transport also from abroad, provided that the oil derivatives or fuels for transport are used for own consumption and this activity shall not require a licence on wholesale trade in crude oil, oil derivatives, biofuels or fuels for transport.

With the provisions regulating the crude oil market, oil derivatives and transport fuels conditions for the activity transport of crude oil and

oil derivatives, provided that the entity performing this activity should adopt certain rules, as well as storage places.

6.2 Regulatory overview

The government shall set the annual share of biofuels to be attained in the total fuels for transport quantities in the Republic of Macedonia with the EU Directive on renewable sources. Based on a proposal from the Ministry of Economy, the Government shall adopt an Act on Liquid Fuels Quality, which shall contain in particular:

- (a) the type of liquid fuels that can be marketed, as well as their characteristics;
- (b) the manner of determining the liquid fuel quality;
- (c) the manner and procedure on monitoring the liquid fuel quality;
- (d) the rights and obligations of the crude oil, oil derivatives and fuels for transport market participants;
- (e) the rights and obligations of market participants and state authorities in the transitional period required for replacing the reserves of blends of fossil fuels and biofuels for transport.

By means of price-setting regulation and methodology for oil derivatives and fuels for transport, the ERC shall stipulate the manner of setting, approving and control or refinery and retail prices for petrol, diesel fuels, light fuel oil and heavy oil (mazut), as well as retail prices for blends of fossil fuels and biofuels for transport, under which the maximum refinery and retail prices for oil derivatives and the maximum retail prices for blends of fossil fuels and biofuels are set.

A decision on the maximum refinery and retail prices for oil derivatives shall be adopted by the ERC, at the request for setting the maximum refinery prices for oil derivatives submitted from the company for crude oil processing and oil derivatives production.

1. Introduction to the energy market

The Romanian energy market has developed significantly in the past 10 years; a period during which the legislation has been harmonised with the EU legal framework. Some of the most important privatisation processes in the energy field have been carried out, more specifically the privatisation of electricity and gas distribution and supply companies, as well as of one of the largest Romanian companies acting in the oil sector. The Energy market has been and continues to be one of the most attractive sectors for investors, specifically due to Romania's remarkable potential for energy sources. The investments are also encouraged by the constant legislative developments aimed at implementing the EU legal framework applicable to Romania as a EU member state and in order to fulfil the measures under the Kyoto Protocol of which Romania is also a member. However, as a rapidly evolving and relatively young energy market (compared to other EU markets) regulations do not always keep pace and may be incomplete or not correlated with the market. The preferred sub-sector in recent years appears to be the electricity market, specifically the renewable field. It is expected to expand even more once the relevant framework setting forth the applicable incentives will be stabilised.

2. Electricity

2.1 Market overview

Following its full liberalisation in 2007, arising from European requirements, the Romanian electricity market has been constantly developing and expanding. A new electricity law was passed in 2007, creating premises for a competitive environment for energy investments.

The complete liberalisation of the market has not been achieved yet. However, progress has been made and future legislative changes are envisaged to align the Romanian market to European requirements. It is worth noting that Romania was one of the first European markets to develop an independent platform for energy transactions which currently supports the bilateral contracts market, the day-ahead market, the green certificates market and the emissions certificates market.

The main participants in the electricity market are: electricity generators, electricity suppliers, electricity distributors/distribution networks operators, electricity transporter/transportation network operator, eligible consumers and captive consumers.

2.2 Regulatory overview

The principles of the electricity market are currently regulated by the Electricity Law No. 13/2007 (published in the Official Gazette No. 51 of 23 January 2007), as subsequently amended

and completed ("Electricity Law") and detailed in secondary legislation including government decisions, and decisions and orders issued by the relevant regulatory authority.

Other relevant legislation regarding the field of electricity includes: Government Decision No. 540/2004 on the approval of the Regulation for granting licences and authorisations in the electricity sector (published in the Official Gazette No. 399 of 5 May 2004), as subsequently amended and completed ("Electricity Licensing Regulation"), Government Decision No. 90/2008 on the approval of the Regulation for the connection of users to public electricity networks (published in the Official Gazette No. 109 of 12 February 2008) ("Interconnection Regulation") and Law No. 220/2008 regarding the system for promoting production of energy from renewable energy sources (published in the Official Gazette No. 577 of 13 August 2010), as subsequently republished, amended and completed ("Renewables Law").

The Electricity Law establishes the general framework for electricity regulated activities, electricity licences and authorisations and the main rights arising therefrom, electricity market principles and the main competencies of the authorities involved (*i.e.*, the relevant ministry – currently, the Ministry of Economy, Trade and Business Environment – and the Romanian Energy Regulatory Authority – ANRE). According to the Electricity Law, electricity related activities are usually subject to the obtaining of a specific licence or authorisation from ANRE in order to be carried out. The Electricity Licensing Regulation further details the conditions and procedure for the granting of the main authorisations and licences, following that the granting of other authorisations/ licences is detailed in other secondary legislation.

The Government determines the national energy strategy which defines the objectives of the energy sector and the best ways of achieving such objectives in the medium or long-term.

The Ministry of Economy, Trade and Business Environment, following the directions set out in the energy strategies and based on the Government programme, determines the energy policy consisting of measures for stimulating investment and research and development activities. The Ministry of Economy, Trade and Business Environment also initiates legislative projects in the field, supervises the application of and compliance with the measures regarding environmental protection and creates programmes regarding the promotion of electricity exports.

ANRE is the Romanian energy regulatory authority, acting as an independent body responsible for regulating and providing a competitive electricity and gas market environment. ANRE must accomplish the objectives provided under the Electricity Law, which refer, among others, to ensuring sustainable development of the national economy, diversification of the energy resources, establishment and functioning of a competitive energy market, granting non-discriminatory and regulated access to the energy market and to the public electrical networks to all participants,

ensuring transparency with respect to the determination of any tariffs, taxes and prices in the energy sector, environment protection etc.

ANRE in its capacity as regulatory authority in the electricity sector has attributions related to (i) regulatory aspects; (ii) authorisation, supervision and control functions; (iii) reporting and information and (iv) mediation and jurisdiction function. Thus it elaborates, determines and supervises the implementation of the national mandatory regulations necessary for the efficient functioning of the internal market in the energy sector, on the basis of transparency, effective competition and consumers' protection principles. ANRE acts in close cooperation with the Competition Council, the National Authority for Consumers' Protection, ministries and other relevant public administration organisations, consumer and professional associations, employers' associations and syndicates.

2.3 Regulated electricity market activities

Pursuant to the Electricity Law, the implementation of new energy capacities as well as the refurbishment of existing ones is based on establishment authorisations. Furthermore, generation, transportation, providing of system services, distribution and supply, as well as the management activities of the centralised electricity markets are carried out on the basis of licences granted in accordance with the law and in the case of public assets and public services also based on specific concessions granted by the relevant authorities. The performance of any activities without the possession of proper authorisations/ licences is subject to specific sanctions.

ANRE grants the following types of authorisations and licences for electricity related activities:

- (a) Establishment authorisations – must be obtained for erecting new electricity generation capacities, including co-generation capacities, or for the refitting thereof, if the installed electricity power of the capacities in question exceeds 1MW;
- (b) Licences for: (i) the commercial exploitation of electricity and thermal energy generation capacities; (ii) the performance of the electricity transportation service; (iii) the performance of the system service; (iv) the performance of the electricity distribution service; (v) the performance of centralised markets management activities and (vi) the performance of electricity supply activity.

2.4 Material provisions of electricity market law and licensing regulations

The applicable regulations set out the documentation to be prepared and criteria to be met by each applicant/ project for certain licences and authorisations. The criteria taken into

account by the regulatory authority upon the analysis of the file are determined by the activities to be performed and are mainly related to the available technical and organisational, financial and human resources capabilities. Moreover, foreign entities are required to have a secondary office in Romania throughout the performance of the licensed/ authorised activity.

In general any changes which might occur with respect to the authorisation/licence holders (*e.g.*, changes of the statute regarding the share capital or the patrimony, split-off, merger, transformation, change of the scope of activity) must be notified to ANRE within 30 days as of their occurrence and ANRE will decide either to annul the existing authorisation/ licence and issue a new authorisation/ licence or the amendment of the conditions joining the authorisation/ licence. This requirement is further detailed in the case of each specific licence in the conditions attached to the licences issued to each applicant.

Pursuant to the general terms of the standard licences granted for performing activities such as generation, distribution, supply and management of centralised markets, the titleholders of such licences have the obligation to notify ANRE of any intention of their shareholders to perform operations which may result in the disposal of the fixed assets necessary for the performance of the relevant activity or which may result in a 25% decrease of the value of the existing share capital of the titleholder.

Additionally, the titleholders of the mentioned licences must notify ANRE of any share transfer operation between the existing shareholders or between the existing shareholders and third parties. In addition, the titleholders of a license for management of centralised markets must notify ANRE in advance of any transaction as a result of which an entity other than Transelectrica, the national transportation network operator, will become a shareholder of the titleholder.

When receiving a notification as mentioned above, ANRE will have to analyse whether following the notified change the titleholder will still be able to perform its obligations under the licence and will communicate to the titleholder its decision. Transactions performed in the absence of ANRE's approval may trigger the suspension/ annulment of the licence.

The shareholding structure of the titleholder of the management of centralised markets licence (*i.e.*, currently, Opcom) cannot include a shareholder, other than Transelectrica, the transportation network operator, which holds a participation quota of more than 5%.

The possibility to transfer the rights granted under a licence is provided in the case of most of the electricity licences (transportation, distribution, generation, supply), with the exception of the management of centralised markets licence. The transfer must be made by means of a contract stipulating the rights and obligations of the parties and is subject to the prior approval of ANRE, under the sanction of annulment. The



transferor will remain jointly liable with the transferee in respect of the transferred obligations.

Any operations on the market shall have to be performed in compliance with the unbundling principles, implemented in the Romanian legal framework in accordance with the EU directives.

In addition to the regulatory rules briefly mentioned above, merger control and corporate governance rules shall accordingly apply.

2.5 Trading and supply of electricity

Exchanges between operators take place in the electricity market which is divided into the wholesale market and the retail market. In the wholesale market, power purchase agreements are generally executed either directly based on negotiations between the parties or in the centralised electricity markets (which include the centralised market for bilateral contracts, the centralised market with continuous negotiation (forward), the day-ahead market and the balancing market).

In the competitive segment of the electricity market, prices are negotiated by the parties or based on centralised markets rules.

Thus, in the wholesale market, power purchase agreements are generally executed in the centralised electricity markets. This includes the centralised market for bilateral contracts, the centralised market with continuous negotiation (forward), the day-ahead market and the balancing market. A market participant may enter also into negotiated bilateral agreements outside the organised specific markets. Furthermore, market participants wishing to conduct cross-border trading activities may also participate in public auctions for the allocation of available cross-transfer capacity.

The holders of licences in the field of electricity (*i.e.*, generation, transmission or distribution, supply operators) have specific obligations in relation to ensuring the reliability of the transmission grid. For this purpose they must be registered in the balancing market, to notify the daily transmissions of electricity, and additionally trade the electricity available after the notifying of the daily transmissions transactions. They must also provide financial guarantees to the transmission and system operator for all the imbalances which may occur between the programmed and effectively generated electricity, between projected and actual transactions, etc. The licence holders may choose to delegate the balancing responsibility to another entity.

All electricity markets transactions are settled by the settlement operator, an independent entity.

Moreover, during the period of the support scheme for electricity generated in cogeneration units (*i.e.*, during the period 2010 - 2023), operators of cogeneration units (*i.e.*, combined heat and

power units) may sell any electricity unsold in the centralised electricity market by regulated agreements and regulated prices. The regulated prices for electricity produced by cogeneration are set by ANRE every year at the level of 90% of the average transaction price of electricity registered for the previous years on the day-ahead market, based on the principles previously mentioned.

The Electricity Law expressly prohibits cross-subsidies between regulated activities, and between the regulated and non-regulated activities of an economic operator.

In respect of the electricity supply prices and tariffs, please note that although the Romanian electricity market was fully liberalised as of 1 July 2007, the market continues to include regulated segments, such as:

- (a) The supply of power to household consumers and consumers, the maximum power (as approved by the technical connection permit) of which does not exceed 100kVA, until such consumers exercise the right to select their supplier for the first time; or
- (b) The supply of power by the supplier of last resort, *i.e.* suppliers which are obliged to provide electricity supply to consumers whose supplier is no longer able to fulfil its obligations set forth under the electricity supply licence and electricity supply agreements where such consumers do not have any other available supply source upon cessation of their supplier's activity.

In order to control tariffs for electricity sold to consumers who do not exercise their right to eligibility, ANRE approves the regulated costs or revenues for the sale or purchase of electricity to such consumers. These prices and tariffs are based on the following principles: (i) the methodologies for establishing regulated prices and tariffs for wholesale electricity are adopted after consultation with all interested parties; and (ii) calculation of the prices and tariffs takes into account the justified costs of the supply activity, expenses related to development and environmental protection, as well as a reasonable profit margin.

The regulated prices or tariffs must: (i) be non-discriminatory, objective and transparent, based on methodologies approved by ANRE; (ii) cover economically justifiable costs; (iii) allow the consumers who do not exercise their eligibility right to choose the price or tariff they deem most favourable, out of those offered by the supplier, while complying with the conditions set out by ANRE and (iv) ensure a reasonable rate of invested capital-earning capacity, in accordance with ANRE methodologies.

The network and system operation tariffs continue to be regulated in accordance with methodologies for determining transport and system, and distribution related tariffs and terms as approved by ANRE.

For power transport services ANRE determines the regulated revenue based on price cap methodology (*de tip plafon*), which sets out the value of the revenue required for the performance of the transmission services. The prices and tariffs takes into account justified transport costs, expenses for development and environmental protection as well as reasonable profit quota. ANRE may limit the tariffs by: establishing a maximum limit for the price or tariff; or limiting the revenue of the regulated activity for the purpose of avoiding an uncontrolled increase of the prices for customers. The tariffs are differentiated based on geographical areas.

For the distribution service, ANRE has developed a methodology setting out the electricity distribution service tariffs which regulates the prices and tariffs for distribution services based on the following principles: (i) ANRE determines the regulated revenue for the distribution service based on a tariffs basket cap methodology (*cos de tarife plafon*), according to which ANRE determines an upper limit of the average of the distribution operator's tariffs. The average is determined by taking into account the quantity of electricity distributed by the distribution operator by categories of consumers and intensity levels); (ii) for the calculation of distribution tariffs any justified cost associated with distribution activity is only considered once; (iii) the calculation of the prices and tariffs takes into account the justified costs of the distribution activity, the expenses related to development and environmental protection, as well as a reasonable profit margin. ANRE may limit tariffs by: establishing an upper limit of the price or tariff; or by limiting the revenue of the regulated activity in the aims of avoiding an uncontrolled increase of prices for customers. The tariffs for distribution operators are determined annually in a specific order approved by the president of ANRE.

ANRE also determines the methodology for calculating the tariffs for interconnection to the public electricity networks. The interconnection tariffs must include only the costs effectively related to the interconnection which include installation of the related interconnection and sometimes also for upgrading the public network to which the interconnection is required.

2.6 Transmission and grid access

The general principle applicable to grid access is non-discriminatory access for all electricity market participants to the public transmission/distribution networks, regulated third party access being the right to connect to and use, in accordance with the conditions provided by law, the transmission or distribution networks. The Electricity Law sets out the obligation of the transmission/ distribution operators to grant access to the relevant networks. However, applicants are required to cover the specific costs of interconnection and frequently the costs required for the enhancement of the network. Access can be denied only for just cause if the connection affects the safety of the National Power System.

Pursuant to the Interconnection Regulation, interconnection to the electricity networks is based on an interconnection permit issued by the transmission/ distribution operator, the payment of the interconnection tariff by the applicant and an interconnection agreement between the applicant and the transmission/ distribution operator. Both the interconnection permits and the interconnection agreements are standard forms and depend mostly on the practice of each network operator, however, the interconnection agreement may be and is often subject to negotiations between the parties.

The applicant pays an interconnection tariff which covers mainly the interconnection work related to the part of the interconnection installation which will become part of the public interest network and will be transferred into the ownership of the network operator. The interconnection tariff shall not cover the part of the interconnection installation remaining in the applicant's ownership and the applicant shall be solely responsible for the construction thereof.

It should be noted that the delimitation point between the two parts of the interconnection installation (*i.e.*, the part belonging to the network operator and the part belonging to the applicant) is agreed by the parties and is usually established at the limit of the applicant's property.

2.7 General approvals and permits for electricity generation facility project implementation

For the implementation of an electricity generation facility project, the following main categories of permits need to be obtained:

- (a) Permits for the prior construction phase which usually include: urbanism certificates, environmental permits and/or approvals, approval in principle from the local public authority, land planning documentations;
- (b) Permits for the construction phase, usually including: building permits, interconnection permits and establishment authorisations (issued by ANRE);
- (c) Permits for the operation phase which may include: environmental authorisations and other operating permits, the electricity generation licence as well as other relevant electricity licences, such as, for example, the electricity supply licence.

Depending on the actual features of the project, the range of applicable permits may vary significantly. Furthermore, in the case of electricity generation facilities envisaging the use of renewable energy sources for the generation of electricity and/or thermal energy, additional special permits will apply.

3. Renewable energy

3.1 Market overview

Romania benefits from significant potential in various renewable energy sources: wind, solar, hydro, biomass, etc. However, in recent years investors have focused mainly on the wind projects. In promoting its resources, Romania was quick to adopt supporting mechanisms for all renewable energy sources consisting mainly of a system of mandatory quotas combined with green certificate trading and various more recent financing schemes.

Initially promoted at the level of government decisions in 2003, the system of green certificates has been revised and changed through the Renewables Law initially adopted in 2008. This law provides for considerable changes from the initial system: an increased number of green certificates; regulation of the terms during which the system would apply to different projects, etc.

While the Renewables Law has been well received by investors, its applicability has been suspended until approval by the European Commission of the state aid scheme. While the Renewables Law has not been fully effective until present, the most important developments in the renewable energy field relate to the amendments made to the law in the summer of 2010 and, more importantly, by the amendments envisaged to be made in 2011 to the Renewables Law. The proposal for legislative amendment currently being discussed by authorities and market players has been drafted in the context created by the process of notification to the European Commission of the renewable energy green certificates support scheme regulated by the Renewables Law. In this respect, the draft law envisages significant changes to the green certificates support scheme, mainly to bring the system in line with the European framework.

The European Commission has recently issued its approval for the green certificates support scheme envisaged in Romania. The amendments arising from such approval together with the relevant secondary regulations to be issued for approval will lead, on the one hand, to the long-awaited effective application of the rules for the granting of more green certificates for renewable energy generated from certain renewable technologies, and on the other hand, additional criteria and limitations for the granting of green certificates. Furthermore, the correlation between various state aid schemes available in the field shall be addressed once the draft law is approved.

3.2 Support schemes

The main support schemes for renewable energy in Romania are:

- (a) Promoting system of green certificates consisting of a system of mandatory quotas combined with green certificates ("GC") trading;

- (b) Financing scheme based on Environmental Fund resources;
- (c) Financing scheme based on EU structural funds; and
- (d) Support for joint implementation projects through Emission Reduction Units ("ERUs").

GC promoting system

In Romania the main system for promoting Electricity generation from Renewable Energy Sources ("E-RES") consists of a system of mandatory quotas combined with GC trading. Every year each electricity supplier in this system must purchase a number of GC equal to the mandatory quota provided by the relevant regulations multiplied by the quantity of electricity yearly supplied to end consumers.

The transport system operator issues GC to the relevant generators in consideration of the quantity of E-RES generated and delivered into the network. Under such a system the GC certifies the generation from renewable energy sources of a certain quantity of electricity which may be traded distinctively from the associated electricity in a parallel market (either based on bilateral contracts or on a centralised market) and which represents a benefit for the E-RES generators in exchange for delivering "clean" electricity into the network.

Currently the promoting system is affected by certain malfunctions of the legislative environment. Thus, while at the end of 2008 a new legal framework was approved through the Renewables Law it has still not been implemented in respect of the number of GC to be issued to relevant generators. This is due to delays in confirmation/ approval from the European Commission. In practice the previous system as regulated by Government Decision No. 1892/2004 (published in the Official Gazette No. 1054/2004) is still applied in respect of the number of GC to be issued.

Environmental fund financing scheme

Generators of energy from renewable energy sources can also access (subject to the fulfilment of eligibility criteria) specific financial allowances from the Environmental Fund (a financial-economic instrument designed to support the implementation of environmental protection projects).

The conditions which must be observed by applicants intending to obtain funds from the Environmental Fund are set out in the Ministry of Environment and Forests Order 714/2010 (published in the Official Gazette No. 341/2010). According to information publicly available, the financing scheme provided under Order 714/2010 was brought to the attention of the Competition Council as a state aid scheme with a duration until 31 December 2011. This information was further transmitted to the European Commission. Thus, a new notification to the Competition Council

with respect to the duration of the financing scheme will need to be submitted in order to apply such a state aid scheme from the 1st January 2012.

On an annual basis one or more financing sessions can be organised by the Administration of the Environmental Fund, relating to type of projects and within the limits of the amount established at the opening of the financing session. The framework of the financing sessions is determined by a decision of the president of the Administration of the Environmental Fund.

EU structural funds

According to European and applicable national regulations, structural funds are available in Romania for seven major areas: Environment, Transportation, Regional Development, Human Resources, Development of Administrative Capacity, Increase of Economic Competitiveness and Technical Assistance.

For each of the abovementioned areas a sectoral operational programme ("SOP") has been issued by the relevant authorities for the purpose of detailing the manner of allocating the funds.

Each SOP includes several priority axes and each priority axis includes two or more domains of major intervention. A domain of major intervention comprises several operations. As a general rule, for each operation a state aid scheme shall be approved through a Ministry of Public Finance Order.

Pursuant to such approval, an announcement for the submission of projects shall be published ("call for projects"), setting out the period during which the projects may be submitted to the competent management authority.

Moreover, the management authority shall provide a guide containing a complete description of the conditions to be fulfilled by both the applicant and the project in order to provide access to structural funds in a specific domain of major intervention and the relevant procedure regarding the application and the granting of funds (*i.e.*, the Applicant's Guide).

Calls for projects may be either with a definite term or continuous submission. The call is limited to the financing of electricity generation from renewable energy sources covered under SOP "Increase of economic competitiveness" priority axis 4 "Increasing energy efficiency and security of supply in the context of combating climate change", main domain "Valorisation of renewable sources for producing green energy".

The call for projects for 2011, according to the schedule of the calls for projects made available by the management body, was scheduled to be launched in June 2011.

The state aid scheme for the granting of structural funds for

electricity generation projects from renewable energy sources has been approved in Government Decision No. 750/2008 (published in the Official Gazette No. 543/2008). However, it does not apply to projects the total costs of which exceed EUR 50 million. Financing is granted to a limited number of beneficiaries and subject to the fulfilment of specific eligibility conditions in what concerns the applicant and the project itself.

ERUs

ERU's may be issued for Joint Implementation ("JI") projects developed in line with the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change (the "Convention"). Pursuant to this international framework and enactments adopted by Romania for its implementation, JI projects may be carried out, amongst others, for the promotion of power generation using renewable sources (including wind farm projects). JI projects may be developed on the basis of two permitting modules (I and II).

4. Natural gas

4.1 Market overview

The Romanian market has undergone significant transformation in recent years due to sector reorganisation and restructuring and the development of the regulatory framework as a result of the sector's dynamics and the implementation of the Community's regulations in the national legislation. The restructuring of the natural gas sector was also a consequence of the development of the undertaking of the public authorities to adapt to the new structures of the natural gas sector, as well as to the new form of collaboration with European structures.

The natural gas market was fully liberalised in 2007 in accordance with European requirements and in the aims of creating a real competitive environment, in order to give consumers the possibility to choose their natural gas supplier, and to increase investments in the sector. However, new regulations still need to be implemented in order to achieve the full liberalisation of the natural gas market.

The principles underlying the functioning of the natural gas market aim to: (i) promote and assure the competition on the natural gas market; (ii) ensure freedom of eligible consumers to choose their natural gas supplier, based on negotiated sale-purchase agreements for natural gas; (iii) ensure free access of the participants to the natural gas market, to natural gas transport, underground storage and distribution systems; (iv) ensure the natural gas transport, underground storage and distribution public services; (v) undiscriminating treatment for the participants to the natural gas market.

The participants in the natural gas market are: natural gas producers (entities possessing an oil agreement and supply

licence); natural gas suppliers (entities possessing a supply licence for natural gas); natural gas transporter/ national transmission system operator (national company Transgaz – entity possessing a transport licence for natural gas, as well as the concession for natural gas transport and related public property items); natural gas distributors (entities possessing a licence for natural gas distribution, as well as the concession for natural gas distribution); natural gas underground storage operators (entities possessing a storage licence, as well as a concession agreement for natural gas storage and related assets); eligible consumers and captive consumers (consumers which for regulatory reasons cannot choose their supplier or have not exercised their eligibility right).

4.2 Regulatory overview

The Gas Law No. 351/2004, as amended and completed (published in the Official Gazette No. 679/2004) (“Gas Law”) is the main legislation governing the natural gas sector. In the case of transport and upstream activities the provisions of the Gas Law are complemented by those of the Petroleum Law No. 238/2004, as amended and completed (published in the Official Gazette No. 535/2004) (“Petroleum Law”). Further regulations are included in secondary legislation, such as: The Regulation for granting authorisations and licences in the natural gas sector approved by Government Decision No. 784/2000, as republished, amended and completed (“Natural Gas Licensing Regulation”), ANRE Decision No. 1271/2004 for the approval of Framework conditions for the validity of the natural gas distribution licence, Framework conditions for the validity of the natural gas supply licence and Framework conditions for the validity of the functioning authorisation for the natural gas distribution objectives/ systems, as amended and completed (published in the Official Gazette No. 1165/2004), ANRE Decision No. 1362/2006 for the approval of the Framework conditions for the validity of the natural gas transportation licence (published in the Official Gazette No. 27/2007), Government No. 824/2004 of the National Energy Regulatory Authority approving the regulation relating to the regulated access to the underground storage of natural gas (published in the Official Gazette No. 562/2004) (“Storage Regulation”).

The Gas Law sets out the general framework for carrying out activities specific to the natural gas sector in competitive and transparent conditions. To this end, the Gas Law sets forth mainly:

- (a) Natural gas market general principles;
- (b) Regulated activities and the rules regarding the unbundling of regulated activities from not regulated activities;
- (c) Licences and authorisations necessary for carrying out certain activities on the gas market, as well as
- (d) The main competencies of the involved authorities (*i.e.*, the relevant ministry – currently, the Ministry of Economy, Trade and Business Environment – and the Romanian

Energy Regulatory Authority – ANRE).

The Government, the Ministry of Economy, Trade and Business Environment and other specialised institutions of the central public administration take measures to achieve the objectives included in the energy strategies and monitor the level of compliance. The Ministry of Economy, Trade and Business Environment develops policy in the natural gas field and ensures its compliance.

At present, the regulatory authority in the field of natural gas is ANRE which functions as an autonomous public institution. ANRE develops, applies and monitors compliance with the mandatory regulations at national level necessary for the functioning of the natural gas sector and market in an efficient, safe, competitive, transparent, non-discriminatory manner, protecting the consumers and the environment.

The main duties of ANRE in the gas sector are: (i) to elaborate, approve and apply the regulations for the organisation and functioning of the natural gas market, in order to ensure the continuity and safety of natural gas supply to consumers; (ii) to ensure the full liberalisation of the natural gas domestic market; (iii) to develop, approve and apply the criteria and methods for approving the prices and for setting the regulated tariffs in the natural gas sector; (iv) to establish validity terms of the licences specific to the sector, and the way in which they are granted; (v) to elaborate and approve the framework agreements in the natural gas sector; (vi) to monitor the natural gas domestic market for compliance with regulations regarding the organisation and functioning of the natural gas market.

According to the Gas Law, the natural gas related activities are usually performed based on specific licences or authorisations issued by ANRE and in the case of public assets and public services also based on specific concessions granted by relevant authorities. The Natural Gas Licensing Regulation further details the conditions and procedure for granting the main authorisations and licences.

4.3 Regulated natural gas market activities

In order to set up, operate and/or make changes to production, transport, storage, transit and distribution capacities of natural gas, and to carry out the supply, transport, storage, transit and distribution activities in the natural gas sector, Romanian or foreign entities must possess authorisations and/or licences issued by the Regulatory Authority based on specific regulations.

Concessions must be awarded by public tender by the relevant authorities in relation to the use of public property assets required for the transportation of natural gas and storage (facilities and systems), and the public services of transport, storage and distribution of natural gas.

ANRE issues the main types of permits for the natural gas field:

- (a) Authorisations issued in relation to natural gas field facilities for the production, transportation, storage, transit, distribution and dispatch of natural gas, including: establishment authorisations, functioning authorisations and modification authorisations;
- (b) Licences issued in relation to carrying out specific natural gas activities including: supply licences, transportation licences; storage licences, dispatch licences, distribution licences and transit licences.

4.4 Material provisions of the natural gas market law and licensing regulations

Similar to the electricity market, the applicable regulations require that certain documentation is prepared and criteria are met by each applicant/ project for certain licences and authorisations.

The Natural Gas Licensing Regulation requires that authorisation/ licence holders must notify ANRE within 30 days of occurrence of the following situations: changes of the statute of the authorisation/ licence holder as a result of split-off, merger, transformation, change of the scope of activity, change of name, headquarters or change of the share capital or of the patrimony, as well as any other changes that affect the conditions in which the authorisation/ licence was issued. In the notification the authorisation/ licence holder requests ANRE to amend the relevant authorisation/ licence. ANRE will analyse the situation and, if the request is grounded, will make one of the following decisions:

- (a) Appropriate amendment of the authorisation/ licence by granting a new authorisation/ licence with an amended content;
- (b) Granting of amendments to the conditions associated with the existing authorisation/ licence.

In the event that the above procedure is not possible the authorisation holder (but not the licence holder) will request approval from the ANRE to transfer the authorisation to another legal entity. In such a case the transferee will have to provide prior proof that it meets the conditions for being authorised provided by the Natural Gas Licensing Regulation.

Only natural gas authorisations may be transferred to other entities while the natural gas licences cannot be transferred by their holders.

Licence holders are able to conclude agreements with third parties for certain licensed activities without, however, being allowed to transfer the rights and obligations granted under the licence.

4.5 Exploration and production

The exploration and production of natural gas are governed by petroleum laws and regulations, as detailed below.

4.6 Transmission and access to the system

Access by third parties to upstream pipelines, storage deposits, transport and distribution systems is based on the principle of third party access in a regulated system and based on the conclusion of agreements between the applicant and the relevant operators. Access to the national transmission system, the distribution system and the upstream pipelines comprises two components: connection to the system and use of the system. The connection is based on a tariff paid by the applicant and the use thereof is also subject to the payment of specific tariffs.

Access by third parties to upstream pipelines, storage deposits, transportation and distribution systems may be refused only in the following situations: (i) there is insufficient capacity; (ii) the facilities/ pipes comprising the systems to which connection shall be made do not exist; (iii) access to the system affects the fulfilment of public service obligations and exploitation safety; (iv) the requested use equipment does not meet the minimum requirements regarding the safety and environmental protection set out in the applicable legislation; (v) access to the system may lead to serious economic and/or financial difficulties arising from the regulated activity of the authorisation/ licence holder requesting the access; (vi) the quality of the natural gas to be supplied into the systems and/or storage deposits does not comply with the requirements imposed by the applicable regulations; (vii) the applicant fails to pay for the services provided by the system operator, in accordance with the contractual clauses.

A licensed operator which refuses access due to lack of capacity or lack of the facilities/ pipes (systems) to which the connection is to be made must finance the necessary work, if such is economically justified, in order to grant access to the applicants. If the installation of such facilities/ pipes is not economically justifiable for the licensed operator, the applicant will contribute to a specific extent and in cooperation with the licensed operator in the financing of the facilities/ pipes, in accordance with the conditions of an agreement in which the applicant agrees to the transfer of the respective facilities/ pipes into the ownership of the operator from the moment of commissioning thereof.

4.7 Trading and supply

Prior to its complete liberalisation, the natural gas market continues to be formed of two segments: the competitive segment and the regulated segment.

The competitive segment of the market is related to the trading of natural gas between suppliers and eligible consumers. In the competitive segment prices are formed freely, based on demand and supply and competition mechanisms. The regulated segment of the market consists of natural gas supply at a regulated price and is based on framework contracts to consumers and natural and/or legal monopoly activities, based



on regulated tariffs: administration of commercial contracts and the contractual balancing of the domestic market, natural gas transport, underground storage, distribution, transit, with the exception of transit through dedicated major pipelines. For this segment of the market, the tariff and prices systems are set by ANRE based on the methodologies developed for this purpose.

In relation to the regulated segment, until the full liberalisation of the domestic natural gas market and convergence of the price of domestic production with the price of imported natural gas and in order to ensure non-discriminatory access for all consumers to domestic sources of natural gas, the supply of natural gas to consumers will be a mixed supply consisting of quantities of current/ stored domestic production and imported gas (current/ stored). The supply shall be determined in such a manner as to ensure full coverage of the consumption demands at national level. The natural gas mixture is determined monthly and established separately for the following categories of consumers:

- (a) For household consumers and thermal energy generators - the quantities used for thermal energy in cogeneration units and thermal units destined for public consumption. The mixture is determined by ANRE, in order to ensure the same final regulated prices for the abovementioned consumers until the following year, by reference to this year;
- (b) For non-household consumers (with the exception of thermal energy generators) - the mixture is determined by Transgaz, the transmission system operator, based on a complete and balanced coverage of the internal market demands and is endorsed by ANRE.

The Natural Gas National Dispatcher organised within Transgaz monitors for compliance with the structure of the mixture approved on the basis of applicable regulations by all licensed operators and eligible consumers in the natural gas sector. In the case of captive consumers, the obligation to comply with the structure of natural gas mixture belongs to the supplier. The supplier must ensure the entire gas needs of the consumer and eligible consumers, respectively, or cover its needs from other suppliers.

Thus, in the natural gas sector the following two price categories apply to each segment of the natural gas domestic market:

- (i) Regulated - determined by ANRE, based on its own methodologies, for the supply to consumers who do not exercise their right to choose the supplier. The supply of natural gas at regulated prices is based on framework contracts. Although the natural gas market is fully opened, the regulated prices continue to be applied as long as the consumers do not exercise their right to choose their supplier.

- (ii) Negotiated - based on supply and demand as a result of competition comprising the trading of natural gas between suppliers and eligible consumers.

The tariffs related to the services carried out in the natural gas field, as a natural monopoly, are regulated by ANRE on the basis of specific methodologies for this purpose. They comprise natural gas transport, distribution and underground storage activities. The regulated prices and tariffs in the natural gas sector are approved by order of the president of ANRE and are published in Romania's Official Gazette.

5. Upstream oil market

5.1 Market overview

Underground oil resources located in Romania and the Romanian sector of the Black Sea continental platform are exclusive public property and belong to the Romanian State. Oil-related activities can be carried out by Romanian or foreign legal entities, in compliance with the conditions provided by the regulatory framework and only within areas specifically established for this purpose by the competent authority.

The oil market is open to all interested participants which are able to prove their financial and technical capabilities for carrying out oil-related activities. Currently, the market is dominated by OMV Petrom SA which still owns a significant share of the market. However, more and more foreign companies have begun to participate in the licensing rounds or enter farm-in or transfer agreements allowing them to acquire interests in petroleum agreements in Romania.

5.2 Regulatory overview

Unlike the natural gas sector, the Romanian oil market is regulated only to a certain extent. Oil-related upstream activities (e.g., exploration, development, and production) are mainly regulated by the Petroleum Law and the subsequent Methodological Norms for its implementation, approved in Government Decision No. 2075/2004 (published in the Official Gazette No. 1170/2004) ("Methodological Norms"). The main regulations are supported by a variety of secondary legislation.

The Petroleum Law contains the main principles applicable for carrying out oil activities; the principles of the regime of classified information; the main types of oil activities and concessions related thereto (petroleum agreements); and the main rights and obligations arising from the oil concessions together with the situations in which such may be suspended or revoked. The Methodological Norms describe in more detail the public procedure for the granting of oil concessions and the regime of the various types of oil concessions as well as the rights and obligations of the titleholders.

The National Agency for Mineral Resources ("NAMR") has the greatest competence in the oil field. It is a body of the central public administration and is legally authorised and functions under the auspices of the Government. The main duties of NAMR are: (i) the management of the state oil resources; (ii) negotiation of the terms and conditions of oil agreements and conclusion of such agreements on behalf of the state; (iii) secondary regulations; (iv) receipt, verification and registration of data and information regarding oil resources and reserves, ensuring the storage, systematisation and valorification; (v) monitoring and verification of oil production for the purposes of calculating royalties; (vi) monitoring the application of measures relating to surface and underground protection during the oil operations; (vii) monitoring compliance by the titleholder of the petroleum agreements, the applicable laws and regulations and ordering measures for compliance with such; (viii) approving the abandonment plan and termination of concession based on compliance with the provisions of the environment recovery plan as approved by the competent environmental authorities; (ix) in the absence of a prospecting permit or a petroleum agreement - certification of the performance of activities and informing the competent authorities in this respect.

NAMR is responsible for maintaining the Petroleum Book, a registration document comprising all data about the legal regime of the areas: the development and exploitation perimeter; ownership; topographical situation of the works related to the oil activities; the oil and production resources/ reserves; and data regarding the demarcation of oil perimeters and operations in the prospecting and exploration stages.

5.3 Regulated oil market activities

NAMR is responsible for granting concessions for petroleum activities (such as exploration, development, exploitation, storage, transmission, transit, etc.) and public assets related thereto. The concession is awarded by public tender for a term of 30 years with the possibility of extension for another 15 years.

NAMR may also grant prospecting permits which allow the titleholder to undertake exploration activities in a specific concession block for a maximum period of three years. The term of a prospecting permit cannot exceed 3 years.

The concession takes the form of a petroleum agreement concluded between NAMR and the Romanian or foreign legal entity awarded the public tender. The concession enters into force subject to specific governmental approval. The titleholder of the concession pays an oil royalty for the entire duration of the concession. The percentage of the royalty payable by the titleholder of the petroleum agreement is determined in consideration of the type of activity undertaken by the titleholder (*i.e.*, production, transit and transport, underground storage of natural gas). The current oil royalty payable for the performance of oil production activities varies between 3.5% and up to 13.5%, percentage applied to the value of the extracted oil quantities.

The main types of petroleum agreements are:

- (a) Exploration-development-exploitation petroleum agreement;
- (b) Development-exploitation petroleum agreement;
- (c) Exploitation petroleum agreement;
- (d) Development petroleum agreement;
- (e) Underground storage of natural gas petroleum agreement – please note that the performance of the natural gas storage activity requires both an ANRE licence and a NAMR petroleum agreement;
- (f) Petroleum agreement for the concession of the national oil pipeline system;
- (g) Petroleum agreement for the concession of the oil terminals.

The granting of oil petroleum agreements is based on transparent and non-discriminatory criteria.

The transit of oil is performed through main pipelines on a contractual basis in compliance with national and international legal provisions. The transit agreements may not include unjustifiably restrictive conditions, or conditions endangering the security of supply and the quality of services. The transport of oil through the national transport system is a public national interest service for which Conpet possesses the concession. Conpet has the status of ordinary transport operator under the Petroleum Law and is thus obliged to ensure non-discriminatory treatment for all its clients and perform oil transport on the basis of tariffs regulated by NAMR.

The national oil transportation system is public property of the state and the concession for its use is the subject of a public tender procedure. Nevertheless, within the duration of the concession agreement, any investments made from the concessionaire's own resources and which relate to the operation of the national oil transportation system (such as modernisation and developments of the transportation system) shall be deemed to be assets in the public property of the state. Such investments will be reimbursed by the Romanian state upon termination of the concession agreement.

5.4 Material provisions of the oil market law and licensing regulations

A titleholder of a petroleum agreement may transfer to another legal entity, in full or in part, the rights and obligations acquired on the basis of the petroleum agreement only with the prior approval of NAMR, under the sanction of nullity of the transfer. The approval of the transfer shall be made provided that the



transferee can prove that it has the technical and financial capacity necessary for the performance of the oil activities in compliance with the conditions provided in the petroleum agreement. For the approval of the transfer the following cumulative conditions must be met:

- (a) The petroleum agreement must be in force;
- (b) The Romanian legal entity to which the petroleum agreement shall be transferred (*i.e.*, a Romanian based company or a Romanian based secondary office of a foreign company) has no outstanding debts towards the state budget, social security state budget or other related state budgets;
- (c) The obligations undertaken by the titleholder on the basis of the petroleum agreement have been fulfilled or the transferee undertakes to fulfil also the non-fulfilled obligations;
- (d) The transferee has the legal and technical capacity required for undertaking the obligations under the petroleum agreement;
- (e) The transfer does not affect the conditions of the concession, as established in the petroleum agreement;
- (f) The transferee is specialised for carrying out oil activities or has appointed an authorised firm in the role of operator which possesses the appropriate technical capacity in relation to the oil operations provided in the transferred agreement.

1. Introduction to the energy market

Serbia has a central position on the Balkan Peninsula and this makes it a natural regional energy hub. Since the breakup of Yugoslavia and a decade of turmoil, the energy sector in Serbia has been under reform. However the pace is rather slow. Only recently has the Serbian Parliament adopted a new Energy Law. In 2009 Serbia sold a majority stake in the oil monopoly to Russian Gazprom Neft. The state-owned electricity utility is still 100% state-owned and the current strategy is not to sell a majority stake in this company but rather pursue joint ventures in development of new capacities.

2. Electricity

2.1 Market overview

The Serbian electricity market is characterised by increased household consumption and lack of new generation capacities. Controlled energy prices, weak economy and undeveloped regulatory framework have been obstructing new investments in the power generation plants by both the state-owned utility Elektroprivreda Srbije ("EPS") and private investors.

The state-owned utility EPS with its 100% subsidiaries is still virtually the only producer, distributor and supplier on the electricity market. Transmission is separated from EPS and is handled by Elektromreže Srbije, another 100% state-owned entity, whereas distribution is in the hands of the regional distribution companies; all of them subsidiaries of EPS.

There is a high degree of dependence on lignite which accounts for more than 60% of the total installed electricity generation capacity in Serbia.

2.2 Regulatory overview

In July 2011, the Serbian Parliament adopted the new Energy Law ("*Zakon o energetici*", Official Gazette of Republic of Serbia, No. 57/2011). The intention of the lawmakers is to further implement the second EU energy package as well as parts of the third EU energy package.

The Energy Law is a comprehensive legislation regulating all relevant energy sectors, *i.e.* electricity, district heating, oil and gas. The Energy Law deals with: a) the rights and obligations of the relevant stakeholders in the energy sector; b) the issuance of authorisations for performance of energy activities; c) the issuance of licences for the construction of energy facilities (energy licence – "*energetska dozvola*"); d) regulated prices; e) renewable energy; f) specific rules for the electricity, gas, oil and district heating sectors; g) access to the energy system, *i.e.* transmission and distribution systems; h) supply of energy.

The Government, the Ministry of Infrastructure and Energy and the Energy Agency of the Republic of Serbia need to adopt a number of implementing regulations necessary for the new Law to be fully functional. Until then, the existing regulations will apply to the extent they are not in conflict with the new Law. The most important of these secondary regulations are: the Transmission Grid Code ("*Pravila o radu prenosnog sistema*", Official Gazette of Republic of Serbia, No. 55/2008), Distribution Grid Codes of each of five regional distribution companies, Supply Rules ("*Uredba o uslovima isporuke električne energije*", Official Gazette of Republic of Serbia, No. 107/2005).

The key stakeholders in the Serbian electricity market are:

- (a) The Ministry of Infrastructure and Energy – responsible for preparing the most important strategic and action documents for adoption by the Government of Serbia, enacting various implementing regulations and technical standards and overseeing the overall implementation of the Law;
- (b) The Energy Agency of the Republic of Serbia ("AERS") - an independent, regulatory body established pursuant to the Law on Energy. Its primary tasks are to develop and enhance the electricity and gas market based on the principles of non-discrimination and effective competition by creating a stable regulatory framework;
- (c) Transmission system operator – Elektromreže Srbije ("EMS") – a state-owned public company in charge of development, safe and reliable functioning of the transmission system, enforcement of non-discriminatory and economical access to the transmission system.

2.3 Regulated electricity market activities

The Energy Law prescribes the following energy activities in the electricity sector:

- (a) The production of electricity;
- (b) The combined production of electricity and heating energy;
- (c) The transmission of electricity and management of the transmission system;
- (d) The distribution of electricity and management of the distribution system;
- (e) The supply of electric energy (*i.e.* energy trading);
- (f) The public supply of electric energy (*i.e.* supply of small consumers);
- (g) Electricity market operation.

The performance of each of these activities is subject to the granting of a licence by the AERS. Furthermore, with the exception of the activities under (a), (b) and (e), all other activities in the electricity sector are considered activities of general interest and, therefore, may be performed either by public, state-owned companies or by privately owned companies expressly authorised by the Government of Serbia to perform a specific activity of general interest pursuant to the Law on Public Companies and Performance of the Activities of General Interest ("*Zakon o javnim preduzećima i obavljanju delatnosti od opšteg interesa*", Official Gazette of Republic of Serbia, No. 25/2000, 25/2002, 107/2005, 108/2005 and 123/2007).

2.4 Generation

The development of generation capacities is reliant on the granting of numerous permits from various state authorities. A licence for the production of electricity described in the previous section is granted only at the end of the entire development process and follows the procurement of an operational permit for the power plant. The following section describes only the most important steps which are part of the development of generation capacity.

First of all, the construction of any electricity generation facility with the installed power of a connection point more than 1MW has to be first approved by the Ministry of Infrastructure and Energy by the issuance of an energy permit ("*energetska dozvola*"). A permit is not required to award a concession for the development of a generation facility.

Secondly, the construction of any larger power plant requires the preparation of adequate planning documents which set out the construction of such power plant. Furthermore, the design of the power plant is subject to an assessment of the environmental impact pursuant to the Law on Assessment of the Environmental Impact ("*Zakon o proceni uticaja na zivotnu sredinu*", Official Gazette of Republic of Serbia, No. 135/2004). Hydro-power plants with an installed capacity of up to 2MW and wind farms with an installed capacity of up to 10MW are exempt from this obligation. Moreover, power plants with a capacity of less than 50MW must prepare an environmental impact assessment only if the municipal authority responsible for environmental protection decides that this is necessary.

Thirdly, when the production of electricity in a power plant is based on natural resources (e.g. coal) or public goods (e.g. water), the prospective producer of electricity must acquire the right to use such a natural resource or public good, either by obtaining a concession in a competitive tender procedure pursuant to the Law on Concessions ("*Zakon o koncesijama*", Official Gazette of Republic of Serbia, No. 55/2003) or through obtaining sector specific permits pursuant to the Law on Mining ("*Zakon o rudarstvu*", Official Gazette of Republic of Serbia, No. 44/95, 85/2005, 101/2005, 34/2006, 104/2009) or the Law on Waters ("*Zakon o vodama*", Official Gazette of Republic of Serbia, No. 30/2010).

Finally, the Law on Planning and Construction provides for various permits, approvals and other documents to be issued before and during the course of the construction of a power plant. The most important of these are the construction permit and the operational permit. The operational permit is issued only upon a successful technical inspection and a trial operation of the power plant.

2.5 Trading and supply of electricity

The Energy Law distinguishes between the regular market activity of supply (which also covers electricity trading) and the activity of public supplier of electricity; the latter being considered as an activity of general interest which may be discharged only after specific authorisation is obtained from the Government of Serbia (see section 2.3 above).

The Serbian energy market is gradually opening up. The previous energy law provided for the concept of a qualified consumer allowed to choose its supplier on the market. In order to be regarded as a qualified consumer, annual consumption needed to be in excess of 200,000 kWh. However, due to the low prices of electricity supplied by EPS, there was no interest in finding an alternative supplier.

The new Energy Law is changing the situation and dispenses with the concept of a qualified consumer of electricity. Instead, all electricity consumers have the right to freely choose their supplier, with the exception of households which will have that right as of 1 January 2015.

From 1st October 2012, the Energy Agency of the Republic of Serbia, as an independent regulator, will have the competence to approve the price of electricity and gas for public supply, as well as the price of access to the transmission and distribution systems. Until then, the Government of Serbia will continue to regulate those prices.

As of 1st January 2013, regulated electricity prices will apply only to consumers connected to the distribution grid, while industrial consumers directly connected to the transmission grid will not be entitled to the regulated price. Consumer protection will be further reduced from 1 January 2015, when regulated prices will apply only to households and small industrial consumers (i.e. companies with less than 50 employees, less than EUR 10 million revenue and connection to the distribution grid of up to 1kV).

Finally, the activity of distribution of electricity and the activity of public supplier currently managed by the 5 regional subsidiaries of EPS will be divided into separate companies by 1st October 2012.

The Energy Law divides the electricity market into a bilateral electricity market; a balance electricity market; and an organised electricity market.

A bilateral electricity market is based on bilateral power purchase agreements. A balance electricity market enables the transmission system operator to secure proper operation of the transmission system by selling and purchasing the required quantities of

electricity. It is managed by the transmission system operator. An organised electricity market is based on day-ahead and intra-day trading and will be managed by the market operator.

At this moment, EMS holds licences for both, transmission system operator and market operator. Pursuant to the Energy Law, EMS will discharge the duty of the market operator until the Government of Serbia forms a company which will assume the duty of the market operator. The Market Rules have not yet been adopted but their content and scope is prescribed by the Energy Law. The newly appointed market operator will, according to the Energy Law, be obliged to adopt the Market Rules and submit them for approval to AERS within one year after having been established.

2.6 Transmission and grid access

Pursuant to Article 122 of the Law on Energy, EMS must allow third party access to the transmission system on a non-discriminatory basis, under regulated prices and through public procedure. Access may be denied only on technical grounds in the event of lack of capacities, system overload or threats to system stability. The access agreement which is signed by EMS and the interested party determines, *inter alia*, the point of access, capacity, accounting period etc.

The procedure for connection to the transmission system begins with the acquisition of an opinion on the possibilities and conditions for connecting the power plant or the consumer's facility to the transmission system. Such an opinion is to be obtained from EMS.

When the opinion has been issued, the interested party then submits a request to EMS for the preparation of an analysis of the best possible connection to the transmission network. The primary and execution designs of the power plant should be prepared in accordance with the EMS analysis.

The producer and/or consumer of electricity may connect to the transmission system only upon the granting of a connection approval by EMS. The deadline for the granting of a connection approval is 60 days for electricity producers and 30 days for consumers. AERS is responsible for deciding on any appeal submitted against a decision issued by EMS. The decision of AERS is final in administrative proceedings but may be challenged before the Administrative Court of Serbia in the case of administrative accountability proceedings.

Connection approval is issued after the construction of the power plant/ consumer's facility.

EMS will grant the connection approval if the equipment and installations of the power plant/ facility are determined to be in accordance with the opinion issued by EMS and the relevant technical rules and regulations.

The connection approval granted by EMS specifically determines the connection point, technical conditions for connection, place

and manner of measuring electricity, deadline for establishing connection and the cost of connection.

Following the issuance of the connection approval, the interested party and EMS enter into an agreement on access to the transmission system. Pursuant to the Transmission Grid Rules, EMS may unilaterally terminate the connection agreement only in the following cases:

- (a) If the operator fails to fulfil its obligations within an additional period of time granted for compliance or it follows from its behaviour that it shall not fulfil its contractual obligations even within the additional time period;
- (b) The performance of the agreement becomes impossible;
- (c) An annulment of the access permit issued by EMS.

The costs of connection are borne by the applicant and are determined by EMS in accordance with the methodology developed by AERS.

3. Renewable energy

3.1 Market overview

Serbian renewable power generation is dominated by the large hydro-power plants with a total installed power of 2,832MW which amounts to approximately 34% of the total installed power generation capacity in Serbia.

During 2009 and 2010, several small hydro power plant ("HPP") projects were completed and commenced commercial operation. Energy permits for development of additional 50MW of small HPP have been issued by the Serbian Energy and Mining Ministry.

The Ministry has, during the past two years, issued a number of energy permits for wind farm projects with total envisaged installed power of around 1,300MW. However, it remains to be seen whether all these wind farm projects will actually be developed since only 450MW of wind farm capacity is eligible for feed-in tariffs.

Biomass, geothermal and solar energy sources are currently not used for power generation although there is potential for all of them.

3.2 Support schemes

- (a) General

The previous Serbian Energy Law, adopted in 2004, introduced the possibility of incentives for renewable power generation as well as the concept of privileged power producers. However, only in late

2009 did the Government of Serbia make these general provisions of the Energy Law operational by adopting two implementing decrees, introducing feed-in tariffs and detailing the procedure for awarding the status of a privileged producer, respectively.

The new Energy Law provides for the possibility of acquiring the temporary status of a privileged producer of electricity (which may last up to three years, with the possibility of a one year extension) and entering into a pre-contract for the purchase of electricity with a public supplier. Temporary status may be obtained upon the procurement of a construction permit for a relevant renewables project and posting a deposit or a bank guarantee in the amount of 2% of the investment.

The new Energy Law also introduces the system of green certificates to be set up and managed by the Serbian transmission system operator. However, until the adoption of the relevant secondary legislation the green certificates scheme will not be operational.

The new Energy Law specifically provides for the obligation of the public supplier to enter into a power purchase agreement with the privileged energy producer. The existing feed-in tariff adopted under the previous Energy Law will remain in place until the end of 2012. It still remains to be seen what policies will be put in place in respect to renewables.

(b) Feed-in tariffs

A separate feed-in tariff regime for renewable energy is applicable as of 2010 by virtue of the Decree on Incentives for Production of Electric Energy by Using Renewable Energy Sources and by Combined Production of Electric and Heating Energy ("*Uredba o merama podsticaja za proizvodnju električne energije korišćenjem obnovljivih izvora energije i kombinovanom proizvodnjom električne i toplotne energije*", Official Gazette of Republic of Serbia, No. 99/2009) ("Decree").

The Decree limits the maximum installed capacity power of hydro, biomass, combined cycle (electric and thermal energy) and communal waste power plants which may qualify for feed-in tariffs to 10MW.

The maximum overall installed power of solar power plants eligible for feed-in tariffs is limited up to 5MW whereas the maximum for wind farms amounts to 450MW with the possibility of increase for an amount equal to 10% of the total newly installed capacity by EPS during the period of the validity of the Decree.

In order to be eligible, renewable power plants must be certified by the Minister of Infrastructure and Energy pursuant to the Decree on Conditions for Acquiring the Status of Privileged Status and Criteria for Evaluation of these Conditions ("*Uredba o uslovima za sticanje statusa povlašćenog proizvođača električne energije i kriterijumima za ocenu ispunjenosti tih uslova*", Official Gazette of Republic of Serbia, No. 72/2009).

Amounts

The guaranteed tariffs applicable to renewable energy produced by qualified producers are as follows:

- 5.9 to 9.7 cEUR/kWh for small HPPs;
- 11.4 to 13.6 cEUR/kWh for biomass plants;
- 12 to 16 cEUR/kWh for biogas plants;
- 9.5 cEUR/kWh for wind farms;
- 6.7 cEUR/kWh for waste and landfill gas power plants;
- 7.5 cEUR/kWh for geothermal power plants;
- 7.6 to 10.4 cEUR for co-generation power plants;
- 8.5 to 9.2 cEUR/kWh for waste-fired power plants;
- 23 cEUR/kWh for solar energy power plants.

Duration

The above feed-in tariffs are valid until 31 December 2012. At this moment, there are no indications whether this period will be extended.

EPS (directly or through its wholly owned subsidiary in charge of distribution) is obliged to purchase eligible renewable energy from certified privileged producers based on a standard power purchase agreement ("PPA") published by EPS. According to unofficial information from EPS, there are currently 11 PPA's in place, covering an estimated annual purchase for 2011 of approximately 13 GWh.

PPAs are concluded for a period of 12 years. Therefore, there is a discrepancy between the period of the validity of the guaranteed feed-in tariffs (three years) and the prescribed duration of the PPAs (12 years). However, in practice, the PPAs contain obligation of EPS to purchase eligible renewable energy for the entire duration of the PPA based on the guaranteed tariffs stated above.

Funding

According to the Decree, EPS is reimbursed by the state for: (i) the difference between the average price of energy invoiced by EPS in accordance with the methodology for calculation of tariff elements as determined by the AERS, and the tariffs guaranteed by the Decree; and (ii) for ancillary services delivered to qualified producers of renewables free of charge. However, the new Energy Law states that the funding for the feed-in tariff and other incentives for the renewable electricity sources is obtained through a special fee paid as part of the access fee to the transmission or distribution system. The Government is supposed to determine the amount of this special fee.

4. Natural gas

4.1 Market overview

The Serbian natural gas market significantly depends on imported natural gas, *i.e.* 91% of consumption is imported.

Currently, there are 36 companies engaged in distribution and supply of end consumers, 2 companies engaged in gas transportation, 12 companies are registered for gas trading and one company is operating a gas storage facility.

Finally, expansion of the gas sector should be expected, as its wider use is declared as one of the priorities of the Serbian Energy Development Strategy. Further gasification of at least 400,000.00 households and increase of the gas usage in electricity generation (for more than 300%) are planned.

4.2 Regulatory overview

Legal framework

The gas sector in Serbia is governed by the Energy Law and bylaws elaborating it as main pieces of gas legislation. The following important laws (and supporting bylaws) are also applied to the gas sector:

- (a) Law on Pipeline Transportation of Gas and Liquid Hydrocarbons and Distribution of Gas Hydrocarbons ("Zakon o cevovodnom transportu gasovitih i tečnih ugljovodonika i distribuciji gasovitih ugljovodonika", Official Gazette of Republic of Serbia, No. 104/09);
- (b) Law on Public Enterprises and Activities of Public Interests ("Zakon o javnim preduzećima i obavljanju delatnosti od opšteg interesa", Official Gazette of Republic of Serbia, No. 25/2000, 25/2002, 107/2005, 108/2005, 123/2007);
- (c) Concession Law ("Zakon o koncesiji", Official Gazette of Republic of Serbia, No. 55/2003);
- (d) Law on Planning and Construction ("Zakon o planiranju i izgradnji", Official Gazette of Republic of Serbia, No. 72/2009, 81/2009, 64/2010 and 24/2011);
- (e) Law on Mining ("Zakon o rudarstvu", Official Gazette of Republic of Serbia, No. 44/95, 101/2005, 85/2005, 34/2006 and 104/2009);
- (f) Law on Geological Explorations ("Zakon o geološkim istraživanjima", Official Gazette of Republic of Serbia, No. 44/95 and 101/2005).

By adopting the Law on Energy, Serbia has made one significant step towards its harmonisation with the EU gas regulations (Directive 2009/73/EC, Regulation (EC) 715/2009 etc).

The Energy Law envisages a gradual opening of the natural gas market. Namely, all end customers, except for households have the right to choose their gas supplier freely. Households will have this right as of 1 January 2015.

The circle of customers entitled to purchase gas from the public supplier under regulated prices is gradually shrinking: starting from 1 January 2013 only consumers connected to the distribution grid will be entitled to regulated prices, while industrial consumers directly connected to the transport system will not be entitled to the regulated price. Consumer protection will be further reduced as of 1 January 2015, when regulated prices will apply only to households and small industrial consumers (*i.e.* companies with less than 50 employees, less than EUR 10 million of revenue and connection to the distribution system).

4.3 Regulated natural gas market activities

The Energy Law provides for the following natural gas related activities:

- (a) The transportation and operation of the transport system;
- (b) The storage and operation of the gas storage facilities;
- (c) The distribution and operation of the distribution system;
- (d) Supply;
- (e) Public supply.

The performance of any of these activities is subject to the issuance of an energy licence by AERS as a principle regulatory body in the gas sector. Licences are issued within 30 days of the proper application, provided that all conditions are met. The validity period of the licence is 30 years and is renewable upon the request of the energy undertaking, provided that the request is filed no later than 30 days prior to the expiry date.

The licence is not transferable. AERS is entitled to temporarily suspend the licence, should the energy undertaking fails to: a) comply with the requirements of the Energy Law; b) maintain energy facilities in accordance with the regulations; c) comply with the obligations imposed by the licence; d) determine the prices according to the methodologies rendered by AERS. If the energy undertaking does not remedy the breach within a given deadline, the licence may be permanently revoked. An appeal to the decision of AERS may be filed with the Ministry of Infrastructure and Energy.

It should be noted that apart from the activity of supply, all other gas activities are declared as activities of general interest and may be performed either by public, state-owned companies or by privately owned companies which are specifically authorised by the Government of Serbia to perform a specific activity of general interest pursuant to the Law on Public Companies and Performance of the Activities of General Interest.

4.4 Exploration and production

(a) Exploration

Exploration for natural gas in Serbia is regulated by the Law on Geological Explorations, while the principle regulatory body in this domain is the Ministry of Environment, Mining and Spatial Planning.

Exploration for natural gas may be performed by companies registered in the respective commercial registry for the activity of geological explorations and employing an adequate number of geological professionals. Prior to commencement of geological explorations, the main geological project and exploration elaborates must be prepared, both of which are subject to mandatory technical review, and Exploration Approval must be obtained from the Ministry of Environment, Mining and Spatial Planning. The Exploration Approval determines the validity period and the deadline for commencement with the exploration works. The licensee is obliged to regularly update the Ministry on the exploration findings.

(b) Production

The production of natural gas is also within the regulatory scope of the Ministry of Environment, Mining and Spatial Planning. Natural gas production (*i.e.* exploitation) is performed by the companies registered with the competent commercial registry for mining activities.

Gas production is based on permits issued by the Ministry. Namely, the following permits are required:

- Exploitation Approval (for the purpose of natural gas exploitation and its refinement);
- Approval for Performance of Mining Works (for the purpose of drilling gas wells and gas wells operation);
- Approval for Construction of the Mining Facilities (for the purpose of development of the gas wells).

An exploitation fee of the natural gas, in the amount of 3% of the income earned from exploitation of the natural gas, shall be paid to the Republic of Serbia.

All gas fields in Serbia are located in Vojvodina and are exploited by the dominant market player Nis a.d. Novi Sad (majority owned by Gazprom Neft) with more than 60 gas wells in Banat, Elemir, Kikinda and Plandište.

4.5 Transmission and access to the system

(a) General

The Gas Transmission System ("GTS") Operator in the Republic of Serbia is the public company Srbijagas (the "GTSO"). GTS

Rules have not yet been adopted. According to the Energy Law, GTS Rules shall be adopted by the GTSO no later than August 2012 and must be approved by AERS.

Serbian GTS is comprised of gas pipelines with a total length of 2,150.00 km and a pressure from 16 up to 50 bars. In addition to GTS operations, the GTSO is also, among other duties, responsible for the organisation and management of the gas market, system balancing, purchasing of gas for balancing, and adoption of the decision on access prices.

(b) Access to the GTS

According to the Energy Law, the GTSO is obliged to provide access to all customers under regulated prices based on the principles of transparency and non-discrimination (obligation to provide access). The GTSO and the interested party enter in an access agreement which regulates the rights and obligations of the parties with respect to access to the GTS.

The right to utilise the transport capacities of the GTS is regulated by the gas transportation agreement entered into between the GTSO and the customer. This agreement may be a long-term (over one year) or short-term agreement (less than one year) and the agreed capacity may be a cut-off or constant capacity.

Access prices are regulated prices determined by the GTSO and approved by the Government of Serbia. From 1st October 2012 AERS will be in charge of approving the regulated prices, *inter alia*, the access prices. The methodologies for determining access prices are prescribed and adopted by AERS.

GTSO is entitled to reject access to the system for the following technical reasons: (i) transportation under-capacity, (ii) if access would endanger the stability of gas supply or (iii) severe economical and financial problems caused due to the take or pay obligations (upon the request of the supplier that has entered into the take or pay gas supply agreement).

Exemption from the obligation to provide access

Major new gas infrastructure, interconnectors and storage facilities, may, upon request, be exempted, from the obligation to provide access under the following conditions:

- The investment must enhance competition in gas supply and enhance security of supply;
- The level of risk attached to the investment must be such that the investment would not take place unless an exemption was granted;
- The infrastructure must be owned by a natural or legal person, independent of the system operators in whose systems that infrastructure will be built;

- Charges must be levied on users of that infrastructure; and
- The exemption must not be detrimental to competition or the effective functioning of the internal market in natural gas, or the efficient functioning of the regulated system to which the infrastructure is connected.

Exemption is granted by a resolution of the Ministry of Infrastructure and Energy.

Additionally, the supplier of natural gas is also entitled to request from the Ministry to exempt the GTSO from the obligation to grant access to the system in the event that it envisages severe financial and economic difficulties due to undertaken take or pay obligations.

4.6 Trading and supply

The trading and supply of natural gas is performed on the free gas market. As mentioned above, public supply under state regulated prices shall be gradually reduced until 1 January 2015, when only the households and small gas consumers shall be entitled to public supply under regulated prices.

Gas is supplied and traded on the market based on gas purchase agreements. The amount of contracted natural gas under the gas purchase agreement may be pre-agreed for a calculation period or determined based on consumer consumption, in the event of gas purchase agreements with full supply. The new Energy Law also prescribes for "take or pay" gas purchase agreements.

According to the Energy Law, participants to the free natural gas market may be: (i) natural gas producer, (ii) supplier, (iii) public supplier (to be appointed by the Government based on public tender no later than October 2012), (iv) end consumers and (v) GTSO, storage operator and gas distribution system operator (but only for the purpose of its own consumption and balancing due until the unbundling principle is introduced). All participants are obliged to regulate their balance responsibility by entering into balancing services agreements with the GTSO.

4.7 Storage

Natural gas storage and operation of storage facilities may be performed by an entity holding a licence for gas storage and operation of storage facilities issued by AERS. So far, only one licence has been issued for this activity to Srbijagas who is also the GTSO. Accordingly, it should be mentioned that there is only one gas storage in Serbia located in Banatski Dvor.

All access rules applicable to the access of the GTS are *mutatis mutandis* applicable to access to the gas storage facilities.

5. Upstream oil market

5.1 Market overview

One of the sectors that make up the energy economy of Serbia is the oil sector. There is exploitation of domestic oil reserves, as well as the import, transport and processing of crude oil and oil derivatives, and distribution and sales/ export of oil derivatives.

5.2 Regulatory overview

Oil-related activities in Serbia are governed by the Law on Geological Explorations, Energy Law and Mining Law.

The principle regulatory body in this domain is the Ministry of Environment, Mining and Spatial Planning and the AERS issues licences for carrying out the energy activities in the sector. In addition, the Agency keeps a register of issued and revoked licences.

5.3 Exploration and production

(a) Exploration

Exploration of oil may be performed by companies registered in the respective commercial registry for the activity of geological explorations and which employ a sufficient number of geological professionals. Prior to commencement of geological explorations, the main geological design and exploration elaborates must be prepared. These documents are subject to mandatory technical review, whereupon Exploration Approval must be obtained from the Ministry of Environment, Mining and Spatial Planning. The Exploration Approval determines the validity period and the deadline for commencement with the exploration works. The licensee is obliged to regularly update the Ministry on the exploration findings.

(b) Production

The production of oil is also within the regulatory scope of the Ministry of Environment, Mining and Spatial Planning. Oil production is based on a licence issued by the Ministry in the course of regular administrative procedure.

It should be emphasised herein that the fee for exploitation of oil is paid to the Republic of Serbia equivalent to the amount of 3% of the income earned from the exploitation of oil.

Serbia is heavily dependent on imported oil (and gas). All significant oil fields in Serbia are located only in Vojvodina Autonomous Province and are exploited by the dominant market player Nis a.d. Novi Sad (majority owned by the international oil (and gas) giant Gazprom Neft). 45 million tons of oil have been produced in the territory of Serbia and about 4 million tons of oil at concession sites in Angola since its incorporation. Operational refineries in Serbia are located in Pancevo and Novi Sad.

5.4 Other oil-related activities

For the performance of other oil-related activities a licence issued by AERS is a prerequisite. The procedure for the issuance of these licences is identical to the procedure for the issuance of licences in the electricity sector.

Energy companies (legal entity or entrepreneur who is registered to perform one or more energy activities) can apply for a licence to perform the following activities:

- (a) The production of oil derivatives;
- (b) Oil transport by oil pipelines;
- (c) The transportation of oil derivatives;
- (d) The storage of oil and oil derivatives;
- (e) Trade with oil and oil derivatives;
- (f) Retail of oil derivatives (fuel supply stations for motor vehicles).

1. Introduction to the energy market

In the past, Slovenian energy policy has been tightly connected with the operation of coal mines. However, in recent decades there have been trends towards a reduction of necessary primary fossil fuels and increased use of renewable energy (in particular hydroelectric power) and intensive introduction of gas as a fuel. Slovenia is still highly dependent on the import of the energy, thus the events on the international energy markets have had a direct impact on the local energy market.

Currently, the discussions amongst market players, the regulatory bodies and other interested parties concentrates mainly on the implementation of the Third Legislative Package and Climate Change Bodies into Slovenian legislation. For this purpose in June 2011 the Ministry of Commerce submitted a draft new Energy Act for discussion in the parliament. The new Energy Act will significantly amend the current legal regulation of the energy sector. However, the legal framework provided by it will be more systematic and transparent. The new features likely to be introduced by the new Energy Act shall be described below.

2. Electricity

2.1 Market overview

Slovenia has opted for the complete liberalisation of the electricity market hence all the customers may freely choose their electricity suppliers. The organisation of the market is carried out as mandatory national public service.

The key market players in Slovenia are Elektro – Slovenija, d.o.o. ("ELES, d.o.o.") – transmission system operator, SODO, d.o.o. – distribution system operator and five distribution companies: Elektro Ljubljana d.d., Elektro Maribor d.d., Elektro Celje d.d., Elektro Gorenjska d.d. and Elektro Primorska d.d.; most of them are directly or indirectly state-controlled.

The first pillar of the Slovenian wholesale electricity market comprises the holding company Slovenske elektrarne, d.o.o., which operates the Drava Hydroelectric Power Plant, the Soča Hydroelectric Power Plant, the Lower Sava Hydroelectric Power Plant, the Šoštanj Thermolectric Power Plant, and the Trbovlje Thermolectric Power Plant. The second energy pillar is the group GEN energija, d. o. o., operating Sava Hydroelectric Power Plant, Brestanica Thermolectric Power Plant and Krško Nuclear Power plant.

The competition on the market is promoted, among others, by the Competition Protection Office which has recently announced some ground-breaking decisions in relation to the energy sector. It should also be noted that the current generation of the electricity barely meets the requirements of the Slovenian market. For the purpose of meeting these requirements, in 2011 the Slovenian and Italian electricity markets were merged for the purposes of allocating

cross-border capacity. Cross-border interconnectors also exist with Austria and Croatia.

The on-going discussion on increasing the electricity capacities currently focuses on two projects: the additions to the sixth block of thermolectric power plant in Šoštanj; and a new second block to the nuclear power plant in Krško.

2.2 Regulatory overview

The legislative framework is provided by the Resolution on the National Energy Plan, the Energy Act (Official Gazette of Republic of Slovenia No. 79/1999, as amended) and implementing regulations adopted on the basis of the Energy Act. In addition, the Environment Protection Act (Official Gazette of Republic of Slovenia No. 4/2004, as amended), Construction Act (Official Gazette of Republic of Slovenia No. 110/2002, as amended) and Placement of Spatial Arrangements of National Interest in Physical Space Act (Official Gazette of Republic of Slovenia No. 80/2010) also apply.

The electricity sector is (in addition to natural gas and district heating) regulated and supervised by the Energy Agency of the Republic of Slovenia ("Energy Agency"). The Energy Agency: (i) issues general acts relating to the network charge and tariff systems; (ii) adopts general rules and sets out the general conditions; (iii) adopts the rules for balancing the electricity market; (iv) is responsible for licensing; (v) deals with the disputes arising from the access to network, network charges, violations of general rules and conditions; (vi) supervises the independence of system operators; (vii) gathers information; and (viii) issues guarantees and green certificates.

On the other hand, the Ministry of Economy, Directorate for Energy supervises the operations of the public utilities services in the field of electricity (as well as natural gas and district heating). Moreover, it operates the licensing regime applicable to the construction and operation of energy facilities. In accordance with the Energy Act, an energy permit is required for the construction of the facilities, distribution and transmission networks, provided that the electric power of the power plant is rated over 1MW or the connection power of the network is rated over 5MW.

A licence must be acquired for performance of, among others, the following energy activities: (i) production of electricity above 1MW in an individual electric power plant or heating plant; (ii) transmission of energy through networks; (iii) supply of electricity; (iv) operation of electricity market; and (v) representation and intermediation in electricity markets. A licence may be obtained by a natural or a legal person, provided that such a person fulfils the following conditions: (a) is appropriately registered for the performance of energy activity; (b) has appropriately trained staff capable of carrying out the activities for which a licence application has been made; (c) disposes of appropriate funds or is able to prove it can dispose of the funds needed for carrying out the energy-related activity; (d) has not had the same type of licence previously revoked by the Energy Agency for a period of ten

years prior to applying for the licence; and (e) has not been convicted of a criminal offence associated with any involvement with economic activities in the last five years nor has been banned from performing the energy-related activity, by the competent authorities.

2.3 Generation

The predominant share of generation in Slovenia is carried out in conventional power plants, such as thermoelectric power plants, hydroelectric power plants and the nuclear power plant which present almost 95% of the generation.

The following companies operating in large facilities with a capacity of over 10MW are active in the electricity-production market: Drava Hydroelectric Power Plants, Sava Hydroelectric Power Plants, Lower Sava Hydroelectric Power Plants, Soča Hydroelectric Power Plants, Krško Nuclear Power Plant, Šoštanj Thermoelectric Power Plant, Trbovlje Thermoelectric Power Plant, Ljubljana Combined Heat-and-Power Plant and Brestanica Thermoelectric Power Plant.

Apart from the production in large power plants, the Slovenian electricity system also includes some distributed production, mainly in small hydroelectric power plants and industrial facilities for the cogeneration of heat and electricity. In recent years, the number of small solar power plants has increased significantly, mainly due to lower prices of photovoltaic models, relatively favourable purchase prices and operating support for electricity produced from small solar power plants. Also the number of the facilities, producing the electricity from other renewables (biomass, landfill gas), has increased.

2.4 Trading and supply of electricity

The Slovenian electricity market is completely liberalised, fully opened and divided into the wholesale market and the retail market.

Participants in the retail market trade only on the basis of opened contracts, while the participants in the wholesale market trade with closed contracts in which the seller and buyer agree on the fixed quantities of electricity for a particular period of time (the price is charged only on the basis of the agreement) or opened contracts which do not specify the quantities of the supplied electricity in advance (the charging is carried out on the basis of meter readings). The producers of electricity and sellers trading with electricity for the purpose of resale, participate on the wholesale market; the wholesale market also includes all forms of cross-border trading (the reason for this is that the cross-border trading is always performed on the basis of closed contracts). Wholesale trade is carried out in the organised market (the exchange) or bilaterally. In Slovenia most of the deals in the wholesale market are made bilaterally, *i.e.* on the basis of an agreement between a seller and a buyer.

On the exchange, the demand and supply of standardised electricity products for the next day or for the period until, and including, the next working day come together. In the trading phase (between 9

a.m. and 12 a.m.) the participants are submitting and recalling their offers, while having a constant insight in trading books. Auction trading is divided in the following phases: (i) trading phase; (ii) stagnation phase; (iii) calculation of price; and (iv) review of marginal prices and own transactions. After auction trading, trading with products of hourly energy starts (trading with 24 hours of one day).

The prices are usually set by the exchange. In March 2001 Borzen assumed the role of a market organiser and still operates the Slovenian power market. However, the newly established company BSP Regional Energy Exchange assumed the responsibilities for activities connected with the energy exchange in November 2008. Borzen also supervises the management of the Balance Scheme (*i.e.* the hierarchically organised group of market participants in which the relations between the members are regulated through membership agreements), in which the potential entrant must enter in order to trade with electricity.

Physical trading is carried out on the daily or futures markets, while financial trading is only carried out on the futures market. The standards used may be ISDA/EFET standards or any other standard, whereas the usage depends on the membership of the market participants in the respective organisation. There also exists a balancing market in Slovenia. However, it is not yet fully developed, since the rules governing the trading on such market are still in preparatory stage.

Cross-border trading with electricity includes exports from Slovenia, imports to Slovenia, and transit through the territory of the Republic of Slovenia. A network user wishing to be involved in cross-border trading with electricity has to obtain the appropriate access to cross-border transmission paths. For the cross-border trading EU legislation applies.

2.5 Transmission and grid access

In accordance with the Energy Act, one legal entity or sole entrepreneur is assigned by the Government for the transmission system operator for a maximum period of fifty years. The activity of the transmission system operator is carried out by a public corporation, established for providing the respective public service, or a concessionaire, recipient of a concession for the provision of the respective public service. Currently, the function of transmission system operator is carried out by ELES, d.o.o.

Access to the Slovenian network is regulated by means of regulated third party access and is legally and in practice available to all network users. An application for network access is submitted to the operator of the transmission network or distribution networks which decides on the applications submitted on the basis of their order of receipt. This principle applies to the whole of the Slovenian transmission and distribution network, with the exception of those parts where this decision is controlled by other regulations, *i.e.* the cross-border transmission paths on which regular or occasional overloading can occur. With respect to third party access network users shall agree on all contractual relations with the relevant

system operator (*i.e.* ELES, d.o.o. for access to the transmission network and SODO, d.o.o. for access to the distribution networks). In disputes arising from third party access, the Energy Agency of the Republic of Slovenia issues a first instance decision through an administrative procedure.

New users, or users which increase the amount of power they order, are charged for the connection to the network. The connection price covers the direct costs for making a connection as well as the average cost of making a connection for each individual customer group, depending on the amount of power ordered. The funds collected in this way are part of the funds allocated for building electricity networks, and part of the network charge. The average cost of making a connection is set by the Energy Agency with a decision based on the Act Determining the Methodology for Charging for the Network Charge, the Methodology for Setting the Network Charge, and the Criteria for the Eligibility of Costs for Electricity Networks (the Official Gazette of the Republic of Slovenia No. 121/05) that was published in the Decision on Setting the Network Charge for the Use of Electricity Networks, and the Correction Factors for Balancing the Revenues from the Network Charges (the Official Gazette of the Republic of Slovenia No. 121/05).

When connecting a power station causes disproportional costs, the connection can only be made if the investor, or the owner, covers these costs. The system operators of the transmission and distribution networks produce and publish the rules for the division of the costs for network reinforcement. When preparing these rules the operators take into account all the network users making use of a connection (Article 71 of the Energy Act).

3. Renewable energy

3.1 Market overview

Slovenia already generates 30% of consumed energy from renewable sources. In particular, it relies heavily on hydroelectric power plants for the production of electricity (25% of all the production of electricity). Despite the challenges, the production of energy from other renewable sources has also increased. In recent years, the number of small solar power plants has increased significantly. This is primarily due to lower prices of photovoltaic models and relatively encouraging purchase prices and operating support for electricity produced from small solar power plants. In addition, the number of renewable energy facilities (biomass, landfill gas) newly connected to the network has increased.

Although the percentage of energy generated from renewables is fairly high, it is still not sufficient to meet the objectives set out under the Renewable Energy Directive. This is mainly due to the increase of the consumption in previous years.

Incentives for energy production from renewable sources are based on the following strategic documents: (i) Resolution on

the National Energy Program (Official Gazette of Republic of Slovenia No. 57/2004); (ii) Operative Program on the Reduction of Greenhouse Gas Emissions by 2012; (iii) Operative Program on Development of Environmental and Traffic Infrastructure for the period from 2007 until 2013; (iv) National Action Plan for Energy Efficiency for the period from 2008 until 2016; and (v) Action Plan for Renewable Energy from 2010 to 2020. The activities with respect to renewable energy are supervised by the Ministry of Economy, Energy Directorate.

3.2 Support schemes

The legal basis for support schemes was set out in 2008 with the adoption of the amended Energy Act and corresponding implementing regulations. The Energy Agency began issuing decisions on granting support allowing producers to enter the new support system. In addition to other tasks carried out in this area, the Energy Agency also issues decisions to grant declarations for production facilities and guarantees of the origin of electricity. It also takes decisions to grant support and monitors the production facilities for which the producers have obtained, or wish to obtain, a declaration. The new regulation concerning support for electricity from renewable sources was registered with and approved by the European Commission.

In order to receive support, an owner or leaseholder producing or intending to produce electricity from renewable energy sources must first file an application with the Energy Agency to acquire a declaration for the production facility. If a production facility fulfils all the conditions for obtaining such a declaration, the Energy Agency issues an administrative decision to grant a declaration for production facility. The decision shall determine the type of support, the period for which the support is granted, and the amount of support, *i.e.* the size classification relating to the specific production facility. A declaration is granted for a period of up to five years. Prior to the expiry of the current declaration's validity, a producer shall file a new application for a declaration, or it shall obtain a new declaration for a production facility after the expiry of the validity of the obtained declaration. If a producer fails to do so, its eligibility to receive support will cease after the expiry of the declaration.

After being granted a final decision for support, a producer shall enter into a contract for the provision of support with the Centre for Support at Borzen, d. o. o., the electricity-market operator. The contract shall regulate all the issues regarding the mutual obligations of the contractual parties.

Support shall be provided in the following way: (i) guaranteed purchase of electricity supplied to the public network by electricity generators with facilities smaller than 5MW; or (ii) financial support for current operations which covers the difference between the production costs and the expected market price of electricity, (calculated as the net electricity sold in the market or used for their own consumption).

Producers shall receive support only for the electricity for which guarantees of origin have been granted. This is certified by a valid production declaration proving that a specific amount of electricity was generated in an environmentally-friendly way.

A guarantee of origin certifies the origin of the energy and has its own life cycle (issuing, transfer, redemption). However, it does not have to be traded together with the electricity it refers to. The guarantees of origin are held electronically in the Register of Guarantees of Origin in a producer's account. Upon the sale of guarantees of origin, a producer transfers them to the account of the buyer (usually a supplier). Redeemed guarantees of origin prove that the electricity thus supplied was produced from renewable energy sources. A supplier redeems a certain number of guarantees (for a specific product) in its own name or in the name of an end customer. The supplier redeems guarantees in its own name for the amount of electricity supplied for a particular product. A product is a trade mark for a particular type of energy such as environmentally-friendly energy. The life cycle of a guarantee is completed with its redemption.

The Energy Agency ensures that the system is not misused by multiple sales of a certain amount of electricity as environmental-friendly electricity. The system is designed in such a way that it assigns added value to the electricity produced in an environmental-friendly way. It allows suppliers to acquire environmentally-friendly products in a transparent manner and consequently enables customers to choose electricity with regard to its source, or manner of production.

Furthermore, in the case of qualified power stations which produce electricity from renewable sources and cogenerate heat and electricity, the connection costs are covered by the owner or investor, while the costs for reinforcing or adapting are covered by the system operator. These costs include the necessary studies and analyses (Article 70 of the Energy Act). The producers of electricity from renewable sources and cogeneration of heat and electricity cover only a part of the disproportional costs if such costs arise as a result of network connection.

The Renewable Energy Certificate System ("RECS") is also in place. The Energy Agency issues RECS certificates as evidence that a specific amount of electricity (1MW) has been generated from renewable sources. The RECS certificates can also be traded, either together with the associated electricity or without it. All producers of electricity from renewable sources may acquire RECS certificates by certifying the unit produced. The respective data has to be confirmed and recorded by the Production Registrar.

The white certificate scheme has not yet been implemented in Slovenia, while the green certificates have been available in the Slovenian electricity markets for several years. The public is not widely aware of their existence and purpose. The certificates have been mainly used for hydroelectric power and more recently for certain small facilities.

Important support is provided also through Eko Sklad (Eco Fund) public fund which finances investments by granting loans with more favourable conditions in the area of environmental protection in accordance with the National Environmental Protection Program. Such loans may be granted to legal entities or natural persons. Natural persons may be granted a loan for, amongst others, financing the use of energy from renewable sources, while legal entities may be financed for the facilities in which the energy from renewable sources shall be produced.

4. District heating

4.1 Market overview

The distribution of heat is organised as a local optional public service and includes the supply of heat or cooling from the distribution networks and the distribution system operator. District heating may be also carried out as a market-based activity of supplying end consumers, provided that no public service is carried out in the concerned area. The heat is predominantly produced from renewable energy sources or in cogeneration and with respect to the available source or the network capacity the maximum possible supply of energy to all customers at any time does not exceed 1 MWh/h.

4.2 Regulatory overview

District heating is regulated by the Energy Act and the implementing regulations.

The supply of heat energy for district heating or cooling is carried out through the distribution of heat or cooling. A licence must be obtained for the production of heat in the production units with installed power of more than 1MW and for the distribution of heat energy. The applicant is granted a licence, provided that the requirements envisaged by the Energy Act are fulfilled.

With respect to heat supply, the Energy Agency: (i) issues general acts for exercising public powers relating to the supply and consumption of heat from the distribution networks and tariff system; (ii) approves the system operation instructions for the heat distribution networks; and (iii) decides on the issuing and revoking of the licences for the production and distribution of district heating.

4.3 Generation

In the structure of primary energy sources used in heat production, coal has a 61% share, natural gas - 30.7% share and heating oil - 1.7% share. The share of wood biomass and other primary renewable sources of energy is 6.6%.

4.4 Distribution

Pursuant to Article 70 of the Energy Act, the general conditions

for the supply and consumption of heat from a distribution network must be harmonised with the methodology determined by the Energy Agency after approval by the government. The Act Determining the Methodology for Setting General Conditions for the Supply and Consumption of Heat from a Distribution Network (Official Gazette of the Republic of Slovenia, No. 74/05) prepared by the Energy Agency, entered into force in August 2005.

In 2009, the service of heat distribution was carried out by 56 licence holders. Heat distribution networks were established in 47 (out of 210) Slovenian municipalities, the combined length of which is 704.9 kilometres.

The first district cooling system in Slovenia with a power of 965 kW began operations in Velenje City Municipality, in the middle of 2008. To generate cooling, the facility uses heat from the district heating distribution system.

District heating is a monopoly service and, therefore, it is necessary to take into consideration the methodology prescribed for the pricing of district heating. In accordance with Article 94a of the Energy Act the mandatory methodology for the preparation of the tariff system is determined by the Energy Agency (which adopted the abovementioned Act Determining the Methodology for the Preparation of the Tariff Systems for the Supply and Consumption of Heat from a Distribution Network). The tariff system for heat from a distribution network is prepared and published by a distribution system operator (Article 97 of the Energy Act).

In April 2011 a new Decree on Pricing the Production and Distribution of Steam and Hot Water Relating to District Heating for Tariff Customers (the Official Gazette of the Republic of Slovenia No. 28/11, as amended) was adopted. The decree entered into force on 23rd April 2011 and shall remain in force for 12 months. It sets the highest original price, the granting of prior approval for the first original price and for amendment of the original price, as well as the mechanism for pricing the products and services intended for the district heating for tariff customers.

5. Natural gas

5.1 Market overview

Slovenia almost entirely depends on supply of natural gas from abroad. The gas is supplied to customers from 71 Slovenian municipalities in its gaseous state via transmission and distribution networks managed and operated by the system operators. The market-based activity of the distribution companies is the supply of natural gas and their regulated activity is the distribution of natural gas over the distribution networks.

The market players on the natural gas market include traders and suppliers which deliver natural gas to customers. The key market players are the major supplier of natural gas Geoplin, d.o.o. and

its subsidiary Geoplin Plinovodi d.o.o. - the transmission network operator. The distribution system operators are Energetika Ljubljana d.o.o., Plinarska Maribor d.o.o. and Adriaplin d.o.o. The supplier of natural gas is also one of the biggest oil traders in Slovenia, Petrol d.d.

The Slovenian natural gas market is fully liberalised. However, in practice the dominant position on the market is held by Geoplin d.o.o. (the only supplier and distributor in Slovenia), which has historically been a very reliable supplier of natural gas. Although Geoplin d.o.o. holds the dominant position on the market, and although the prices set by it are not regulated, no abuse of the dominant position has so far been identified.

5.2 Regulatory overview

A licence must be obtained for the activities of: (i) supply of natural gas; (ii) organising a market for natural gas trading and (iii) transport of natural gas via networks. The licence may be obtained by a natural or a legal person, provided that such person fulfils the conditions, prescribed by the Energy Act (please see section 2.2 - Regulatory overview).

Energy-related activities relating to natural gas are supervised by the Energy Agency. Its main responsibilities with respect to this part of the energy sector are: (i) issuance of general acts with respect to network charges and tariff system; (ii) setting general conditions for supply and consumption; (iii) issuing and revoking of licences; (iv) resolution of disputes regarding third party access, charging for the use of network, alleged breaches of the general supply conditions and the system operation instructions, established imbalances and amounts needed for covering the costs of balancing, as well as breaches of general acts regulating imbalances and their balancing, status of a specific customer; (v) supervision of independence of the system operators; and (vi) preparation of the annual report.

5.3 Exploration and production

Slovenia depends almost entirely on the import of gas, since it has virtually no gas resources, only about one percent. In 2009 most of the natural gas, as much as 48% was supplied by Russia, 29%, by Algeria, 17% by Austria and 5% by Italy.

Since natural gas is considered as a mineral resource, the exploration of natural gas is regulated by the Mining Act (Official Gazette of the Republic of Slovenia No. 21/2010, as amended). The conditions for the exploration and exploitation of natural gas will be described in greater detail under section 6 (Upstream oil market).

5.4 Transmission and access to the system

In accordance with the amendments of the Energy Act, in 2004, Geoplin plinovodi, d.o.o. was established as a subsidiary of Geoplin, d.o.o. Since January 2005 it has performed the functions of the

transmission system operator. Geoplin plinovodi, d.o.o. in turn operates and owns 970 km of the Slovenian gas transmission network which is part of the European gas network.

Access to the system is governed by Regulation (EC) No. 1775/2005 aiming at setting non-discriminatory rules for access conditions to natural gas transmission networks based on the specific characteristics of the national and regional markets with a view to ensuring the proper functioning of the internal gas market.

The system operator shall connect every user to the natural gas network. Prior to connection the users must obtain approval for each individual connection or any change made to a connection. The requirements for obtaining the approval are determined by the Ordinance Relating to the Operating Mode of the Public Service of the System Operator of the Gas Transmission Network (Official Gazette of the Republic of Slovenia No. 97/2004, as amended) and the General Conditions for the Supply and Consumption of Natural Gas from the Transmission Network (Official Gazette of the Republic of Slovenia, No. 89/2005).

The abovementioned Ordinance and General conditions regulate among others: the procedure for obtaining approval for connection; the procedure for making physical connection; the connection contract; and the costs of making a connection. The system operator acting under public authority, issues the approval for connection to the transmission network by adopting the decision through an administrative procedure. The decision is taken on the basis of transparent and comprehensive criteria including an order for the submission of applications, auctioning and proportional reduction of access to all other users. The users must provide the transmission system operator with documents proving that the facilities, installations and plants comply with applicable legislation.

The price for the network usage payable by the customer of natural gas for access to the network consists of the network charge and the supplements to the network charge. The Energy Agency regulates the network charge by determining the modes for fixing and calculating the network charge. The supplements to the network charge which make up the price for use of the network are determined by the Government of the Republic of Slovenia. These supplements cover the costs for the Energy Agency's operation, the release of the long-term transmission capacities for natural gas and the costs of suppliers resulting from the continuity of the energy supply.

The network charge for the gas transmission network consists of: (i) the price for the transmission of natural gas; (ii) the price for a company's own use; and (iii) the price for making measurements. It is set on the basis of the system operator's eligible costs arising from the transmission of natural gas, own use and the making of measurements.

The distribution of natural gas is an optional local public service. It is provided by the gas distribution system operators operating

the distribution networks in individual local communities. The public service of gas distribution may be organised within a public company established by a local community, or may be regulated by a concession act between the concessionaire and the local community as the awarding authority.

The system operators of the natural gas distribution networks connect the customers to the distribution networks in accordance with the general conditions valid in the areas in which the system operators carry out the respective public service.

The network charge for the distribution network consists of: (i) the price for the distribution of natural gas and (ii) the price for carrying out the metering. It is set on the basis of eligible costs which the system operator incurs from the distribution of natural gas, metering and making connections.

5.5 Trading and supply

Gas trading is regulated by the Decree on Functioning of the Natural Gas Market (Official Gazette of the Republic of Slovenia, No. 95/2007). Natural gas is traded on the organised, opened or balancing markets while transfer capacity may be traded on the primary or secondary market.

The organised market is organised by the public service provider. The supplier and customer agree upon the quantity and price of supplied natural gas, the point of sale and obligation of ensuring the transfer capacity. On the open market participants may directly conclude agreements on the supply of natural gas and the supplier and customer may freely determine the price and quantity of the supplied natural gas. The balancing market is intended for trading with quantities of natural gas, necessary for the balance of differences between the committed quantity at one or more takeover points and committed quantity at one or more delivery points. The transfer capacities market is intended for acquiring the highest possible usage of transferred capacities of natural gas network.

The operation of the market is directed towards balancing the contractual and physical currents in the natural gas network. On the primary market, the transfer system operator sells the rights to transfer capacities to the end users connected to the transmission network and to the operators of the distribution systems. Other participants may trade on the market in the name and for the account of the end user. The prices on the primary market are subject to regulation. On the secondary market, the participants with the rights of transfer capacities directly trade on the basis of bilateral contracts and the prices are freely determined by the conditions of the market.

The supplier of natural gas forms the balance groups with one or more participants as members. The holder of the balance group is the supplier. The group is created for the purpose of tracking discrepancies in the acceptance and delivery of the natural gas for all members within the group which forms one transfer

capacity. The balance group must enter into a contract with the transmission system operator, while the holder is obliged to pay the outstanding payments to the operator.

5.6 Storage

There are currently no gas storage sites in Slovenia, hence, there is no particular legal framework set out to regulate the storage of the natural gas and the third party access. Therefore, the general provisions of the Energy Act relating to natural gas apply.

Nevertheless, the Energy Act envisages that end users may store the supplied natural gas for their own consumption in their own storage capacities which they construct, maintain and manage themselves.

5.7 Liquefied natural gas

There is currently no liquefied natural gas ("LNG") terminal in Slovenia and, therefore, no specific regulatory framework is provided, particularly in the area of third party access. On the other hand, discussions relating to the construction of an LNG terminal have begun. An initial option is the port in Trieste, Italy, strongly contended by Slovenia. Recent developments indicate that Slovenia would consent to the construction of a LNG terminal in Žavlje, Italy, provided that Italy in return waives its objections to the construction of another LNG terminal in the port of Koper, Slovenia. However, the project is still in the preparatory stage and it is therefore not possible to predict the outcome of the negotiations.

6. Upstream oil market

6.1 Market overview

In Slovenia the exploitation of oil began in 1940 when oil stocks were discovered in the North-East part of the country (Petišovci pri Lendavi). They are the only stocks of oil to have been discovered and they have already been exhausted.

An oil transmission network does not yet exist and Slovenia is therefore completely dependent on the import of oil. The main sources of oil are Algeria and Russia. Oil represents 40% of imported fossil fuels in the total supply of energy in Slovenia.

The key market players in the Slovenian oil market are the suppliers of oil Petrol d.d. and OMV Slovenija d.o.o. The other suppliers of oil with a minor market share are also MOL Slovenija d.o.o. and AGIP Slovenija d.o.o.

6.2 Regulatory overview

Oil is considered a mineral resource and is regulated by the Mining Act (Official Gazette of Republic of Slovenia No. 61/2010, as amended). In addition also the Energy Act regulates certain oil-related activities.

The search for mineral resources (including oil) is free. However, exploration must not cause damage to third parties. Prior to the commencement of drilling a borehole depth of 30m or more, it must be verified that the geological structure does not contain beds of coal or hydrocarbons and that borehole does not exceed 300 m.

Prior to the commencement of exploration in a defined exploration area, an exploration permit must be obtained under the conditions and in accordance with the procedure determined by the Mining Act. Prior to the exploitation of oil, an exploitation concession (which may be granted on the basis of previously obtained mining right for exploitation) must be obtained.

An exploration permit and mining right for exploitation may be granted to a legal or a natural person which complies with the following requirements: (i) has its registered seat in the Member States of the European Union or European Economic Area, Swiss Confederation or Member State of Organisation for Economic Cooperation and Development; or (ii) has its registered seat in a third state under the condition of reciprocity. Nonetheless, it is not possible to obtain the permit for the purpose of injection or storage of carbon dioxide. The natural or legal person which requests an exploration permit or mining right for exploitation must also fulfil all its obligations arising from taxes and other public duties or with respect to previous mining activities. It may not be the subject of any insolvency proceedings and may not have been convicted by a final judgment for a criminal offence in relation to exploration or exploitation of the mineral sources.

An exploration permit may only be issued on the basis of a previous call for tenders by the Ministry of Economy. The call for tenders is deemed successful if at least one tenderer submits its bid. In such a case the exploration permit is issued *ex officio*. If several applicants have submitted their bids, the Ministry of Economy carries out an auction, wherein the bidders submit competitive bids for the amount of compensation for exploration.

An exploration permit shall be issued for no more than five years and may not be extended, unless in case of force majeure; in such a case the permit is extended for the duration of force majeure.

The exploration may begin when the exploration permit becomes final. Prior to exploration, the explorer has to prepare an audited implementation plan for each of the exploration areas. The exploration activities must also be reported to the competent mining inspectorate, the Slovenian Geological Fund and any other body, stipulated by the exploration permit at least 15 days prior to the beginning of the exploration. Every six months during exploration, the explorer must submit a report to the Ministry of the Economy detailing exploration activities and the results achieved. Mineral resources may be used only for laboratory tests, technological experiments and in the amount allowed by the exploration permit. Any trade with the mineral sources obtained during the exploration is prohibited.

An exploration permit may be revoked, if: (i) the exploration is carried out contrary to the conditions stipulated in the exploration permit; (ii) the prescribed measures for the sanitation of the land or insurance are not implemented; (iii) the exploration is preventing or distorting exploration carried out by another explorer on the basis of an exploration permit; (iv) the exploration is endangering future exploitation of the mineral sources; (v) a higher amount of the mineral resources is used during the explorations than envisaged by the exploration permit; (vi) the compensation for exploration has not been paid, even after written notification; or (vii) the exploration does not commence within the deadline determined by the exploration permit.

As a rule, a concession for the exploitation of mineral resources may be granted on the basis of a previously issued mining concession act and call for tenders. In certain limited cases, explicitly determined by the Mining Act, the concession for the exploitation of mineral resources may be granted without a previous call for tenders on the basis of previously issued mining concession act for a certain exploitation area.

Prior to the conclusion of the concession agreement, the holder of the mining right must present an audited mining implementation plan and, if he is not the owner of the respective land, enter into a legal transaction with the owner of the land with the intention of obtaining the right to enable the holder of the mining right to carry out mining activities. The concession agreement process commences with a proposal submitted to the Ministry of Economy. Prior to entering into the agreement, the Ministry shall verify whether the mining plan contains all the required elements; has been prepared by an eligible person and audited in accordance with the applicable legislation; whether the exploitation area is in accordance with the concession act; and whether the applicant has the right to carry out the mining activities.

If all the requirements are fulfilled, the concession agreement is concluded for the period determined therein. The concession agreement shall in particular determine the manner of exploitation, description of exploitation area, duration of exploitation right, modality and conditions of concession payment and reservations for the sanitation, modality and conditions of the sanitation, conditions for the cessation and extension of the validity of mining right, conditions for the transfer and inheritance of right, etc. When the concession agreement enters into force, the holder of the mining right must make a concession payment and reserved sanitation payment. The mining concession payment shall be paid in annual amounts not exceeding EUR 500 for each hectare of exploitation area and 20% of the average price for the produced unit of mineral source in the respective year. The amount of reserved payment for sanitation is determined by the mining project.

The Energy Agency grants a licence for oil- and oil derivatives refining, as well as for the production, trading with and distribution of liquid fuels. The applicant for the licence must fulfil the

conditions, prescribed by the Energy Act (please see section 2.2 – Regulatory overview).

When the trade with oil is performed in Slovenia, all import or export of oil and oil derivatives must be reported to the Ministry of Economy.

1. Introduction to the energy market

With its unique location, geographical characteristics, warm climate and growing demand, Turkey continues to attract foreign investors interested in the potential of the energy market. 2007 was a boom year for investment in energy generation and, following the downward trend post-credit crunch, the Turkish government has been pro-active in adopting new regulations to please investors. Turkey is a party to Kyoto and there are expectations that a number of legislative initiatives to develop renewable energy sector even further are in the pipeline.

2. Electricity

2.1 Market overview

Following experience of privatisation, developments in the electricity markets of other jurisdictions and EU accession targets Turkey opted for full liberalisation and the enhancement of stability, transparency and competition in the Turkish electricity market. February 20, 2001, saw the material altering of the electricity generation regime with the Electricity Market Law, after which related regulations ensued forming electricity legislation in Turkey.

Market liberalisation is ongoing. Rapid changes in the global economy as well as rising domestic demand have opened Turkey's energy sector to constant regulatory change in recent years. Apart from the internal regulatory developments, Turkey has executed the Nabucco pipeline project and Kyoto Protocol and the relevant regulatory bodies have been very active in developing Turkey's position as a regional energy hub. This has resulted in closer official monitoring of the new, emerging regulatory regime for the electricity market and Energy Market Regulatory Authority ("EMRA") is determined to maintain the perception of good governance it has pursued up until now.

2.2 Regulatory overview

Electricity related activities in Turkey are mainly governed by the Electricity Market Law (*Law No: 4628*), published in the Official Gazette dated 3 March 2001 and numbered 24335; Electricity Market Licensing Regulation, published in the Official Gazette dated 4 August 2002 and numbered 24836; Regulation on Amendment to the Electricity Market Licensing Regulation ("Amendment Regulation"); Balancing and Settlement Regulation, published in the Official Gazette dated 3 November 2004 and numbered 25632; and Electricity Market Grid Regulation, published in the Official Gazette dated 22 January 2003, and numbered 25001.

The Electricity Market Law sets forth the general principles that apply to (i) the licensing system regulated market activities; (ii) market players; and (iii) EMRA, all of which are further detailed under secondary legislation. The Electricity Market Licence Regulation contains details of this licensing system, including the requirements for and the restrictions upon licence holders. The Electricity

Market Law and the Electricity Market Licence Regulation clearly distinguish various electricity market activities and introduce the requirement to obtain a licence from EMRA for the performance of these market activities.

EMRA is an independent regulatory authority, administratively and financially autonomous and responsible for the regulation and supervision of the operation of the electricity and natural gas markets in a competitive environment. EMRA is also responsible for granting licences to private enterprises for their activities in the Turkish electricity market, such as generation, transmission, distribution, wholesale, retailing and the import and export of electricity and rights and obligations arising there from. Further functions involve the preparation, enforcement and supervision of electricity market regulations as well as regulating and supervising the tariff pricing mechanism.

2.3 Regulated electricity market activities

According to the Electricity Market Law, the "electricity market" comprises of the sale and purchase of electricity energy and capacity, as well as commercial activities including generation, transmission, distribution, wholesale, retail, retail services, import and export, and other activities related to the same. Accordingly, the Electricity Market Licensing Regulation sets forth the following six licensing categories authorising the licence holder to perform such electricity market activities:

- (a) Generation licence - must be obtained for the establishment and operation of electricity generation facilities and sale of electricity generated there from in the electricity market;
- (b) Transmission licence - obtained by Turkish Electricity Transmission Company ("TEIAS") to conduct its electricity transmission activities;
- (c) Distribution licence - must be obtained by distribution companies to engage in distribution activities in the regions authorised under their distribution licences;
- (d) Autoproducer and autoproducer group licence - to be obtained by autoproducers/ autoproducer groups to engage in generation activities for their own needs or the needs of their shareholders;
- (e) Wholesale licence - the licence that wholesale companies must obtain from EMRA for the wholesale of electricity energy; and
- (f) Retail licence - obtained from EMRA for retail sales or retail sales services.

2.4 Material provisions of electricity market law and licensing regulations

- (a) Please be informed that under the amended version of

Article 10 of the Electricity Market Licensing Regulation, the minimum share capital amount of a generation licence holder company shall be equal to at least 20% of the investment amount determined by EMRA.

- (b) Please note that pursuant to Article 47 of the Electricity Market Licensing Regulation, the prior approval of EMRA is required for each of the following activities of electricity generation licence holders:
- (i) each direct or indirect transfer of shares representing at least 10%¹ of the share capital of a licence holder to a real or legal person; and/or
 - (ii) any share transfer, as a result of which a shareholder ceases to hold shares representing at least 10% of the share capital of the licence holder; and/or
 - (iii) any share transfer, as a result of which a shareholder becomes the holder of shares representing more than 10% of the share capital of a licensee company; and/or
 - (iv) any transfer of the right to vote over the shares representing at least 10% of the share capital; and/or
 - (v) any establishment or removal of privileges without any pro-rata limit over shares in the licence holder company.
- (c) Article 2 of the Electricity Market Law and Article 17 of the Electricity Market Licensing Regulation provides that the combined market shareholding of any private generation company and its subsidiaries cannot exceed 20% of the total electrical energy output of Turkey as calculated from the previous year's output determined by TEIAS.
- (d) The Electricity Market Licensing Regulation allows the licence holders to transfer their generation facilities activity by way of sale, transfer or any other arrangement to another legal entity that wishes to continue the licensed generation activity provided that the approval of EMRA is obtained. Please be informed that the transferee of the power plant is obligated to obtain a licence from EMRA before realisation of the transfer transaction. Nevertheless, the licence of the transferee shall become effective upon completion of the transfer transactions and revocation of the licence of the transferor.

2.5 Trading and supply of electricity

Pursuant to Article 13 of the Electricity Market Law, the types of tariffs subject to Board regulation are: Transmission System Connection and Utilisation Tariffs; Transmission Tariff; Wholesale Price Tariff; Distribution Tariffs and Retail Sales Tariffs including terms and conditions included in the pertinent

transmission system connection and utilisation agreements for connection to and utilisation of a transmission or distribution system or wholesale/ retail sale systems, which are prepared by the relevant authorities.

The balancing and settlement of the electricity demand and supply in the electricity market is regulated under the Balancing and Settlement Regulation. Pursuant to the Balancing and Settlement Regulation, balancing consists of activities directed to ensure balance between the demand and supply of electricity energy. The balancing mechanism complements the bilateral agreements by creating an opportunity for the licence holders to purchase or sell insufficient or excess electricity in the market by way of engaging in two balancing activities.

Settlement is the process of calculating the amounts of receivables and payables arising from day ahead planning, day ahead market and Balancing Power Market, and the preparation of the related receivable-payable notifications in a fast, reliable and transparent manner. The Market Operator is empowered to perform the settlement activities in the electricity market.

Pursuant to Article 10 of the Balancing and Settlement Regulation, Market Participants are defined as legal entities that hold generation, auto production, group auto production, wholesale and retail sale licences. For each settlement period and each trade zone, Market Participants are responsible for ensuring the establishment of a balance between supplies to the system, electricity energy purchases and imports against withdrawals from the system, electricity energy sales and exports.

2.6 Transmission and grid access

Pursuant to the Electricity Market Grid Regulation, the operators of electricity generation facilities are required to enter into a "system connection agreement" and a "system utilisation agreement" with TEIAS in order to connect their generation facilities to the transmission system that will transmit the generated electricity and use such transmission system. Please note that as per Article 4 of the Communiqué on Connection Fees, these agreements are in standard forms prepared by TEIAS and approved by EMRA; thus, their general terms cannot be amended without the prior approval of EMRA. In general, the "system connection agreement" governs the terms, conditions and tariff prices concerning the connection of the power plant to the facilities of TEIAS in accordance with the Electricity Market Law and relevant legislation; whereas, the "system utilisation agreement" governs the terms, conditions and tariff prices for the use of TEIAS facilities by the generation licensee.

Please be informed that electricity generation facilities to be connected to the transmission systems are obligated to pay TEIAS a system connection and system utilisation fee calculated in accordance with the "Connection Fees Methodologies" published by EMRA.

¹ Please be informed that if the licence holder is a publicly traded company, the 10% threshold shall be 5%.

3. Renewable energy

3.1 Market overview

Through the enactment of the Electricity Market Law and the Electricity Market Licensing Regulation, one of the aims of the Turkish government was the utilisation of renewable energy resources. However, due to a lack of technical and regulatory knowledge and experience in Turkey, both the Electricity Market Law and the Electricity Market Licensing Regulation did not provide a sufficient and strong legal base for renewable energy investments. Accordingly, the Law regarding the Usage of Renewable Energy Resources for the purpose of Generating Electricity (Law No. 5346), published in the Official Gazette dated 18 May 2005 and numbered 25819 (the "Renewable Energy Law") was adopted on 10 May 2005 with the main purpose of the encouragement and expansion of the use of renewable energy sources, particularly generating electricity, benefiting from these resources in a secure, economic and qualified manner, and increasing the diversification of energy resources, reducing greenhouse gas emissions, assessing waste products, protecting the environment and developing the related manufacturing sector to realise these objectives. The scope of the Renewable Energy Law covers wind, solar, geothermal, biomass, biogas, wave, stream, tidal, river and arc type hydroelectric generation facilities and hydroelectric generation facilities for either canal or run of river type or with a reservoir area of less than 15 km².

3.2 Support schemes

Within the framework of the Electricity Market Law and the related secondary legislation, power plants based on renewable energy sources are mainly supported by the mechanisms summarised below:

- (a) **Licence Fees:** The legal entities applying for licences for the construction of facilities based on domestic natural resources and renewable energy resources pay only one percent of the total licensing fee. In addition, generation facilities based on domestic natural resources and renewable energy resources do not pay annual licence fees for the first eight years following the facility completion date displayed on their licences;
- (b) **Connection to the TEIAS Transmission System:** TEIAS, and/or distribution licensees are obligated to give priority to renewable energy generators when connecting them to the national gridlines;
- (c) **The Right to Purchase Power from Private Wholesale Companies:** The legal entities engaged in generation activity at facilities based on renewable energy resources are allowed to purchase electricity from private sector wholesale companies on the condition purchases do not exceed the annual average generation amounts displayed on their licences in a calendar year;
- (d) **Priority in Energy Sales:** If the price of electricity generated at generation facilities based on renewable energy resources is equal to or lower than the sales price of TEIAS and if there is no cheaper energy supplier alternative, the legal person retail licensees are obliged to purchase such energy firstly from such generation facilities for the purposes of re-sale to the non-eligible consumers;
- (e) **Exemption from the Requirement to Register as Balancing Unit:** Pursuant to Article 22 of the Balancing and Settlement Regulation, Market Participants that purport to join the balancing mechanism must define and register their "balancing units" under their own title. Generation facilities based on renewable energy resources which can be considered within the scope of Article 18 titled "Balancing Units and Registration Rules" of the Electricity Market Balancing and Settlement Regulation are exempt from the responsibility of being balancing units. In that regard, due to their intermittent nature, canal or river-type hydroelectric, wind power, solar, wave, tidal power, co-generation and geothermal generation facilities do not have to be registered as balancing units.

Please note that the Renewable Energy Law sets out the following incentives for power plants based on renewable energy resources: The Renewable Energy Sources ("RES") Support Mechanism shall be provided for those facilities which (i) hold a RES Certificate, (ii) have commenced/ will commence their operations within the period 18 May 2005 to 31 December 2015, and (iii) apply to EMRA by October 31st of the previous year. EMRA announces those who will be subject to the RES Support Mechanism by November 30th each year. With respect to facilities commencing operations after 31 December 2015, the Council of Ministers shall determine the amount, pricing, terms and resources applicable to such facilities in accordance with various developments including in particular supply security and provided that the pricing shall not exceed those set out under Chart No: I and II explained below.

It is also noteworthy that pursuant to Article 6 of the Renewable Energy Law, generation licensees who are involved in the RES Support Mechanism are prohibited from acting outside this mechanism in the relevant year. Nonetheless, those generation licensees based on renewable energy resources who are not subject to the RES Support Mechanism are allowed to freely trade electricity in the electricity market within the scope of their licences.

RES Certificate

Pursuant to Article 5 of the Renewable Energy Law, if and when requested by any legal entity holding a generation licence based on renewable energy resources, EMRA is authorised to issue RES Certificates for the purpose of the identification and monitoring of the resource type in the purchasing and sale of electricity generated from renewable energy resources in the domestic and international markets;

Pricing and term

Pursuant to Article 6 of the Renewable Energy Law, generation licensees subject to the RES Support Mechanism are entitled to benefit from the prices set out in Chart No. I of the Renewable Energy Law (the "Chart No. I"). Please note that a generation licensee can only benefit from the pricing restrictions under Chart No. I for a maximum term of 10 years as from its operation date;

Payment mechanism

Pursuant to Article 6 of the Renewable Energy Law, the Market Financial Reconciliation Centre ("MFRC") shall announce the RES Total Amount¹ and the Payment Obligation Ratio² of each supplier for each invoice period. The MFRC shall invoice each supplier providing electricity to consumers the amount they are obligated to pay and the collected amount shall be payable to the generation licensees being subject to RES Support Mechanism in proportion to their shares;

Additional incentive mechanism for usage of domestic products

Should the mechanical and electromechanical components of a power plant, which is subject to the RES Support Mechanism and commenced operations before 31 December 2015, be manufactured in Turkey, the unit prices set out under Chart No: I shall be increased in the amounts set out under Chart No: II of the Renewable Energy Law for a period of five years starting from the operational date of the power plant.

4. Natural gas**4.1 Market overview**

Natural gas, first used in the 1980s in Turkey, is now one of the main energy sources. With the enactment of the Natural Gas Market Law (published in the Official Gazette dated 2 May 2001 and numbered 24390) in 2001, authorities have aimed at liberalising the natural gas market and encouraging market players on privatisation and competition as BOTAS (*Boru Hatlari ile Petrol Tasima Anonim Sirketi*), a government involved joint stock company, was the only authority conducting import, wholesale and transmission activities in Turkey. Nevertheless, currently the dominant market player in the import and wholesale markets of natural gas in Turkey is still BOTAS. We have been verbally informed by EMRA and BOTAS that there is the possibility of certain amendments being made to the Natural Market Gas Law, which would enable BOTAS to enter into new contracts. Currently, BOTAS is the only company that holds a transmission licence with respect to the transmission of natural gas in a gaseous state. Accordingly, all existing and new pipelines in relation to the transmission of natural gas in a gaseous state belong to BOTAS.

There are 17 other companies that hold transmission licences. However, they are Liquefied Natural Gas ("LNG") transmission licences.

4.2 Regulatory overview

Please note that the Natural Gas Market Law and the relevant regulations enacted based on the Natural Gas Market Law are the main pieces of legislation that govern the import, transmission, distribution, marketing, trading and export of natural gas and determine the market players as well as their rights and obligations. Under certain circumstances, with respect to the transmission of natural gas in particular, other specific pieces of legislation may be applicable such as the Principles of BOTAS on Transmission Network Operation Arrangements. The market players are required to observe all applicable legislation under the supervision of EMRA.

4.3 Regulated natural gas market activities

Please note that every entity wishing to engage in natural gas market activities in Turkey shall obtain a licence from EMRA. Natural Gas Market Licensing Regulation (published in the Official Gazette dated September 7, 2002 and numbered 24869) sets forth the following categories of licences authorising the licence holder to perform such natural gas market activities: (i) export, (ii) import, (iii) transmission, (iv) storage, (v) wholesale, (vi) distribution, and (vii) compressed natural gas. The licences are granted for a minimum term of 10 years and a maximum term of 30 years. Upon request of the licence holder, the licences may be renewed for a minimum of 10 and a maximum of 30 years, as of the expiry date of the licence. A request for renewal shall be filed with EMRA in writing at least nine months and at most one year before the expiry date. Licences shall terminate automatically in the event of expiry and bankruptcy of the licence holder, or upon the approval of EMRA following the request of the licence holder. EMRA is entitled to impose administrative fines on licence holders violating the applicable natural gas market legislation and to revoke their licences accordingly.

4.4 Material provisions of the natural gas market law and licensing regulations

- (a) If private law legal entities wishing to engage in natural gas market law activities are incorporated as limited or joint stock companies, all shares of these companies shall be registered. By virtue of Article 47 of the Natural Gas Market Licensing Regulation, the minimum share capital requirements, which are calculated annually based on Turkish Tax Procedure Law are (i) TL3,568,151 for import, storage and wholesale licences; (ii) TL1,850,152 for export licences; (iii) TL356,815 for CNG sales, transmission and distribution licences; (iv) TL17,840,753 for transmission licences; and (v) TL898,646 for LNG transmission licences;

¹ RES Total Amount is defined as the total sum of the electricity energy amount dispatched to transmission and distribution system by each of the licensees subject to RES Support Mechanism multiplied by the applicable prices under Chart No: I and II of the Renewable Energy Law.

² Payment Obligation Ratio is defined as the amount to be calculated by dividing the amount of electricity sold by each supplier to their consumers to the total amount of electricity sold by all suppliers to their consumers. The electricity energy amount generated by facilities based on renewable energy resources and traded in the free electricity market without being subject to RES Support Mechanism shall not be included in the calculation of the Payment Obligation Ratio.

- (b) Please be informed that natural gas activities that require the approval of EMRA are similar to the electricity market except for the establishment of any pledges on shares representing at least 10% of the share capital and/or the establishment or removal of any privileges or issue of dividend shares without any pro-rata limit over shares in the licence holder company, which also requires the approval of EMRA;
- (c) Please note that the annual quantity of natural gas that companies import under one or more import licences shall not exceed 20% of the total estimated national consumption in that calendar year to be determined and announced by EMRA in January every year. Except for generation companies, the annual quantity of natural gas to be sold by legal entities shall not exceed 20% of the total estimated national consumption in that calendar year;
- (d) Legal entities engaged in natural gas market activities are allowed to hold shares in only one legal entity which carries out activities out of the scope of their fields of activity; however, it cannot incorporate an independent company therewith. This legal entity cannot hold more than 50% of its subsidiary's shares or commercial assets nor have the right to use more than 50% of the voting rights thereof or to appoint more than half of the members of the board of directors, board of auditors or members and the organs which are entitled to represent the subsidiary. This principle does not apply to BOTAS' current subsidiaries, subsidiaries and companies to be incorporated for international projects;
- (e) In principle, licences cannot be transferred under any circumstances. However, in the event banks and/or finance institutions finance a project (project financing) on a limited and irrevocable basis, as per the loan agreement, the banks and/or finance institutions may notify EMRA stating the legal grounds and request that the licence be given to a third legal entity to be recommended by such bank and/or financial institution to undertake all obligations of the licence holder under the relevant licence. The licence shall be granted to the recommended legal entity provided that such legal entity meets the requirements under the Natural Gas Market Licensing Regulation. The rights of the licence holder shall not be assigned to third parties without the approval of EMRA.

4.5 Exploration and production

Exploration and production of natural gas are conducted in accordance with the Petroleum Law. Please see below.

4.6 Transmission and access to the system

Consumers connect to the transmission network of BOTAS through either a transmission or distribution company. However,

pursuant to Article 3 of the EMRA decision dated 11 January 2005 and numbered 419, in principle, a transmission company shall not establish the connection of a consumer if such a consumer is within a distribution zone under the coverage of a licence of a distribution company. Section H of the Principles of BOTAS on Transmission Network Operation Arrangements regulates the conditions in relation to the connection to the transmission network of BOTAS. Applicants wishing to connect to the transmission network shall enter into a connection agreement, and in the event the natural gas is transported through the transmission network, a transportation agreement shall be executed. The parties shall fulfil their obligations under the connection agreement related to the connection within 12 months following the execution date of the connection agreement, and realise the connection. The pipeline and/or the Ring Main ("RM") Station shall be tested and controlled by BOTAS. Upon the activation of the new exit point following the completion of the pipeline and the RM Station, and commencement of the natural gas supply, the ownership of the pipeline shall be transferred to BOTAS. BOTAS shall be responsible for the operation, maintenance, repair and development of the pipeline. If a connection is made from the pipeline to new users, such new users shall pay the participation fees to the end user who has financed the costs of the pipeline. In determining the participation fees, BOTAS shall take into account the proportion of the station capacities of the end users.

For the activation of a new exit point, from where natural gas shall be supplied, the following need to be satisfied:

- (a) the pipe-line and the RM Station is ready for operation;
- (b) the project and construction conformity control of the domestic installations have been performed and approved; and
- (c) the relevant supplier has informed BOTAS of the date on which it will start supplying the natural gas.

Even though the end user has financed the cost of installing the RM Station, BOTAS shall own and be responsible for the operation, maintenance, repair and development of such station. However, if the RM Station, which is installed to supply natural gas, falls within the boundaries of a distribution zone, the relevant distribution company shall own and be responsible for the operation of the RM Station.

4.7 Trading and supply

Article 11 of the Natural Gas Market Law and the Regulation on Natural Gas Market Tariffs (published in the Official Gazette dated 26 September 2002 and numbered 24888) regulate the procedures and principles regarding tariffs. Accordingly, connection tariff principles, to be determined by EMRA, include terms and conditions to be inserted into relevant connection agreements and are based on the principle of non-discrimination among eligible consumers

who have equal standing for connection to a transmission or distribution system. These fees shall be freely determined by the parties pursuant to these principles. With respect to transmission tariffs, EMRA shall determine the transmission tariffs and tariffs pertaining to the supervision of conveyance. The tariffs prepared by EMRA shall include prices, terms and tariff conditions which are applicable, without discrimination, to all users with equal standing who benefit from the transmission network for the transfer of generated, imported or exported natural gas. In practice, such tariffs are reflected in the natural gas sale prices of the supplier. With regards to wholesale tariffs, EMRA determines the principles and conditions to be taken as a basis for natural gas sale tariffs. The sale prices can be determined freely pursuant to such principles. Transportation tariffs apply when natural gas delivery services are provided from a distribution company. Pursuant to the Regulation on Natural Gas Market Tariffs, a system utilisation fee (which refers to transportation tariffs in case an eligible consumer provides transportation services from a distribution company) shall be freely determined between the relevant parties, provided that it shall not exceed the maximum fee to be determined by EMRA.

5. Upstream oil market

5.1 Market overview

Petroleum sources in Turkey are subject to the authority and disposition of the State. The right to obtain exploration licences and operation licences is exercised by Turkish Petroleum Corporation ("TPAO") on behalf of the State. TPAO may use this right together with its subsidiaries or the companies under the management thereof.

Furthermore, the General Directorate of Petroleum Activities ("General Directorate") exists under the Ministry pursuant to the relevant provisions of the Petroleum Law. The General Directorate has the authority to, *inter alia*, investigate, audit and examine all documents, records or reports of the petroleum right holder with respect to petroleum right or activities.

5.2 Regulatory overview

Petroleum-related activities in Turkey are governed by the Petroleum Law (published in the Official Gazette dated 16 March 1954 and numbered 8659) (*Law No. 6326*), Petroleum Market Law (published in the Official Gazette dated 20 December 2003 and numbered 25322) (*Law No. 5015*) and the Petroleum Market Licensing Regulation (published in the Official Gazette dated 17 June 2004 and numbered 25495).

For the performance of petroleum-related activities, privately-held Turkish or foreign companies may be granted, *inter alia*, an "exploration licence" or an "operation licence". Exploration licences and operation licences explained below are referred to as the specific decision(s) of the General Directorate.

The General Directorate keeps a Petroleum Register in which the following items are registered and recorded:

- applications to obtain exploration licences and operation licences;
- exploration licences and operation licences and amendments to such licences;
- the expiration of exploration licences and operation licences;
- any rights in relation to any exploration licences and operation licences, and also petroleum rights arising from such licences (the option of Perenco over the petroleum exploration licence under right number AR/TPO/3341 is a right of Perenco registered in the Petroleum Register in line with this provision);
- the transfer of any exploration licences and operation licences, and petroleum rights arising from such licences, and the rights on such petroleum rights and any encumbrances in relation thereto.

5.3 Regulated oil market activities

The structure established by the Petroleum Law requires that an "authorisation" (*i.e.* geological investigation in a specific area), "exploration licence", "operation licence" or "certificate" (*i.e.* authority granted for a petroleum activity other than search, exploration, development and production) be obtained in order to engage in the relevant petroleum activity. Therefore, a petroleum right is a right arising from any one of the following: (i) exploration licence, (ii) operation licence, (iii) authorisation or (iv) certificate. Items (iii) and (iv) are not outlined below.

- (a) Exploration Licences: An exploration licence holder has the following rights:
 - (i) to carry out geological investigation in the exploration area;
 - (ii) to carry out geological investigation outside the exploration area (to the extent allowed by the General Directorate in relation to the explanations on exploration in the exploration licence application) in order to determine the petroleum prospects of the exploration licence holder if authorised;
 - (iii) to perform exploration or development drilling and produce petroleum from the relevant area, provided that such activities are carried out exclusively by the exploration licence holder in the exploration area; and
 - (iv) to file an application for an operation licence, if petroleum is discovered.

The exploration licensee can commence exploration or geological investigations within one year from the effective date of the licence and may continue explorations as long as the licence is in effect. If the exploration licence holder has more than one exploration area in the same region, then they shall start exploratory drilling in any one such area within three years from the date of the oldest exploration licence for such region. The Council of Ministers may extend this term for a maximum of one year.

The term of an exploration licence is limited to four years and can be extended for a further two years. In the event that the activities within the last year of the extension may give rise to discovery, then the Council of Ministers may grant a further two-year extension, provided that security is provided by the licence holder. In any case, the term of an exploration licence is limited to eight years starting from the effective date, with the exception that if petroleum is discovered in the relevant area, the General Directorate may grant an extension of a maximum of three years in addition to the eight years on condition that the exceptional three-year extension is deducted from the term of the operation licence if granted after the end of the exceptional period.

- (b) Operation Licences: An operation licence allows the holder to explore for, develop, and produce petroleum and to transport and sell the petroleum produced. An exploration licence holder who discovers petroleum in its area while the exploration licence is in force shall be granted an operation licence for an area limited to half of the geographical scope of the exploration licence. The existing licence holder has the right to select the half he wants for operations.

The term of an operation licence is limited to 20 years, which may be extended twice for further terms of 10 years each by the Council of Ministers.

5.4 Material provisions of the oil market law and licensing regulations

Any legal entities financially related to a foreign state, to the extent that such state has an influential position over the management or the persons acting for or on behalf of a foreign state, may not:

- (i) have any petroleum rights or engage in any petroleum activity;
- (ii) purchase or acquire any rights on any movable or immovable property essential for a petroleum activity; or
- (iii) establish or operate any facility for any petroleum activity.

The Council of Ministers can exempt certain persons or legal entities from such limitations.

While assessing applications for the acquisition of petroleum rights, the following are decisive factors:

- (a) whether the application is in compliance with the national interest and objectives of the Petroleum Law;
- (b) whether the applicant complies with the legislation;
- (c) previous practices of the applicant that may prove the applicant's compliance with the goal of the Petroleum Law;
- (d) relevant experience of the applicant;
- (e) financial soundness with respect to the intended petroleum activity;
- (f) if the qualified applicants are positioned in equivalent positions in light of the foregoing criteria, then priority shall be determined in accordance with the timing of such application.

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