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Energy Law Guide

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INTRODUCTION TO FIRST EDITION

The issue of reliable energy supply and thereto related availability of sufficient amount of energy sources in a long-term perspective becomes more and more urgent whereas conventional types of fuel gradually yield more ground. This range of problems affects Ukraine even more than other countries since on the one hand the country is very dependent on its neighboring Russia and this dependence hampers its advancement towards the EU. On the other hand, Ukraine consumes almost four times as much energy (proportionally to the gross income) as developed countries do.

Thus, Ukraine is facing two serious tasks at the moment: achieving massive energy savings via application of corresponding energy saving technologies as well as a stage by stage transition from conventional energy sources to alternative types of energy. Ways to resolve these problems have been recently set out in both directions at least on behalf of the legislation.

Moreover, Ukraine will have to sort out and open the energy market where traditionally monopolized entities still prevail as before. Settling an opportunity for using alternative types of energy will help Ukraine make a leap forward.

Particular gratitude I would like to express to my colleague Olena Bondarenko for her active involvement and contribution to preparation of this book as well as to Dietrich Treis whose article laid a foundation for the chapter on bioenergy and agriculture in Ukraine.

This book is not a guidance for actions. It’s role is rather to provide investors with a general overview of the framework conditions and opportunities in the field of energy law. Therefore, it may not and should not provide an exhaustive legal reference on all issues and problems.

Kyiv, August 2009

Wolfram Rebbock
Partner
Energy supply is more and more often recognized as being the focus of political and public attention. Issues of reliability and sustainability of energy supply, quality meeting ecological requirements as well as prices for energy resources need satisfactory solutions and are already subjects of daily discussions. There has been a while since the world started moving towards renewable energies and there is no coming back. Certainly, there are still questions whether we can say goodbye to traditional energy sources in a short perspective and what the real potential of renewable energy is. After long years of detached actions the belief is entrenched among the EU Member States that only a single incentive program will ensure that the potentials are raised in areas where they can be generated at the lowest possible price. Furthermore, Europe begins to think over its state borders and accordingly involve the North African countries and neighboring states into its thoughts. All in all, the energy transfer over long distances from the generating area to the consumer and energy storage for renewable alternative sources seem to be the most essential requirements. Therefore, being an energy supplier Ukraine may benefit greatly and should consequently focus on this issue.

My particular gratitude goes again to my colleague Olena Bondarenko who made an essential contribution to this update. I would also like to thank the co-authors who wrote the market potentials researches provided in appendixes to this Guide as well as other participating colleagues.

This second edition again shall not provide an exhaustive legal reference on all issues and problems of Ukrainian energy law. Its role is rather to provide investors with a general overview of the framework conditions and opportunities. It either cannot substitute legal advice in a particular case.

Kyiv, February 2011

Wolfram Rehbock
Partner
Section I

LEGAL FRAMEWORK FOR ENERGY SECTOR IN UKRAINE
Chapter 1. Power Industry

1. GENERAL CHARACTERISTICS OF LEGISLATION ON POWER INDUSTRY

Today, energy plays a key role in the everyday life and is an important indicator of the living standards. Demand for energy keeps growing every year.

Viewing this subject, the first thing to do is to define the rather comprehensive notion of energy. According to Energy strategy of Ukraine till 2030, the fuel and energy complex of Ukraine (power industry) is an economy sector where economic entities provide for exploration, extraction, processing, production, storage, transportation, transmission, distribution, trade, marketing or sale of energy products (energy sources), except for subjects, the main activity of which is directed at provision of centralized heating and hot water supply services for population and the economic complex. Energy sources are fuel, electricity and heat energy.

The complexity of legal regulation of power industry can be explained mainly by the fact that there is no unified regulatory legal act for this sector and, moreover, at the level of laws the regulation is limited to general provisions. Therefore, main regulatory norms are contained in by-laws the number of which exceeds 500.

The main legislative acts regulating the power industry in Ukraine are the following:

- Law of Ukraine “On the Principles of the Natural Gas Market Functioning” No 2467-VI dd. 08.07.2010;
- Law of Ukraine “On Coalbed Methane” No 1392-VI dd. 21.05.2009;
- Natural Resources Code of Ukraine No 132/94-BP dd. 27.07.1994;
- Mining Law of Ukraine No 1127-XIV dd. 06.10.1999.

1 Approved by Resolution of the Cabinet of Ministers of Ukraine #145-p dd. 15.03.2006
There are also some special laws in the sphere of energy conservation and alternative energy industry which are in detail considered in the respective sections hereof.

This guide is focused mainly on the electricity sector of Ukraine with a brief look into regulations on extraction of fuel resources and heat sector. In the respective appendix hereto the information about the natural gas market and coal market can be found.

2. LEGISLATION ON EXTRACTION OF FUEL RESOURCES

2.1. General provisions

In the structure of primary energy consumption of Ukraine in the last couple of years the main volumes go to natural gas - 41 % (39 % in 2005), while the respective index in most countries is half as high. The volume of oil consumption in Ukraine is 19 %, coal - 19 %, uranium - 17 %, water resources and other renewable energy sources - 4 %.

The main regulatory legal acts in this sphere are the Mining Law of Ukraine, Natural Resources Code of Ukraine as well as the Law of Ukraine “On Oil and Gas”. As mentioned, more information about the natural gas market and coal market of Ukraine can be found in the respective appendix hereto.

2.2. Permit for mining operations

Extraction of mineral resources, including coal, is carried out on the basis of a mining claim.

Provision on the order of filing mining claims is approved by the Resolution of the Cabinet of Ministers of Ukraine (hereinafter CM of Ukraine) No 59 dd. 27.01.1995.

Mining claims can be filed by enterprises and individuals provided they have a special permit for subsurface use as well as a project for mineral deposit development approved in due order.

As for the year 2010, such permits were granted according to the Order of granting in 2010 of special permits for subsurface use approved by the Resolution of the CM of Ukraine No 596 dd. 23.06.2010. As a rule, such permits are granted by tender, but the aforementioned Order contains
a number of exceptions, according to which such a permit can be provided without any tender procedure. The list of documents to be submitted with the application is contained in the Annex 1 to the aforesaid Order. The permit is granted for a specific parcel. A new order for the year 2011 has not been adopted as for February 2011.

For oil-and-gas subsurface resources there is a special order for permit obtaining which is provided in the Resolution of the CM of Ukraine No 1475 dd. 17.09.2003.

### 2.3. Licensing

According to the amendments introduced into the Law of Ukraine “On Licensing of Certain Types of Economic Activity” No 1775-III dd. 01.06.2000 in October 2010 the types of activity mentioned below no longer require obtaining a license. The respective licensing conditions were also abolished formally. Here we provide a short historical overview.

Development of mineral deposits being of national importance and included to the State Fund of mineral deposits as well as mineral exploration were the activity types subject to special licensing. The license was granted to an economic entity and did not depend on a specific parcel.

Licensing terms for carrying out economic activity on mineral exploration were approved by the Order of the State Committee of Ukraine on Regulatory Policy and Entrepreneurship and the Ministry of Ecology and Natural Resources No 31/51 dd. 13.02.2001.

Licensing terms for carrying out economic activity on development of mineral deposits being of national importance and included in the State Fund of mineral deposits were stipulated in the Order of the State Committee of Ukraine on Regulatory Policy and Entrepreneurship, Ministry of Ecology and Nature Resources of Ukraine No 107/370 dd. 31.07.2007.

Still there are licensing terms for transportation of oil and oil products through main pipelines, transportation of natural and oil gas and its distribution, supply of natural gas as per regulated and non-regulated tariff. Licensing terms were approved by the National Commission on Energy Industry Regulation (hereinafter - NERC) with its respective Resolutions:

- Licensing terms for carrying out economic activity on oil transportation through main pipelines are approved by Resolution of NERC No 857 dd. 30.09.2005;
- Licensing terms for economic activity on distribution of natural and oil gas are stipulated in the Resolution of NERC No 12 dd. 13.01.2010;
— Licensing terms for carrying out economic activity on natural gas supply as per regulated tariff are approved by Resolution of NERC No 11 dd. 13.01.2010;

— Licensing terms for economic activity on natural gas supply as per non-regulated tariff are stipulated in the Resolution of NERC No 10 dd. 13.01.2010;

— Licensing terms for economic activity on transportation of natural and oil gas through main pipelines are stipulated in the Resolution of NERC No 9 dd. 13.01.2010;

— Licensing terms for economic activity on storage of natural gas are stipulated in the Resolution of NERC No 8 dd. 13.01.2010.

3. LEGISLATION ON ELECTRIC POWER INDUSTRY

3.1. General provisions

Taking into account the specifics and the fact that hydro and nuclear power plants are not subject to privatization according to the Law of Ukraine “On Electric Power Industry” No 575/97-BP dd. 16.10.1997, further we will not pay special attention to the specifics of their legal regulation.

The main legislative act regulating electric power supply is the Law of Ukraine “On Electric Power Industry”. Companies generating and companies supplying electric energy being participants of the electricity wholesale market buy and sell electric power based on the Agreement between members of the Wholesale Electricity Market dd. 15.11.1996 and the Rules of the Wholesale Electricity Market of Ukraine approved by Resolution of NERC No 921 dd. 12.09.2003.

The Law of Ukraine “On Electric Power Industry” provides for main definitions, outlines main objectives of state policy, establishes a framework for electricity market activity including the export of electricity and provides grounds for regulation in the electricity sector as well as envisages main rights and obligations of the players on electricity market. Namely, NERC as the state authority which performs the state regulation for natural monopolies activity in the fuel and energy sector finds the legal grounds for its activity in the named Law.

The regulation is conducted by NERC in following areas:
— setting the prices and tariffs (conducting the tariff policy);

— regulating the electricity and natural gas markets (conditioning the Agreement between the Members of the Wholesale Electricity Market (WEM) and, correspondingly, the Rules of WEM, approving the WEM Board decisions, approving the Rules for utilization of electricity and natural gas by consumers etc);

— licensing, issuing and supervising the observance of requirements of the Conditions and Rules of licensed activity.

Among recent changes, it is worth mentioning the Law of Ukraine “On land of electric powers and the legal status for special zones of power engineering facilities” No 2480-VI dd. 09.07.2010. The Law provides definition and classification for the land of electric powers and stipulates that electricity transmission objects can be located on land plots of all land categories without change of their designation. For construction, allocation and operation of electricity or heat energy transmission objects land plots of any ownership form, under agreement with owner or user of the land plot, can be used also through establishment of permanent or fixed-term servitudes without change of land plot designation. The Law also stipulates the legal regime for special zones of power engineering facilities, in particular sanitary protection areas of nuclear power plants, radiation-control area of nuclear power plants, protected and sanitary protection zones of power engineering facilities, protected zones of main heating systems.

3.2. Licensing

Production, transmission and supply of electricity in Ukraine are carried out based on the respective license.

Licensing terms are provided by the Conditions and Rules for production of electricity approved by the Resolution of NERC of Ukraine No 3 dd. 08.02.1996 and Conditions and Rules for electricity supply based on regulated tariff approved by the Resolution of NERC No 15/1 dd. 13.06.1996.

Conditions and rules for electricity supply as per non-regulated tariff are contained in the Resolution of NERC No 36 dd. 12.08.1996.

The Licensing Procedure is defined by Resolution of the CM of Ukraine No 753 dd. 29.04.1999.
3.3. Sale of electricity

Pursuant to article 15 of the Law of Ukraine “On Electric Power Industry” purchase and wholesale of all electric power produced at power stations, wattage or supply volume of which exceeds limit indexes, as well as at wind power stations regardless of total capacity or supply volumes (except for electricity produced at heat power plants belonging to electricity suppliers for consummation on territory where licensing activity is exercised) is carried out on electricity wholesale market of Ukraine. State enterprise “Energorynok” is acting as operator. All produced electricity is to be sold to the said enterprise.

Therefore, currently Ukraine has the so-called central pooling (Single Buyer) electricity purchase model. However, according to the Concept of WEM development approved by the Cabinet of Ministers on 16.11.2002, a phased transition from the existing market model to a more progressive model of competitive bilateral contracts with the balancing market was envisaged. Still the idea has not been materialized yet.

Purchased energy is sold by “Energorynok” to 27 oblast energy companies (Oblenergo) and suppliers licensed to electricity supply as per unregulated tariffs (independent suppliers). Oblenergo sells electricity to final consumers as per regulated tariffs.

3.4. Tariffs

3.4.1. General tariffs

Please see Appendix 2. Electricity Market Study.

3.4.2. “Green tariffs”

For electricity produced by using alternative energy sources there is such notion as “green” tariffs. Detailed description is provided in the section on alternative energy.

3.5. Connection to the network

Order of net connection is provided in the Rules for electricity use approved by the Resolution of NERC No 28 dd. 31.07.96. Connection of a new or reconstructed electrical installation of the customer (this provision is not applied to installations used for electricity production) to the
The electrical network foresees the following stages:

- Customer submits to the electricity transmitting organization (or main consumer) an application on connection of its electrical installation to the electrical network;

- Electricity transmitting organization (or main consumer) prepares and issues to the customer technical specifications for the connection, the customer pays the fee for issuance of technical specifications;

- Electricity transmitting organization (or main consumer) prepares based on the Standard form contract (Annex 5 to the Rules for electricity use) a draft contract on connection, the parties sign the contract;

- Customer (or specialized organization on contractual basis) develops and approves project documentation for construction and reconstruction objects;

- Construction and installation and check out works;

- Acceptance tests;

- Obtaining of an operation certificate for connection of the customer’s electrical installation to the electrical network;

- Conclusion of a contract on supply of electricity and/or other contracts;

- Connection of the customer’s electrical installation to the electrical network.

In contrary to regulation of connection to the grid of consumers. For now, the order is determined by the parties in the agreement on network connection taking into account current legislation. In particular, part 3 Article 18 of the Law of Ukraine “On Electrical Power Industry” provides that construction of new networks for connection to local electrical network is carried out according to technical specification issued by the electricity supplier and shall be paid by the owner of the equipment to be connected to the local network. Finished parts of electrical network shall be included into the balance of the energy supplier with compensation of construction costs according to the order to be approved by the CM of Ukraine. The way of connection of electricity producer to network (this concerns local and main networks) is not regulated with any subordinate regulatory legal acts. For local networks the respective order was repealed in 2008, and the new one has not been passed as for February 2011. National JSC “Ukrenergo” has not approved respective order for connection to main network with NERC.
Taking into account that order of compensation has not been approved yet, by its Letter No 2726/11/17-10, 11.05.2010 NERC recommended that the parties define in the agreement on connection to the grid that finished parts of electrical network will be included into the balance of the energy supplier, and the costs will be compensated to the object owner after approval of the respective order.

Special order of connection to the grid is defined for wind power plants with installed capacity of over 100 MW in the Order of the Ministry of Fuel and Energy No 570 dd. 28.10.2009. Pursuant to this Order, the connection is performed based on connection agreement according to the issued technical conditions, the same as the general order of connection to the grid for all other producers. The Order stipulates the peculiarities of issuance of technical conditions, their fulfillment and factual connection to the grid. The issue of determination of connection costs and their distribution between the parties is to be determined in the connection agreement.

This Order may be used as a visual aid for general understanding of the process of connection to the grid in Ukraine.

### 3.6. Ownership rights in the electric power industry

According to the Law of Ukraine “On Electric Power Industry” objects of the electric power industry can be in different forms of ownership. Privatization of objects of the electric power industry is carried out according to the legislation of Ukraine on privatization. Detailed information on privatization as well as on possibilities of cooperation with the state in the sphere of electric and heat power industry and others can be found in the book “Public-Private Partnership in Ukraine 2nd edition” ² issued by Arzinger and in respective appendix hereto.

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The book covers the following issues:
- General overview of legal framework for PPP;
- Possibilities for PPP in single areas;
- General overview of legislation on concessions;
- General overview of legislation on privatization;
- General overview of legislation on public procurement.

It is available for download at  
4. LEGISLATION ON HEAT POWER INDUSTRY

4.1. General provisions

Heat supply in Ukraine is governed by the Law of Ukraine “On Heat Supply” No 2633-IV dd. 02.06.2005.

In Ukraine there are heat power and boiler plants which produce heat energy only, as well as there is possibility for complex production of electrical and heat power (cogeneration), though it is currently not completely implemented. Such activity type is regulated in Ukraine by the Law of Ukraine “On Combined Production of Heat and Electric Energy (Cogeneration) and Use of Waste Energy Potential” No 2509-IV dd. 05.04.2005. Many heat electro power stations (ТЕЦ) in Ukraine produce heat and electric energy. According to Energy Strategy of Ukraine for period till 2030, approved by the Instruction of the CM of Ukraine No 145-p dd. 15.03.2006, it is planned to widely use combined production of heat and electrical energy, renewable and alternative energy sources.

4.2. Licensing

Economic activity on production, transportation and supply of heat energy is subject to licensing.

Licensing terms for production of heat energy are approved by the Order of the State Committee of Ukraine on Regulatory Policy and Entrepreneurship, the Ministry of Housing and Communal Services of Ukraine No 167/417 dd. 30.12.2008.

Licensing terms for transportation of heat energy through main and local (distribution) heat networks are approved by the joint Order of the State Committee of Ukraine on Regulatory Policy and Entrepreneurship and the Ministry of Housing and Communal Services of Ukraine No 168/418 dd. 30.12.2008.

Licensing terms for supply of heat energy are approved by the Order of the Ministry of Housing and Communal Services of Ukraine No 370 dd. 24.11.2009.

Licensing terms for combined production of heat and electrical power are approved by the Resolution of NERC No 997 dd. 02.11.2005.
4.3. Heat power supply

Pursuant to Article 19 of the Law of Ukraine “On Heat Supply” activity in the sphere of heat supply can be exercised by economic entities of all organizational legal and ownership forms, in particular, on basis of lease, contractor’s, concession, leasing and other agreements.

Heat generating company is entitled to supply produced heat energy directly to the consumer under a sale-purchase agreement.

Heat transporting company is not allowed to refuse supply of heat energy to consumers provided there is technical possibility to connect consumers to the heat network.

Standard contract form on provision of centralized heat supply, cold and hot water supply, and water disposal services, as well as Procedure on Provision of Centralized Heat Supply, Cold and Hot Water Supply, and Water Disposal Services, are approved by the Resolution of the CM of Ukraine No 630 dd. 21.07.2005.

4.4. Connection to the network

The Rules on granting and approving the technical conditions for connection to heat network are approved by the Order of the Ministry of Housing and Communal Services of Ukraine and NERC No 334/1232 dd. 29.10.2009.

Rules for connection of co-generating equipment to the heat network are approved by the Decree of the Ministry on housing and communal services of Ukraine No 223 dd. 24.07.2009.

4.5. Tariffs

Establishment of heat supply tariffs for natural monopolies and economic entities on allied markets are established pursuant to Article 10 of the Law of Ukraine “On National Commission on Regulation of the Utility Services Market of Ukraine” No 2479-VI dd. 09.07.2010 in accordance with the procedure (methods) to be approved by this law. According to Transitional Provisions of the law, NERC shall temporarily perform its functions till the completion of the establishment process of the Commission on Regulation of the Utility Market Services of Ukraine. Till the National Commission on Power Industry Regulation of Ukraine establishes tariffs, the tariffs established by executive organs and self-government authorities pursuant to the law shall remain in force.
NERC temporarily performing the functions of the National Commission on Power Industry Regulation of Ukraine passed its Resolution dd. 17.02.2011 – No 242 “On approval of the procedure for tariff formation in thermal energy, its production, transportation and delivery” and No 243 “On approval of the procedure for tariff formation in centralized water supply and sewerage” which entered into force on April 1, 2011.

Prior to the adoption of the Law of Ukraine “On National Commission on Regulation of the Utility Services Market of Ukraine”, the formation of tariffs for heat, centralized water supply and sewerage under the Law of Ukraine “On Housing and Communal Services” # 1875-IV dd. 26.04.2006 was performed by executive bodies and local self-governments, which had actually caused significant differences in the tariff amounts for different regions of Ukraine.

The orders approved by NERC establish the mechanism for calculating cost-based tariffs for municipal services in all forms of ownership. They ensure the application of common principles and methodological bases for the formation of heat tariffs, centralized water supply and sewerage services; introduce a unified classification of costs that are included in the total cost of such tariffs, as well as prevent the inclusion in the tariff of those costs that are not directly related to the provision of heating, centralized water supply and sewerage services. According to the orders, the tariffs include commercially reasonable costs as well as planned profit.
Chapter 2. Energy conservation

1. GENERAL CHARACTERISTICS


This Law stipulates a number of principles in the energy conservation sphere. A lot of them are either declarative or too general, for instance:

- Combination of methods of economic stimulation and financial responsibility for the purpose of rational and efficient use of fuel and energy resources;

- Popularization of economic, ecologic and social advantages of energy conservation,

- Increase of public educational level in this sphere.

Among principles of energy conservation important one is obligingness of the state evaluation on energy conservation. Order and cases of obligatory conduction are stipulated in the Resolution of the CM of Ukraine No 1094 dd. 15.07.1998 “On State Evaluation of Energy Conservation”. In particular, this evaluation is obligatory for construction investment projects; for import of new energy consuming machinery, technologies and materials; for equipment, household appliances, heating appliances and illumination tools produced in Ukraine and in other cases.

Another important principle of energy conservation is establishment of fee for direct waste and irrational use of fuel and energy resources (“Order for Conduction of Inspection as to Effective Use of Fuel and Energy Resources in Enterprises, Establishments and Organizations as well as Elimination of Facts of their Ineffective Use” approved by the Order of the National Committee of Ukraine on energy conservation No 64 dd. 04.08.2000). Inspection of effective use of resources is conducted on schedule (not oftener as once a year) and, according to request of authorities – unscheduled. Norms excess of which is considered ineffective use are stipulated by the Resolution of the CM of Ukraine No 786 dd. 15.07.1997 “On Norms for Discharge Intensity of Fuel and Energy Resources in Public Production”. The exact fee for overuse of energy resources are defined in the Resolution of CM of Ukraine No 699 dd. 02.09.1993. The double fee is paid for overuse of fuel and energy resources.
2. STIMULATION OF ENERGY CONSERVATION

2.1. General characteristics

Pursuant to the Law “On Energy Conservation” stimulation of energy conservation is carried out in following forms:

a) tax preferences for companies – producers of energy-efficient equipment, machinery and materials, tools for measuring, control and management of fuel and energy use, for producers of equipment using non-conventional and renewable energy sources and alternative fuel;

b) tax preferences for companies using equipment working on non-conventional and renewable energy sources, alternative fuel;

c) priority financing (by state banks) of measures as to rational use and saving of fuel and energy resources (Order of provision of preferential credits for implementation of investment projects as to introduction of energy-saving technologies and technologies for production of alternative fuel sources is approved by the Resolution of the Cabinet of Ministers of Ukraine No 695 dd. 18.05.2006);

d) establishment of enhanced amortization norm for energy-saving fixed assets. List of energy-saving equipment types where this enhanced amortization norm is applied is stipulated by the CM of Ukraine (as for February 2011 it has been developed but not approved yet);

e) target state and other subsidies and non-repayable allotment for basic research in the sphere of energy-saving technologies and non-conventional energy sources, for production and exploration of new energy-saving equipment and technologies. The order for provision of state subsidies and non-repayable allotment is stipulated by the CM of Ukraine (Order of conduction on competitive basis of evaluation and selection of investment projects involving budget funds approved by the CM of Ukraine by its Resolution No 2145 dd. 25.11.1999).
2.2. **Tax and customs duty preferences**

The legislation of Ukraine provides for a number of preferences as to taxation of business activity connected to development, implementation and taking of energy-saving measures and energy-effective projects.

### 2.2.1. **Company profit tax**

The Tax Code of Ukraine No 2755-VI dd. 02.12.2010 stipulates a tax relief (during five years as of first profit due to increase of energy efficiency of the production) for:

1. 80% of income of enterprises gained out of sale of own-produced goods in Ukraine according to the List as approved by the Cabinet of Ministers of Ukraine (is not approved, by analogy the Resolution of the CM of Ukraine dd. May 14, 2008 No 444 “On import to the customs territory of Ukraine of energy-saving materials, equipment and component parts” may be applied):
   - Energy efficient equipment, materials and goods operation of which saves energy and provides rational consumption of fuel and energy resources;
   - Fuel and energy resources measuring, control and management devices.

Funds released due to tax allowances shall be directed by the tax payer for increase of production volumes pursuant to the procedure as stipulated by the Cabinet of Ministers of Ukraine.

2. 50% of the profit of companies which are included to the State register of companies, establishments and organizations which develop, implement and take energy-saving measures and energy efficient projects.

The State register of companies, establishments and organizations which develop, implement and take energy-saving measures and energy efficient projects includes companies, establishments and organization which are part of branch programs on energy conservation (subject to approval by the Ministry; integrated program on energy conservation approved by the Resolution of the CM of Ukraine No 148 dd. 05.02.1997). In order to be included to the Register according to results of an evaluation carried out by the bodies of State inspection on energy conservation the companies have to obtain an opinion on compliance of energy-saving measures and energy efficient projects which have been already implemented or are at stage of development and implementation with the criteria of energy conservation and included to the energy conservation programs.
The aforementioned State register is kept by the National Agency of Ukraine on Efficient Use of Energy Resources. The order of inclusion of companies to this Register is also approved by the Order of the National Agency of Ukraine on Efficient Use of Energy Resources No 49 dd. 01.04.2008.

### 2.2.2. Value Added Tax

According to the Tax Code of Ukraine, no VAT shall be applied to import transactions of the following equipment and materials (as well as materials, equipment, components used for production of such equipment and materials):

- energy-saving equipment and materials;
- tools for control, measurement and management of fuel and energy resources use.

Import to Ukraine of goods stated in this paragraph is free of taxation if such goods are used by the taxpayer for its own production and if identical goods of equivalent quality are not produced in Ukraine.

List of respective goods are determined by the Resolution of the CM of Ukraine No 444 dd. 14.05.2008 “On import to the customs territory of Ukraine of energy-saving materials, equipment and component parts”.

By violation of requirements as to proper use of such goods the taxpayer is obliged to increase tax liabilities upon results of the tax period when such violation occurred for the amount of the VAT which should have been paid for such import operations on regular basis as well as to pay a fine in amount of 120 % of NBU discount rate as of the day of payment of tax obligation and for the period from the day of import of such goods till the day of increase of tax obligations accrued according to the Tax Code.

### 2.2.3. Customs duties

According to Part 3 Article 19 Par. (ч,щ) of the Law “On unified customs tariff” the following equipment and materials (as well as materials, equipment, components used for production of such equipment and materials) are not subject to custom charges provided they are used by the taxpayer for its own production and if identical goods of equivalent quality are not produced in Ukraine:
• energy-saving equipment and materials;

• tools for control, measurement and management of fuel and energy resources use.

The list of goods is stipulated by the Resolution of the CM of Ukraine No 444 dd. 14.05.2008 “On import to the customs territory of Ukraine of energy-saving materials, equipment and component parts”.

By violation of requirements as to proper use of mentioned goods the subject of the foreign economic activity is obliged to pay customs dues in order and amount stipulated by the law.
Chapter 3. Alternative energy

1. LEGISLATION ON ALTERNATIVE ENERGY

1.1. General provisions

Problems with environmental pollution and limited reserves of traditional energy sources force to search for other fuel and energy types. Therefore, alternative energy gains on importance. First of all it shall be noted that in legislation of Ukraine a unified definition of alternative (renewable) energy sources is absent (different laws contain different definitions – renewable, non-conventional, alternative etc.). The respective draft on introduction of a unified definition has been prepared by the ICC Ukraine working group.

Main legislative acts governing the alternative energy in Ukraine are the following:


The Law of Ukraine “On Alternative Types of Fuel” defines legal, social, economic, ecological, and organizational grounds for production and consumption of alternative types of liquid and gas fuel on the basis of involving untraditional sources and types of energy raw materials. The Law aims at establishing the necessary conditions for expanding production and consumption of these types of fuel in Ukraine. The Law defines the key principles of government policy in the sphere of alternative types of fuel:

- supporting the development of scientific and technical base for production of alternative types of fuel, promoting scientific and technical achievements in this sphere;
- supporting entrepreneurship in the sphere of alternative types of fuel on the basis of government protection for business interests;
- developing international scientific and technical cooperation, widely using the opportunities of world science and technology in the sphere of alternative types of fuel, etc.
The Law of Ukraine “On Alternative Energy Sources” defines legal, economic, ecological and organizational principles of use of alternative energy sources and promotion of extension of their use in the fuel and energy complex. The basic principles of state policy in the field of alternative sources of energy are as follows:

— observation of safety for human health at the alternative energy objects at all production stages, as well as during transfer, transportation, supply, storage and consumption of the energy produced from the alternative sources;

— adherence to the legislation by all subjects of relations connected with production, storage, transportation, supply, transfer and consumption of the energy produced from the alternative sources;

— observation of the conditions of efficient consumption and economy of energy produced from the alternative sources, etc.

The Law of Ukraine “On Alternative Energy Sources” stipulated that the Verkhovna Rada of Ukraine defines basic directions of the state policy in the field of alternative energy sources and performs legislative regulation of relations in it. The CM of Ukraine and other authorized bodies of executive power within the authorities defined by law implement the state policy in the field of alternative energy sources and manage it. The state regulation in the field of alternative energy sources is performed by the CM of Ukraine or on its errand by the specially authorized central body of executive power in the respective sphere according to the procedure defined by the legislation.

1.2. Changes in legislation and further plans

Beginning with September 2008 when the term “green” tariffs has been introduced to the Ukrainian legislation the work on promotion of alternative energy has been speeded up. In order to improve provisions of the first law the Law of Ukraine “On introduction of changes to the Law of Ukraine “On Electrical Power Industry” as to stimulation of use of alternative energy sources” No 1220-VI dd. 01.04.2009 has been passed introducing new order for establishment of tariffs for electricity produced using alternative energy sources (came in force as of 22.04.2009).

3 Passing of the Law of Ukraine “On introduction of changes to certain laws of Ukraine as to establishment of “green” tariff” # 601-VI dd. 25.09.2008 which introduces changes to the Law of Ukraine “On Electrical Power Energy”. 
The work on stimulation of development of such type of the alternative energy as bioenergy has been also further advanced. In particular, the Law of Ukraine "On Amendments to Certain Laws of Ukraine as to Support of Production and Use of Biofuel Types" No 1391-VI dd. 21.05.2009 provides for:

- definitions of biofuel types (biofuel: bioethanol, biogas, biomass, biodiesel etc) have been determined;
- it was determined that biofuel types designed for sale as market products are subject to certification (except for products for own consumption); at sale of such fuel the seller shall provide to the buyer a document confirming the quality of the fuel and that such fuel is alternative;
- companies of all legal organizational forms can engage in production and sale of biofuel;
- production of bioethanol can be conducted by economic entities the list of which is established by the Cabinet of Ministers of Ukraine provided obtaining of a respective license;
- one of the principles of the state policy in the sphere of biofuel types is the stage-by-stage increase of obligatory volume of production and use of bio and mixed motor fuel;
- some changes have been introduced to certain laws according to which:
  - machinery and equipment not produced in Ukraine and imported to the customs territory of Ukraine in the period from January 1, 2010 to January 1, 2019 for reconstruction of existing and construction of new biofuel production plants, reconstruction of transport vehicles for use of biofuel according to the list approved by the Cabinet of Minister of Ukraine are not subject to customs duty;
  - profit of producers of biofuel types gained on biofuel sale is not subject to taxation for five years beginning with January 1, 2010;
  - bio types of motor-fuel are subject to taxation as to zero rate of excise tax.

On February 12, 2009 a Decree of the CM of Ukraine No 276-p “On approval of Concept of State target research-and-technology development program for production and use of biofuel types” has been adopted. This program is designed for years 2009-2014. This concept provides for necessity to elaborate regulatory legal acts, outlines perspectives for development of alternative energy in Ukraine.
1.3. **Basic terms**

Alternative energy sources according to the Law of Ukraine “On alternative energy sources” are renewable energy sources which include solar, wind, geothermal, wave and tidal, hydro and biomass energy, gas from organic waste and sewage treatment plants, biogas and secondary energy resources such as blast-furnace and coking plant gas, methane gas from degasification of coal deposits, transformation of industry waste energy.

Non-conventional energy resources and types of energy feedstock according to the Law of Ukraine “On alternative types of fuel” are stock materials of plant origin, waste, hard combustibles, other natural and artificial sources and types of energy feedstock, including oil, gas, oil and gas condensate, exhausted, non-industrial and technogenic deposits, heavy oil grades, original asphalt, gas-saturated waters, gas-hydrates etc., production (extraction) and processing of which require high technology and which are not used for production (extraction) of conventional fuel types.

The Tax Code of Ukraine also contains a definition of renewable energy sources – these are solar, wind, geothermal, wave and tidal, hydro and biomass energy, gas from organic waste and sewage treatment plants, biogases.

1.4. **Licensing, standardization and certification**

1.4.1. **Licensing**

The general terms of licensing in electrical power industry have been mentioned above. As to the electrical power produced using alternative energy sources there are some peculiarities. The CM of Ukraine passed Resolution No 126 dd. 19.02.2009 according to which NERC was advised to stipulate that owners of plants producing electricity using alternative energy sources with rated capacity up to 10 MW are allowed to produce electricity without respective license.

Therefore, if there is generating equipment which uses alternative energy sources with rated capacity of up to 10 MW, the producers of electricity shall have the right to produce electricity without obtaining respective license for electricity production.

Nevertheless, at publishing of the regulatory act draft NERC explained that aforesaid owners of electricity generating equipment shall obtain licenses for electricity production in order to sell the produced electricity on the Wholesale electricity market as per “green tariff”. Obtaining of electricity production license by such economic entities is necessary as:
• becoming a participant of the Wholesale market and, therefore, getting the right to sell produced electricity on the Wholesale market is only possible provided license for production of electricity;

• obtaining from the economic entity of all necessary documents for approval of a “green” tariff, control over proper use of “green” tariff investment funds, regulation of relations between participants of the Wholesale market during production, transfer and supply of electricity as per “green” tariff is only possible if an economic entity has obtained license from NERC.

Therefore, there is no need in obtaining of a license only for production of electricity with generating equipment using alternative energy sources with rated capacity up to 10 MW for own consumption.

### 1.4.2. Standardization

The goal of standardization in the sphere of alternative fuel types according to article 7 of the Law of Ukraine “On alternative energy sources” is stipulation of a complex of norms, rules, requirements, indexes as to technology of production (extraction) and use of such fuel types, their quality, ecological safety, their safety for human health and labour.

Standards stipulating requirements for quality of alternative fuel types shall provide for effective and economic use of fuel energy potential. Indexes for consumer quality for each alternative fuel type are stipulated in according standards. These indexes shall be basis for all calculations as to alternative fuel types (production and sale volumes, technical and economic, commercial and other indexes). The State Committee of Ukraine on Technical Regulation and Consumer Policy is the central executive body responsible for standardization and, by necessity, delegates powers in the sphere of standardization to respective state authorities.

### 1.4.3. Certification

The alternative nature of fuel is confirmed by a document on fuel identification which is issued by the National Agency of Ukraine on Efficient Use of Energy Resources in order stipulated by the CM of Ukraine. This order is approved by the Resolution of the CM of Ukraine No 1307 dd. 05.10.2004 “On order of issuance of certificate confirming alternative nature of fuel”. Certificate confirming alternative nature of the fuel is issued only provided obtaining of an expert opinion, the order for conduction of which is approved by the Decree of the State Committee of Ukraine on Energy Conservation “On approval of Order for conduction of expertise for confirmation of alternative nature of fuel” No 183 dd. 10.12.2004.
1.5. **Taxation**

The legislation of Ukraine provides a number of preferences as to taxation of activity connected to development, implementation and use of alternative energy.

### 1.5.1. **Company’s profit tax**

The Tax Code of Ukraine stipulates that there shall be no income tax for 10 years for:

- Income of enterprises of the electric power industry (class 40.11 group 40 KVED DK 009:2005) gained out of sale of the electricity produced with the use of renewable energy sources (such as wind, solar, geothermal, wave and tidal, hydro, and biomass energy, landfill gases, sewage facilities gases, biogases);

- Income of biofuel producers from sales of biofuel;

- Income of mechanisms and equipment producers as determined by Article 7 of the Law of Ukraine “On Alternative Fuel Types” intended for production and reconstruction of technical and transport means, electrical devices which consume biofuel gained out of sale of such mechanisms and equipment produced in Ukraine;

- Income of enterprises exercising co-generation activity and/or producing heat energy using biofuel;

- Income of enterprises gained out of extraction and use of coalbed methane.

No taxation is either stipulated for 80% of income of enterprises gained out of sale in Ukraine of own-produced goods according to the List as approved by the Cabinet of Ministers of Ukraine:

- Equipment working on renewable energy sources;

- Materials, raw materials, equipment and components which will be used for production of energy out of renewable energy sources;

- Equipment for production of alternative fuel types.

Funds released due to tax allowances shall be directed by the tax payer for increase of production volumes pursuant to the procedure as stipulated by the Cabinet of Ministers of Ukraine.
1.5.2. Value added tax

No VAT shall be applied to the import of:

- Equipment consuming renewable energy sources, equipment and materials for production of alternative fuel types or for production of energy out of renewable energy sources;

- Materials, equipment, components used for production of:

- Equipment consuming renewable energy sources;

- Materials, raw materials, equipment and components which shall be used for production of alternative fuel types or for production of energy out of renewable energy sources.

Import to Ukraine of goods stated in this paragraph is free of taxation if such goods are used by the taxpayer for its own production and if identical goods of equivalent quality are not produced in Ukraine. The list of such goods with codes pursuant to the Ukrainian classification of foreign economic activity goods is stipulated by the Cabinet of Ministers of Ukraine (the Resolution of the CM of Ukraine dd. May 14, 2008 No 444 “On import to the customs territory of Ukraine of energy-saving materials, equipment and component parts”).

In addition to this, temporarily, till January 1, 2019 no VAT shall be applied to the following transactions:

- Delivery of mechanisms and equipment determined by Article 7 of the Law of Ukraine “On Alternative Fuel Types” in the territory of Ukraine;

- Import under codes of the Ukrainian classification of foreign economic activity goods determined by the Law of Ukraine “On Alternative Fuel Types” of mechanisms and equipment intended for reconstruction of existing and construction of new enterprises for production of biofuel and for production and reconstruction of technical and transport means consuming biofuel, if such goods are not produced and have no equivalent in Ukraine, as well as of technical and transport means, including self-moving agricultural machinery consuming biofuel, if such goods are not produced in Ukraine.

Import procedure for the mentioned mechanisms and equipment, technical and transport means shall be determined by the Cabinet of Ministers of Ukraine.
1.5.3. Customs dues

According to Part 3 Article 19 Par. (ч,щ) of the Law “On unified customs tariff” following equipment and materials (as well as materials, installations and equipment used for production of such equipment and materials) are not subject to custom charges, provided they are used by the taxpayer for its own production and if identical goods of equivalent quality are not produced in Ukraine:

- equipment working on non-conventional and renewable energy sources;

- equipment and materials for production of alternative fuel types (hereinafter – goods) imported to the customs territory of Ukraine by national companies.

By violation of requirements as to proper use of mentioned goods the subject of the foreign economic activity is obliged to pay customs dues in order and amount stipulated by the law.

1.6. “Green tariffs”

1.6.1. General characteristics and history of establishment

As mentioned above, initially the Law of Ukraine “On introduction of changes to certain laws of Ukraine as to establishment of “green” tariff” No 601-VI dd. 25.09.2008 introduced changes to the Law on Electrical Power Industry.

Pursuant to the aforementioned Law “green” tariff is a special tariff for purchase of electricity produced at power plants using alternative energy sources (except for blast-furnace and coke gas, and using hydro energy – produced by small hydro power plants). Electricity produced in such way can be sold directly to consumers, and the Wholesale market is obliged to pay “green” tariff for electricity produced in such way and not sold at contractual prices directly to consumers or energy supplying companies, which conduct economic activity in sphere of electricity supply as per regulated tariff. Sample form of purchase and sale contract for electricity produced with alternative sources directly to consumers as well as the purchase and sale contract with the WEM is approved by the Resolution of NERC No 838 dd. 16.07.2009.

Previously, “green” tariff should have been yearly approved by NERC for each economic entity on
level of double average tariff for electricity, purchased by energy generating companies acting on the electricity wholesale market of Ukraine according to price applications for a year, preceding to the tariff establishment year. Such procedure for “green” tariff establishment had to be applied for each economic entity during 10 years as of its establishment year. Then “green” tariff was established by the Resolution of NERC No 25 dd. 15.01.2009 “On Establishment of “Green Tariff” at the rate of 0.6624 UAH for 1 kWh (VAT excluded).

1.6.2. Current system

On April 1, 2009 the Law of Ukraine “On Amendments to the Law of Ukraine “On Electrical Power Industry” as to stimulation of alternative energy sources use” was passed (came into force as of April 22, 2009). This Law brought significant changes to the system of green tariff’s establishment.

The passed Law stipulates that rate of the “green” tariff shall be established for each economic entity producing electricity using alternative energy sources as to each type of alternative energy and for each object of the electrical power industry. Now the rate of the “green” tariff will be calculated by multiplying retail tariff for consumers of second class voltage as for January 2009 (and for subjects producing electricity with solar energy and small hydro power plants – applying tariff level factor used for peak periods) by “green” tariff level factor for each type of alternative energy. “Green” tariff level factor is floating between 0,8 (for electricity produced by small hydro power plants) and 4,8 (for electricity produced by surface power facilities using solar energy). “Green” tariff level factor for electricity produced by power plants which have been put into operation (or considerably improved) after 2014, 2019 and 2024 years is decreased respectively for 10, 20 and 30 percent of its basis rate. The “green” tariff is established up to January 1, 2030.

The “green” tariff level factor is defined only for solar, wind, biomass energy and small hydropower plants. But as mentioned above, alternative energy sources, according to the Law of Ukraine “On alternative energy sources”, are renewable energy sources which include solar, wind, geothermal, wave and tidal, hydro and biomass energy, gas from organic waste and sewage treatment plants, biogas and secondary energy resources such as blast-furnace and coking plant gas, methane gas from degasification of coil deposits, transformation of industry waste energy. In practice of NERC, for the types of alternative energy sources for which no “green” tariff level factor is determined, the “green” tariff on the economically feasible level might be awarded based on the application of an economic entity.
The said order for stimulation of the electricity production based on alternative energy sources will be applied provided that beginning with January 1, 2012 share of feedstock, materials, fixed assets, works and services of Ukrainian origin in the cost of construction of respective electrical power facilities producing electricity with use of alternative energy sources will amount to not less than 30%, and beginning with January 1, 2014 - 50%. Additional condition for establishment of the “green” tariff for electrical power plants working on solar energy is the use at such plants beginning with January 1, 2012 (initially it was January 1, 2011, but in the end of the year 2010 the respective amendment was introduced and the implementation of this condition was postponed) of solar modules in the production cost of which the share of domestic materials and feedstock amounts to not less than 30%.

On July 23, 2009 during an open session NERC has approved the minimal “green” tariffs. Below you find the schedule on green tariff rates calculated according to the Law of Ukraine “On Amendments to the Law of Ukraine “On Electrical Power Industry” as to stimulation of use of alternative energy resources” dd. 01.04.2009:

<table>
<thead>
<tr>
<th>ELECTRICITY PRODUCED WITH:</th>
<th>Formula</th>
<th>Retail price for electricity for 2nd class consumers as for January 2009, EUR/KWh</th>
<th>“Green” tariff level factor</th>
<th>Peak time factor</th>
<th>TARIFF, EUR/KWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind energy:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By objects7 with rated capacity up to 600 KW</td>
<td>A*B</td>
<td>0,05385</td>
<td>1,2</td>
<td>not applied</td>
<td>0,0646</td>
</tr>
<tr>
<td>By objects with rated capacity over 600 KW but not exceeding 2000 KW</td>
<td>A*B</td>
<td>0,05385</td>
<td>1,4</td>
<td>not applied</td>
<td>0,0754</td>
</tr>
<tr>
<td>By objects with rated capacity over 2000 KW</td>
<td>A*B</td>
<td>0,05385</td>
<td>2,1</td>
<td>not applied</td>
<td>0,1131</td>
</tr>
<tr>
<td>Biomass energy8:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A*B</td>
<td>0,05385</td>
<td>2,3</td>
<td>not applied</td>
<td>0,1239</td>
</tr>
<tr>
<td>Solar energy:</td>
<td>Surface power facilities A<em>B</em>C</td>
<td>0.05385</td>
<td>4.8</td>
<td>1.8</td>
<td>0.4653</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------</td>
<td>---------</td>
<td>-----</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>Power facilities fixed (installed) on roofs of houses, buildings and constructions with rated capacity over 100 KW</td>
<td>A<em>B</em>C</td>
<td>0.05385</td>
<td>4.6</td>
<td>1.8</td>
<td>0.4459</td>
</tr>
<tr>
<td>Power facilities fixed (installed) on roofs of houses, buildings and constructions with rated capacity not exceeding 100 KW as well as for objects fixed (installed) on the facades houses, buildings and constructions with rated capacity regardless their rated capacity</td>
<td>A<em>B</em>C</td>
<td>0.05385</td>
<td>4.4</td>
<td>1.8</td>
<td>0.4265</td>
</tr>
<tr>
<td>Small hydro power plants</td>
<td>A<em>B</em>C</td>
<td>0.05385</td>
<td>0.8</td>
<td>1.8</td>
<td>0.0775</td>
</tr>
</tbody>
</table>

4 Resolution of the NERC # 1440 dd. 23.12.2008 “On approval for January 2009 of electricity retail tariffs in consideration of tariff level limits by stepwise transfer to establishment of unified retail tariffs for consumers on the territory of Ukraine”.

5 The Law of Ukraine # 575/97-BP dd. 16.10.1997 “On Electrical Power Industry” as to stimulation of use of alternative energy sources” with amendments introduced by the Law of Ukraine dd. April 1, 2009 #1220-VI “On Amendments to the Law of Ukraine “On Electrical Power Industry” as to stimulation of use of alternative energy sources”.

6 Resolution of the NERC # 1241 dd. 20.12.2001 “On Tariffs Differentiated due to Time Periods”

7 Under “object” according to the Law of Ukraine “On Electric Power Industry” is meant the whole wind park. This position is confirmed by NERC in its Letter No 4240/23/17-09 dd. 25.06.2009. Still according to the draft Law No 8028, it is stipulated that the installed capacity of single installation and not the whole wind park itself is to be taken into account.

8 According to the Law “On Electric Power Industry”, the “green tariff” is awarded only for biomass which is fully or partially composed of phytogenous substances. There are respective drafts which envisage respective amendments to be introduced into Ukrainian legislation so that the biomass for the purpose of the awarding of the “green” tariff would cover phytogenous and animal produce and will be described below.
1.6.3. The order of establishment and adjustment

On January 22, 2009 the Resolution of NERC “On Approval of Order for Establishment, Review and Annulment of “Green” Tariffs for Economic Entities” was adopted. Taking into account that with passing of the Law of Ukraine “On Amendments to the Law of Ukraine “On Electrical Power Industry” as to stimulation of use of alternative energy sources” the order has been changed significantly, NERC elaborated amendments to the aforesaid Resolution dd. 16.07.2009 No 828.

“Green” tariff is established for a certain company provided submission to NERC of following documents:

1) application for establishment of “green” tariff according to standard form; and

2) following documents in printed form:

   — explanatory note with detailed information on the company (ownership form; rated capacity of the generating equipment; characteristics of the generating equipment);

   — net cost calculation for electricity production with equipment using alternative energy sources;

   — substantiation of net costs positions and elements for electricity production (copy of contracts for purchase of goods, works and services, cost estimate, interpretation, information on personnel number, on balance value of fixed assets as per day of application for establishment of “green” tariff);

   — explanatory note to the work construction project for power facilities with use of alternative energy sources;

   — copy of technical specifications for connection of new power facilities of the company – electricity producer which uses alternative energy sources received according to the current legislation;

   — certificate of conformity of the constructed power facility producing electricity with use of alternative energy sources to the project documentation, state standards requirements, construction norms and rules;

   — copy of project estimate for reconstruction, modernization and technical reequipment at own expense or on account of borrowed capital;
beginning with January 1, 2012 document confirming that according to the Order of determination of share of feedstock, materials, fixed assets, works and services of domestic origin in the cost of power facility construction and their components the share feedstock, materials, fixed assets, works and services of domestic origin in the construction cost of this particular power facility makes up not less than 30%, and beginning with January 1, 2014 – not less than 50%;

if company produces electricity using solar energy beginning with January 1, 2011 a document confirming that the share of domestic materials and feedstock in the cost of solar modules amounts to not less than 30%.

NERC reviews the application and submitted documents within 30 calendar days as of submission of these documents in full extent, after that within 15 days brings the subject to the open session of NERC with respective notice to the company. The decision of NERC on approval of “green” tariff shall be executed as resolution.

According to the aforesaid, “green” tariff shall be established by NERC and be in force till 2030. A formula for correction of the tariff depending on exchange changes has been stipulated as well, but according to this formula the tariff can be only increased, not decreased. Such review shall occur on each day of establishment of retail tariffs for consumers.

The order of adjustment of “green” tariff is as follows:

if Euro/UAH exchange rate established by NBU as of the day of changing the retail tariff for consumers of the second class voltage is higher than that of 01 January 2009, the following formula shall apply:

\[
B \text{ tariff } XX.XX.XXX = B \text{ tariff } 01.01.2009 \times \frac{N \text{Euro } XX.XX.XXX}{N \text{Euro } 01.01.2009}
\]

where:

- \( B \text{ tariff } XX.XX.XXX \) — amount of green tariff for the day of review
- \( B \text{ tariff } 01.01.2009 \) — amount of green tariff for the day 01.01.2009
- \( N \text{ euro } XX.XX.XXX \) — Euro/UAH exchange rate as of XX.XX.XXX
- \( N \text{ euro } 01.01.2009 \) — Euro/UAH exchange rate as of 01.01.2009

Such adjustment of the “green” tariff shall be performed based on a separate decision of NERC. If the value of UAH increases relative to EUR, then the exchange rate as of 01.01.2009 applies.
1.7. **Order of connection to the network**

The general order of connection of electricity producing installation is also applied for installations producing electricity from alternative energy sources. Still there are some peculiarities for connection of such installations.

On February 19, 2009 the Resolution of the CM of Ukraine No 126 “On Peculiarities of Connection to Electrical Network of Power Facilities Producing Electricity with Use of Alternative Sources” was adopted and came into force on 03.03.2009. According to this Resolution connection point is determined as the border of the land plot where the power facility is or will be situated. Connection is made based on a connection contract, sample form⁹ of which has been approved by NERC with its Resolution No 838 dd. 16.07.2009.

According to amendments to the Law of Ukraine “On Electrical Power Industry” as of April 1, 2009 the energy suppliers who use their own network for transmission of electricity are not entitled to deny access to such network for companies producing electricity with use of alternative energy sources and have to include in their investment plans cost for such connection as well.

Special order of connection to the grid is defined for wind power plants with installed capacity of over 100 MW in the Order of the Ministry of Fuel and Energy No 570 dd. 28.10.2009, as described above.

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⁹ Difference between sample and standard contract is that provisions of a standard contract cannot be changed by the parties, only expanded, and the provisions of a sample contract have advisory character.
2. REGULATION FOR SINGLE TYPES OF ALTERNATIVE ENERGY SOURCES

In the first edition of this Guide we dedicated a special chapter to agriculture and biofuels in Ukraine as well as certain regulations on renting agricultural land. In this second edition we deliberately do not include this section, as the general information on bioenergy and agriculture in Ukraine can be found in the Agriculture Guide prepared by Arzinger in cooperation with the Institute for Economic Research and Policy Consulting\(^\text{10}\).

2.1. Bioethanol

According to the Law of Ukraine “On Amendments to Certain Laws of Ukraine as to Support of Production and Use of Biofuel Types” No 1391-VI dd. 21.05.2009 bioethanol is anhydrous ethanol produced from biomass or raw ethanol for use as biofuel.

Pursuant to the Law of Ukraine “On Entrepreneurship” production of mixed motor fuel with bio-ethanol, ethyl tertiary butyl ether additives and bioethanol-based is carried out by companies list of which is approved by the Cabinet of Ministers of Ukraine. The list of respective companies is approved by the Resolution of the CM of Ukraine “On Approval of List of Companies with all Operational Procedures for Production of Oil Products which are Entitled to Produce Mixed Motor Fuel with Ethyl Tertiary Butyl Ether or Bioethanol Additives and State Distilling Plants Entitled to Produce Bioethanol” No 1375 dd. 05.12.2007.

According to the draft Law of Ukraine “On Promotion of Production and Consumption of Biofuels” No 7524 (was returned as requiring improvement on March 1, 2011), the state promotes the production of mixed gasoline and motor fuel containing bioethanol in such proportions as to the

10 “Agriculture Guide”
total volume of gasoline production in Ukraine: in 2012 – not less than 2%, in 2013 - not less than 5%, in 2014 - not less than 15%, in 2015 and more - not less than 30%. At the same time, the used wording (“the State shall promote/contribute to”) does not give any clear idea of the liability for non-observance of prescribed standards. The draft also contains economic mechanisms as to the promotion of biofuel use. Still economic mechanisms to stimulate production and consumption of biofuels are formulated very abstractly (e.g., use of the phrase “economic incentives” without specifying what kind of incentives), and require substantial revision, especially in the provision of tax benefits and increased budget costs.

Production of bioethanol is carried out by companies subject to obtaining a respective license (licensing terms have not been approved as for February 2011). The above named draft also supports the idea of licensing this activity. Detailed information on promotion of alternative energy development in general is contained in paragraph 1.6. of the chapter on legislation on alternative energy.

### 2.2. Biodiesel

Biodiesel fuel (biodiesel) is methyl and/or ethyl ethers of organic acids produced from plant oils or animal fat used as biofuel or biocomponent. Industrial production of biodiesel has not been formed yet.

Currently the Instruction of the Cabinet of Minister of Ukraine No 576-p dd. 28.12.2005 “On Approval of the Concept of Biodiesel Production Development Program for the period to 2010” and the Resolution of the Cabinet of Ministers No 1774 dd. 22.12.2006 “On Approval of the Diesel Biofuel Production Development Program” are in force. It is provided that normative acts directed at promotion of rape growing and construction of plants for production of biodiesel shall be elaborated.

The program also provides for elaboration of respective state standards in the sphere of production and use of alternative fuel types, in particular biodiesel with high ecological and technical qualities.


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11 The Law of Ukraine “On Amendments to Certain Laws of Ukraine as to Support of Biological Fuel Production and Use” dd. 21.05.2009 #1391-VI
Further to the above provision, according to the draft Law of Ukraine “On Promotion of Production and Consumption of Biofuels” No 7524, the state promotes the production of biodiesel containing ethyl or methyl esters of fatty acids derived from vegetable and animal fats in such proportions to the total production of diesel fuel in Ukraine: in 2012 - not less than 10%, in 2013 - not less than 30%, in 2014 – not less than 50%, in 2015 and further - at least 80%. In Kiev and other cities with populations of more than 500 thousand inhabitants, in recreational areas, the bodies of executive power contribute to ensuring the operation of vehicles with internal combustion engines with biofuels, with the following proportions of sale of biofuels to sale of traditional fuels: in 2012 – 5%, in 2013 – 30%, in 2014 – 50%, in 2015 – 80%. In addition to this, a reduction in the use of MTBE (methyl tert-butyl ether) manufacturers of gasoline and replacing it with ETBE (ethyl tert-butyl ether) is envisaged in 2012 – by 10%, in 2013 – by 30%, in 2014 – by 70%, in 2015 – at 80%. At the same time, the used wording (“the State shall promote/contribute to”) does not give any clear idea of the liability for non-observance of prescribed standards. The draft also contains economic mechanisms as to the promotion of biofuel use. Still economic mechanisms to stimulate production and consumption of biofuels are formulated very abstractly (e.g., use of the phrase “economic incentives” without specifying what kind of incentives), and require substantial revision, especially in the provision of tax benefits and budget costs.

Detailed information on promotion of alternative energy development in general is contained in paragraph 1.6. of the chapter on legislation on alternative energy.

**2.3. Biogas**

Biogas is gas obtained from biomass and can be used as biofuel and for heat and electricity production. Biogas upgraded to natural gas quality might be pumped into gas network after respective purification. Order for transmission of such gas into gas transporting system has not been elaborated yet. General information on connection to electricity networks is contained in paragraph 1.7. of the chapter on legislation on alternative energy.

Special legislation for regulation of biogas production has not been elaborated yet.

According to the Law of Ukraine “On Licensing of Certain Types of Economic Activity” No 1775-III dd. 01.06.2000 with the latest amendments the trade with liquid fuel from biomass and with biogas is subject to licensing (till October 2010 production and storage of biogas and liquid fuel from biomass were subject to licensing as well). The respective draft of licensing conditions has been elaborated by the Ministry of Fuel and Energy of Ukraine, but has not been approved yet. According to the draft Law of Ukraine “On Promotion of Production and Consumption of Biofuels” No 7524, licensing of trade with liquid fuel from biomass and with biogas has to be abolished and only production of bioethanol will be licensed.
Nevertheless, on February 12, 2009 the CM of Ukraine adopted two Instructions as to the development of biogas production in Ukraine – Instruction No 217-p “Issues on Organization of Production and Use of Biogas” and Instruction No 223-p “On Creation of Register for Resources “Suitable for Biogas Production”.

With these Instructions the CM of Ukraine obliged the respective authorities to develop and implement pilot projects on biogas production, to elaborate and approve state standards for biofuel, to regulate issues of lease of state-owned land plot as per simplified procedure for placement of a fuel station selling liquid and/or gas biofuel and mixtures with content of pure biodiesel over 80%. The executive bodies (as for companies, establishments and organization in their administration domain), regional councils (as for companies, establishments and organizations located on the respective territory and not falling into administration domain of central executive bodies) have been instructed to ensure yearly before March, 25th, collecting and provision to the National Agency on Efficient Use of Energy Resources of information as for availability in such companies, enterprises and organizations of resources suitable for production of biogas. Detailed information on promotion of alternative energy development in general is contained in paragraph 1.6. of the chapter on legislation on alternative energy.

One of the most important draft Laws in the sphere of biomass and biogas production is the recent draft Law No 8028 submitted to the Parliament. According to this draft, the tariff level factors for “green” tariff calculation for electricity produced out of biogas shall be introduced (2,0-2,6 depending on installed capacity and type of biogas). In addition to this the draft Law also stipulated that biomass includes both phytogenous and animal produce.
2.4. Wind energy industry

Stimulation on legislative level of Wind Energy Industry begins in Ukraine in 1997, when the complex program on construction of wind power plants has been approved. NERC put into force with its Resolution No 276 dd. 06.03.1998 the Temporary Methodic for Determining Expenses and Tariffs for Electricity Produced at Wind Power Plants.

With its Resolution No 705 as of 08.07.2009 the CM of Ukraine obliged the National Agency on Efficient Use of Energy Resources to elaborate amendments to the Complex Program on Wind Power Plant Construction.

Potential of the wind energy in Ukraine is very high. Below you find the map of Ukraine with marking regions with different wind speed:

The state policy in the sphere of wind energy is pursuant to the article 5 of the Law of Ukraine “On Wind Power Industry” as follows: support of development of wind energy industry as ecological and fuel-free energy sub-industry through purchase by power plants of all produced electricity with monetary payment without application of any offsets of debts as to payments for electricity.

After approval of “green” tariffs (as described above) for electricity produced with use of wind energy intensification of the wind energy industry development can be expected. Detailed information on promotion of alternative energy development in general is contained in paragraph 1.6. of the chapter on legislation on alternative energy.
Chapter 4. Kyoto Protocol in Ukraine

1. CONCEPT DESCRIPTION

A Framework Convention on Climate Change hereinafter referred to as UN FCCC was adopted in order to resolve the issues of climatic changes caused by so-called greenhouse gas (GHG) emissions. The UN FCCC is an agreement signed by more than 180 developed countries of the world including the countries of the former Soviet Union and all industrially developed countries. This Convention became effective on March 21, 1994. Since UN FCCC does not set forth quantitative obligations and an additional document called the Kyoto Protocol was developed to specify such obligations.

The key goal of the mechanisms of the UN FCCC and the Kyoto Protocol is to reduce the emission of greenhouse gases (GHG). The parties to the Convention assumed obligations not to exceed the volume of emissions which was in 1990 and a further decrease of the admissible emissions for all member countries is being slated. The Convention stipulates for a possibility to redistribution of the admissible volume of emissions in particular when one state which produces much less emissions than it has the right for transfers a part of its quota to another state. The Convention stipulates for a possibility to redistribution of the admissible volume of emissions in particular when one state which produces much less emissions than it has the right for transfers a part of its quota to another state.

The goals set for environmental protection are also achieved thanks to such mechanisms because during implementation of the UN FCCC mechanisms the funds are spent for upgrading the production facilities and respectively for decreasing such emissions in the future.

Taking into account that Ukrainian industry in 1990 was more developed than today Ukraine has a chance to transfer part of its quota to other countries and is an important player on the market of trading quotas and implementing other mechanisms of the UN FCCC and Kyoto Protocol.

There are three market financial mechanisms (“flexible mechanisms”) within the framework of the Kyoto protocol which was ratified by the Verkhovna Rada of Ukraine in 2004:

1. International emission quotas trading;
2. A mechanism of Joint Implementation;

3. Clean Development Mechanism.

The first mechanism is international emission trading: Transfer of excessive units of established quantities from one country to another in exchange for financing or other economic benefits. The right to sell belongs to a state which is party to the UN FCCC on climatic change. The emission trading between the states is mainly regulated by the bilateral agreements (for example an agreement between Ukraine and Japan). Green investments scheme is one type of such emission trading program. Member states of the Kyoto Protocol were given an opportunity to trade GHG quotas since January 1, 2008. Pursuant to Article 17 of the Kyoto Protocol the countries are allowed to assign or sell the remaining part of their quota to another state in the event if they do not exhaust their own quota. The emission limits were fixed at the level of 1990.

The joint implementation mechanism stipulates for selling part of the quota in exchange for investment in upgrading the production facilities with the purpose to decrease such emissions in the future and such mechanism is being implemented by the factories of both member states of the Convention. Particularly, such mechanism envisages a transfer of GHG emission decrease units to a foreign investor. This mechanism can be used by countries which are enlisted in the Appendix 1 to Kyoto Protocol and Ukraine is in this list. Moreover, the state shall authorize a factory where a joint implementation project is being implemented to transfer the GHG emission decrease units to a foreign investor which provides financing.

The third mechanism is a clean development mechanism: This mechanism can be used by countries which are enlisted in the Appendix 2 to Kyoto Protocol which is comprised of developing countries.

Among the above mechanisms Ukraine, which has the right for emissions on the level of the year 1990 and the actual emission due to setback in production are currently lower than they were in 1990, can be interested in a mechanism of “green” investment and joint implementation projects which we will review in details.
2. A MECHANISM OF “GREEN” INVESTMENTS (“GREEN” INVESTMENT SCHEME, GIS)

A mechanism of “green” investments is one way to trade quotas. It is a mechanism in the framework of International Emission Trade (IET). Under the GIS a Party to the Protocol expecting that the development of its economy will not exhaust its Kyoto quota, can sell the excess of its Kyoto quota units (AAUs) to another Party. The proceeds from the AAU sales should be “greened”, i.e. channeled to the development and implementation of the projects either acquiring the greenhouse gases emission reductions or building up the necessary framework for this process.

The regulation is carried out in accordance with the Resolution of the CM of Ukraine No 221 dd. 22.02.2008 “On adoption of the Procedure for review, approval and implementation of targeted environmental (green) investment projects during the continuance of the obligations of the party to the Kyoto Protocol to the UN FCCC on climatic changes”.

The projects shall be developed on basis of international agreements on transfer of part of the emissions by interested agencies of executive power, agencies of local self-government, legal entities and natural persons who are registered as business entities (hereinafter Applicants) independently or with the assistance of a specialized project organization and shall be submitted for review of the National Agency of Environmental Investment in Ukraine (hereinafter referred to as NAEIU).

The applicant shall submit to NAEIU a written and electronic application and support documentation to the project, a list of which is stipulated by the above Resolution.

The projects which are submitted for review and approval of the NAEIU should meet general and additional criteria established by the above Decree.

Among the general criteria the following criteria should be mentioned:

- Correspondence of the project with the priorities of national economy development and particularly on issues of resource and energy conservation, energy efficiency;
- Availability of social benefits in the implementation of the project (new jobs, ensuring safe working conditions, etc);
• Availability of the decision of the agency of local self-government on its approval to implement this project on a particular territory.

Additional criteria include the following:

• Realistic, transparent technological decisions and financial plan of the project;

• The results of a previous independent assessment of the level of decreased emission or increased absorption of greenhouse gasses and decrease of emission and discharge of pollutants (following a particular focus of the project);

• Availability of relevant permits and/or licenses for taking measures envisaged by the project;

• The term of project implementation (the priority will be given to projects with a deadline for implantation by the end of 2012. However, the operational time of such projects may exceed the mentioned term);

• The return on investment of the project (the priority will be given to projects with the shortest investment return time).

The shortlisting of projects shall be made by an interagency task force which shall be established by the NAEIU within the period of two months from the moment of registration of such a project at NAEIU.

General criteria shall be applied while shortlisting of projects by an interagency task force. Correspondence of the project to general criteria shall be the grounds upon which the interagency task force makes a decision on entering a project into a database of such projects.

An interagency task force shall review the documents submitted by the applicant and conclusions made by an independent expert organization, make analysis and assessment of the submitted project, financial terms of its implementation and makes a decision on implementing such project or reject the further implementation of the project.

If the project has been approved for implementation the NAEIU determines who shall be the contractors according to the legislation on procurement of goods, works and services using the budgetary funding. Further details on governmental procurement you can find in the book called “Public Private Partnership”12, prepared by Arzinger.

12 Please see the footnote No 5.
Additional criteria shall be applied while making a decision on approving the project by the NAEIU. Additional criteria are of comparative nature and allow determining the advantages of the project over other projects of the corresponding topic on the basis of the evaluation of qualitative and quantitative indicators of the project.

The implementation of “green” investments project shall be carried out as follows:

1. Development of the project
2. submitting the application and supplementary documentation
3. shortlisting of projects, entering the project into a database of the projects
4. decision on implementation of the project
5. determining the contractors of the project by NAEIU
6. Implementation of the project

The following fact should be mentioned as an example. Ukraine signed guidelines with Japan on implementing the green investment scheme. Within the Ukrainian Japanese cooperation the Ministry of Housing and Communal Services is responsible for developing project suggestions.  

13 You can download it from: http://www.auc.org.ua/activities/news/?id=35789
3. JOINT IMPLEMENTATION PROJECTS

3.1. General provisions

The joint implementation project (JI) may be implemented following a national (Track 1) or international procedure (Track 2). International procedure is quite longer and it is used as a rule when the member state of the Kyoto Protocol does not fully meet the conditions of this protocol and respectively has no right to use a national procedure. Ukraine received the right to approve and use the national procedure. More information can be found in the Kyoto Protocol Brochure prepared by Arzinger.  

3.2. Procedure for review and approval of the project

The procedure for preparation, review, approval and implementation of projects focused on reduction of the volume of man-made GHG emission has been adopted by the Resolution of the CM of Ukraine No 206 dd. 22.02.2006. The guidelines for execution of joint implementation projects following the national procedure has been adopted by the order of NAEIU No 79 dd. 18.12.2008.

It should be mentioned that joint implementation projects require approval from both states. The approval of a project shall be first received from a state where gas emission takes place and then shall be transferred to Ukraine and this is one of the conditions for approval of such JI project approval by NAEIU.

According to this guideline the owner of the object or a person authorized for receiving a Letter of Endorsement (LoE) shall submit an application to NAEIU on providing such LoE which contains a petition about a preliminary approval of NAEIU of the implementation of a potential JI project following the national procedure.

14 “Kyoto Protocol”
— General overview of the Kyoto Protocol;
— JI Projects;
— Possibilities for cooperation with Ukraine.
You can download it in German from:
http://arzinger.ua/file_collection/en/0_br_Kioto_A5_german_pdf
With reference to the LoE issued by NAEIU and according to the project offer, the owner of the object shall develop PDD (Project Design Documentation) and submits the latter for determination to the national or an international determinator. The international determinator is an independent agency which has been accredited by the Supervisory Committee which has the right for determination of a JI project following an international or national procedure; national determinator is an independent expert organization which has the right for determination of a JI project following the national procedure. In case the determinator’s conclusion is positive the owner of the object shall submit the JI project to NAEIU for further approval.

The joint implementation project (JI) which passed the determination shall be approved by NAEIU for implementation following the national procedure by virtue of issuing a corresponding Letter of Approval (LoA).

Requirements with regard to the documents necessary for receiving the LoE, LoA, the contents and design thereof including the grounds for rejection to issue such a letter shall be determined by the NAEIU. At the moment the Requirements for the documents which describe the volumes of man-made emissions and absorption of GHG necessary to receive a LoE by the owner of the emission source where such JI project shall be executed (the Order of NAEIU No 32 dd. 25.06.2008) and the Requirements for preparation of the JI projects (the Order of NAEIU No 33 dd. 25.06.2008) have been approved.

In order to receive the approval for the JI project an owner of the object or an authorized person shall submit the following documents to the NAEIU:

— Application on approval of the JI project following the national procedure;
— Copy of the LoA;
— LoE of the foreign state issued by a competent agency which approves the JI project and a translation thereof into Ukrainian, legalized by the owner of the object following the established procedure, in writing and in electronic form (CD-R or DVD-R) as PDF;
— A copy of the contract (previous agreement) with the Buyer about a sale and purchase of a unit of emission decrease certified by the owner of the object following the established procedure.

The NAEIU shall approve the JI project issuing a corresponding order within 10 days from the moment of submission of the documents and shall transmit within 10 days from the moment of approval of the JI project the PDD, LoE, conclusion of the determinant and the information about approval of the JI project via official electronic channels of communication to the UN FCCC Of-
cies in order so that this JI project could be published and registered by virtue of assigning it an identification number of the JI project in the International Transaction Log. In the event when the package of documents proves incomplete or inconsistent with the established requirements the NAEIU rejects to approve the JI project by issuance of the rejection order and advises the owner of the object in writing accordingly within 10 day’s period.

3.3. Further implementation of the project

NAEIU after receiving the information from the UN FCCC Offices regarding the registration of the JI project, further informs about it the owner of the object, opens in the National Register a project account and a transfer account (if necessary) and makes a deposit of corresponding number of units (parts) of the assigned amount.

NAEIU may terminate the implementation of the approved JI project which follows the national procedure by virtue of canceling the order on approving the corresponding JI project which will result in a voiding the registration of this JI project in the International Transaction Log. The following represents the grounds to cease the implementation of the JI project adopted by the national procedure:

— A written application of the owner of the object or his/her successor about cessation of implementation of the JI project;

— Finding out by NAEIU inaccurate information in the documents submitted for approval, adoption of the JI project, and in the annual report (monitoring report) and verification conclusion submitted for registration;

— Cessation of the object to function or functioning of the object in a manner which is not specified by the approved Project Design Documentation;

— Cessation of the business activity of the owner of the object;

— Implementation of the JI project with significant deviation from indicators specified by the approved PDD with regard to new construction, replacement, upgrading or capital repair of the equipment, failure to meet other investment measures which may have a significant effect on the quality of implementation of JI project;

— Failure to submit for registration an annual report, (monitoring report) and verification conclusion about the progress of implementation of the JI project and achieved reduction in GHG emissions before November 1 of the year which follows the reporting year.
On the basis of registered annual report, (monitoring report) and verification conclusion the NAEIU shall convert the corresponding volume of unit (part) of the assigned amount in the unit of emission decrease and credits the account of the owner of the object.

The transfer of the emission reduction unit shall be made on the basis of the authorization from the owner of the object submitted to NAEIU along with the registered contract with the buyer by virtue of electronic transfer from the account of the owner of the object at the National Register to the account of the buyer in the National Register of a foreign state.

In order to make such transfer of the unit (part) of the assigned amount the owner of the object shall submit the following documents:

- A petition (application) of the owner of the object about a transfer of the unit (part) of the assigned amount;

- The verification conclusion and its translation into Ukrainian, certified following the established procedure by the owner of the object in writing and in electronic form (CD-R or DVD-R) as PDF.

### 3.4. Conclusion

The whole procedure if observed stage by stage is as follows:

1. Development of the project proposal
2. Submitting the application
3. Receiving a LoE from the NAEIU
4. Development of the project design documentation (PDD)
5. Determination and obtaining a positive determination conclusion
6. Receiving a LoA from the NAEIU
7. Receiving a LoE from a foreign state
8. Submitting the documents for approval of the project
9. Approval of the project
10. Registration at the UN FCCC Offices by virtue of issuing an identification number of the JI project at the International Transaction Log
11. Opening a project account at the National Register and placing a corresponding number of the units (parts) of the assigned amount as a deposit.
12. Registering of the annual report and verification conclusion.
13. Transfer of the units from the account of the owner of the object at the National Register to the account of the buyer in the National Register of a foreign state.

In conclusion it should be repeated that the key positive thing about such cooperation is the fact that such project may be implemented in a country where its implementation is the most advantageous and as a result of energy efficient measures it results in upgrading of the equipment and gradual decrease of harmful emissions.

4. UPCOMING CHANGES

Among recent developments in this sphere in Ukraine it is to point out the following. On October 21, 2010 Verkhovna Rada passed the draft law No 7231 “On regulation in sphere of energy saving” in first reading.

The draft contains progressive for Ukraine ideas on reduction of greenhouse gas emissions and is based on principles of United Nations Framework Convention on Climate Change and Kyoto Protocol.

One of the most important things in this draft is the introduction of the registration system for anthropogenic emissions and absorption of greenhouse gases.

According to the draft the National register of anthropogenic emission and absorption of greenhouse gases (hereinafter the National register) is introduced and kept with the purpose of ensuring of introduction, accounting, storage, transfer, receipt, cancellation and withdrawal of carbon units, in particular emission reduction units (ERU), certified emissions reductions (CER), Assigned amounts units (AAU) and units of rights on the emissions of greenhouse gases (per analogy with EUA – Emissions Allowances in EU).
National register keeps accounts for the state as well as operators of installations for the purposes of transfer of AAU and for participation in “emissions trade” (trade with rights on emissions of greenhouse gases, emission reduction units and other derivatives).

Further inventory of emissions of greenhouse gases shall be performed on state and regional level. First regional inventory have to be completed till January 1, 2012.

Operators of installations which emit greenhouse gases have to register all their installations with the National cadastre of anthropogenic emission and absorption of greenhouse gases till January 1, 2013. After that special reports on monitoring of emissions are to be submitted annually.

Most important is probably that operators of installations which emit greenhouse gases have the right for such emission only within the established limit. Such limit has to be defined by the National Plan of allocation of rights on the emission of greenhouse gases. Allocation of rights is based on the idea of stage-by-stage passing to the newest energy-saving technologies to the types of activity, related to the emission of greenhouse gases. Such distribution will start from January 1, 2013 and only for those installations which are registered with the National cadastre of anthropogenic emission and absorption of greenhouse gases. 1 “unit” of right on emission of greenhouse gases is 1 metric ton of CO2 and shall be equal to 1 AAU.

Emission rights trading shall be realized on stock exchange in form of futures.

Generally the draft law aims at the introduction of EU-like emissions trading system which is a very progressive idea for Ukraine. Draft law is based on the ideas of Kyoto Protocol which is supposed to be followed by a new analogue regulation. But even in absence of such regulation the envisaged measures for reduction of emissions of greenhouse gases within the territory of Ukraine will be a great environmental achievement and a necessary step towards the European integration of Ukraine.

Despite such progressive ideas the draft law is unfortunately far away from ideal, starting from the title which does not describe the idea of the law and ending up with the wording full of mistakes and stylistics defects, and therefore requires enormous improvements before the final approval of the draft.

Part of the draft law defining authorized bodies shall contain an exhaustive list of bodies. It is also unclear whether a new authority will be established to be in charge of the concerned issues or the law refers to an already existing authorized body. For instance, according to current legislation the issues on pollution of the environment shall be in sphere of competence of the Ministry of Environmental Protection of Ukraine.

In general, the draft law gives a plenty of new definitions and mechanisms which require the adoption of new procedures. But there is no need to re-invent the wheel. One might easily invite experts who have a deep understanding of the EU emission trading system and let them adapt these regulations to Ukrainian reality.
Appendix 1. Energy Community, *Sophia Shavlak*

Appendix 2. Electricity market study, *Maryna Ilchuk*

Appendix 3. Gas market study, *Maryna Ilchuk*

Appendix 4. Coal market study, *Anastasiia Shtanieva & Sophia Shavlak*

Appendix 5. Energy market: maps and graphics, *Sophia Shavlak*
Appendix 1.

ENERGY COMMUNITY

Sophia Shavlak
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UKRAINE’S ACCESSION TO THE ENERGY COMMUNITY

On February 1, 2011 Ukraine became a member of the Energy Community. Negotiations on Ukraine’s accession to the Energy Community lasted for about 2 years. Starting from November 2006, Ukraine was an observer of the said organization. The decision on acceptance of Ukraine to the Energy Community was adopted on 18 December 2009 at the meeting of the Community’s Council of Ministers in Zagreb. The Countries of the Energy Community put forward a number of conditions for Ukraine’s entry. First, Ukraine was to improve the nuclear safety of its nuclear power plants in accordance with the IAEA requirements, and, secondly, to conduct a series of legislative reforms in the gas sector, i.e. to bring them into conformity with the norms of EC directives. Ukraine performed two of the conditions and, thus, implemented a joint project of the European Commission and the IAEA on nuclear safety and the adoption of Law of Ukraine “On the principles of the natural gas market functioning”, which complies with the European gas directives (Directive 2003/55/EC and EC Regulation 1775/2005).

For Ukraine, it means the must to implement the EC energy legislation with the boundary terms set for that purpose. The European Commission plans to evaluate the performance of Ukraine of its commitments and the implementation of energy legislation. The terms set for implementation thereof are quite short. Ukraine is obliged to apply eight of the EC acts as early as January 2012. These are, in the first place, the “Gas” Directive 2004/76/EC on measures to ensure the security of natural gas supply, and two directives on electricity (Directive 2003/54/EC on common rules for the functioning of the internal electricity market, Directive 2005/89/EC on activities to ensure the safety of investing in energy supply systems and infrastructure). To implement the directives in the field of environmental protection the Protocol of Accession to the agreement provides for a longer term.

1. MILESTONES

The reasons for establishing the Energy Community go back to the conflicts of 90s that caused disintegration of the united energy system which existed before the breakup of Yugoslavia began. The process was swift-flowing. The Treaty on establishment of the Energy Community was the first agreement between the said countries after the wars of 90s and was the result of the so-called Athens process, which began in 2001. The Community was created primarily as a political organization, the task of which was to make the Eastern European and Balkan countries go over to the same principles as those regulating the European energy market, as well as replicate the experience
of the EC internal energy market in the countries of South Eastern Europe and promote investment in the energy sector of the Parties to the Treaty.

The first important act in the history of this process was the Athens Memorandum of Understanding signed in November 2002. The subject thereof was electricity. A few months later, in 2003, it was decided that the gas market should also accede to the Athens process. Two Athens Memoranda initiated the creation of the Community, and in May 2004, the European Union began negotiations with the countries of Southeast Europe to create a regional energy market. The negotiations were held between the European Community, on the one hand, and Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Romania, Turkey, the Interim United Nations Mission in Kosovo on behalf of Kosovo, on the other hand. In October 2005, the Treaty was signed on establishing the Energy Community. It was supported by the European Parliament on May 29, 2006. The introduction of the Parties proceeded in the following order:

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<tr>
<th>Albania</th>
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<td>Bulgaria</td>
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<td>Croatia</td>
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<td>Bosnia and Herzegovina</td>
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<td>Serbia</td>
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<td>Moldova</td>
<td>May 2010</td>
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In November 2006, the Council of Ministers adopted a decision on awarding Moldova, Norway, Turkey and Ukraine the observer status. In December 2007, Georgia also became another observer.
2. COMMUNITY GOALS

Interestingly enough, the principles of the Treaty on establishing the Community coincide with the principles of the European Coal and Steel Community. The Energy Community strives to balance commercial, political and social interests of all parties, ensuring a stable and continuous supply of energy, which will in turn contribute to economic development and social stability.

The Community goals are declared in Article 2 of the Treaty on the establishment of the Energy Community dated 10.25.2005. They include the following ones:

- setting up a stable regulatory and market structure to attract investment to gas networks, power generation, transmission networks and their distribution so that all parties have access to stable and continuous energy supply that is essential for economic development and social stability;

- creating a single regulatory space for energy products and materials, which are transported through networks needed to meet the geographic dimensions of product markets, if applied;

- improving the supply security in a single regulatory space by introducing a stable investment climate, under which pipelines can be laid to Caspian, North African and Middle East gas reserves, and local energy sources such as natural gas, coal and hydro-power can be used;

- improving the environmental situation regarding energy products and materials transported through network, and the related thereto energy efficiency, promoting renewable energy sources, determining the conditions of energy trade in the unified regulatory space;

- developing competition in the market of energy products and materials transported through networks on the wider geographical scale and the use of the respective cost-saving effect

To achieve these goals, relations are being established between the Parties to the Treaty as well as the legal and economic framework regarding energy products and materials transported through networks.
3. COMMUNITY MEMBERS

To better understand the Community organization it is worth considering the countries’ functional status.

3.1. Parties

Today, the respective Parties are Albania, Bosnia and Herzegovina, Croatia, Macedonia, Moldova, Montenegro, Serbia, the temporary UN Mission in Kosovo and Ukraine. Also, a Party thereto is the European Union. The European Union is a special Party to the Treaty as the European Commission is responsible for coordinating the activities of the Energy Community on behalf of the European Union. In particular, the Commission coordinates the implementation by the Parties of the EC legal basis and the establishment of a regulatory system for the functioning of energy products markets, and establishes a mechanism for cross-border transfer and transportation of energy products, mutual assistance in case of serious violations in the operation of energy networks.

Obligation of the Parties is the implementation and adoption of acquis communautaire in the field of energy, environment, competition and renewables. The parties also undertake to provide to each other mutual assistance should any of the Parties experience problems with the functioning of energy systems.

3.2. Participants

Any EC member country can be represented in the bodies of the Community as a participant. In this case, a representative of this country can take part in discussions but has no vote in decision-making. To exercise its right to become a participant, a country must apply to the Council of Ministers (the Superior Body of the Community, see “The Council of Ministers”). Today, the Community has 14 participants. They are Austria, Bulgaria, Cyprus, the Czech Republic, France, Germany, Greece, Hungary, Italy, the Netherlands, Romania, Slovakia, Slovenia and the UK.

3.3. Observers

Any third neighboring party has the right to appeal to the Council of Ministers regarding the possibility of participation in the Community as an observer. Decision on acceptance to the Community as an observer shall be taken unanimously. An observer has the right to attend meetings of all institutions, but cannot take part in discussions or votes. Today, observers are Georgia, Norway
and Turkey. Moldova, as an observer, as well as Ukraine, expressed their interest in full membership
and became a Community Party after the negotiation and signing of the protocol in May 2010. The
first negotiations with Turkey regarding its membership took place in September 2009.

4. COMMUNITY INSTITUTIONS

Established in the Community structure are the following institutions:

4.1. Ministerial Council

This institution implements the community goals. It defines the general policy principles as well
as takes measures and adopts the procedural acts, which may include delegation of certain powers
and responsibilities to the Permanent High-Level Group, the Regulatory Board or the Secretariat
in order to implement the policy of the Energy Community.

The institution is formed as follows: each of the Parties may send one representative; the European
Union has two representatives. Also, the meeting may be attended by a representative of each
Participant without voting rights. The institution shall adopt its rules of procedure. The chairman-
ship shall be carried by one representative of each Party to the Treaty; rotation takes place every
six months. Meetings of the Ministerial Council are held at least every six months. The meetings
are prepared by the Secretariat. The Chairman heads the Ministerial Council with the assistance
of Deputies, one of them being a representative of the Party to head the Community for the next
6 months, and the second one a EC representative, respectively.

The Ministerial Council sends an annual report on the work of the Energy Community European
Parliament to the parliaments of Accessions, as well as to the Participants.

4.2. The Permanent High-Level Group

This institution, like the Ministerial Council, brings together a representative of each Contracting
Party and two representatives of the European Community. Each participant can also send one
representative without voting rights to work in the Group.

The Permanent High-Level Group prepares the work of the Ministerial Council, gives its consent
to requests for technical assistance from international financial donor institutions and bilateral
donors, gives an account to the Ministerial Council on progress in achieving the objectives of
the Treaty, takes measures, if given a mandate by the Ministerial Council, adopts procedural acts. A very important function of the institution is to discuss the development of the EC regulatory framework, as EC laws directly affect the domestic law of the Contracting Parties. For this purpose, the European Commission regularly sends reports on its activities in this area.

The Group is headed by a chairman, the assisting Deputies being one representative from the European Union and one from a country that will lead the next period.

Meetings of the Permanent High-Level Group are conducted by its President. He also appoints the venue. The meetings are prepared by the Secretariat.

### 4.3. Regulatory Board

Its primary function is consulting the Ministerial Council or the Permanent High-Level Group on legislative, technical and regulatory standards, as well as giving recommendations regarding the settlement of cross-border disputes between two or more regulatory agencies at the request of one of them. In addition, the institution may take action (if given the powers by the Ministerial Council), and also takes procedural acts.

The Regulatory Board includes one representative from the energy regulatory bodies of each treaty country (in accordance with parts of the regulatory framework in the EC’s energy industry). The European Union is represented by the European Commission assisted by one regulator of each Participant and a representative of the European Regulators’ Group for Electricity and Gas (ERGEG)

A country may also have a regulatory body for gas and a parallel regulatory body for electricity. In this case, the Contracting Party or Participant, depending on the agenda, determines the regulatory body whose representative shall attend the Board’s each particular meeting. The Regulatory Board assembles in Athens. The agenda is prepared by Chairman of the Board and his deputy, which is the European Commission.

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1. European Regulators’ Group for Electricity and Gas is a consultative body of the European Commission on the internal energy market. This body was established by the European Commission to support the consolidation of the single EU electricity and gas market. Members of this body are the chairmen of national regulatory authorities of 27 EU member countries. The European Regulators’ Group was founded on December 11, 2003. The main project of this body is the Regional Initiative, which began in 2006 with the support of the European Commission. The project started 7 electricity markets and 3 regional gas market in Europe. They are an intermediate step in creating a single competitive electricity and gas market in EU. Another area of its practice is the wide monitoring of the existing standards implementation and advising the European Commission in accordance with monitoring results. The institution has developed the Principles of Practice (Guidelines of Good Practice (GGPs)) in different areas, which are optional rules formulated in accordance with the recommendations of the interested EU parties.
4.4. Forums

This institution can rightly be called the oldest one in the Energy Community. Just exactly the meetings in this format led to the adoption of the Athens Memorandum. Initially the Treaty provided for two forums: the Gas Forum and the Power Industry Forum. It is composed of representatives of all stakeholders, including regulators, representatives of industry groups, consumers. They give advice to the Energy Community. Chairmen of the Forums are representatives of the European Union. Conclusions of Forums are made in the form of consensus decision sent to the Permanent High-Level Group. The Power Industry Forum assembles in Athens (Greece). By decision of the Ministerial Council the Gas Forum is held in Maribor (Slovenia).

In October 2007 the idea to establish a Social Forum was put forward. The purpose of establishing this body was to assess the social impact of the energy market reforms. The Forum involves checking the implementation of the principles enshrined in the Memorandum of Understanding on Social Issues. This body has no permanent location, meetings of the Forum taking place in the country presiding at a particular time period.

The Oil forum was only held twice, being also not foreseen by the agreement. It will be held once a year in Belgrade (Serbia) from September 2009.

4.5. Secretariat

This body carries out maintenance work of all four institutions, monitors the execution by the parties of their obligations, forms the reports in this regard and transmits them to the Ministerial Council, supports the European Commission in the coordination of donor activities in the territory of the Parties, provides administrative support to donors, performs other tasks besides taking measures, adopts the procedural acts. Unlike other bodies, the Secretariat includes the staff which is required for the Community’s work. It is selected and appointed by the Director. Functions and activity regulation of the Director and the Secretariat are exercised by the Ministerial Council via its procedural regulations. The Secretariat is located in Vienna (Austria).
5. UKRAINE’S FUTURE OBLIGATIONS IN THE COMMUNITY’S SPECIFIC PRACTICE AREAS

In accordance with Section II of the Treaty establishing the Energy Community, the territory of the Parties is subject to the acquis communautaire of the European Union in the part that regulates the electricity, gas, environment, competition and renewables. As a Party to the Treaty, Ukraine must also enforce these rules in its territory. All acts that Ukraine is committed to implement in the nearest future are listed in the Protocol on Ukraine’s accession to the Treaty on establishing the Energy Community, and an important part of legislation is provided for by the Treaty on establishing the Energy Community. See below the implementation schedule indicating the term of implementation.

<table>
<thead>
<tr>
<th>Directive/Regulation</th>
<th>Term of Implementation</th>
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</thead>
<tbody>
<tr>
<td>Regulation N 1775/2005 on conditions for access to the systems of transportation of natural gas</td>
<td>Till January 1, 2012</td>
</tr>
<tr>
<td>Directive 2003/54/EC on common rules for the functioning of the internal electricity market</td>
<td>Till January 1, 2012</td>
</tr>
<tr>
<td>Regulation N 1228/2003 concerning conditions for access to a network of cross-border electricity transmission</td>
<td>Till January 1, 2012</td>
</tr>
<tr>
<td>EC Commission Decision 2006/770/EC, which amends the Annex to Regulation #1228/2003 concerning conditions for access to a network of cross-border electricity transmission</td>
<td>Till January 1, 2012</td>
</tr>
<tr>
<td>Directive 2001/77/EC on the establishment of favorable conditions for the sale of electricity produced from renewable energy sources in the internal electricity market</td>
<td>Till January 1, 2012</td>
</tr>
</tbody>
</table>
It is important to note that some of the legislation acts included in the Protocol have been replaced by new ones. It is therefore important to understand that the Energy Community may, under Article 25 of the Treaty on establishing the Energy Community, take measures to implement the amendments to the EC regulatory framework in compliance with the changes in the EC legislation. However, for Ukraine there are only the implementation terms for these acts.

5.1. Competition Policy

The Treaty provides for the obligation to adhere to competition rules of the Treaty on establishing the European Community as early as 6 months after a country joins the Energy Community. The articles in question are 81, 82 and 87. However, the Lisbon Treaty entered into force on December 1, 2009, and therefore the principles of competition policy should be sought in the Treaty on the Activities of the European Union (Treaty on the Functioning of the European Union). (It also means changing the numbering in the Consolidated Agreement). Article 101 (formerly Article 81) says that all agreements between enterprises, decisions of company groups and concerted practices, which can disrupt trade between countries and cause distortion, limitation or impediment of competition are incompatible with the domestic market and are prohibited. In particular, incompatible with the competition is direct or indirect fixing of the purchase price, sale or other terms of transactions; restriction or control over the manufacture, marketing, technical development or investment; allocation of markets or sources of supply, use of different conditions for the implementation of the same obligations with respect to contractors due to what they get in a competitive disadvantage; binding of an additional condition to the contract, if it has nothing to do with the subject of the contract. All such transactions are deemed void. Nevertheless, there may be exceptions for improving the manufacture of goods or their distribution, or if such transactions promote the technical or economic progress.

Article 102 (formerly Article 82) concerns the dominant position. Incompatible with the internal market and banned is the unfair use of a dominant position in the domestic market or its substan-
tial part by one or more companies, if it might lead to a breach of trade between countries. Such abuse may occur through direct or indirect establishment of a disproportionate sale and purchase prices or other terms of the deal; through limiting production, markets or technical development to the detriment of the consumer; using different terms for the same obligations with respect to different contractors and thus hampering the competition; establishing additional terms of a deal, which cause the counterparty to assume additional duties not related to the subject of the contract.

Article 107 (formerly Article 87) concerns public assistance. It says that aid to state enterprises or the financing of enterprises from public funds, if it distorts or may distort competition, are incompatible with the internal market, if they violate the trade between the states. However, compatible with the internal market are social subsidies to some consumers, if they do not entail discrimination in terms of origin, subsidies to address the harm brought by natural disasters or other emergencies; subsidies to the economy of certain areas of Germany which suffered as a result of the division of Germany. Compatible with the internal market can be subsidies to promote economic development in areas with an extremely low standard of living or substantial unemployment; subsidies to promote the common European interest or to eliminate serious violations in a country’s economy; subsidies to promote development of economic sectors, if they do not change trade relations so that the latter do not meet the general interest; subsidies to promote culture and cultural heritage preservation, if it does not damage the conditions of competition and trade in the union to the extent which is contrary to the common interest.

Interestingly enough, following the Treaty on the basis of the Energy Community to assess the anti-competitive activities the criteria should be applied that are used in the European Union. Moreover, Article 94 of the Treaty says that the institution of the Energy Community interpret the terms of the Treaty as such that are derived from the European Union legislation in accordance with the case law of the Court of the European Union (European court of Justice) or the Court of general jurisdiction of the European Union (General Court).
5.2. Electric Power Industry

5.2.1. Directive\(^2\) 2003/54/EC on common rules for the internal electricity market functioning establishes common rules for the generation, transmission, distribution and supply of electricity. Like other “electricity” directives, it must be implemented in the Ukrainian legislation prior to January 1, 2012. It sets out the rules relating to the organization and functioning of the electricity sector, the market access, the criteria and procedures for bidding, permitting and operation of systems. This Directive obliges the state to ensure the right of all residential customers to be provided with electricity within their accommodation at affordable and transparent prices that can be easily and accurately compared. The state may appoint a supplier of last resort. If the state provides financial assistance or other types of compensation and exclusive rights, such provision is carried out transparently and in a non-discriminatory manner. The Directive also obliges the state to guarantee the consumer the opportunity to transfer to another supplier. The state requires the supplier to provide information on the share of each energy source in the overall composition of the fuel which was used for the previous year, to provide links to sources of information about the impact on the environment due to electricity production. The Directive establishes a list of criteria which the state should apply to give permissions for the construction of new generating capacities and to promulgate procedures and criteria for giving those permits, as well as to inform about the reasons for the refusal. It should also be possible to appeal the refusal. The details of the tendering procedure for means of production or increasing energy efficiency / implementation of measures to manage the demand are published in the Official Journal of the European Union at least 6 months prior to the closing date of the tender.

The biggest innovation of the Directive for Ukraine is the duty to ensure the existence of independent transmission system operators (TSO). They may be individuals or legal entities, whose exclusive activity is the operation, maintenance and development of electricity transportation at high voltage through EHV networks and ensuring the long-term possibility of the transmission system to remain consistent with the requirements for energy transportation. This operator must be independent, even if it is part of an integrated enterprise. The Directive also provides for distribution system operators (DSO), i.e. natural or legal persons engaged in transportation of electricity through high voltage, medium voltage and low voltage distribution systems for direct delivery to consumers. The functions of these two types of operators can also be combined.

Ukraine will be obliged to implement a system of third parties’ access to transmission and distribution systems based on published tariffs. The Transmission System Operator (TSO) and Distri-

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\(^2\) Directive is a type of legislative act of the European Union. Unlike other instruments of direct action, a directive is being implemented through national legislation. It requires a Member State to take steps to implement its goals within a certain term. If any of the countries does not implement a directive into national law in a timely manner, the directive would still have the force of law in that country and its violation may be appealed in the EU Court.
bution System Operator (DSO) may deny access to the system only in case of power shortage. In addition, the Directive includes provisions on consumer protection. For today, this Directive is replaced by Directive 2009/72/ES.

5.2.2. Regulation on the conditions of access to a network of cross-border electricity transmission regulates the cross-border trade in electricity, which includes the establishment of a compensation mechanism for the supply of electricity. Transmission System Operators are compensated for the costs arising from the electricity current in their networks. Compensation is provided by the operators of national transmission systems from which the current comes, and the operators of national transmission systems to which electricity is delivered. Compensation payments are regular payments that are paid in advance and, if necessary, after the transfer of electricity the real costs are recalculated. The tariffs of system operators for access to networks should be transparent in respect of the needs of security systems and should display the actual cost. These tariffs should not depend on the distance at which electrical energy is delivered. The amount of compensation payments is determined by the Commission. The Regulation permit the states to oblige producers and consumers to pay a certain sum for access to the network, but in this case, the tariffs should be uniform throughout the country.

Special attention in this Regulation is devoted to the capacity shortage issue, namely the situation in which there is not enough capacity for power for transmission between national transmission networks. As a result, the passage of the amount planned by the current market participants is not possible. Such a situation must be solved by means of a non-discriminatory market-oriented method. Moreover, the transaction may be terminated only in case of emergency. The market participants are given, subject to safety standards, the maximum capacity of trunk lines and cross-border power transmission.

By this Regulation the countries are invited to introduce a system of open auctions. They must be designed so that the market offers all possible facilities. For this purpose a mixed auction may be offered, that is the one in which power will be offered for different terms and with different signs. Full power transmission is offered at several auctions that can be held annually, monthly, weekly, and daily or several times a day depending on the market demand. The procedure for conducting the auction must be prepared so that buyers from the participating countries could also participate in daily auction (electricity exchange). During an auction a situation may occur in which the dominant position of one or more market participants becomes stronger. To avoid this situation, the auction rules should stipulate the upper limit value of capacity a market participant can get. The Regulation should be introduced into the Ukrainian legislation prior to January 1, 2012. At

3 Regulation is a legislative act of the European Union, which takes legal effect in all countries simultaneously.
the same time, on March 3, 2011 Regulation # 714/2009 on conditions for access to the network for cross-border trade in electricity enters into force in the European Union, which cancels Regulation # 1228/2003.

5.2.3. Directive 2005/89/EC concerning measures to ensure the safety of investing in the power supply system and infrastructure must be implemented before 1 January 2012. The purpose of this Directive is to take measures to ensure the security of electricity supply. Primarily, the questions are the proper amount of electricity production, the balance between supply and demand, a sufficient level of interconnection between the countries. The countries and their designated authorities are obliged to ensure the transmission systems operators’ compliance with the minimum network security rules. To establish these rules, consulted should be all market participants of the country that will apply these rules in the future. Transmission system operators are also required to ensure the production safety of the systems, which consists primarily in the spare capacity. The countries also ensure that the interconnected transmission system operators themselves and the operators of distribution systems provide each other with information about the operation of the network in a timely manner. In case of emergency supplies could be reduced by the operator of a transmission system. To do this, the criteria must be pre-established for the cases in which such supply reductions shall be possible.

To set up the balance between supply and demand the countries should promote the establishment of the market for large electricity consumers without inflicting harm on the special interests of small isolated networks. The countries should also provide for the situation in which transmission system operators are required to provide an adequate level of reserve capacity.

Countries are also obliged to adopt a legislative framework that would ensure the possibility for transmission and distribution systems operators to attract investment and develop its network in order to cover the foreseen market demand, to keep the networks in good condition and repair them. Decisions on investments in transmission systems should be taken in close agreement with the transmission systems operators concerned. Investment plans of transmission system operators for the next 5 calendar years or longer shall be available for familiarization.

Countries may also oblige the transmission systems operators to provide information on investments that relate to the construction of domestic connections and significantly affect the provision of cross-border connections.

The Commission, in its turn, reports to the countries on planned investments based on the information provided by the countries.
5.2.4. Commission Decision 2006/770/EC introducing amendments to the Annex to Regulation #1228/2003 on the conditions of access to a cross-border electricity transmission network. According to the Decision, in case there is no shortage, the access to networks for cross-border trade cannot be restricted. However, if the business needs are incompatible with the safe operation of the network, the network operators act in accordance with the requirements of the safe network use and ensure that such activities do not exceed the cost-effective level. An application for access to the network can be rejected only if the physical load on the network can interfere with the safety of electrical networks, or the monetary value of this application is lower than other bids, which must be taken at the same performance and under the same conditions. In addition, mechanisms to control the single-day deficit should be introduced in order to maximize the trade opportunities and to allow the cross-border exchange of energy.

This solution also introduces the principle that the right to power (capacity) is binding. One of the two rules effects: “Use or lose” or “Use or sell it.” If the rule is not observed, there comes a financial liability in the form of monetary compensation. The refund must be timely and proportionate. At the same time, if the transmission system operators do not perform their duties, they also repair the damage (but not loss of profits).

Capacities should be distributed under the same criteria and the same rules. The aim of the Community is to create common rules for the entire European market, but the first priority following this decision was to set up a common, coordinated method for managing deficiency in certain regions. Ukraine has common borders with the Central-Eastern European region, which includes Germany, Poland, the Czech Republic, Hungary, Austria and Slovenia. Therefore, Ukraine will be most likely subject to the same rules that apply in the said region.

The decision establishes the duty of transmission operators to publish all relevant data on the network availability, access thereto and use thereof, including notifications of deficit and its causes, methods of deficits control, and plans for the future management.

The decision must be implemented into the legislation of Ukraine before January 1, 2012.
5.3. Gas and Gas-transport Systems

5.3.1. Directive 2003/55/EC on the general principles of functioning of the internal market in natural gas establishes common rules for the transportation, distribution, supply and storage of natural gas. The Directive should be fully implemented in legislation prior to January 1, 2012. It defines the rules that relate to the organization and functioning of the natural gas industry, the market entry, the criteria and procedures for obtaining a permit to carry out transportation, distribution and conservation of natural gas and the system operation. This Directive classifies all consumers into the following groups:

- Household consumers,
- Non-household consumers,
- Final consumers that buy the gas for individual needs,
- Qualified consumers that are free to buy gas from a supplier they choose. According to the Protocol on Ukraine’s accession to the Treaty on the Establishment of the Energy Community all consumers that do not use gas for domestic purposes must be recognized as qualified consumers from January 1, 2012, whereas from January 1, 2015 all consumers should be recognized as such.
- Wholesale customers that are individuals and entities other than the operators of gas transmission and distribution systems that buy natural gas for resale within the system they are set up within, or outside it.

In case the construction or operation of gas facilities require permits (e.g. license, endorsement, concession, agreement or approval), but such permission was not granted, the Member States will ensure that the reasons for refusal in obtaining the permission were objective and not discriminatory and were communicated to the applicant. The reasons for granting permission shall be sent to the Commission. Each state should establish its procedure for appeals.

The state shall appoint one or more transport operators and operators of gas distribution system or require that the gas companies possessing the means of transportation, storage or liquefaction of natural gas make such an appointment. The operators of both systems are required to establish the rules and tariffs on a non-discriminatory basis and at the same time display their costs. They must be independent, even if they are part of a vertically integrated enterprise, at least in terms of its legal form, organization and decision-making. Operators do not have the right to make preferences to their subsidiaries.
To ensure the deconcentration and transparency of gas companies’ report accounts the states have the right to verify their report accounts. All gas companies must publish their annual balance sheets and provide them for verification. According to this Directive, to avoid discrimination, cross subsidies and violations of competition law gas companies must keep separate accounts for each of their activities and countries are especially obliged to enforce this duty on gas companies. The state provides the third-party access to gas transmission and distribution systems and liquefied natural gas terminals. To implement such an obligation a system of tariffs is being developed; and even before their entry into force, the tariffs must be published along with the methodology for calculating them.


5.3.2. Regulation 1775/2005
on conditions for access to the systems of transportation of natural gas has as its object the establishment of non-discriminatory rules for access conditions to the main gas pipeline networks with regard to the specific features of national and regional markets. This involves primarily the establishment of harmonized tariffs or methods of their computation for the network access and services to third-party access, and for deficit control. According to the Rules, the tariffs should not be non-discriminatory, transparent and meet the needs of network integration, while avoiding cross-subsidization. The tariffs should in no case distort the market liquidity and the trade. Persons operating the capacities of the main gas network offer their services on a non-discriminatory basis. If they offer the same services to multiple clients, they must conclude a contract on the same conditions. To do that, they should use the harmonized agreements or the common “Network Cod”. The market participants should be provided with the maximum possible large power. If there is spare capacity, the main gas transmission pipeline operator offers the unused capacity in the primary market at least a day in advance and as uninterruptible power. The user has the right to sell the capacity in the secondary market. But the country may then require the user to notify the main gas transmission pipeline operator on such sales. The Regulation should be implemented prior to January 1, 2012. In this case, as of March 3, 2011 the Regulation # 715/2009 on conditions for access to pipelines comes into force, which terminates the Regulation # 1775/2005.

5.3.3. Directive 2004/67/EC
on the security measures regarding the natural gas supply should be implemented in the Ukrainian legislation before January 1, 2012. The purpose of this Directive is to take measures to ensure the sufficient security in the gas supply. It introduces the concept of “a major supply disruption” meaning a situation in which there is a danger of more than 20% of gas supplies from third countries stopped, and this situation in terms of the Community can not be properly resolved by a single state. If over a long period of time one of the countries suffers a disrupt gas supply, the countries are obliged to support that country.
The directive determines the situations in which the country must take special care of the households. In particular, it refers to disruptions in the national gas supply, extremely low temperatures, quite a large demand for gas at very low temperatures, which statistically occur every 20 years.

The Annex to this Directive specifies the instrument that countries can use to ensure the security in the gas supply. This may be the accumulation of gas, the possibility of using gas from storage systems, the preparation of the pipelines capacity to allow gas transfer in the appropriate regions, liquid markets for the sold natural gas, the flexibility of networks, the construction of an interrupted demand, the use of fuel substitutes in industrial plants and power plants, the use of cross-border capacity and cooperation of the main gas pipelines operators in neighboring countries in order to coordinate the supply, the coordination of supply activities of the distribution network and main gas pipeline operators, domestic gas production, production and imports flexibility, diversification of the gas supply source, long-term contracts, investments in the infrastructure to import gas via ion regasifying facilities and pipelines.

5.4. Environmental Protection

5.4.1. Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and Directive 2003/35/EC, should be implemented before January 1, 2013. The subject of this Directive is to check the compatibility of public and private projects with the environment. The term “project” in this directive includes the design of constructional or other buildings, and further intervention in nature and landscape, including the exploitation of mineral resources. According to this document, the countries are obliged to take measures to form a procedure for authorizing the project. The criteria for authorizing a project are its form, size and quantity, location, as well as the possibility of its impact on the environment. The verification of the impact on the environment includes the influence on people, fauna and flora, soil, water, air, climate and landscape, consumer goods, cultural heritage and the relationship between all the said factors.

5.4.2. Directive 1999/32/EC concerning the reduction of sulfur content in certain liquid fuels must be introduced into the Ukrainian legislation before January 1, 2012. The purpose of this Directive is to reduce sulfur dioxide emissions after the combustion of certain liquid fuels and, consequently, reduce the negative impact of such emissions on man and environment. This should be achieved by establishing the boundary for sulfur in fuel. For heavy fuel oil the boundary indicator shall be 1% by weight. For gas oil, this boundary shall be equal to 0.1% by weight.
5.4.3. Directive 2001/80/EC on the limitation of emissions for certain air pollutants from large combustion plants should implement before 1 January 2018. This Directive applies to combustion plants with the rated thermal input equal to and exceeding 50 MW. The limit for the number of hours of emissions for the year 2015 is 2000 hours and from January 1, 2016 1500 hours, respectively (with sulfur emissions not to exceed 800 mg / Nm3). The Directive is also replaced by Directive 2010/75/ES on industrial emissions (integrated avoidance and reduction of environmental pollution).

5.4.4. Paragraph 2 of Article 4 of Directive 79/409/EC on the protection of wild birds should be implemented before January 1, 2015. This paragraph obliges the countries to take measures in the maritime and rural areas for the conservation of migratory birds regularly returning to their breeding, moulting and wintering areas and in places where they halt in the trip. For that purpose, the countries protect wetlands.

5.5. Renewable Energy

5.5.1. Directive 2001/77/EC on the establishment of favorable conditions for the sale of electricity produced from renewable energy sources in the internal electricity market. The plan for the implementation of this Directive should be adopted before July 1, 2011, that is later this year. The purpose of the Directive is to promote the increase of renewable energy in the production of electricity in the domestic market. The EU set a target to reach 12% of the gross domestic energy consumption, and the indicative share of 22.1% for electricity produced from renewable sources in the Community’s total electricity consumption in 2010. The Directive was amended by a new Directive № 2009/28/ES on promoting the use of renewable energy, which set the following goal: the use of renewable energy in the EU must be at least 20% of the total amount of the final energy used. Moreover, the use of such energy in the transport sector of each country must not be less than 10%.

5.5.2. The implementation plan for Directive 2003/30/EC on the promotion of biofuels and other renewable fuels for vehicles to be adopted before July 1, 2011. The purpose of the said Directive is to encourage the use of biofuels or other renewable fuels as a substitute for petrol and diesel fuels in the transport sector. Before the end of 2010 the use of biofuels should reach the level of 5.75% of the total petrol and diesel fuel used in transport. The Directive was also replaced by Directive № 2009/28/ES on promoting the use of energy from renewable sources, which put a new target: 10% of the total number of used petrol and diesel should come from biofuels.
6. POSITIVE ASPECTS AND CRITICISM

Prior to the ratification of the Treaty and the signing of the Law on ratification by the President of Ukraine, the Ukrainian government, the European Commission and the public expressed their opinions on the future of Ukraine in the Energy Community and the prospects for Ukraine. Of course, caveats were also provided regarding the difficulties to be faced by Ukraine. See below the basic opinions of experts on the strengths and potential difficulties.

Positive aspects:

- Ukraine’s participation in the EU internal energy market would considerably enhance the investment appeal of domestic energy companies entailing their capitalization. Thus, the opportunity will arise to attract large amounts of investments

- The entry opens the access for Ukrainian companies to European energy market. The greatest expectations concern the electricity sector

- Increased competition in energy markets

- Experts suppose that Ukraine’s accession to the European Energy Community will make impossible the merger of NAK Naftogaz and Gazprom

- Ukrainian exporters gain direct access to end users thus preventing the possibility of mediation

- The European Commission hopes for secure supply in the described environment. The agreement also provides for the possibility of mutual assistance in case of disruption of supplies from supplying countries

- The accession gave a precondition for the integration of Ukraine into the EU;

- It is believed that Ukraine will gain access to cheaper credits via its accession to the Energy Community. The European Commission is ready to finance feasibility studies to modernize the gas transportation system

- The energy sector of Ukraine will operate within the overall EU regulatory policy, which should provide transparent mechanisms for the formation of energy tariffs.
POSSIBLE DIFFICULTIES:

- Ukrainian systems need to enhance their profitability and achieve the compliance with modern environmental safety requirements, and this in turn requires high material costs from Ukraine.

- Ukraine’s membership in the Energy Community provides for the payment of contributions to its budget. The amount depends on the size of GDP and the total supply of primary energy resources. Some experts believe that Ukraine is not ready to pay membership dues.

- Some analysts believe that membership in the Community does not provide the desired results due to the imbalance of obligations to the Community and to Russia. On the one hand, Ukraine can perform or delay the performance of its obligations to the Community. On the other hand, Ukraine enters into agreements with Russia, with large penalties that lead to monopolization of the Ukrainian market of supply and transit of natural gas.

- In Ukraine there is no comprehensive energy audit. This means that in future it will be difficult to determine what accomplishments and losses would follow Ukraine's entry in the Energy Community, as there is no reference point for the timing of reforms.

- Experts believe that the modernization of Ukraine’s energy sector requires an investment of $8-15 billion Euros.
Appendix 2.

ELECTRICITY MARKET STUDY

Maryna Ilchuk
ELECTRICITY MARKET IN UKRAINE

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Annex 1. LAW OF UKRAINE “ON ELECTRIC POWER INDUSTRY”
   dd. 16.10.1997 № 575/97-BP ..................................153
1. GENERAL CHARACTERISTICS OF THE WHOLESALE ELECTRICITY MARKET IN UKRAINE

Electric power production is the basic industry of national economy, the efficient functioning of which is a necessary condition for stabilization and structural economic transformations aimed at meeting the need for electric energy in respect of individuals and public production.

In February 1996 the Cabinet of Ministers adopted a decree according to which the energy market started its operation on April 10, 1996.¹

The Wholesale electricity market (hereinafter the WEM) is a market set by business entities for the purchase and sale of electric energy under contract.²

The main objectives of WEM operation are

- meeting the Ukrainian consumers’ need for electricity at the lowest possible price based on competition among power generating companies and among suppliers
- ensuring financial stability and profitability of the industry
- creating the competitive Ukrainian electric power industry, and thus establishing conditions for attracting potential investors

Today, the Wholesale Electricity Market (WEM) operates based of the Law of Ukraine “On Electric Power Industry” as amended on June 22, 2000. In accordance with this Law, activities on the energy market are regulated by Wholesale Market Rules, by the Agreement between the parties (or members) of the wholesale market,³ by bilateral contracts on the sale of electricity, by the license of the National Electricity Regulatory Commission (hereinafter the NERC) on production, transmission⁴ and supply⁵ of electric energy. Regulation of the energy market is provided by NERC, including the establishment of fixed rates for electricity producers, fixed tariffs on transmission

---

¹ Resolution of the Cabinet of Ministers of Ukraine “On Approval of Rules and Regulations of Entrepreneurial Activity on Production of Electricity” dd. 08.02.1996 № 3
³ Agreement between WEM of Ukraine dd. 15 November 1996
⁴ Transmission of energy is transportation of energy through networks based on agreement (Article 1 of the Law of Ukraine “On Electric Power Industry”).
⁵ Supply of electricity is provision of electricity to consumer through technical transmission and distribution means based on agreement (Article 1 of the Law of Ukraine “On Electric Power Industry”).
and supply for electricity providers, as well as the rate for households. In addition, the control of
the energy market is exercised by the Ministry of Fuel and Energy of Ukraine.

Given that a considerable part of the wholesale electricity market participants are natural mo-
nopolies, its operation shall be based on the Law of Ukraine “On Natural Monopolies”, “On Pro-
tection of Economic Competition” and “On Protection against Unfair Competition”.

WEM operates according to the Single Buyer Model. The scheme of the currently operating WPM
is shown in Fig. 1.

---

Figure 1. CURRENT ENERGY MARKET STRUCTURE IN UKRAINE

Parliament, President, Cabinet of Ministers

Legislation establishing the relationship of market entities

Ministry of Fuel and Energy

NERC National Electricity Regulatory Commission

CONSUMERS

Energy generation companies

Payment for electricity supply

Energy generation companies

27 Oblenergo companies operating electricity distribution networks

27 SRT (Oblenergo companies) Suppliers at regulated tariffs

Ukrenergo NEC, operator of main electric networks in the WEM

Energorynok SE, operator of commercial settlements in the WEM

SNT Suppliers at non-regulated tariffs, electricity exporters

Payment for electricity generation

Payment for electricity production

Payment for electricity dispatch

27 SRT (Oblenergo companies) Suppliers at regulated tariffs

Ukrenergo NEC, operator of main electric networks in the WEM

Energoatom NAEC

Ukrgidroenergo OJSC

Thermal power generation

Alternative and renewable generation

Thermal power generation

Alternative and renewable generation

Implementation of the state policy regarding economic and social development of electric power sec-
tor in Ukraine

State regulation of market entities’ activities in the electricity sector, implementation of the state policy
on prices and tariffs of natural monopolies

---
All entities of the electric power industry are licensees (producing companies, distribution companies, electricity suppliers) form the WEM. The executive body of WEM administration is the Market Council. The State Enterprise “Energorynok” is a commercial WEM operator, and thus a “single buyer” therein (it exclusively buys electricity from generating companies and sells it to distribution companies). The National Energy Company “Ukrenergo” (hereinafter the Ukrenergo NEC), owner and operator of the main network of 220 kV-750kV voltage class, performs managing as the WEM technical operator.

Energy distribution companies are represented in the WEM according to the number of regions, 25 regional (Oblenergo companies) and two municipal energy companies (Kyiv, Sevastopol). WEM energy suppliers are divided by licensing rules into two major groups: suppliers at regulated (fixed) tariffs and suppliers at non-regulated (free) tariffs. Tariffs for electricity suppliers at regulated tariffs are set by the NERC, whereas tariffs for electricity supply at non-regulated tariffs are determined by agreement between electricity supplier and consumer. The consumer buys electricity from Energorynok SE through electricity suppliers, and Energorynok SE, in its turn, orders and buys the necessary volume of electricity from generating companies. Physically, the electricity produced by generating companies gets to the consumer through the main and distribution electric networks based on agreements on the transfer of electricity between the relevant WEM entities.

---

6 Ukrenergo owns the main networks with the right of economic management (may not sell them), whereas Oblenergo companies are owners of native (local) distribution networks.
2. ELECTRICITY MARKET PARTICIPANTS

WEM entities are: manufacturers of electricity, suppliers of electricity at regulated tariffs, suppliers of electricity at a non-regulated tariff (independent suppliers of electric energy), the wholesale electric power supplier Energorynok SE (which provides centralized managing of the United Energy System of Ukraine), and the National Energy Company Ukrenergo (grid operator in Ukraine).

All of the above WEM entities shall be licensed by NERC for carrying out the appropriate activities.

2.1. Wholesale Supplier – the State Enterprise “Energorynok”

In May 2000 the state enterprise (SE) “Energorynok” was established on the basis of Ukrenergo NEC SE, a separate division of Energorynok. According to the Regulation of the Cabinet of Ministers of Ukraine #755 the object of Energorynok SE is the following:

— Purchase of electricity from its producers, as well as from entrepreneurs who are owners of power generated from customer’s raw materials;

— Purchase of electricity from wholesale electricity market participants (WEM of Ukraine) which receive it in accordance with the agreements on its imports;

— Wholesale supply of electric energy;

— Conclusion of contracts for electric power transmission via main and interstate electricity grid with a business entity, which received the respective license and ensuring compliance with the provisions of such contracts;

— Organizational and logistical support of WEM operation;

— Management of the settlement system, as well as of WEM funds;

— Participation in the provision of foreign economic relations with energy systems of neighboring countries.

On 16 June 2000 Energorynok SE obtained a license for business activity on wholesale electricity supply, which came into force on 1 July 2000.
Pursuant to the Conditions and Rules for business activities on wholesale electricity supply, Energorynok SE carries out the wholesale electricity supply, the functions of the WEM funds manager, administrator of the settlement system in the WEM and other functions in accordance with the contract concluded between the members of the Wholesale Electricity Market of Ukraine.

Purchase of electricity from the producers thereof and the wholesale supply to electricity suppliers is carried out based on bilateral contracts drawn up in the form which shall comply with the standard contract approved by NERC.

### 2.2. State Enterprise

**“National Nuclear Energy Generating Company “Energoatom”**

The State Enterprise “National Nuclear Energy Generating Company “Energoatom” (hereinafter the Energoatom) was established in October 1996. The Company is the operator of all existing nuclear power plants in Ukraine. Its primary objective is increasing the electricity production and installed capacity utilization factor at nuclear power plants subject to continuous improvement of operational security.

Four nuclear power stations – Zaporozhye, Rivne, South-Ukrainian and Khmelnitsky, as well as “Atomproektinzhiniring”, “AtomRemontService”, “Scientific-Technical Center”, “Emergency Technical Center”, “Atomenergomash”, “Atomkomplekt”, “Donuzlav EER “Ukrenergoefektivnost”, “Warehousing” and “Management Department” are separate Energoatom divisions. They have their own accounts and pay taxes to local governments under current legislation.

Today fifteen units operate at the Ukrainian nuclear power plants, of which thirteen are those with WMPR -1000 reactor plant, and two with WMPR-440 reactor plant (see Table 1). Ukraine is ranked the eighth in the world and the fifth in Europe in terms of installed nuclear power capacity.
Table 1. NPP SPECIFICATIONS

<table>
<thead>
<tr>
<th>Name of NPP</th>
<th>№ of unit</th>
<th>Reactor type</th>
<th>Installed capacity (million of kW)</th>
<th>Beginning of construction</th>
<th>Start-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zaporozhye NPP</td>
<td>1</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>04.1980</td>
<td>10.12.1984</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>04.1981</td>
<td>22.07.1985</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>WWER 1000/320</td>
<td>1000</td>
<td>04.1982</td>
<td>10.12.1986</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>01.1984</td>
<td>18.12.1987</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>WWER 1000/320</td>
<td>1000</td>
<td>07.1985</td>
<td>14.08.1989</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>06.1986</td>
<td>19.10.1995</td>
</tr>
<tr>
<td>South-Ukrainian NPP</td>
<td>1</td>
<td>WMPR 1000/302</td>
<td>1000</td>
<td>03.1977</td>
<td>31.12.1992</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>WMPR 1000/338</td>
<td>1000</td>
<td>10.1979</td>
<td>06.01.1985</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>02.1985</td>
<td>20.09.1989</td>
</tr>
<tr>
<td>Rivne NPP</td>
<td>1</td>
<td>WMPR 440/213</td>
<td>420</td>
<td>08.1976</td>
<td>22.12.1980</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>1984</td>
<td>16.10.2004</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>WMPR 1000/320</td>
<td>1000</td>
<td>1983</td>
<td>08.08.2004</td>
</tr>
</tbody>
</table>

The share of nuclear electricity production at NPP remains high (see Table 2).

Table 2. SHARE OF NUCLEAR ELECTRICITY PRODUCTION AT NPP, %.

<table>
<thead>
<tr>
<th>Year</th>
<th>1996</th>
<th>2000</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>43.8</td>
<td>45.3</td>
<td>53.2</td>
<td>52.3</td>
<td>46.9</td>
<td>47.5</td>
<td>46.8</td>
<td>47.9</td>
</tr>
</tbody>
</table>

In accordance with the Law of Ukraine “On the Use of Nuclear Energy and Radiation Safety”, Energoatom NAEC is entrusted with the functions of the operating organization, which is responsible for the safety of all NPP in the state. In addition, the main objectives of Energoatom are setting up new and extending the available generating capacities, purchase of fresh and removal of spent nuclear fuel, establishing the national infrastructure of irradiated nuclear fuel disposal, physical protection of nuclear power facilities, staff retraining and development, solving social problems of the Company’s employees, etc.
As already noted, Energoatom operates four NPP in Ukraine. Today fifteen units operate at the Ukrainian nuclear power plants, of which thirteen are those with WMPR-1000 reactor plant type, whereas two are with WMPR-440. The share of NPP in the Ukrainian power industry is 43.4%.

1) ZAPOROZHYE NPP (HEREINAFTER THE ZNPP)

   Beginning of construction – 1979
   First unit launched in –1984
   Number of units – 6
   Reactor type – WMPR-1000
   Total power – 6000 MW
   The satellite town of NPP is Energodar, Zaporozhye Region.

Zaporozhye NPP is located in the steppe zone of Ukraine on the bank of the Kakhovka Reservoir. It is Europe’s largest nuclear power plant.

Currently ZNPP is a modern high-tech enterprise, a powerful electricity supplier in Ukraine.

Annually, the station generates 40-42 billion kWh of electricity, which amounts to one fifth of the total annual electricity production in the state and half of its production at Ukrainian nuclear power plants.

Based on the outcome in 2000, Zaporozhye Nuclear Power Plant has been recognized as one of the top three nuclear power stations of the world, which fully meets the IAEA’s requirements.

A dry repository of spent nuclear fuel has been constructed at Zaporozhye Nuclear Power Plant, the first among the Ukrainian nuclear power plants with WMPR reactor type (hereinafter the DRSNF).

The Zaporozhye DRSNF technology is based on storage of spent fuel collectors in ventilated concrete containers located on the site within the nuclear power plant.

Commercial operation of DRSNF began on August 10, 2004. Its design capacity is 380 containers, which will provide for storage of fuel assemblies for the entire period of plant operation. As of 2009 80 containers have been installed on the site of the repository.

---

8 International Atomic Energy Agency
The station can annually save tens of millions of dollars as it has no need to remove the spent nuclear fuel.

ZNPP introduced for the first time in CIS the information-measuring system “Ring” which is designed for continuous monitoring of the radiation situation at the site of the nuclear power plant in the buffer zone and the 30-km surveillance zone.

2) SOUTH-UKRAINIAN NPP

The South Ukrainian power complex consists of:
— South-Ukrainian Nuclear Power Plant
— Alexandrovsk Hydropower Plant on the Southern Bug River
— Tashlyk Pumped Storage Power Plant

In terms of production capacity, the South Ukrainian power complex provides the electricity needs and conditions for normal life in Southern Ukraine, with a population of more than 5 million people.

For a quarter of a century the enterprise has produced over 420 billion kWh of electricity.

a) South-Ukrainian NPP

Beginning of construction – 1975
First unit launched in – 1982
Number of units – 3
Reactor type – WMPR-1000
Total power – 3000 MW
The satellite town of NPP is Yuzhnoukrainsk, Mykolaiv Region.

This is the basis of the energy complex. At the station, there are three WMPR-1000 power units making up two technological turns.

Every year, the South-Ukrainian nuclear power plant provides more than 10% of total electricity production in the country.

b) Alexandrovsk Hydropower Plant

The station, which was put into commercial operation in 1999, consists of two hydrounits with total capacity of 11.5 MW. The Alexandrovsk HPP produces yearly more than 35 million kWh of electricity.
Aleksandrovsk Reservoir is located in a canyon of the South Bug, in the waterworks of the South Ukrainian power complex and provides electricity production at hydropower plants serving as a lower reservoir for Tashlyk hydropower plant.

Alexanderovsk waterworks are of high importance for the protection of the settlements located downstream of the Southern Bug from spring floods.

c) Tashlyk Pumped Storage Power Plant (hereinafter the TPSPP)

TPSPP is intended to cover peak loads in the southwestern part of the united energy system of Ukraine, as well as for securing the base operating mode of the South-Ukrainian NPP.

3) RIVNE NPP
Beginning of construction – 1973
First unit launched in – 1980
Number of units – 4
Reactor type – WMPR-440 (the first and the second units), WMPR-1000 (the third and the fourth ones)
Total power – 2835 MW
The satellite town of NPP is Kuznetsovsk, Rivne Region.

Design of the station which was originally called Western Ukrainian Nuclear Power Plant began in 1971. Subsequently, it was renamed in Rivne Nuclear Power Plant.

RNPP is Ukraine’s first nuclear power station with power water-moderated reactors WMPR-440.

After the start-up of the fourth reactor, the annual electricity production at RNPP exceeds 17 billion kWh.

4) KHMELNITSKY NPP
Beginning of construction – 1981
First unit launched in – 1987
Number of units – 2
Reactor type – WMPR-1000
Total power – 2000 MW
The satellite town of NPP is Neteshyn, Khmelnitsky Region.

Khmelnitsky NPP is located in the central part of Western Ukraine on the border of three regions – Khmelnitsky, Rivne and Ternopil.
The station annually generates almost 15 billion kWh of electricity.

**THE OUTCOME OF ENERGOATOM FOR 9 MONTHS OF 2010**

Fifteen units with total installed capacity of 13,835 MW have operated at nuclear power plants in Ukraine in January-September 2010.

The share of nuclear power in the domestic power industry constitutes the production volume of 47.5%.

During the first 9 months of 2010, the plants generated 64,579 million kWh of electricity, which exceeds the target by 2,696 million kWh. Production targets have been fulfilled at 104.4%.

Figures on electricity supply are displayed in Table 3.

**Table 3. FULFILLMENT OF THE TARGETS FOR ELECTRICITY PRODUCTION BY NUCLEAR POWER PLANTS FOR THE PERIOD OF 9 MONTHS IN 2009 AND 2010**

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount of electricity supplied to the energy market, million kWh</th>
<th>Supply index exceeds the target by..., Million kWh</th>
<th>Target on electricity supply has been fulfilled at ..., %</th>
<th>Installed capacity factor, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>56 722</td>
<td>893</td>
<td>101.6</td>
<td>66.6</td>
</tr>
<tr>
<td>2010</td>
<td>60 661</td>
<td>2 857</td>
<td>104.9</td>
<td>71.1</td>
</tr>
</tbody>
</table>

The cost of electricity supplied to the energy market during the first 9 months of 2010 amounts to UAH 11 612.2 million (including VAT), which is by 22.8% more than the cost thereof for the same period last year (UAH 9 458.5 million (including VAT).
2.3. National Joint Stock Company
“Energy Company of Ukraine”

The National Joint Stock Company “Energy Company of Ukraine” (hereinafter the NJSC ECU) is a shareholder in 21 joint stock companies of the fuel and energy complex, which produce and deliver electricity.

The company is incorporated as a public company, the authorized capital of which is formed via the transfer of the state shares of four power generating companies, 15 power supply companies and 2 hydropower-generating companies.

According to the size of the authorized fund, which is UAH 9.8 billion, NJSC ECU is one of the largest companies in Ukraine.

Power supply companies, with the controlling block of shares owned by NJSC ECU, exercise power supply in 20 regions of Ukraine with population of over 30 million people. The annual volume of electricity that enters the Oblenergo network is 109 billion kWh or 57% of the nationwide electricity volume.

The main task of NJSC ECU is the reliable and efficient operation and development of the electricity sector to ensure the state’s economic and energy security, better compliance with the needs of consumers regarding electric and heat energy, effective management of public property, attraction of investments and profit.

In its activities, NJSC ECU is regulated by the legal framework defining the state policy in the fuel and energy industry. The basic document is the “Energy Strategy of Ukraine till 2030™”, which lays the conceptual basis of the state’s energy security and determines the main objectives and tasks of energy policy, as well as outlines the major directions, priorities and development factors of the Ukrainian energy sector.

The share capital structure of NJSC ECU is displayed in Table 4.

---

9 Resolution of the Cabinet of Ministers of Ukraine dd. March 15, 2006 #145-p
<table>
<thead>
<tr>
<th>Open Joint Stock Companies</th>
<th>The size of the block of shares transferred into the Company statutory fund, %</th>
<th>Number of shares transferred to the Company statutory fund, ps.</th>
<th>Current capitalization of the business company, UAH</th>
<th>Current capitalization of the block of shares transferred to the Company authorized capital, UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dniproenergo</td>
<td>76,04</td>
<td>2 983 717</td>
<td>7 170 949 385</td>
<td>5 452 623 469</td>
</tr>
<tr>
<td>Donbassenergo</td>
<td>85,77</td>
<td>20 280 473</td>
<td>2 671 333 127</td>
<td>2 291 287 840</td>
</tr>
<tr>
<td>Zakhidenergo</td>
<td>70,1</td>
<td>8 966 614</td>
<td>5 024 891 937</td>
<td>3 522 623 976</td>
</tr>
<tr>
<td>Centrenergo SEC</td>
<td>78,29</td>
<td>289 205 117</td>
<td>6 845 113 711</td>
<td>5 358 970 818</td>
</tr>
<tr>
<td>Vinnitsa JSC</td>
<td>75</td>
<td>2 323 026</td>
<td>2 137 182 540</td>
<td>1 602 887 940</td>
</tr>
<tr>
<td>Volynoblenergo</td>
<td>75</td>
<td>357 957 002</td>
<td>1 384 100 400</td>
<td>1 038 075 306</td>
</tr>
<tr>
<td>Dniproblenergo EC</td>
<td>75</td>
<td>4 493 715</td>
<td>3 375 257 605</td>
<td>2 531 444 471</td>
</tr>
<tr>
<td>Donetskoblenergo</td>
<td>65,06</td>
<td>42 626 170</td>
<td>1 648 412 123</td>
<td>1 072 474 437</td>
</tr>
<tr>
<td>Zakarpattyaoblenergo EC</td>
<td>75</td>
<td>93 452 432</td>
<td>974 397 337</td>
<td>730 798 018</td>
</tr>
<tr>
<td>Zaporozhyeoblenergo</td>
<td>60,25</td>
<td>108 060 002</td>
<td>3 228 480 000</td>
<td>1 945 080 036</td>
</tr>
<tr>
<td>Kyivenergo JSC</td>
<td>50 plus one share</td>
<td>54 182 141</td>
<td>3 208 666 331</td>
<td>1 604 333 195</td>
</tr>
<tr>
<td>Krymenergo</td>
<td>70</td>
<td>121 077 330</td>
<td>1 492 709 698</td>
<td>1 044 897 358</td>
</tr>
<tr>
<td>Luganskoblenergo</td>
<td>60,06</td>
<td>125 001 287</td>
<td>83 249 168</td>
<td>50 000 515</td>
</tr>
<tr>
<td>Nikolayevoblenergo EC</td>
<td>70</td>
<td>111 048 001</td>
<td>39 660 000*</td>
<td>27 762 000,25*</td>
</tr>
<tr>
<td>Ternopoblenergo</td>
<td>51</td>
<td>31 154 360</td>
<td>916 322 400</td>
<td>467 315 400</td>
</tr>
<tr>
<td>Kharkovoblenergo JSC</td>
<td>65</td>
<td>166 754 183</td>
<td>1 931 751 923</td>
<td>1 255 658 998</td>
</tr>
<tr>
<td>Khmelnitskoblenergo EC</td>
<td>70,01</td>
<td>94 197 953</td>
<td>1 950 994 720</td>
<td>1 365 870 319</td>
</tr>
<tr>
<td>Cherkasyoblenergo</td>
<td>46</td>
<td>68 260 989</td>
<td>1 773 300 317</td>
<td>815 718 819</td>
</tr>
<tr>
<td>Chernovtsyoblenergo EC</td>
<td>70</td>
<td>39 746 477</td>
<td>567 806 800</td>
<td>397 464 770</td>
</tr>
<tr>
<td>Dnister TPSPP</td>
<td>87,4</td>
<td>41 544 339</td>
<td>475 329 410*</td>
<td>415 443 390*</td>
</tr>
</tbody>
</table>

* — nominal value due to the lack of information on stock quotes

10 Decree of the Cabinet of Ministers of Ukraine dd. June 22, 2004 #794
The basis of thermal power plants are 4 joint-stock power generating companies (OJSC Dniproenergo, Donbassenergo, Zakhidenergo, Centrenergo), which comprise 11 power stations with block units with a unit capacity from 150 to 800 MW (see Table 5). Total power of block thermal power plants is 23 140 MW making up 43.7% of the installed capacity of power plants in Ukraine.

### Table 5. CHARACTERISTICS OF THERMAL POWER PLANTS

<table>
<thead>
<tr>
<th>1) Dniproenergo OJSC</th>
<th>2) Donbassenergo OJSC</th>
<th>3) Zapedenergo OJSC</th>
<th>4) Centrenergo OJSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prydniprovska TPS</td>
<td>Starobeshevskaya TPS</td>
<td>Burshtyn TPS</td>
<td>Tripolskaya TPS</td>
</tr>
<tr>
<td>Krivorozhskaya TPP</td>
<td>Slavyanskaya TPP</td>
<td>Dobrotvorskaya TPP</td>
<td>Zmeevskaya TPP</td>
</tr>
<tr>
<td>Zaporozhye TPP</td>
<td>Ladyzhynskaya TPP</td>
<td></td>
<td>Uglegorskaya TPP</td>
</tr>
</tbody>
</table>

1) **DNIPROENERGO OJSC**

Dniproenergo OJSC is one of the leading Ukrainian electricity and heat producers.

Today, Dniproenergo is a leader company among the country’s thermal power generating companies. Its installed capacity is 8,185 MW, making up 16% of the total capacity of power plants in Ukraine. It accounts for 8.9% of the total electricity generated in the state. Unit costs of fuel to produce 1 kWh of electricity are among the lowest in Ukraine.

The main divisions Dniproenergo include Prydniprovska TPP, Krivorozhskaya TPP and Zaporozhye Thermal Power Plant.

a) **Prydniprovska TPP**
   - Installed capacity – 1765 MW
   - Number of units – 8
   - Project fuel: 150 MW power units, coal grade ASh with a calorific capacity of 6010 kcal/kg; units 285-310 MW, coal grade ASh with calorific capacity of 5900kcal/kg
   - Part of natural gas used in the fuel mix in 2009 was 3.4%.

b) **Krivorozhskaya TPP**
   - Installed capacity – 2820 MW
   - Number of units – 10
   - Project fuel: coal grade T with a calorific capacity of 6550 kcal / kg
   - Part of natural gas used in the fuel mix in 2009 was 0.6%.
c) Zaporozhye TPP  
   Installed capacity – 3600 MW  
   Number of units – 7  
   Project fuel: 300 MW power units, coal grade GSSh with a calorific capacity of 5000 kcal / kg; 800 MW power units, gas  
   Part of natural gas used in the fuel mix in 2009: 300 MW power units – 0.6%.

2) DONBASENERGO OJSC

Donbassenergo OJSC is a major power generating company in Ukraine with the total power plant capacity of 3,450 MW. The power unit equipment installed in the company power plants has the unit capacity from 80 to 800 MW.

The company includes: Starobeshevskaya TPP, Slavyanskaya TPP, Electroremont, Donbassenergospettsremont, Donbassenergonaladka, Teploelectroproekt, TPP “Energotorg”, Kurakhovokommunenergo, Luganskommunenergo, Slavyanskommunenergo, Donbassenergoavtotrans.

a) Starobeshevskaya TPP  
   Installed capacity – 1725 MW  
   Number of units – 10  
   Project fuel: coal grade ASh with a calorific capacity of 6010 kcal / kg  
   Part of natural gas used in the fuel mix in 2009 was 3.5%.

b) Slavyanskaya TPP  
   Installed capacity – 800 MW  
   Number of units – 1  
   Project fuel: coal grade ASh with a calorific capacity of 5600 kcal / kg  
   Part of natural gas used in the fuel mix in 2009 was 1.5%

3) ZAKHIDENERGO OJSC

Zakhidenergo OJSC is one of the leading Ukrainian producers of electricity and heat. Electricity generated by the company is supplied to Ukrainian consumers and exported to European countries.

Zakhidenergo OJSC is the fourth largest power generating company of Ukraine with an installed capacity of 4,707.5 MW, which makes about 9% of the total capacity of electric power in Ukraine. The company also includes Burshtyn TPP, Ladizhinskaya TPP and Dobrotvorskaya TPP, as well as Galremenergo, Lvovenergo-Spetsremont, Lvovenergoavtotrans and Zapadenergopostav service companies.
a) **Burshtyn TPP**
Installed capacity – 2300 MW
Number of units – 12
Project fuel: coal grade G with a calorific capacity of 5000 kcal / kg
Part of natural gas used in the fuel mix in 2009 was 1.5%.

b) **Dobrotorskaya TPP**
Installed capacity – 600 MW
Number of units – 2
Project fuel: coal grade G with a calorific capacity of 4950 kcal / kg
Part of natural gas used in the fuel mix in 2009 was 0.4%.

c) **Ladyzhynskaya TPP**
Installed capacity – 1800 MW
Number of units – 6
Project fuel: coal grade GSSh with a calorific capacity of 5000 kcal / kg
Part of natural gas used in the fuel mix in 2009 was 0.3%.

4) **CENTRENERGO OJSC**

The State Energy Generating Company “Centrenergo” (Centrenergo OJSC) is an important element of the energy system of Ukraine, one of the leading power generating companies covering the country’s electricity needs by 7.7%. The total installed capacity thereof is 7,575 MW, or 15% of the installed power throughout the power industry of Ukraine. Therefore, Centrenergo OJSC plays an important role in supporting and regulating the energy balance of the whole country.

Centrenergo OJSC owns three thermal power facilities, which are located in the most industrialized regions of Ukraine: Tripolskaya TPP in the Kyiv region, Zmievskaya TPP in the Kharkov region and Uglegorskaya TPP in the Donetsk region. There are 23 power units of 175 MW to 800 MW installed in the company power plants, of which 18 are carbon, and 5 are oil-gas ones.

a) **Tripolskaya TPP**
Installed capacity – 1800 MW
Number of units – 6
Project fuel: coal grade ASh with a calorific capacity of 5790 kcal / kg at power units of plants 1-4; gas at power units of plants 5-6.
Part of natural gas used in the fuel mix in 2009 at coal power units was 5.0%.
b) Zmievskaya TPP
Installed capacity – 2175 MW
Number of units – 10
Project fuel: 175 MW power units, coal grade ASh with a calorific capacity of 6010 kcal / kg; 275-300 MW power units, coal grade T with a calorific capacity of 6150 kcal / kg.
Part of natural gas used in the fuel mix in 2009 was 6.1%.

c) Uglegorskaya TPP
 Installed capacity – 3600 MW
Number of units – 7
Project fuel: 300 MW power units, coal grade GSSh with a calorific capacity of 5000 kcal / kg; gas at 800 MW power units.
Part of natural gas used in the fuel mix in 2009: 0.3% at 300 MW power units.

THE OUTCOME OF THE NJSC “ENERGY COMPANY OF UKRAINE”
FOR 8 MONTHS OF 2010

Production of electricity by power generation sources which belong to the management of the NJSC “Energy Company of Ukraine” has increased within 8 months of 2010. In general, power generating companies and power plants of the Energy Company of Ukraine (including power generating sources that are in the economic management of energy supplying companies) produced 44.8 billion kWh beginning from 2010 (36.6% of total electricity produced by the united energy system of Ukraine), which is 5.0 billion kWh (12.6%) more than the same period last year.

During 8 months in 2010 the thermal power generation companies of the Energy Company of Ukraine produced 31.8 billion kWh of electricity (26.0% of national production), which is 2.7 billion kWh (9.3%) more than during the same period in 2009 (29.1 billion kWh).

During 8 months in 2010 cogeneration power plants produced 3.2 billion kWh of electricity, which is 0.4% more than during the same period in 2009 (2.7 billion kWh). Since the beginning of the year hydropower plants produced 9.8 billion kWh of electricity, which is 23.3% more than 8 months of 2009 (8.0 billion kWh).

Since the beginning of the year 2010 heat power facilities of the Energy Company of Ukraine supplied 10.5 million Gcal of heat, which is 9.4% more than heat supply during the same period in 2009 (9.6 million Gcal).
2.4. National Energy Company “Ukrenergo”

Ukrenergo National Energy Company is a state enterprise. It is administered by the Ministry of Fuel and Energy of Ukraine and acts as a guarantor of unity and reliable operation of the Unified Energy System (hereinafter the UES) of Ukraine.

The scope of activities of Ukrenergo NEC is management and implementation of energy projects regarding:

1) **Design and construction of energy facilities, supply, installation, commissioning and maintenance of equipment:**
   - Energy transmission lines, substations, distribution devices;
   - Thermal power plants;
   - Hydro and pumped storage power plants;
   - Electric precipitators for high-degree flue gas cleaning;

2) **Reconstruction and modernization of:**
   - Thermal power plants;
   - Hydro and pumped storage power plants;
   - Transmission lines, substations, distribution devices;
   - Electricity, hydro and thermal power equipment;
   - Steam and hot water boilers;
   - Gas purification electric precipitators;

3) **Electricity and heat production;**

4) **Supply of electricity;**

5) **Delivery of structures, equipment and other products, such as:**
   - Metallic structures of waterworks;
   - Metallic structures for processing, construction and other designation;
   - Process pipelines of various designation, pressure and diameter;
   - Spare parts and materials for operating equipment of hydropower and thermal power plants or other energy facilities;
   - Cable and wire products;
   - Transformers of different capacity and voltage class;
   - Crane facilities;
   - Hydro-mechanical equipment;
   - High-voltage electrical equipment.
ELECTRIC POWER SYSTEMS

The basis of power industry in Ukraine is the country’s UES, which provides centralized electricity supply for consumers, interacts with the energy systems of adjacent states, and provides electricity export, import and transit. The UES combines the power generating facilities and distribution networks of Ukrainian regions, which are interconnected by system power transmission lines (see Figure 2).

There are eight electric power systems (hereinafter - EPS) set up at Ukrenergo NEC in charge of 32 structural units which directly operate the main and interstate power networks.

The main objective of EPC is providing reliable and economic operation of the main electric power networks and operational management control of the regional grid.

Figure 2. UNIFIED ENERGY SYSTEM OF UKRAINE
1) DNIPRO ELECTRIC POWER SYSTEM

Dnipro EPS provides the centralized power supply for three regions of Ukraine, namely Zaporizhzhya, Dnipropetrovsk and Kirovohrad with the area of about 84 km², with a population of more than 7 million people, and comprises Zaporizhzhya, Dnipropetrovsk, Kirovohrad and Krivoy Rog main electric networks.

In the operational control of the Manager Dnieper ES are the powerful hydraulic power plants, which are part of “Dniprohydroenergo: Dnipro, Kremenchug, Dniprodzerzhinsk and Kakhovka, Krivoy Rog and Dneprodzerzhinsk cogeneration heat and power plants; the country’s largest thermal power plants that are part of Dnerpoenergo: Dnipro, Krivoy Rog and Zaporizhzhya, as well as the largest in Europe, Zaporizhzhya NPP, which is part of the Energoatom. The total installed capacity of all power plants as at 1.01.02 makes up 17,787 MV.

The operational management of the Dnipro PP Manager includes seven 750 kV overhead lines and 55 330 kV overhead lines with the total length of 4375 km, as well as two 750 kV substations and 19 330 kV substations with the total transformer capacity of 18845.1 MVA.

Number of power transformers and 330-750 kV autotransformers is 56 pcs (making 96 pcs with auto-transformers and thermal power plant, hydropower and nuclear power plant transformers, respectively).

2) DONBASS ELECTRIC POWER SYSTEM

The Donbass EPS comprises separate units for operation of the main electric power networks (MN) in the Donetsk region: Artemovsk, Chaykin and Mariupol, and Lugansk MN in Lugansk region, respectively. The service area includes the Donetsk and Lugansk region (Donbass region) with the territory of 53.1 thousand km² and a population of 7.8 million people.

The Donbass EPS coordinates and schedules the operation of power supplying companies, such as Donetskoblenergo OJSC, Luganskoblenergo OJSC, Lugansk Energy Associa-
tion LLC, Donetskgol Electric Networks Production Enterprise and others, as well as of power generating enterprises of Donbasenergo OJSC and Skhidenerho LLC, thereby providing a single operational and supervisory control regime of power plants and electrical networks.

On the balance sheet and in operation of the Donbass EPS there are more than 3.1 thousand km of power transmission lines with a voltage of 35-800 kV and 28 substations of 220-750 kV with 110 installed transformers, the total capacity of which is 23,134 MVA.

3) WEST ELECTRIC POWER SYSTEM

The West EPS serves the region of Lviv, Volyn, Transcarpathian, Ivano-Frankivsk and Rivne regions.

The West EPS includes seven structural divisions operating the mainline electric networks in the regions of the service area, namely: Lviv, Striy, Ivano-Frankivsk, Transcarpathian, Volyn, Rivne main electric networks (MN) and the 750 kV Western Ukrainian Substation. The main electric networks of 220, 330, 400, and 750 kV operated by the West EPS transmit electricity from generating sources in the region and other energy systems into the network of power supplying companies of the above five areas, as well as export electricity westwards.

The West EPS operates 20 substations of 220, 330, 400, 750 kV and 3567 km (in circuits) of power transmission lines, including transmission lines connecting the UES of Ukraine with that of Europe – the 750 kV transmission line “Western Ukrainian – Albertirs” (Hungary), three 400 kV transmission lines and two 220 kV transmission lines from the 400 kV substation in Mukachevo to Hungary, Slovakia, Romania and a 220 kV transmission line from the Dobrotvor Power Plant to Poland.
4) CRIMEAN ELECTRIC POWER SYSTEM

The Crimean EPS includes Dzhankoy, Simferopol and Feodosia main networks and the Training Center.

On the balance of the Crimean EPS are four 330 kV substations with the total capacity of 1955 MVA, eleven 220 kV substations with the total capacity of 1,438 MVA, five 330 kV transmission lines 653 km of length, and seventeen 220 kV transmission lines 664 km of length.

5) NORTH ELECTRIC POWER SYSTEM

The North EPS includes 3 divisions for operation of main electric networks: Kharkiv, Poltava and Sumy MN. The North EPS plants are located in the territory of three regions: Kharkiv, Sumy and Poltava, whose territory is 84 thousand km² with a population of 5.84 million.

The North EPS performs operational management control of the following power plants in its area: Zmievskaya TPS, Kharkiv CHPP-5, Kremenchug CHPP, Kharkiv CHPP-3, Kharkiv CHPP-2 “Eskhar”, Akhtyrka CHPP; regional energy supplying companies: Kharkivoblenergo JSC, Sumyoblenergo OJSC, Poltavaoblenergo OJSC. On the balance and in operative management of the North EPS are:

— one 750 kV substation (one AO with the capacity of 1000 MVA);
— thirteen 330 kV substations (thirty-three AO with the total capacity of 6145 MVA);
— 1 PL-750 kV 101.8 km of length;
— 27 PL-330 kV with the total length of 2083.6 km.
6) SOUTH-WEST ELECTRIC POWER SYSTEM

The SWEPS comprises separate structural divisions operating the main electric power networks in Vinnytsia, Khmelnytsky, Ternopil and Chernivtsi regions. The region locates nine 330-750 kV substations with the total nominal capacity of about 4000 MVA.

The operative management of SWEPS covers Khmelnitsky NPP with the capacity of 1 million kilowatts, Ladyzhyn TPP with the capacity of 1 million 800 thousand kilowatts, Dniester HPP of 711 thousand kilowatts and four joint-stock energy supplying companies that produce, transmit, distribute and sell electricity.

Electric power transmission is carried out through overhead lines with the total length of 2,034 km of 330-750 kV voltage (330 kV – 1276 km, 750 kV – 757.79 km).

Annually the SWEPS 330-750 kV networks transmit approximately 7000 million kWh of electricity.

7) SOUTH ELECTRIC POWER SYSTEM

The Southern Electric Power System of Ukrenenergo NEC falls geographically into three regions: Odessa, Nikolayev and Kherson with the total area of 86.1 square kilometers. The South EPS employs 1,265 people.

The South EPS operates 2,576 km of overhead lines by voltage classes: 750 kV – 480 km, 330 kW – 1638 km, 220 kV – 186 km, 110 kV – 272 km; 12 substations, including 9 of 330 kV and 3 of 220 kV, with the total capacity of 4,391 MVA. The Southern region locates the South Ukrainian NPP and three CHHP in regional centers.
8) CENTRAL ELECTRIC POWER SYSTEM

The Central Electric Power System serves the area, which includes Kyiv, Cherkasy, Zhytomyr, Chernihiv regions and Kyiv, the capital of Ukraine, with the total area of 111.6 thousand square km with a population of 8.4 million people. The Central EPS includes Kyiv main electric networks (hereinafter the MN), Cherkasy MN, Zhytomyr MN, Chernihiv MN, production services and divisions operating 2,401 km of 110-750 kV overhead lines (including: 750 kV – 598 km, 330 kV – 1792 km, 110 kV – 11 km), as well as 13 substations of 750-330 kV, with 27 installed autotransformers having the total capacity of 5524 MVA.

The results of financial and economic activities of Ukrenergo NEC regarding electricity transmission are shown in Table 6.

<table>
<thead>
<tr>
<th>Measurement unit</th>
<th>9 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
</tr>
<tr>
<td>Electricity supplied to Ukrainian consumers</td>
<td>million kWh</td>
</tr>
<tr>
<td>Cost of services on electricity transmission (product output)</td>
<td>million UAH</td>
</tr>
<tr>
<td>Tariff for electricity transmission (according to the order of NERC)</td>
<td>Kopecks kWh</td>
</tr>
<tr>
<td>Total costs</td>
<td>million UAH</td>
</tr>
<tr>
<td>including repair costs</td>
<td>million UAH</td>
</tr>
<tr>
<td>Capital investments</td>
<td>million UAH</td>
</tr>
</tbody>
</table>
### 3. NATIONAL ELECTRICITY REGULATORY COMMISSION. LICENSING

According to the Law of Ukraine “On Electric Power Industry”, the authority of state regulation of activities in the electricity industry is the National Electricity Regulatory Commission (hereinafter the NERC) of Ukraine.

NERC of Ukraine regulates the activity of the natural monopoly entities in the electric power industry and business entities operating in adjacent markets, as well as performs other functions in accordance with the law.

The main tasks of NERC are:

— Participation in the formation and implementation of a unified state policy in the development and operation of the wholesale electricity market;

— State regulation of natural monopolies in the electricity;

— Promoting competition in electric power generation and supply;

— Provision of pricing and tariff policy in the electric power industry;

— Ensuring effective functioning of commodity markets based on balancing the interests of the society, the natural monopolies and consumers of their goods and services;

— Protecting the rights of electricity and heat consumers;

<table>
<thead>
<tr>
<th>Ingoing payments (from WEM) for the current year’s product output on electricity transmission as of 01.10.2010 (net of VAT)</th>
<th>million UAH</th>
<th>1 500,824</th>
<th>1 708,343</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of financing for the current year’s product output</td>
<td>%</td>
<td>91,37%</td>
<td>92,65%</td>
</tr>
<tr>
<td>Underfinanced current year’s product output (net of VAT)</td>
<td>million UAH</td>
<td>141,756</td>
<td>135,474</td>
</tr>
</tbody>
</table>
— Coordination of activities of state bodies in the regulation of energy resources markets;

— Issuing licenses to business entities for electricity generation and transmission;

— Monitoring the licensees’ compliance with the Rules and Conditions of the licensed activity and imposition of appropriate sanctions for violation thereof.

**LICENSING**

Licensing of activities in the electric power industry is regulated by Article 13 of the Law of Ukraine “On Electric Power Industry”.

Production, transmission and supply of electric power in Ukraine are subject to obtaining an appropriate license. Such license shall be issued by NERC.

Activities of economic entities on electric power production without a license are permitted if the installed capacity value or the electric power supply from them is lower than the targets identified in the Rules and Conditions of business activity for the production of electric power.¹¹

Energy suppliers, which include cogeneration heat and power plants, obtain licenses for types of activities in the electric power sector with regard to the special provisions concerning the priority of providing for the needs of heat consumers the territory in which the licensed activity is performed.

**License is issued by NERC for each single type of activity, namely:**

— Electricity production (in amounts exceeding the level set by licensing conditions);

— Electricity transmission via main and interstate electric power networks;

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¹¹ *According to Article 2 of the Terms and Conditions of business activities for the production of electric power, approved by the Resolution of the NERC of Ukraine № 3 dd. 08.02.96:*

Subject to licensing are activities of business entities producing electricity, which:

— have in their ownership or use equipment with the installed capacity of not less than 5 MW;

— have in their ownership or use equipment that generates electricity using alternative sources (except for blast furnace and coke oven gas) with the installed capacity of not less than 10 MW, or have the intention to sell the electricity generated by this equipment in the WEM (regardless of the installed capacity).

Licensee, together with related enterprises can carry out the licensed activity, if the volume of electricity generated by it is less than 33 percent (50 percent for NPP energy companies) of the total electric power generated by all electricity producers in Ukraine during the last calendar year.
— Electricity transmission via native (local) electric power networks;
— Electricity supply at regulated tariffs;
— Electricity supply at non-regulated tariffs;
— Wholesale electricity supply;
— Combined heat and power production;
— Heat production at CHPPs and installations using nontraditional or renewable energy sources.12

ELECTRICITY SUPPLIERS

Electricity supply refers to the activities subject to licensing. Moreover, there are two kinds of licenses for carrying out business activities in the supply of electricity. They are the license on electricity supply at regulated tariffs and the license on electricity supply at non-regulated tariffs. While tariffs for electricity suppliers at regulated tariffs are set by NERC, the tariffs for electricity supply at non-regulated tariffs are determined by agreement between supplier and consumer of electricity. All regional energy supplying companies of Ukraine (Oblenergo companies) are licensees for the supply of electricity at regulated tariffs.

ELECTRICITY PRODUCERS

Activities for electricity production in Ukraine are to be licensed and performed in accordance with the Rules and Conditions of business activities for the production of electric power, approved by the Order of the NERC of Ukraine.

WHOLESALE ELECTRICITY SUPPLIER

On June 16, 2000 (Order of NERC N684) Energorynok SE was licensed to carry out business activities in the wholesale supply of electricity, which came into force on July 1, 2000.

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12 Instruction on the procedure for issuing licenses by NERC for certain business activities, approved by the Order of NERC dd. 06.10.99 N 1305
SUPervisory Control of the WEM of Ukraine; Electricity Transmission Via Main and Interstate Electric Power Networks

Ukrenergo NEC SE operates the wholesale electricity market with respect to scheduling and transmission of electricity via main and interstate networks based on contracts with Energorynok SE and the other WEM members.13

4. PRIVATIZATION

Article 6 of the Law of Ukraine “On Electric Power Industry” regulates the property right in the electric power industry.

Power generation facilities may be in different forms of ownership. The list of power generation facilities, which are not subject to privatization, shall be approved by the Supreme Council of Ukraine upon provision of the Cabinet of Ministers of Ukraine.

Privatization of facilities in electric power industry is performed in accordance with the laws of Ukraine on privatization.14

In case of privatization of electric power generation facilities the Cabinet of Ministers upon provision of the State Property Fund of Ukraine passes a decision on consolidating the state-owned shares of joint stock companies established on the basis of power generation facilities. Not subject to privatization is the property, which ensures the integrity of the UES of Ukraine and centralized operational process management, main and interstate power grids, and property of research institutions of national importance. Such objects are Ukrenergo, Ukrintenergo, public research institutes of thermal power.15

Privatization of power generation facilities in Ukraine was initiated after the adoption of the Presidential Decree № 944 dd. 2.08.99 “On some issues of privatization of the electricity sector.” The decree approved the list of energy companies, blocks of shares of which were subject to consolidation in state property and offered for sale by tender, as well as certain requirements regarding the tender sale of state shares in the respective companies.

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13 In accordance with the Terms and Conditions of business activities for the production of electric power, approved by the Order of NERC № 152 dd.11.10.96
14 Order of the State Property Fund N 1855/12/263/414 dd. 07.09.2000 “On approval of the Regulation on the procedure of tenders for sale of shares in energy companies”
15 Law of Ukraine “On the list of objects of state property that can not be privatized” dd. 07.07.1999 № 847-XIV
Thus, two stages of privatization took place:

- in 1997-1998 shares were sold in the amount from 20 to 45 percent of authorized funds of 9 from 27 Oblenergo companies against investment obligations;

- in 2001, pursuant to the approved State privatization program for 2000-2002, controlling blocks of shares were sold on tender principles in all 6 regional energy supplying companies.

The ownership structure of some regional energy companies is displayed in Table 7.

In September 2010 the head of the State Property Fund issued a statement according to which the Fund plans to announce the sale of two out of the four state-owned thermal power generating companies by the end of 2010. According to him, two other companies will be put on sale in 2011.

Currently, four of five power generating companies in Ukraine are state-controlled, and one company – Skhidenerho is part of the country’s largest private vertically integrated energy holding DTEK, which is controlled by System Capital Management (Rinat Akhmetov’s company). DTEK is the largest minority shareholder of Dniproenergo and Zakhidenergo. It owns, respectively, 47.55% and 11.36% of the shares, whereas NJSC “Energy Company of Ukraine” has 50% +1 share, and 70.1034%.  

**Table 7. APPROXIMATE PROPERTY STRUCTURE OF SOME OBLENERGO COMPANIES**

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>SHAREHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lvivoblenergo</td>
<td>94% (Structures of Surkises)</td>
</tr>
<tr>
<td>Chernihivoblenergo</td>
<td>96% (Structures of Kolomoisky and Grigorishin)</td>
</tr>
<tr>
<td>Poltavaoblenergo</td>
<td>72% (Structures of Kolomoisky and Grigorishin)</td>
</tr>
<tr>
<td>Prykarpatyyaoblenergo</td>
<td>70% (Structures of Surkises, namely: 12.72% – Kerelio Commercial Ltd., and 24.99% – Lex Perfecta Ltd (all in Cyprus), 25,021% – Magnum-Kapital LLC), 24.99% – Margaroza Commercial Ltd. (Structure of Kolomoisky)</td>
</tr>
<tr>
<td>Sumyoblenergo</td>
<td>72% (Structures of Kolomoisky and Grigorishin)</td>
</tr>
<tr>
<td>Odessaoblenergo</td>
<td>55.8% – VS Energy, FS Trading – 14%</td>
</tr>
</tbody>
</table>

16 NJSC “Energy Company of Ukraine” owns 78,289% of shares in Centrenergo and 85.77% in Donbassenergo.
<table>
<thead>
<tr>
<th>Oblenergo</th>
<th>Percentage</th>
<th>Ownership Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zaporozhyeoblenergo</td>
<td>26%</td>
<td>Structures of Surkises</td>
</tr>
<tr>
<td>Kharkivoblenergo</td>
<td>65% – the state, 12.3% of the company “Svarog Asset Management” (Structure of Grigorishin), 15.8% – Grayham Investments Limited, 12.8% – Vanair Limited</td>
<td></td>
</tr>
<tr>
<td>Cherkasyoblenergo</td>
<td>46% – State Property Fund, 25% – UkrESCO CJSC, 10.1579% – Svarog Asset Management LLC (Structure of Grigorishin), 8.2194% – Grayham Investments Ltd</td>
<td></td>
</tr>
<tr>
<td>Vinnitsaoblenergo</td>
<td>20.3%</td>
<td>Grayham Investments Limited</td>
</tr>
<tr>
<td>Volynoblenergo</td>
<td>17.288%</td>
<td>Svarog Asset Management LLC (Structure of Grigorishin)</td>
</tr>
<tr>
<td>Ternopoloblenergo</td>
<td>More than 40% – Larva Investments Ltd and Bikontia Enterprises Ltd (Structures of Kolomoisky and Grigorishin)</td>
<td></td>
</tr>
<tr>
<td>Zhytomiroblenergo</td>
<td>75.56% – “Vychodoslovenske Energeticke Zavody S.P.”, a Slovak Company</td>
<td></td>
</tr>
<tr>
<td>Sevastopoloblenergo</td>
<td>70%</td>
<td>Vychodoslovenske Energeticke Zavody S.P.</td>
</tr>
<tr>
<td>Khersonoblenergo</td>
<td>65%</td>
<td>Vychodoslovenske Energeticke Zavody S.P.</td>
</tr>
<tr>
<td>Kirovogradoblenergo</td>
<td>51%</td>
<td>Vychodoslovenske Energeticke Zavody S.P.</td>
</tr>
<tr>
<td>Kyivoblenergo</td>
<td>75%+1 share – AES Washington Holdings B.V</td>
<td></td>
</tr>
<tr>
<td>Rivneoblenergo</td>
<td>75%+1 share – AES Washington Holdings B.V</td>
<td></td>
</tr>
<tr>
<td>Dniprooblenergo</td>
<td>16% (Structures of Kolomoisky and Grigorishin)</td>
<td></td>
</tr>
<tr>
<td>Donetskoblenergo</td>
<td>more than 20% (Akhmetov’s structures)</td>
<td></td>
</tr>
</tbody>
</table>

On November 4, 2010 at the suit of the Government and the State Property Fund (SPF) Kyiv Appeal Administrative Court renewed the orders of the Cabinet of Ministers on the transfer of state-owned shares in 15 energy companies from the statutory fund of the Energy Company of Ukraine into the SPF management.

Pursuant to the resolution of the Cabinet of Ministers, the Ministry of Fuel must now pass to the SPF 60% +1 share of Vinnitsa, Volyn, Transcarpathian, Khmelnitsky, Nikolaev, Chernovtsy, Donetsk and Kharkiv Oblenergo companies, "Krymenergo and Dniproenergo, 60.25% of shares of Zaporozhyeoblenergo, 60.06 % of Luganskoblenergo, 51% of Ternopoloblenergo, 50% +1 share of Kyivenergo and 46% of Cherkassoblenergo. Presumably the shares are planned to be transferred to the balance of SPF by the beginning of March, whereas the auction on their sale is to be held in late April or early May.

On April 11, 2011 the Cabinet of Ministers of Ukraine adopted Resolution #310-p “On approving the list of power generating and power distributing companies with the state-owned stakes to be sold in 2011”.

Appendix 2. ELECTRICITY MARKET STUDY
Thus, the list of power generating and power distributing companies with the state-owned stakes to be sold in 2011 is as follows:

<table>
<thead>
<tr>
<th>Code under EDRPOU</th>
<th>Company name</th>
<th>State share in the authorized capital proposed for sale</th>
<th>Nominal value of state share of the authorized capital, UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>number (units)</td>
<td>percent</td>
</tr>
<tr>
<td>00130872</td>
<td>Dniproenergo OJSC</td>
<td>1491858</td>
<td>25</td>
</tr>
<tr>
<td>23269555</td>
<td>Zapadenergo OJSC</td>
<td>5768977</td>
<td>45.1</td>
</tr>
<tr>
<td>00130694</td>
<td>Vinnytsaoblenergo JSC</td>
<td>1548683</td>
<td>50</td>
</tr>
<tr>
<td>23359034</td>
<td>Dniprooblenergo EC OJSC</td>
<td>2995809</td>
<td>50</td>
</tr>
<tr>
<td>00131268</td>
<td>Donetskoblenergo OJSC</td>
<td>26246875</td>
<td>40.06</td>
</tr>
<tr>
<td>00131529</td>
<td>Zakarpattyaoblenergo EC OJSC</td>
<td>62301621</td>
<td>50</td>
</tr>
<tr>
<td>00131305</td>
<td>Kyivenergo JSC</td>
<td>27091070</td>
<td>25</td>
</tr>
<tr>
<td>00131400</td>
<td>Krymenergo OJSC</td>
<td>77835449</td>
<td>45</td>
</tr>
<tr>
<td>00130725</td>
<td>Ternopiloblenergo OJSC</td>
<td>15882319</td>
<td>25.99</td>
</tr>
<tr>
<td>22800735</td>
<td>Cherkasyoblenergo OJSC*</td>
<td>31162655</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the state shareholding making 21% of the authorized capital of Cherkasyoblenergo OJSC is sold along with the company stake of 25% owned by UkrESKO CJSC as agreed with UkrESKO CJSC</td>
<td></td>
</tr>
<tr>
<td>00130760</td>
<td>Chernivtsioblenergo EC OJSC</td>
<td>25551306</td>
<td>45</td>
</tr>
</tbody>
</table>
5. ELECTRIC POWER TURNOVER

5.1. Electric power production

Activities for electricity production in Ukraine shall be licensed and operated in accordance with Rules and Conditions of business activities for the production of electric power, approved by the Resolution of the National Electricity Regulatory Commission (NERC) of Ukraine.

Pursuant to the Rules and Conditions, the wholesale electricity market of Ukraine shall sell all the electric energy that is produced at:

— Licensee’s power plants with the installed capacity exceeding 20 MW;

— Licensee’s power plants, with the average annual electricity supply in the UES exceeding 100 million kWh;

— Wind power stations (regardless of the installed capacity or volume of electric power distribution).

An exception may be electricity, which is:

— consumed by power plants for their own needs;

— produced by power plants with installed capacity below 20 MW;

— produced by power plants, in which the total electricity supply to the UES of Ukraine amounted to less than 100 million kW/year for the previous year;

— produced at CHPP plants (which are part of the energy suppliers) for consumption on the site of the licensed activity.

DYNAMICS AND STRUCTURE OF ELECTRICITY PRODUCTION

During 9 months of 2010 the production volume of electric power plants, which are included in the UES of Ukraine reached 135 941.6 million kWh which is 12 002.5 million kWh or 9.7% more as compared to 2009 (Figure 3).
Figure 3. STRUCTURE OF ELECTRICITY PRODUCTION IN THE UES OF UKRAINE FOR 9 MONTHS OF 2009-2010

Power plants, which belong to the administration sphere of the Ministry of Fuel and Energy, produced 130,448.9 million kWh of electricity, which is 11,563.9 million kWh, or 9.7% more than the last year’s figure.

In this case, the TEC and CHPP generated electricity 5,665.9 million kWh or 11.4% more than during 9 months in 2009.

Nuclear power plants produced electricity 4,081.6 million kWh or 6.8% more as compared to 2009. The installed capacity factor is 71.1% which is 3.5% more than last year.

Production of electricity by hydropower and pumped storage power plants has increased by 1,813.4 million kWh, or 20.7% than the same period’s figure in 2009, and amounts to 10,578.9 million kWh.

Production of electricity by other types of power plants (block stations and municipal CHPP) increased by 438.6 million kWh or 8.7% in comparison with the corresponding period in 2009.

During January – September 2010 energy companies and power plants (NPP, HPP, CHPP) controlled by the Ministry of Fuel and Energy and the company “Vostokenergo” supplied 17,469.5 thousand Gcal of heat, which is 1,472.1 thousand Gcal (or 9.2%) more than last year. As of 1 October 2010, HPP repositories have accumulated 3,606.0 thousand tons of coal, which is 55.0 thousand tons more than last year (3,551.0 tons).
5.2. Sale. Purchase. Consumption

The turnover of electricity in the market goes as follows:

— Sale: electricity producers sell it to the wholesale supplier Energorynok SE;

— Purchase: supplying companies purchase electricity from Energorynok SE (for Ukrainian consumers and for export);

— Consumption: supplying companies distribute electricity to consumers in Ukraine.

SALE. In 2009 electric power was sold in the wholesale electricity market by 51 Ukrainian producer of electricity, including Energoatom SE, 5 thermal power plants, 2 hydropower enterprises, 28 heat and power plants, 2 cogeneration units, and 13 enterprises producing electricity with the use of alternative sources.

The amount of electricity sold by producers in the WEM in 2009 as compared with 2008 decreased by 9.23% (from 172,477.7 million kWh to 156,564.6 million kWh), which is connected with a significant reduction in electricity consumption in 2009 by major categories of industrial and non-industrial consumers. Thus, the amount of electricity sold by the state enterprise “Energoatom” decreased by 7.83% (from 84,631.7 million kWh to 78,009.2 million kWh), TPP – by 13.06% (from 65,985.1 million kWh to 57,370.2 million kWh), and by CHPP by 10.50% (from 11,007.6 million kWh to 9851.3 million kWh), respectively. At the same time, the amount of electricity sold by HPP companies increased by 4.29% (from 10,752.9 million kWh to 11,214.5 million kWh) and by cogeneration units (KU) – by 52.00% (from 3.9 to 6.0 million kWh million kWh). The amount of electricity sold to companies that produce it with alternative sources made up 71.1 million kWh in 2009.

The amount of electricity product supplied by Ukrainian producers to WEM in 2009 (including VAT) made up 47123.21 million UAH for a total payment of 47036.16 million UAH or 99.82% of the value of the electric power product distribution.

PURCHASE. In 2009 the purchase of electricity from the wholesale electricity market by all companies (both for Ukrainian consumers and for exports) amounted to 152,543.3 million kWh, which is 16,565.2 million kWh or 9.8% less than in 2008. In particular, the amount of electricity purchased in the WEM by supplying companies, which supply electricity at regulated tariffs, decreased by 7148.0 million kWh (5.06%) as compared with 2008, and amounted to 134,098.3 million kWh. and reduce The Amount of electricity purchased in the WEM by licensees supplying electricity at non-regulated tariffs reduced by 5634.1 million kWh (28.62%) and amounted to 14050.1 million kWh (Table 8).
The cost of electricity, which was bought by power suppliers at regulated tariffs in 2009, has risen by 3002.5 million UAH (7.18%) as compared with 2008 and amounted to 44,827.6 million UAH (including VAT).

In 2009, the total payment received for electricity bought from WPM was 52,791.2 million, which is 250.6 (0.48%) million more than in 2008.

CONSUMPTION. During 2009, Ukrainian consumers received from energy supplying companies electric power in the volume of 133,095.387 million kWh, including 119,211.833 million kWh, or 89.57% of the total volume to the amount of 56,494.313 million UAH from companies operating at regulated tariffs, and 13,883.554 million kWh, or 10.43% of the total volume, from companies operating at non-regulated tariffs.

In comparison with 2008 the volume of electric energy supplied by companies operating at non-regulated tariffs decreased by 5,562.805 million kWh. In 2009, consumers paid for electricity purchased from these companies in full.

The volume and cost of electric power supplied to consumers by companies operating at regulated tariffs changed as follows in 2009: as compared with 2008 – less in volume by 6448.7 million kWh, but more in value by 3928.871 million.

Table 8. AMOUNT OF ELECTRICITY PURCHASED BY ENERGY SUPPLYING COMPANIES FROM WEM IN 2008 - 2009, MILLIONS OF KWH

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>Including energy supplying companies at regulated tariff</th>
<th>2009</th>
<th>Including energy supplying companies at regulated tariff</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>16925</td>
<td>14478</td>
<td>14334</td>
<td>12974</td>
</tr>
<tr>
<td>February</td>
<td>15419</td>
<td>13114</td>
<td>12904</td>
<td>11556</td>
</tr>
<tr>
<td>March</td>
<td>15133</td>
<td>12644</td>
<td>13604</td>
<td>12126</td>
</tr>
<tr>
<td>April</td>
<td>13747</td>
<td>11367</td>
<td>11227</td>
<td>9934</td>
</tr>
<tr>
<td>May</td>
<td>13360</td>
<td>10927</td>
<td>10773</td>
<td>9533</td>
</tr>
<tr>
<td>June</td>
<td>12866</td>
<td>10453</td>
<td>10950</td>
<td>9582</td>
</tr>
<tr>
<td>July</td>
<td>13513</td>
<td>10985</td>
<td>11958</td>
<td>10372</td>
</tr>
<tr>
<td>August</td>
<td>13584</td>
<td>11085</td>
<td>11714</td>
<td>10152</td>
</tr>
</tbody>
</table>
In 2009, industrial enterprises received electric power in the volume of 55,528.553 million kWh to the amount of 30,047.233 million UAH. As compared with 2008, the volume of the supplied energy decreased by 5,455.865 million kWh, or 8.90%; as compared with 2007 – by 10,403.061 million kWh, or by 15.78%.

Agricultural enterprises received in the same year 2,615.586 million kWh to the amount of 1,746.729 million UAH.

The volume of consumed electricity made up 3,052.244 million kWh to the amount of 1,654.953 million UAH, and the payment for it equaled to 1642.34 million UAH.

Institutions and organizations funded from the state budget paid off 99.24% for the electricity used in 2009, improving the index of 2008 by 0.74% (2008 – 98.5%). The volume of consumed electricity made up 3,052.244 million kWh to the amount of 1,654.953 million UAH; the respective payment was 1642.34 million UAH.

Institutions and organizations funded from local budgets paid for the electricity at 100.33% in 2009 (98.8% in 2008), having received 2,374.798 million kWh of electricity to the amount of 1,569.748 million UAH; the payment made amounted to 1574.952 million UAH.

As compared with 2008, housing and communal services improved settlements for the use of electrical energy by 0.6%. The level of payments in this consumer category in 2009 amounted to 93.5% (92.9% in 2008). The volume of consumed electricity was 9,489.721 million kWh of electricity to the amount of 4,867.567 million UAH; the made payment equaled to 4551.008 million UAH.

The level of payments from individuals for the use of electricity in 2009 remained at the level of 2008 making up 97.73%. Individuals received 30,652.144 million kWh of electricity to the amount of 6,828.431 million UAH; the payment made was 6673.386 million UAH.

Railways paid for the electricity used in 2009 at the same level as the previous year, which amounted to 99.58%. The volume of consumed electricity made up 724.594 million kWh to the amount of 400.659 million UAH; the payment made was 398.967 million UAH.

<table>
<thead>
<tr>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>13296</td>
<td>10926</td>
<td>11747</td>
<td>9968</td>
<td>169109</td>
</tr>
<tr>
<td>13427</td>
<td>11194</td>
<td>13316</td>
<td>11512</td>
<td>141246</td>
</tr>
<tr>
<td>13116</td>
<td>11081</td>
<td>14224</td>
<td>12415</td>
<td>152543</td>
</tr>
<tr>
<td>14722</td>
<td>12993</td>
<td>15793</td>
<td>13974</td>
<td>134098</td>
</tr>
</tbody>
</table>

Appendix 2. ELECTRICITY MARKET STUDY
Payments from other consumers made up 99.87 % (101.6 % in 2008). The volume of consumed electricity was 14,774.192 million kWh to the amount of 9,378.995 million UAH; the payment for it was 9366.784 million UAH.

The overall debt for the electricity used in 2009 increased by 997.79 million UAH, making up 9132.56 million UAH as at 01.01.2010. Figure 4 shows the structure of the debt for the use of electrical energy in different economy sectors as at 01.01.2010.

**Figure 4. STRUCTURE OF THE DEBT FOR THE USED ELECTRICITY IN TERMS OF CUSTOMER CATEGORIES**

ANALYSIS OF ELECTRICITY CONSUMPTION IN UKRAINE FOR 6 MONTHS OF 2010

For 6 months of 2010 consumers used 73.5 billion kWh of electricity, which is 7.65 billion kWh or 11.6% more than in the corresponding period of 2009.

The increase in electricity consumption occurred every month of the first half of 2010: from 10.2% in February to 14.0% in April.

Increased consumption of electricity in Ukraine took place in almost every industry and consumer groups, with the exception of the Building sector, where power consumption has decreased by 0.008 billion kWh, or by 1.5%.

Electricity consumption increased most of all in industry – by 5.4 billion kWh or 17.9%, including such branches of industry as metallurgy – by 4.2 billion kWh or 28.1%, engineering – 0.5
billion kWh or 20.6%, chemical and petrochemical industry – by 0.26 billion kWh or 11.5%, and fuel industry – by 0.18 billion kWh or 4.1%.

Electric power consumption increased also in such groups as “Individuals” – by 1.5 billion kWh or 8.5%, “Transport” – by 0.43 billion kWh or 10.5%, and “Other non-industrial consumers” – by 0.22 billion kWh or 7.7%.

In this case, electricity consumption increased by 70.8% in the group “Transport” mainly due to the increase of electricity consumption by trunk pipeline transport.

The increased electricity consumption in the first half of 2010 versus the same period last year was conditioned by the gradual operational resumption of the economy sectors after a significant decline which began in the fourth quarter of 2008 and lasted through 2009.

The structure of electricity consumption by major industries and consumer groups in 2008 and 2009 is shown in Table 9.

**Table 9. STRUCTURE OF ELECTRICITY CONSUMPTION IN 2008 AND 2009 (million kWh)**

<table>
<thead>
<tr>
<th>Major industry and consumer groups</th>
<th>Electricity consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Electricity consumption in total (net), including:</td>
<td>147890.6</td>
</tr>
<tr>
<td>1. Industry</td>
<td>77012.3</td>
</tr>
<tr>
<td>1.1 fuel</td>
<td>9455.9</td>
</tr>
<tr>
<td>1.2 metallurgical</td>
<td>40687.9</td>
</tr>
<tr>
<td>1.3 chemical and petrochemical</td>
<td>6383.7</td>
</tr>
<tr>
<td>1.4 machine building</td>
<td>6877.0</td>
</tr>
<tr>
<td>1.5 construction materials</td>
<td>3430.5</td>
</tr>
<tr>
<td>1.6 food and processing</td>
<td>4661.3</td>
</tr>
<tr>
<td>1.7 other industries</td>
<td>5516.0</td>
</tr>
<tr>
<td>2. Agricultural consumers</td>
<td>3286.0</td>
</tr>
<tr>
<td>3. Transport</td>
<td>9962.4</td>
</tr>
<tr>
<td>4. Building</td>
<td>1291.2</td>
</tr>
<tr>
<td>5. Municipal consumers</td>
<td>1847.0</td>
</tr>
<tr>
<td>6. Other non-industrial consumers</td>
<td>5942.0</td>
</tr>
<tr>
<td>7. Individuals</td>
<td>31917.7</td>
</tr>
</tbody>
</table>
5.3. Electricity Export

THE POSSIBILITY OF ELECTRICITY EXPORT IN UKRAINE

Currently, the Unified Energy System of Ukraine is working simultaneously (in parallel) with the combined energy system of the Russian Federation and with the Moldovan grid. Parallel operation of power plants across the Unified Energy System allows making use of the following benefits:

— Reduction of the total maximum load in the UES of Russia by 5 GW;
— Reduction of the needed installed capacity by 10-12 GW;
— Optimization of load distribution between power plants to reduce fuel consumption;
— Use of high-performance large-generating equipment;
— High level of reliability and survivability of energy associations.

In addition, the allocated part of the UES of Ukraine, the so-called “Burshtyn Island”, operates in parallel with the combined energy systems of Western, Central and Eastern Europe – the UCTE (Union for the Coordination of Transmission of Electricity), namely of Poland, Slovakia, Hungary and Romania.

Through technological balance-flow between Ukraine-Russia and Ukraine-Belarus, electricity is supplied in small quantities via dead-end lines to the Belarusian and Russian border consumers on the side of the Ukrainian UES, simultaneously with the electricity supply to border consumers in Ukraine on the side of the energy systems of Russia and Belarus.

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17 The Unified Energy System (UES) is a set of several energy systems united by a common operational mode, which has overall supervisory control as the highest level of management with respect to the supervisory controls of its constituent energy systems.

18 Balance-flow of electricity is the algebraic sum of flows of electric power through all operating interstate power transmission lines of all voltage classes during the billing period, which is a calendar month.

19 In July 2010, the companies of Russia, Belarus and Ukraine signed a technical agreement on providing the parallel operation of power systems in the three states.

20 Dead-end transmission lines are:
   a) Lines receiving the voltage from one side and feeding the substations to the tires of which no power plants are connected;
   b) Lines receiving the voltage from one side and feeding the substations to the tires of which small power plants equipped with automatic pitch are connected.
On March 19, 2009 the Parliament of Ukraine adopted the Law of Ukraine “On Amendments to the Law “On Electric Power Industry” for regulation of the electricity export issues” N 1164-VI. Important is that at the time the Law of Ukraine was adopted the Commission established electricity purchase prices in the WEM of Ukraine for further export in accordance with the legislative authority and pursuant to paragraph 22 of the Provisional rules for the operation of the WEM in Ukraine, approved by resolution of the Cabinet of Ministers of Ukraine dd. 05.11.99 N 2043. Following the adoption of the aforementioned Act, tariff setting for electricity purchase in the wholesale electricity market for its subsequent export does not fall within the Commission’s competence, since Article 30 of the Law of Ukraine defines that “to export energy suppliers procure the necessary amount of electricity in the wholesale electricity market of Ukraine at the wholesale market price” and “access to the throughput of interstate electric power networks of Ukraine for electricity export is provided on terms of an auction.”

An auction for a period not longer than one year is held by Ukrenergo NEC, which transmits electric power via interstate electric networks in Ukraine. The auction is held at least once a month subject to the availability of free throughput capacity in interstate power networks of Ukraine. The order of the auction is approved by NERC21.

Participants in the auction can be entities which hold a license to perform activities for independent electricity supply, are members of the wholesale electricity market of Ukraine and have no arrears on electricity purchased in the wholesale market.

The winner of the auction is the entity in the electric power industry, which offered the highest price.

If the auction winner uses the throughput capacity of interstate power networks of Ukraine by less than 70 percent on average per month within two successive calendar months, this throughput capacity shall be auctioned again.

On December 16, 2009, the first auction was held regarding the access to the throughput capacity of interstate electric networks of Ukraine to export electricity in the period inclusive from 01.01.2010 to 31.12.2010. Participants in the auction were Zakhidenergo, Ukrinterenergo, Vostokenenergo LLC, Energoatom and “Belotserkovskaya CHPP” CJSC.

21 “The order of auctions on access to the throughput of interstate electric networks of Ukraine for electricity export”, approved by the Resolution of NERC dd. 22.10.2009 № 1207
According to the results of the annual auction (for the entire year of 2010), the right of access to the 100 MW crossing of the so-called Burshtyn energy island, from which electricity is exported to the countries of Eastern Europe, was granted to the state-owned company “Zakhidenergo OJSC”. Another 150 MW acquired the private company “Vostokenergo” (DTEK). 25 MW of non-guaranteed endowments\(^\text{22}\) acquired the state-owned company “Ukrinterenergo”.

On October 5, 2010 Ukrenergo announced a monthly auction on providing the services of access to the throughput interstate section for electricity exports in November 2010.

Vostokenergo LLC, Power Trade LLC (both DTEK companies) and ZAO “Belotserkovskaya CHPP” CJSC applied for participation in the monthly auction held by Ukrenergo for the right of access to the interstate transmission lines to export electricity.

Vostokenergo and “Belotserkovskaya CHPP” CJSC applied for the lots of the Burshtyn section, whereas Power Trade LLC applied for one lot of the section “Ukrainian UES – Moldovan grid”. Upon results of the auction, Vostokenergo got the right of access to the 100 MW intersection of the Burshtyn energy island, wherefrom electricity is exported to the countries of Eastern Europe; LLC Power Trade got access to the section “Ukrainian UES – Moldovan grid”.

**STATISTICS ON ELECTRICITY EXPORTS FROM UKRAINE**

Ukraine increased electricity exports during 9 months of 2010 as compared with the same period of 2009 by 18.9%, which is up to 2.746 billion kWh (see Figure 5). Such changes occurred as a result of the last year’s resumption of commercial energy supplies to Belarus. Thus, in January-August 2010 Ukraine supplied to Belarus 77.8% of the total export. Export to Belarus increased to 2.117 billion kWh from 577.9 million kWh. Supplies to Slovakia fell by 76.9% to 266.7 million kWh, to Hungary – by 73.5% to 226.7 million kWh. Romania increased the purchase of Ukrainian electricity by 98.1% to 61.6 million kWh, Moldova by 2.4 times to 16.9 million kWh. From August 31, 2010 Ukraine and Russia sell peak powers in the night period. The positive balance in favor of Ukraine reached 57.1 million kWh. Poland did not buy Ukrainian electricity in 2010, whereas it imported 73.6 million kWh from Ukraine in January-September 2009.

\(^{22}\) Non-guaranteed delivery of electrical energy means that the given value may be adjusted by Ukrenergo expeditiously in case of emergency disconnection of power lines in the UES of Ukraine (or part thereof) and change in the balance of power in the UES of Ukraine (or part thereof). The possibility of such adjustments should be considered by export energy suppliers and is to be confirmed in agreements by the possibility of termination of supplies or their emergency reserve by the system operators of adjacent grids.
In September 2010 the electricity export from Ukraine decreased in comparison with September 2009 by 63.2% to 205.3 million kWh. In particular, supplies to Hungary fell by 99.9% to 0.2 million kWh, to Slovakia by 91.1% to 4.9 million kWh, to Belarus by 32.8% to 139.5 million kWh. Supplies to Moldova grew by 7.4 times up to 4.2 million kWh. In September Ukraine supplied 56.5 million kWh of electricity to Russia.

**Figure 5. ELECTRICITY EXPORT FOR 9 MONTHS OF 2010, million kWh**

Rumania 2,20%  Russia 2,10%
Moldova 0,60%  Slovakia 9,70%
Hungary 8,30%
Belarus 77,10%
6. AUTOMATED SYSTEM OF COMMERCIAL ELECTRIC POWER ACCOUNTING

Prior to starting the operation of the bilateral contracts market and of the balancing energy market to allow optimization of production, distribution and consumption of electric power, it is necessary to create an automated system of commercial electric power accounting (hereinafter the ASCEPA). The state-owned enterprise “Energorynok” and almost all WEM subjects in Ukraine have been actively working on it for over ten years. However, the ASCEPA has not begun to fully operate yet. The establishment of ASCEPA is the responsibility of WEM entities, but to fulfill the said work they must choose contractors (by tender) from the list of companies that specialize in developing the ASCEPA. Nevertheless, most of the subordinate organizations set up the ASCEPA with violations of regulatory requirements, making it difficult or even impossible to use the systems set up by them.

Today, the Principal operator’s software for ASCEPA data collection is used for testing technologies for obtaining data from WEM subjects in a test mode (from introduced ASCEPA or by using the software modules with manual data entry). In addition, by using the specified software control data are received to evaluate the data provided by ASCEPA of Zhytomyrobelenenergo EC OJSC, Kirovogradoblenenergo OJSC and Kharkivoblenenergo JSC for the layout 30817 in the framework of a pilot project on using ASCEPA data in the calculation of the electricity purchase and sale in the WEM.

To ensure the automation of commercial accounting data collection in accordance with the Instructions on the order of commercial accounting of electric power and pursuant to the provisions of the Consistent ASCEPA Implementation Program, WEM agents should adopt and use the ASCEPA.

The entire volume of active energy purchased and sold by the wholesale electricity market participants in Ukraine shall be determined by using commercial electric power accounting systems.

In accordance with amendments of 04.02.2010 to the Rules on the use of electric power, premises (except for apartment buildings and settlements) with the connected load of electrical installations of 150 kW or more and the average monthly consumption of 50 kWh or more over the previ-

23 Supplement N 10 to the Agreement between the WEM members, approved by resolution of NERC dd. 19.10.98 N 1349
24 Minutes dd. 22.04.08 № 40 of the Interdepartmental Commission for Coordination of work relating to implementation of the provisions of the Concept on operation and development of the WEM dd.16.11.02 № 1789
25 The procedure for registration of ASEPA in the WEM (published on 28.07.2010)
ous 12 billing periods for existing electrical installations or the stated amount of electrical energy consumption for new electrical installations should be provided with local equipment for data collection and processing within the period specified for the establishment of the said accounting means pursuant to the agreement.

The automated system of commercial electric power accounting is a set of local equipment for collection and processing of data from accounting media (medium), information transmission channels and devices for taking, processing, displaying and recording information, which are combined into a single functional metrologically certified system.

The main purpose of the ASCEPA consists in measuring the exact amount of consumed or transmitted energy and capacity with regard to the daily, zone or other tariffs, ensuring the possibility to store these measurements through a month or a year and to get access to such data for settlements with the supplier and the consumer. In addition, an important ASCEPA constituent is the possibility to analyze energy and power consumption and transmission. Regular analysis of consumption modes for periods of time allows detecting flaws in the organization of energy consumption.

The ASCEPA of the wholesale electricity market of Ukraine (ASCEPA WEM) is a set of ASCEPA agents in the WEM of Ukraine, which are united by respective systems for collecting, processing and transmission of data, and allow forming the Main operator’s single information complex. ASCEPA WEM shall be a set of technical, algorithmic, mathematical and programming methods and tools entered in the structure of commercial accounting of production, transmission and supply of electricity to/from the WEM.

**ASCEPA WEM is being established to achieve the following objectives:**

- Providing commercial accounting of active and reactive electric energy in accordance with the Rules of WEM at the balance inventory borders of electricity networks of WEM agents;
- Improving the accuracy, reliability and timeliness of obtaining data on the production, transmission and supply of electric energy;
- Providing simultaneous measurements at all points of commercial accounting;
- Automating the data collection, processing and transmission through electric power commercial accounting devices;

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26 Article 1.2 of the Rules for the use of electric power, approved by NERC dd. 31.07.96 № 28

27 Supplement 7 (4) to the Agreement between the members of the WEM dd. November 15, 1996
REQUIREMENTS TO THE ASCEPA WEM STRUCTURE

AMR WPM shall be set up according to the “Structural scheme of ASCEPA in the wholesale market of Ukraine and of data exchange between the wholesale market agents and the Main Operator” on the principle of open architecture and distributed operation, and shall use the process data transmission networks to unite the ASCEPA of WEM agents operating in the universal time into a single measurement and information system:

- Main Operator’s ASCEPA;
- ASCEPA of operators of commercial accounting systems of the wholesale market agents generating, transmitting or supplying electricity;
- AMR of accounting objects: plants, substations.

Process data network is based on allocated channels leased by the Main operator of the wholesale market which are directly connected to the communication node of the Main Operator in the wholesale market.

The general scheme of interaction between the WEM agents is presented in Figures 6 and 7.
Figure 7. ASCEPA WEM INFORMATION TECHNOLOGY COMPLEX

Main Operator’s ASCEPA

Application software of Administrator of the WEM settlement system

Main Operator’s application software:
• Verification;
• Construction of production and consumption balance in Ukraine;
• Consolidation and data analysis;
• etc. ...

Complementary WEM agent

WEM agent’s ASCEPA

Exchange with Complementary WEM agents

WEM agent’s ASCEPA Database

Application software:
• Verification;
• Construction of production and consumption balance;
• Giving data before the balance inventory borders of electricity networks etc.

Subsystem for data transmission to the Main Operator’s ACEPA

Collection of data from accounting devices

Accounting devices

Main Operator’s ASCEPA Database

Subsystem for collection, storage and primary processing of commercial accounting data
7. PRICES AND PRICE FORMATION

In accordance with its legislative authority, NERC regulates the prices (tariffs) for goods (services) of natural monopolies in the fuel and energy complex of Ukraine, based on the regulation principles as defined by applicable law, the main of which is the principle of balance between economic interests of producers and consumers of their goods and services, as well as the principle of full compensation by the consumer of reasonable expenses for production, transmission and supply of electricity. At the same time, the market order of electricity price formation is not differentiated for consumers referring to this or other economy sectors.

The Commission established a system of price regulation, which includes a number of regulations that provide control over pricing at each stage of formation of electricity tariffs (at the stages of production, transmission and supply of electric energy).

The concept adopted in Ukraine and set forth in the Law of Ukraine “On Electric Power Industry” as well as in many acts of the Cabinet of Ministers of Ukraine, provides for market pricing of electricity. In other words, today’s electricity tariffs for all consumers, except for households, are the market ones.

Scheme of price formation in the electricity industry is represented in Figure 8.
Figure 8. SCHEME OF PRICE FORMATION IN THE ELECTRIC POWER INDUSTRY

Electricity producers
(see clause 7.1)

Work on price bids
(see clause 7.1.1)

The price is formed by Administrator of “Energorynok” based on the system’s boundary price, on the assumption of bids

Wholesale supplier Energorynok SE
(see clause 7.2)

Work on price bids
(see clause 7.1.2)

The tariff is settled by NERC

Wholesale market price minus the amount of compensations to suppliers at regulated tariffs against the Endowment Certificate

Suppliers at regulated tariffs
(see clause 7.3.1)

Tariffs are regulated and approved by NERC (same for all)

Wholesale market price, which includes the amount of compensations to suppliers at regulated tariffs (formed by Energorynok SE)

Suppliers at non-regulated tariffs
(see clause 7.3.2)

The tariff is approved by NERC, whereas the provider calculates the price based on a formula (taking into account the predictive wholesale market price approved by NERC)

The price is set in the contract between the supplier and the consumer

Consumers
(Individuals and settlements)
(see clause 7.4)

Consumers
(Excluding individuals and settlements)
(see clause 7.4)

Consumers
(Any consumer having no indebtedness for the electricity supplied at regulated tariffs)
(see clause 7.4)

Appendix 2. ELECTRICITY MARKET STUDY
7.1. Establishment and regulation of tariffs for the sale of electric power by generating companies

According to the method of price formation for electricity sold in the wholesale electricity market, producers are divided into two groups:

1) Generating companies that operate on price bids;

2) Generating companies that do not operate on price bids.

7.1.1. Establishment and regulation of tariffs for sale of electric power by generating companies, which operate in the WEM on price bids

The first group of producers consists of generating companies that operate on price bids. They are the so-called competitive market segment comprising about 35% of the wholesale electricity market.

Formation of these tariffs in 2009 was performed according to the WEM Rules on an hourly basis and consisted of such payments: payment for generated electricity (70.42%), payment for operating power (18.95%); payment for mobility (7.75%); additional payments for reconstruction and modernization of power equipment to comply with legislative acts and governmental decisions (1.5%), other payments (2.07%); reduction in payment for energy units for violation of the operation mode (-0.69%).

The price is formed by the Administrator of Energorynok based on the system’s boundary price\(^\text{28}\), on the assumption of bids.

Here is the list of generating companies’ stations operating on price bids in 2009: Burshtyn TPP, Uglegorsk TPP, Dobrotvorska TPP, Zaporozhye TPP, Zmeevski TPP, Zuyevskaya TPP, Krivo-

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\(^{28}\) The system’s boundary price is the price of the most expensive of the maneuvering blocks included in the Scheduled load of producers operating on price bids, for each billing period of the day (WEM Rules approved by Resolution of the NERC dd. 12.09.2003 N 921).
rozhska TPP, Kurakhovskaya TPP, Ladyzhyn TPP, Luhansk TPP, Prydniprovska TPP, Starobeshivskaya TPP, Slavyanskaya TPP, Tripolskaya TPP.

During 2009 the sales tariff for electricity producers operating on the price bids in the wholesale electricity market increased in comparison with 2008 by 10.8% (from 33.4 kopecks / kWh to 37.02 kopecks / kWh). In the tariff structure the part of the electricity has increased from 30.64 kopecks/kWh to 36.74 kopecks / kWh (by 19.9%). At the same time, the profitability of electricity production decreased from 8.99% to 0.78%.

Table 10 shows the average tariff for purchase of electricity from producers operating on price bids in 2008 - 2009.

The structure of tariff for electricity purchased from producers operating on price bids in 2008 - 2009 years is shown in Table 11.

Table 10. THE DYNAMICS OF THE AVERAGE TARIFF FOR PURCHASE OF ELECTRICITY FROM TPP GENERATING COMPANIES IN 2008 - 2009 (UAH/MWh)

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Year</th>
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<tbody>
<tr>
<td>Dniproenergo OJSC</td>
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<td>267.1</td>
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<td>338.0</td>
<td>302.0</td>
<td>307.4</td>
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<td>315.3</td>
<td>345.4</td>
<td>371.1</td>
<td>311.3</td>
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<tr>
<td></td>
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<td>340.3</td>
<td>353.2</td>
<td>322.8</td>
<td>317.2</td>
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<td>342.5</td>
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<tr>
<td>Centrenergo SEC OJSC</td>
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<td>289.4</td>
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<td>362.1</td>
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<td>399.1</td>
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Appendix 2. ELECTRICITY MARKET STUDY
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<tr>
<th>Electricity producers working on price requests</th>
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<th>2009</th>
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<td>283.7</td>
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Table 11. STRUCTURE OF TARIFF FOR THE ELECTRICITY SOLD IN THE WHOLESALE ELECTRICITY MARKET BY TPP GENERATION COMPANIES IN 2008 - 2009

<table>
<thead>
<tr>
<th>INDICES</th>
<th>2008</th>
<th>2009</th>
<th>Variation of tariff components values in 2009 vs. 2008</th>
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<td>Tariff components value</td>
<td>Specific weight in the tariff</td>
<td>Tariff components value</td>
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<tr>
<td></td>
<td>kop./kWh.</td>
<td>%</td>
<td>kop./kWh.</td>
</tr>
<tr>
<td>Cost of commercial products</td>
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<td>92.54</td>
<td>36.14</td>
</tr>
<tr>
<td>Fuel</td>
<td>24.44</td>
<td>73.48</td>
<td>28.54</td>
</tr>
<tr>
<td>Conventionally fixed costs:</td>
<td>6.34</td>
<td>19.06</td>
<td>7.60</td>
</tr>
<tr>
<td>Production services</td>
<td>0.77</td>
<td>2.32</td>
<td>0.67</td>
</tr>
<tr>
<td>Raw and auxiliary materials</td>
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<td>Energy from outside</td>
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<tr>
<td>Payments for labor</td>
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<tr>
<td>Deductions for social events</td>
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<td>1.98</td>
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<tr>
<td>Amortization charges</td>
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<td>4.33</td>
<td>1.76</td>
</tr>
<tr>
<td>Profit from electricity</td>
<td>2.18</td>
<td>6.55</td>
<td>0.04</td>
</tr>
<tr>
<td>Target allowance</td>
<td>0.30</td>
<td>0.90</td>
<td>0.59</td>
</tr>
<tr>
<td>Tariff</td>
<td>33.26</td>
<td></td>
<td>36.77</td>
</tr>
<tr>
<td>Tariff without allowance</td>
<td>32.96</td>
<td></td>
<td>36.18</td>
</tr>
<tr>
<td>Productive power distribution, thousand kWh.</td>
<td>65949330</td>
<td>57341853</td>
<td>-8607477</td>
</tr>
</tbody>
</table>
In connection with the non-competitiveness, Kyivenergo and Kharkiv CHPPP-5 JSC were transferred to operation at a fixed rate as of December 1, 2009. Moreover, in order to implement the CHPP’s responsibility for the excess of contractual electricity sales volumes, changes were made in the bilateral agreements between Energorynok SE and CHPP, as well as in the WEM Rules, which stipulate that Energorynok SE charges a penalty from CHPP at the rate of 50% of the cost of electricity supplied to the WEM beyond the contractual amount.

7.1.2 Establishment and regulation of tariffs for sale of electric power by generating companies, which do not operate in the WEM on price bids

The second group includes producers that do not operate on price bids. These are nuclear, hydropower, and pumped storage power plants, cogeneration plants.

In accordance with the Law of Ukraine “On Electric Power Industry”, NERC approves tariffs for electricity supplied by power generating companies which do not operate in the wholesale electricity market on price bids. Furthermore, in accordance with the said Law, NERC approves “green” tariffs for electric power produced by economic entities in the power generation facilities using alternative energy sources (except for blast furnace and coke oven gas, and with the use of hydropower developed only by small hydroelectric power plants).

Adoption of tariffs for supply of electricity is carried out in open sessions of the Commission. Tariffs are calculated with regard to the reasonable expenses necessary for the production process, and means for funding the upgrading and reconstruction of power equipment under the investment programs agreed upon with the Ministry of Fuel and Energy of Ukraine.

NPP

The tariff for supply of electricity produced at nuclear power plants of Energoatom SE amounted to 13.77 kopecks per 1 kWh since 2009.

<table>
<thead>
<tr>
<th>Commercial product, thousand UAH</th>
<th>21933205</th>
<th>21084315</th>
<th>-848891</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability with target allowance %</td>
<td>8.07</td>
<td>1.75</td>
<td>-6.32</td>
</tr>
<tr>
<td>Profitability without target allowance %</td>
<td>7.09</td>
<td>0.11</td>
<td>-6.97</td>
</tr>
</tbody>
</table>
As of September 2009, the Commission approved the tariff at 13.97 kopecks per 1 kWh for Energoatom SE.

The average tariff for supply of electricity produced at nuclear power plants in 2009 was 13.84 kopecks per 1 kWh vs. 12.22 kopecks per 1 kWh in 2008. The tariff increase was 13.3%.

On December 30, 2009 NERC approved the Tariff for electricity produced at nuclear power plants in 2010 at the rate of 15.83 kopecks per 1 kWh (net of VAT). The Tariff for heat produced at nuclear power plants of Energoatom SE in 2010 was approved at the rate of 27.81 UAH per 1 Gcal (net of VAT).

CHPP

As of January 1, 2009 tariffs were approved for electricity supplied to business entities that are licensed to carry out economic activities for electricity production sell it in the wholesale electricity market.

The average tariff for electricity supplied to power plants in 2009 amounted to 74.13 kopecks per 1 kWh, exceeding by 57.8% the previous year’s tariff which amounted to 46.98 kopecks per 1 kWh.

HPP and PSPP

For hydropower stations the Commission approves the two-rate electricity tariff, which consists of rates of payment for labor power and the rate of payment for sold electricity.

As of January 1, 2009 the effective two-rate tariff for Ukrhydroenergo JSC equaled to:

- Payment rate for electricity – 5.09 kopecks per 1 kWh,
- Payment rate for operating power – 252,808.78 UAH per 1 MW (per year)

As of February 1, 2009 the Commission approved the two-rate tariff including:

- Payment rate for electricity – 4.84 kopecks per 1 kWh,
- Payment rate for operating power – 235,490.27 UAH per 1 MW (per year)

The actual average rate of Ukrhydroenergo in 2009 was 11.61 kopecks per 1 kWh vs. 10.06 kopecks per 1 kWh in 2008.
For the 1st quarter of 2010 Commission approved the two-rate tariff for HPP of Ukrhydroenergo JSC consisting of:

— Payment rate for electricity – 3.51 kopecks per 1 kWh;

— Payment rate for operating power – 77,616.00 UAH per 1 MW.

The average rate for the 1st quarter of 2010 was 16.71 kopecks per 1 kWh. In 2009, the effective two-rate tariff for electricity released by HPP and PSPP of Energoatom SE (Tashlyk PSPP and Alexandrovsk HPP) determined the average tariff of 44.30 kopecks per 1 kWh.

In 2009, the effective two-rate tariff for electricity released by HPP of Zakarpatyyaoblenergo EK OJSC determined the average rate of 9.62 kopecks per 1 kWh.

PRODUCERS OF ELECTRICITY FROM ALTERNATIVE ENERGY SOURCES

The order of NERC dd. 23.07.2009 N 857 fixed the minimum rates of “green” tariff for power generation from alternative energy sources. The corresponding fixed minimum “green” tariff rates set for different types of alternative energy sources are displayed in Table 12.

Table 12. FIXED MINIMUM “GREEN” TARIFF FOR GENERATION FROM ALTERNATIVE ENERGY SOURCES “GREEN” TARIFF, kopecks /kWh

<table>
<thead>
<tr>
<th>Installed capacity value up to 600 kW</th>
<th>Installed capacity value from 600 kW to 2000 kW</th>
<th>Installed capacity value from exceeding 2000 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.15</td>
<td>81.84</td>
<td>122.77</td>
</tr>
</tbody>
</table>

For electricity produced from biomass processing

134.46

For electricity produced from solar energy

<table>
<thead>
<tr>
<th>Terrestrial objects</th>
<th>Objects installed on rooftops, with a capacity exceeding 100 kW</th>
<th>Objects installed on roofs, with up to 100 kW capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>505.09</td>
<td>484.05</td>
<td>463.00</td>
</tr>
</tbody>
</table>

For electricity produced by small hydropower plants

84.18
In accordance with the Procedure for establishment, revision and termination of the “green” tariff, the values of “green” tariff for business entities are established monthly at each establishment date of retail tariffs for consumers, depending on the official exchange rate of national currency against euro set by the National Bank of Ukraine. As of October 2010, the following values of “green” tariff NERC have been established by NERC: for small HPP – 84.18 kopecks per 1 kWh, for wind power plants – 22.77 kopecks per 1 kWh.

7.2. Wholesale market price formation

Wholesale supply of electricity: Energorynok SE buys electric power, forms its wholesale price and sells electricity at the wholesale price to energy suppliers.

For each billing period of the daily schedule the Administrator of the settlement system (Energorynok SE) should perform the calculation of the wholesale market price without taking into account the amount of subsidies to offset losses occurring through supply of electricity at regulated tariffs29.

The wholesale market price for electricity is defined as the weighted average cost of purchasing electricity from all producers that sell electricity in the Wholesale market, the management and maintenance cost of main and interstate power grids, the costs of running the wholesale electricity market and a number of additional national expenditures (a charge in the form of a target allowance to the current electricity and heat tariff, development of alternative energy sources, compensation of preferential tariffs for certain consumer categories, especially for individuals).

Providers at non-regulated tariffs purchase electricity from Energorynok SE at the wholesale market price. Suppliers at regulated tariffs purchase it at the wholesale market, from which the sum of compensations is subtracted that these suppliers provide to individuals paying electricity costs30.

In accordance with Article 30 of the Law “On Electric Power Industry”, to export electricity the energy supplier purchase its necessary volume in the wholesale electricity market of Ukraine at the wholesale market price.

As compared with 2008, in 2009 there occurred an actual increase in the wholesale market price for the sale of electricity from the WEM to energy supplying companies from 333.00 UAH / MWh in 2008 to 407.56 UAH / MWh in 2009. The structure of the actual wholesale market prices for 2008 and 2009 is shown in Table 13.


30 Resolution of NERC dd. 26.02.2001 N 184 “On Approval of Regulations on the order of compensating licensee’s losses incurred through electricity supply to household consumers at regulated tariffs”
Table 13. THE STRUCTURE OF THE ACTUAL WHOLESALE MARKET PRICES FOR 2008-2009, %

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPP General companies (with regard to extra payments for reconstruction and modernization as well as pursuant to other governmental decisions)</td>
<td>40.93</td>
<td>34.24</td>
</tr>
<tr>
<td>Energoatom NNEGC</td>
<td>19.45</td>
<td>17.67</td>
</tr>
<tr>
<td>HPP Generating companies</td>
<td>2.01</td>
<td>2.11</td>
</tr>
<tr>
<td>Cogeneration heat and power plants</td>
<td>8.52</td>
<td>9.63</td>
</tr>
<tr>
<td>Turbogas unit</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Producers of electricity from alternative sources</td>
<td>0.02</td>
<td>0.10</td>
</tr>
<tr>
<td>Electricity export and purchase of electric power for process losses during electricity transit</td>
<td>-3.83</td>
<td>-0.78</td>
</tr>
<tr>
<td>Ukreenergo NEC</td>
<td>3.85</td>
<td>3.67</td>
</tr>
<tr>
<td>Others</td>
<td>0.15</td>
<td>0.45</td>
</tr>
<tr>
<td>Target allowance</td>
<td>5.16</td>
<td>3.66</td>
</tr>
<tr>
<td>Subsidy certificates</td>
<td>23.72</td>
<td>29.24</td>
</tr>
</tbody>
</table>

7.3. Establishment and regulation of tariffs for sales of electricity to suppliers

Electric power supplier is a party to the wholesale electricity market of Ukraine, which has been licensed by NERC to supply electricity at regulated or non-regulated tariffs for selling it to consumers\(^\text{31}\). 

7.3.1 Suppliers at non-regulated tariffs

Suppliers at non-regulated tariffs (hereinafter the SNT) are business entities that have the right to supply electricity to consumers at a free tariff. Working with such suppliers allows the consumer to get a lower price for electricity (as compared to the fixed price of suppliers at regulated tariffs) due to the forced reduction of the own SNT profit value in the competitive non-monopolized SNT market.

\(^{31}\) Conditions and Rules for entrepreneurial activity in the wholesale supply of electricity approved by Resolution of NERC dd. 16 December 1996 № 256
Electric power supplier at non-regulated tariffs is entitled to enter into a contract on purchase and sale of electric energy with a consumer in the absence of the consumer’s debt for electricity to electricity supplier at regulated tariffs32 (these are mostly industrial consumers).

Consumers pay at non-regulated tariffs in accordance with contracts on purchase and sale of electricity from suppliers at non-regulated tariffs.

During 2009, suppliers of electricity at non-regulated tariffs (66 companies) purchased electricity from the WEM in the amount of 14,050,122 MWh (10.5% of the total sales in the WEM), which is 5,634,075 MWh or 28% less than the previous year. In this case, 24% of the volume of electricity was purchased by large industrial consumers (Nikolayev Alumina Plant, Pobuzhsky Ferronickel Plant, Poltava Mining Works, Ukrtatnafta and the like), which buy electricity in the wholesale market for their own consumption.

### 7.3.2 Suppliers at regulated tariffs

Suppliers at regulated tariffs (SRT) are mainly regional energy supplying companies (Oblenergo). In some regions of Ukraine they are subdivisions of Ukrzaliznytsya (Ukrainian Railway Company) operating at electricity tariffs fixed (regulated) by the state. Consumer of such suppliers can be any person or entity. Consumers pay at tariffs regulated by NERC in accordance with electricity supply agreements with providers at regulated tariffs. In this case the tariffs shall be defined by NERC.

### 7.4. Price and tariff formation at the retail electricity market

Price and tariff formation at the retail electricity market varies depending on the consumers:

- Household consumers (individuals and settlements) which receive electricity from suppliers at regulated tariffs;
- Non-household consumers (consumers, except for individuals and settlements) which receive electricity from suppliers at regulated tariffs;
- Consumers which receive electricity from suppliers at non-regulated tariffs.

32 Resolution of NERC dd. 31.07.96 N 28 "Rules for the use of electricity"
1. ELECTRICITY TARIFFS FOR INDIVIDUALS

Electricity tariffs for individuals are approved by NERC. The tariff is the same for all suppliers at regulated tariffs.

Electricity tariffs for individuals are displayed in Table 14.

Table 14. ELECTRICITY TARIFFS FOR INDIVIDUALS AND SETTLEMENTS

<table>
<thead>
<tr>
<th>Consumer categories</th>
<th>Net of VAT</th>
<th>VAT</th>
<th>Including VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Electricity supplied to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Individuals</td>
<td>20.3</td>
<td>4.06</td>
<td>24.36</td>
</tr>
<tr>
<td>1.2. Individuals living in rural areas</td>
<td>18.75</td>
<td>3.75</td>
<td>22.5</td>
</tr>
<tr>
<td>1.3. Individuals living in houses equipped with electric cookers, electricity heated units (including rural areas)</td>
<td>15.60</td>
<td>3.12</td>
<td>18.72</td>
</tr>
<tr>
<td>1.4. Individuals who live in apartment buildings (towns, villages, urban settlements) which are not supplied with natural gas, with no or non-operating district heating systems</td>
<td>15.60</td>
<td>3.12</td>
<td>18.72</td>
</tr>
<tr>
<td>2. Electricity supplied to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1. Settlements</td>
<td>19.70</td>
<td>3.94</td>
<td>23.64</td>
</tr>
<tr>
<td>2.2. Settlements in rural areas</td>
<td>18.15</td>
<td>3.63</td>
<td>21.78</td>
</tr>
<tr>
<td>2.3. Settlements with houses equipped with electric cookers and electricity heated units (including rural areas)</td>
<td>15.00</td>
<td>3.00</td>
<td>18.00</td>
</tr>
</tbody>
</table>

33 Resolution of NERC dd.10.03.99 № 309 “On tariffs for electricity supplied to individuals and settlements”

34 Settlements are consumers, which pay to the electricity supplying organization according to the common meter readings for the electricity consumed by individuals for different household needs in houses, apartments, dorms, for the needs of family farms, small holdings and gardens, country houses, garages and light boxes for private cars, boats, as well as by penal institutions and medical and labor dispensaries, pre-trial detention facilities.
2. ELECTRICITY TARIFFS FOR NON-RESIDENTIAL CUSTOMERS

Retail tariffs for the electricity supplied to consumers other than individuals and settlements) is calculated according to the requirements of the Order of the retail electricity tariff formation for consumers (except for individuals and human settlements) by licensees which supply electricity at regulated tariffs, approved by resolution of NERC dd. 22.01.2001 N 47, or according to the market formula contained in the Conditions and Rules for business activities on electricity supply at regulated tariffs (Resolution of NERC dd. 13.06.96 N 15/1) (formulas are identical). Transmission and supply tariffs for each energy supplying company differ depending on many factors, namely: the structure and condition of electric networks, electricity losses in networks, the structure and volume of energy consumption, the serviced land area, etc. Levels of tariffs for transmission and supply of electric power are determined based on companies’ reasonable expenses and the power balance, coordinated with the Ministry of Fuel and Energy of Ukraine.

The part of the wholesale market price in the retail tariffs structure is around 80%.

Retail electricity tariffs as of November 2010 were as follows\(^{35}\):

- Voltage class 1\(^{36}\) – 55.27 kopecks / kWh;
- Voltage class 2 – 68.60 kopecks / kWh.

3. TARIFFS FOR ELECTRICITY FROM SUPPLIERS AT NON-REGULATED TARIFFS

Prices for electricity supplied by business entities licensed to electricity supply at unregulated tariffs shall be determined in agreements between electricity suppliers and consumers.

---

35 Resolution of NERC dd. 25.10.2010 N 1389 “On approval of retail electricity tariffs for November 2010...  
36 Voltage class is a set of power consumers connected to the licensee’s networks at the appropriate nominal voltage and of electricity transmission lines, transformers and other electrical equipment with appropriate degrees of nominal voltage which are used during the transmission of electricity to these consumers.  
35 kV voltage class and above (Class 1), voltage class less than 35 kV (Class 2)
7.5. Regulation of tariffs for thermal power generation

NERC approves the tariffs for thermal power produced at CHPP, TPP, NPP and cogeneration plants in accordance with the Procedure of calculating tariffs for electricity and heat produced by CHPP, TPP, NPP and cogeneration plants (Resolution of NERC dd. 12.10.2005 N 896), the Procedure of calculating tariffs for electricity and heat produced by cogeneration plants (Resolution of NERC dd. 12.10.2005 N 897), the Procedure for revision and approval of tariffs for licensees to produce electricity and heat (Resolution of NERC dd. 12.10.2005 N 898).

Tariffs for thermal power production are approved with regard to the planned production volumes, regulatory justified expenses needed for the production process and the means to fund investment programs, previously agreed with the Ministry of Fuel and Energy of Ukraine.

The range of tariffs approved for thermal energy produced by CHPP in 2009 was as follows:

- from 154.43 UAH (Dzerzhinsky Mining and Metallurgic Complex, OJSC) to 472.75 (Zuyeyskaya experimental CHPP SE) per 1 Gcal for industrial users and public institutions;

- from 108.88 UAH (Kyivenerho JSC) to 208.66 UAH (Saki heat network “Krymteploelektrotsentral LLC”) per 1 Gcal for individuals.

On December 24, 2009 the Commission approved the tariffs for production of thermal power for households, industrial users and public institutions for CHP plants in 2010 at the rate of 727.32 UAH per 1000 m³ (net of VAT) and thermal power production for industrial users and public institutions at the rate of 2182.66 UAH.

The tariff for thermal power produced at nuclear power plants of Energoatom SE was UAH 24.05 UAH per 1 Gcal (net of VAT) since the beginning of 2009 and has not change throughout the year.

The level of tariffs for heat energy produced by thermal power plants during the second half of 2008 and the first half of 2009 ranged from 100.29 to 128.47 UAH per 1 Gcal. As of August 1, 2009 the level of approved tariffs for thermal power produced by TPP was ranging from 122.82 to 165.60 UAH per 1 Gcal.
### 7.6. Analysis of prices which have developed in the WPM from October 11 till October 20, 2010

During the period from 11th till 20th of October 2010 the average price of electricity sold by producers in the wholesale electricity market increased by 5.53% as compared with the previous period (from 01 to 10.10.2010). This is determined by the decrease in the share of the electricity volume supplied to the WEM by Energoatom SE from 51.89% to 49.79% with an increase in the share of electricity volume supplied to the WEM by TPP Group from 38.35% to 38.58%.

The average purchase price of electric energy in the wholesale electricity market during the said period for electricity suppliers has increased as compared with the previous period by 4.14%, for the suppliers at regulated tariffs by 4.59% and for suppliers at non-regulated tariffs by 2.46%. This is conditioned by the increased average sales price for electricity producers in the wholesale electricity market.

The difference between the sales price and the purchase price of electricity is extra charge, which includes payment to Ukrenergo for dispatching and transmission of electricity through main and interstate networks, a fee in the form of a target allowance to the existing tariffs for electricity and heat, infrastructure costs of Energorynok SE as well as payment for the system-wide process consumption of electricity in main and interstate networks.

Dynamics of volumes of the supplied and purchased electricity as well as the respective prices are displayed in Table 15.

#### Table 15. THE DYNAMICS AND STRUCTURE OF VOLUMES AND PRICES FOR ELECTRICITY DURING THE PERIOD FROM 11.10.2010 TILL 20.10.2010

<table>
<thead>
<tr>
<th>Dynamics and Structure of electricity supplied by the producers in the Wholesale Electricity Market</th>
<th>Supply period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index</td>
<td></td>
</tr>
<tr>
<td>from 11.10.2010 till 20.10.2010</td>
<td>MWh</td>
</tr>
<tr>
<td>Buildup from 01.10.2010</td>
<td>MWh</td>
</tr>
<tr>
<td>Amount of electricity supplied to the WEM</td>
<td>4 956 673</td>
</tr>
<tr>
<td></td>
<td>9 713 176</td>
</tr>
</tbody>
</table>
including:

| Suppliers of electricity at regulated tariffs | 4 199 825 | 89.64 | 8 210 106 | 89.35 |
| Suppliers of electricity at non-regulated tariffs | 485 246 | 10.36 | 978 656 | 10.65 |

Dynamics of the electricity sales price in the Wholesale Market for electricity producers

| The average sales price of electricity in the wholesale electricity market producers | 335.75 | 327.13 |

including:

| NPP | 159.33 | 159.32 |
| TPP Group | 502.70 | 495.68 |
| HPP Group | 168.54 | 167.45 |
| TPP | 726.10 | 730.54 |
| WPP | 1 227.70 | 1 227.70 |
### Dynamics of the prices for electricity purchased by suppliers in the Wholesale Electricity Market

<table>
<thead>
<tr>
<th>Index</th>
<th>Purchase period</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>from 11.10.2010 till 20.10.2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buildup from 01.10.2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UAH/ MWh</td>
<td>UAH/ MWh</td>
</tr>
<tr>
<td>The average price of electricity purchased by suppliers in the WEM</td>
<td>381.05</td>
<td>373.63</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppliers of electricity at regulated tariffs</td>
<td>370.75</td>
<td>362.80</td>
</tr>
<tr>
<td>Suppliers of electricity at non-regulated tariffs</td>
<td>470.20</td>
<td>464.50</td>
</tr>
</tbody>
</table>
8. CROSS-SUBSIDIZATION

Cross-subsidization occurs due to the fact that one consumer group has to cover the energy supply costs for the other group enjoying special privileges.

In accordance with the Law of Ukraine “On Electric Power Industry”, NERC provides compensation for losses of energy companies (subsidies 37), the wholesale market price for electricity being the source of funding such subsidies (Regulation of NERC dd. 26.02.2001 N 184 “On Approval of the Regulation on the order of subsidizing licensees supplying electricity at regulated tariffs for the losses incurred through supply of electricity to household consumers”), to prevent supplying companies from incurring losses through electricity supply to household consumers.

When calculating the wholesale market price, the administrator of the WEM settlement system should:

1) take into account the sum of subsidy certificates in the specified amount;

2) when calculating the daily wholesale market price in payment periods take into account 1/31 of that amount;

3) to daily reduce the amount of payment for electricity purchased in the wholesale electricity market by 1/31 of monthly subsidy certificates to compensate for losses incurred through supply of electricity to certain consumer categories by licensees supplying electricity at regulated tariffs38.

The negative factor in the operation of the electricity market is still the high level of cross-subsidization by industrial consumers regarding the cost of electricity supplied to certain consumer categories at reduced tariffs. These are primarily the fixed low tariffs for individuals, tariffs for electricity used for exterior lighting of settlements, electricity tariffs for urban electric transport, which are set at the level of tariffs for individuals, compensation of costs for supplying companies connected with the effective tariffs differentiated by time periods, compensation for losses incurred by companies supplying electricity to coal, mining and chemical enterprises, the State-owned Enterprise “Zaporozhye Titanium-Magnesium Works” as well as children’s centers “Artek” and “Molodaya Gvardiya”.

37 Subsidy certificate (subsidy) is a certificate that NERC provides to the licensee for compensation of subsidies which the licensee should grant to consumers which are entitled to enjoy preferential tariffs and receive other subsidies in accordance with subsidy programs. (Resolution of NERC N 15/1 dd. 06.13.1996 “On Approval of Rules and Regulations of Entrepreneurial Activity on supplying electricity at regulated tariffs”)

38 Regulation of NERC dd. 28.09.2010 № 1287 “On accounting the sums of subsidy certificates in the calculation of the wholesale market price in October 2010”
The overall level of subsidies predefined by cross-subsidization in the formation of the wholesale market price increased from 23.72% in 2008 to 29.3% in 2009. The sums of compensation for losses (subsidies) incurred by supplying companies through electricity supply to certain consumer categories during 2001 - 2009 are displayed in Table 16.

In particular, the amount of subsidies for supplying companies to recover losses from the electricity supply to individuals in 2009 grew up to 15.369 billion UAH vs. 10.751 billion UAH in 2008, or increased by 4.618 billion UAH (i.e. 43%).

Table 16. SUMS OF COMPENSATION FOR LOSSES INCURRED BY SUPPLYING COMPANIES THROUGH ELECTRICITY SUPPLY TO CERTAIN CONSUMER CATEGORIES IN 2009

<table>
<thead>
<tr>
<th>№</th>
<th>Energy supplying companies</th>
<th>The amount of compensation of losses incurred through electricity supply, UAH</th>
<th>The total amount of compensation for losses, UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vinnit-saoblenergo OJSC</td>
<td>52217247 944682 217423 4687603 1169582 0 0 0 0 549188437</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Volynoblen-ergo OJSC</td>
<td>273338409 328419 16318 273905 293833 0 0 0 0 28329514</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
<td>Registration Number</td>
<td>Phone Number</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------</td>
<td>---------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>3</td>
<td>Dniproblenergo EC OJSC</td>
<td>1081123016</td>
<td>409076580</td>
</tr>
<tr>
<td>4</td>
<td>Donetskblenergo OJSC</td>
<td>1592583451</td>
<td>77096480</td>
</tr>
<tr>
<td>5</td>
<td>Zhytomiroblenergo EC OJSC</td>
<td>361667563</td>
<td>22511685</td>
</tr>
<tr>
<td>6</td>
<td>Zakartatyoblenenergo EC OJSC</td>
<td>478480944</td>
<td>1989858</td>
</tr>
<tr>
<td>7</td>
<td>Zaporozhyeoblenergo OJSC</td>
<td>5004353389</td>
<td>66100277</td>
</tr>
<tr>
<td>8</td>
<td>Kyivenergo JSC</td>
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The volume of subsidies for energy supplying companies to recover losses incurred through electricity supply for exterior lighting of settlements in 2009 totaled 155.088 million UAH and increased by 44.017 million UAH (or 39.6%) as compared with 111.071 million UAH in 2008.

Consumers buying electricity at tariffs differentiated by periods of time reduced the cost of purchased electricity by 1158.669 million in 2009. As compared with 997.370 million UAH in 2008, the amount of subsidies increased by 161.299 million UAH (or 16.2%).

Household consumers purchasing electricity at tariffs differentiated by periods of time reduced the cost of purchased electricity by nearly 14.9 million UAH in 2009, while subsidies increased by 5.7 million (or 62%) in comparison with 9.2 million in 2008.

The volume of subsidies for supplying companies to recover losses incurred through electricity supply for urban electric transport at tariffs set as for individuals amounted to 357.56 million UAH in 2009, and increased by 56.31 million (or 18.7%) as compared with 301.25 million in 2008.

The volume of subsidies for supplying companies to recover losses incurred through electricity supply for coal producers amounted to 436.61 million UAH in 2009 and reduced to 62.96 million UAH (or 12.6%) as compared with 499.57 million UAH in 2008. This was conditioned by

39 Resolution of NERC dd. 26.02.2001 N 184
40 Resolution of NERC dd. 16.11.2006 N 1487
41 Resolution of NERC dd. 18.01.2007 N 27
42 Resolution of NERC dd. 21.02.2008 N 198
43 Resolution of NERC dd. 26.07.2007 N 996
44 Resolution of NERC dd. 26.06.2007 N 866
45 Resolution of NERC dd. 27.10.2008 N 1240
46 Resolution of NERC dd. 02.04.2009 N 387
47 Resolution of NERC dd. 05.03.2009 N 279
the failure of certain mines pay in full for the use of electricity and by transfer of such mines to Class 2 power consumers.

The volume of subsidies for supplying companies to recover losses incurred through electricity supply for enterprises of the mining-metallurgical and chemical sector amounted to 512.14 million UAH in 2009 and increased by 470.15 million UAH as compared with 41.99 million in 2008 (in 2008, the subsidies were provided in November – December).

The amount of compensation of losses incurred through supplying electricity to individuals and settlements in 2005 was 3.379 billion UAH, as compared with 4.847 billion in 2006, 5.589 billion in 2007, 10.751 billion UAH in 2008 and 15.369 billion in 2009. Part of the total subsidies in the structure of the wholesale market price for electricity amounted to more than 29 % in 2009, which increases the pricing pressure on non-household consumers.

At the beginning of 2009 the electricity tariff for individuals compensated 30% of its economically justified production, transmission and supply costs.

The only effective way to reduce the volume of cross-subsidization in the electricity industry is to bring electricity tariffs for individuals to the economically justified level.

It is worth emphasizing that the Program of Economic Reforms for 2010-2014 adopted for execution by order of the Cabinet of Ministers of Ukraine dd. 23.06.2010 № 1724-p provides for termination of the price subsidization of individuals through gradual reduction of electricity tariffs to economically justified levels, in parallel with the establishment of a system for providing targeted assistance to the poor population strata as well as the elimination of the price subsidization mechanism regarding all industrial and municipal customer types.
9. REFORMING OF THE WEM

By Resolution dd. 16.11.2002 N 1789 the Cabinet of Ministers of Ukraine approved the Concept of operation and development of the wholesale electricity market in Ukraine, which provides a solution for the problems in the existing wholesale electricity market and prospects for its further development through gradual transition from the current Single Buyer market model to the fully competitive electricity market of bilateral agreements with a balancing market.

The new market model provides for introduction of the competitive bilateral contracts market with the following main elements:

- Bilateral contracts market operating on the basis of agreements on purchase and sale of electric energy, concluded between power producers and suppliers;
- Balancing electricity market, electricity exchange;
- Support services market (frequency and active power regulation, voltage and reactive power regulation, active power redundancy, system redundancy, emergency prevention, start-up after an abnormal power blackout);
- Auction of the available transmission capacity of interstate power grids.

The schemes of the existing and the future model of the wholesale electricity market in Ukraine are shown in Figure 9.
Scheme 2. PROSPECTIVE BILATERAL CONTRACTS MARKET MODEL

Figure 9. THE SCHEME OF THE EXISTING AND THE FUTURE MODEL OF THE WHOLESALE ELECTRICITY MARKET
Reforming of the electricity market provides for a radical change in the market rules: it requires the establishment of new segments and market players, the introduction of a new technical infrastructure for information exchange and commercial metering of electric energy in the electricity market of Ukraine; thorough training of market participants to work in the new market model, special seminars and trainings.

In accordance with the Action Plan on implementing the Concept of the operation and development of the wholesale electricity market in Ukraine, approved by order of the Cabinet of Ministers of Ukraine dd. 28.11.2007 N 1056-p, the Concept regarding the reform of the existing electricity market model shall be implemented in three consecutive stages for transition from the existing market model to a model of the full market of bilateral agreements with a balancing market:

1) Establishment of a regulatory framework, partial implementation of bilateral agreements for market participants of electric energy;

2) Introduction of a special mechanism for balancing the purchase and sales volumes of electricity preserving the centralized load scheduling;

3) Implementation of own load scheduling immediately by electricity market participants and establishment of exchange for selling electricity.

Implementation terms for these stages are as follows:

1) First stage:

   — Development of the draft law “On State regulation of natural monopolies in the energy sphere”, 2008-2009 (not developed)

   — Development of the draft law “On Electricity Market”, 2008-2009 (NERC has developed a draft law “On the principles of the electricity market operation”);

   — Development of other legal documents was planned until 2008 or 2009, most of which had not been submitted;

2) Second stage:

   — Introduction of a special mechanism for balancing the purchase and sales volume of electricity preserving the centralized load scheduling, 2010 (not implemented);
3) **Third stage:**

- Introduction of a mechanism for own load scheduling by qualified electricity market participants – 2011 (not yet implemented);

- Establishment of exchange for selling electricity – no specified implementation period \(^{48}\);

- Introduction of the bilateral contracts market and a balancing energy market (till 2014).

According to the concept of operation and development of the wholesale electricity market in Ukraine, liberalization of the electricity market in Ukraine will help:

- Establish clear and transparent conditions for the electricity market in Ukraine;

- Create conditions for the containment of increasing prices for electricity due to enhanced competition;

- Improve the competitiveness and investment attractiveness of Ukrainian energy companies;

- Strengthen the energy supply reliability by creating an efficient operating reserves market in the power system and using it for minimization of the total electricity production and supply cost;

- Introduce electricity trading mechanisms which are close to the electricity trading rules of the EU Member States;

- Harmonize the legal framework and rules of the power industry in Ukraine with the regulatory framework of the European Union, inter alia, in accordance with the requirements of Directive 2003/54/EC regarding common rules for the internal electricity market.

\(^{48}\) On 24.06.2010 NERC adopted a resolution providing for approbation of auction electricity sale from 07/01/1910 during three months of the pilot WEM mode. The purpose of approbation is to improve the draft legal framework and identify the possible phases and volumes of the subsequent transition of to the real new market model operation. In the pilot mode, a 10%-share of the country's total monthly electricity production volume was sold. In this case, the buyer of electricity produced at NPP had to purchase a more expensive proportional volume of electricity produced by TPP. Participation in the approbation of the new market model was obligatory for all market participants. The Auction was organized by Energorynok SE.
Annex 1.

LAW OF UKRAINE
“ON ELECTRIC POWER INDUSTRY”
dd. 16.10.1997 # 575/97-VR

LAW OF UKRAINE
On Electric Power Industry

(News of Verkhovna Rada of Ukraine (NVR), 1998, N 1, p.1)
(with amendments pursuant to the Laws
N 1812-III (1812-14) dd. 08.06.2000, NVR, 2000, N 38, p.319
N 1821-III (1821-14) dd. 22.06.2000, NVR, 2000, N 38, p.321
N 741-IV (741-15) dd.15.05.2003, NVR, 2003, N 29, p.231
N 747-IV (747-15) dd.15.05.2003, NVR, 2003, N 29, p.236
N 2505-IV (2505-15) dd.25.03.2005, NVR, 2005, N 17, N 18-19, p.267
N 2509-IV (2509-15) dd.05.04.2005, NVR, 2005, N 20, p.278
N 2598-IV (2598-15) dd.31.05.2005, NVR, 2005, N 27, p.359
N 2633-IV (2633-15) dd.02.06.2005, NVR, 2005, N 28, p.373
N 2706-IV (2706-15) dd.23.06.2005, NVR, 2005, N 33, p.428
N 2711-IV (2711-15) dd.23.06.2005, NVR, 2005, N 33, p.430
N 232-V (232-16) dd.05.10.2006, NVR, 2006, N 49, p.486
N 997-V (997-16) dd.27.04.2007, NVR, 2007, N 33, p.440
N 107-VI (107-17) dd.28.12.2007, NVR, 2008, N 5-6, N 7-8, p.78)
(Additionally see Decision of the Constitutional Court N 10-rp/2008 (v010p710-08 ) dd. 22.05.2008)
(with amendments pursuant to the Laws
N 1164-VI (1164-17 ) dd.19.03.2009, NVR, 2009, N 31, p.457
N 1220-VI (1220-17 ) dd.01.04.2009, NVR, 2009, N 32-33, p.496
N 1565-VI (1565-17 ) dd.17.11.2009, NVR, 2010, N 1, p.3
N 2388-VI (2388-17 ) dd.01.07.2010, NVR, 2010, N 37, p.496)

(In the text of the Law to replace words “distribution accounts” in all cases with words “current accounts with special use regime” and “current account with special use regime” respectively in respective cases pursuant to the Law N 2921-III (2921-14 ) dd. 10.01.2002)

This Law determines legal, economic and organizational principles of activity in the electric power industry and regulates relations connected to production, transfer, supply and use of energy, security of energy supply in Ukraine, competition and protection of rights of consumers and employees in the industry.
Section I

GENERAL PROVISIONS

Article 1. Definition of terms

Terms used in this Law shall have following meaning:

*Energy* – electric or heat energy which is produced at objects of the electric power industry and is a commodity intended for sale and purchase;

*Electric power industry* – industry of Ukraine ensuring supply of energy to consumers;

*Security of energy supply* – state of the electric power industry which guarantees technically and economically save satisfaction of current and future needs of consumers of energy and environmental protection;

*Energy generating company* – participants of the wholesale electricity market of Ukraine which owe or use generating facilities, produce and sell electricity;

*Energy suppliers* – participants of the wholesale electricity market of Ukraine which buy electricity on this market in order to sell it to consumers or in order to export it; (par. 6 article 1 with amendments introduced pursuant to the Law # 1164-VI (1164-17) dd. 19.03.2009)

*Main power network* – power network intended for transmission of electricity from producer to access point in local networks;

*Main heat network* – complex of pipelines and pumping stations ensuring supply of hot water and steam from electric power stations and boiler-houses to local heat networks;

*Network (power or heat)* – complex of energy and pipeline facilities for transmission and distribution of electricity, hot water and steam;

*Interstate power network* – electric network intended for transmission of electricity between states;

*Local power network* – connected power network intended for transmission of power from main power network to consumer; (Part eleven Article 1 in version of the Law # 997-V (997-16) dd. 27.04.2007)
**Joint power system of Ukraine** – complex of power stations, power and heat networks, other objects of the electric power industry connected through common production regime, transmission and distribution of electricity and heat energy with centralized management of this regime;

**Object of the electric power industry** – power station (except nuclear composition of a nuclear power plant), power substation, power network connected to the joint power system of Ukraine, as well as boiler house connected to main heat network, main heat network;

**Wholesale electricity market of Ukraine** – market created by economic entities for sale and purchase of electricity based on agreement;

**Energy transmission** – transportation of energy through networks based on agreement;

**Supply of electricity** – provision of electricity to consumer through technical transmission and distribution means based on agreement;

**Energy consumers** – economic entities and individuals using energy for their own needs based on a sale and purchase agreement;

**Entities of the electric power industry** – economic entities irrespectively their departmental subordination and ownership form which produce, transfer, supply electricity and heat power with centralized heat supply;

**Participants of the wholesale electricity market of Ukraine** – economic entities which sell and buy electricity on the wholesale electricity market of Ukraine based on agreement;

**Centralized dispatch (operative and technological) management** – operative management of the joint energy system of Ukraine securing safe and constant supply of electricity to consumers with adherence to requirements of security of energy and electricity supply to consumers;

**Overriding criterion** – index of total capacity volume of an electric power plant or volume of an annual electricity transfer into the joint energy system of Ukraine as determined by conditions and rules of economic activity exercise above which electricity shall be sold on the wholesale market;

**Emergency state in the country** – a situation when fuel reserves at the objects of the electric power industry are used in amount below stipulated norms or water reserves in storage lakes are worked out below stipulated ecological requirements;
Current accounts with special use regime for the wholesale electricity market (hereinafter – current accounts with special use regime) accounts of economic entities supplying electricity at the designated territory and or supplying electricity on wholesale terms which have been opened in an authorized bank and are intended for accumulation of funds received as payment for electricity from consumers and settlements with participants of the wholesale electricity market; (article 1 amended with paragraph pursuant to the Law # 1821-III (1821-14) dd. 22.06.2000)

Algorithm of the wholesale electricity market – procedure for distribution by the authorized bank of funds from current accounts with special use regime without payment orders which is stipulated by the National commission on regulation of the electric power industry of Ukraine; (article 1 is amended with paragraph pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)

Wholesale electricity supply – purchase of electricity, establishment of its wholesale price and sell of electricity at wholesale prices to energy suppliers; (article 1 amended with paragraph pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)

(paragraph twenty six article 1 lost effect for 2005 as to determination of an authorized bank for operation of current accounts with special use regime of participants of the wholesale electricity market of Ukraine in part of settlements determined by article 35 of the Law N 2285-IV (2285-15) pursuant to Laws N 2285-IV (2285-15) dd. 23.12.2004, N 2505-IV (2505-15) dd. 25.03.2005) authorized bank – determined by the Cabinet of Ministers of Ukraine and the National bank of Ukraine banking institution which operates current accounts with special use regime for participants of the wholesale electricity market; (article 1 amended pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)

Restricted zone of hydro electro technical facilities – land plot adjacent to main fence from inside territory of the hydro electro technical facility equipped with engineering and technical means and marked with warning signs as well as part of area of water of upper and lower pools with distance of 500 m from the dam of the hydro eclectic power plant marked with signs warning about restricted access to its territory for persons, vessels and floating objects; (article 1 amended with paragraph pursuant to the Law N 1330-IV (1330-15) dd. 25.11.2003)

Controlled zone of hydro electro technical facilities – territory of concrete and earth banks of hydro electro technical facilities and land plots located between storage lakes and drainage canals marked with warning signs; (article 1 amended with paragraph pursuant to the Law N 1330-IV (1330-15) dd. 25.11.2003)

Especially important objects of the electric power industry – objects which ensure constant functioning of the joint energy system of Ukraine, destruction or damage of which will lead to a break down of electricity supply for economic entities and population, possible human losses and essential material dam-
Article 2. Sphere of effect of the Law

This Law regulates relations arising in connection with production, transmission, supply and use of energy, state control over safe execution of works at objects of the electric power industry irrespective their ownership form, sate operation of energy equipment and state control over regime of consumption of the electricity and heat energy.

Article 3. Legislation on the electric power industry

Relations in connection with production, transmission, supply and consumption of energy are regulated by this Law and other regulatory and legal acts.

Article 4. Peculiarities of regulation of relations in the electric power industry

Regulation of relations in the electric power industry has its peculiarities as determined by this Law. These peculiarities are caused by objective conditions of the industry functioning:

Constant and uninterrupted balancing of production and consumption of electricity through unified dispatch (operative and technological) management of the joint energy system of Ukraine;
Centralized heat supply for consumers by combined heat and power plants and boiler plants belonging to the joint energy system of Ukraine.

Article 5. **State policy in the electric power industry**

State policy in the electric power industry is based on following principles:

State regulation of activity in the electric power industry;

Creation of conditions for safe operation of the electric power industry objects;

Provision of rational consumption of fuel and energy;

Adherence to unified state norms, rules and standards by all subjects of relations in connection with production, transmission, supply and use of energy;

Creation of conditions for development and increase of the technical level of the electric power industry;

Increase of environmental safety of the electric power industry objects;

Ensuring protection of rights and interests of energy consumers;

Preservation of integrity and ensuring of safe and effective functioning of the joint energy system of Ukraine, unified dispatch (operative and technological) management of it;

Facilitation of development of competitive relations on the electricity market;

Ensuring of training for high qualified stuff for the electric power industry;

Creation of conditions for potential scientific research;

Ensuring of stable financial state of the electric power industry;

Ensuring of responsibility of energy suppliers and consumers;

Facilitation of development of the alternative energy industry as ecologically clean and fuel-free sub-industry of the electric power industry through establishment of a “green” tariff and payment
to electric power plants which produce electricity using alternative energy sources (except for blast furnace and coke gas, and with use of hydro energy – produces only at small hydro power plants) for all electricity produced by them in whole amount in monetary form without application of any set-off for indebtedness out of payments for electricity. (article 5 amended with paragraph pursuant to the Law N 1812-III (1812-14) dd. 08.06.2000; in version of the Law N 1220-VI (1220-17) dd. 01.04.2009)

Article 6. Ownership rights in the electric power industry

Objects of the electric power industry can have different ownership forms. List of objects of the electric power industry not subject to privatization is approved by the Parliament of Ukraine upon submission of the Cabinet of Ministers of Ukraine. Privatization of the electric power industry objects is carried out pursuant to the legislation of Ukraine on privatization.

In case of privatization of the electric power industry objects the Cabinet of Ministers upon submission of the State property fund of Ukraine shall decide on securing in state ownership stocks of joint stock companies created on basis of the electric power industry objects.

Property ensuring integrity of the joint energy system of Ukraine and centralized dispatch (operative and technological) management, main and interstate electricity networks as well as property of scientific institutions of state importance is not subject to privatization.

Article 7. Norms, rules and standards in the electric power industry

Design, construction, putting into operation, operation, decommissioning of the electric power industry objects, systems of dispatch (operative and technological) management, other objects connected to the joint energy system of Ukraine are regulated by regulative and legal acts obligatory for all subjects of the electric power industry.
Section II

COMPETENCE OF EXECUTIVE BODIES AND LOCAL SELF-GOVERNMENT AUTHORITIES IN THE ELECTRIC POWER INDUSTRY

Article 8. State administration in the electric power industry

State administration in the electric power industry is carried out by executive bodies authorized by the Cabinet of Ministers of Ukraine.

The central executive body authorized by the Cabinet of Ministers shall provide the Parliament of Ukraine not later than on March 31 of each year with a report on state of the alternative electric power industry and efficiency of actions for facilitation of its developments as provided by this Law. (article 8 amended with part two pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)

Article 9. State control in the electric power industry

State control in the electric power industry is carried out by the State inspection on operation of electric power plants and networks and the State inspection on energy control over consumption regimes for electric and heat energy according to the procedure stipulated by the Cabinet of Ministers of Ukraine as well as other bodies determined by the legislation of Ukraine.

State inspection on operation of electric power plants and networks controls adherence to the requirements of technical operation of electric power plants and networks, requirements of technical operation of energy equipment of the electric power industry objects connected to the joint energy system of Ukraine.

State inspectors for operation of electric power plants and networks are entitled to:

Free access at any time to the electric power industry objects in order to control adherence to regulatory and legal acts as to the electric power industry on issues falling into their competence,
receive from officials information as to fulfillment of these acts;

Instruct managers of the electric power industry objects within limits of their competence to eliminate violations of the regulatory and legal acts;

Impose in procedure established by the legislation of Ukraine sanctions against enterprises objects of the electric power industry of which are connected to the joint energy system of Ukraine for violation of the legislation as to the electric power industry on issues falling into their competence.

State inspection on energy control over consumption regimes for electric and heat energy controls electricity and heat using equipment and heat networks of consumers and the electric power industry subjects. \textit{(part four article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)}

\textbf{State inspectors on energy control over consumption regimes for electric and heat energy are entitled to:}

Free access to electric and heat consuming equipment and heat networks of consumers and the electric power industry subjects; \textit{(paragraph two part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)}

Receive from consumers and subjects of the electric power industry information necessary for fulfillment of their duties pursuant to regulatory and legal acts; \textit{(paragraph three part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)}

Give consumers and subjects of the electric power industry obligatory instructions on elimination of violations of the regulatory and legal acts; \textit{(paragraph four part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 06.2005)}

Give consumers and subjects of the electric power industry instructions on bringing accounting, control and consumption regulation units for electric and heat energy into compliance with norms, rules and standards of the electric power industry; \textit{(paragraph five part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)}

Send to owners of consumer's objects information on inconsistency with the job of technical workers who did not pass knowledge assessment on electro-safely and operation of electrical receivers;

Require consumers and subjects of the electric power industry to adhere to consumption regimes for electric and heat energy as stipulated by regulatory and legal acts; \textit{(paragraph seven part five part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)}
Article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)

Give instructions on inadmissibility of prolongation of operation of electric and heat consuming equipment of consumers if this endangers life of service personnel and health of the population;

Impose according to the procedure stipulated by the legislation of Ukraine sanctions against economic entities for violation of regulatory and legal acts and compose protocols on administrative violations (paragraph nine part five article 9 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005).

Article 10. **Powers of local executive and local self-government authorities in relations with subjects of the electric power industry**

Powers of local executive and local self-government authorities in relations with subjects of the electric power industry include:

Coordination of issues of location on the territory in their subordination of objects of the electric power industry based on interests of the territorial community;

Participation in elaboration of complex plans for energy supply to consumers on the territory in their subordination;

Participation in elaboration and implementation of an action plan as to work of the electric power industry objects under extreme conditions;

Regulation of tariffs for heat energy pursuant to the Law;

Facilitation of development of the electric power industry in the region.

Local executive and local self-government authorities are not entitled to interfere with operative regulation of the energy consumption regime.
Section III

STATE REGULATION OF ACTIVITY IN THE ELECTRIC POWER INDUSTRY

Article 11. State regulation of activity in the electric power industry

State regulation of activity in the electric power industry is carried out through issuance of a license for exercise of certain activity types in the electric power industry, establishment of a tariff policy, establishment of a procedure for control over activity of subjects of the electric power industry, other participants of the wholesale electricity market and liability for violation of terms and rules of exercise of activity on the wholesale electricity market. (part one article 11 in the version of the Law N 1821-III (1821-14) dd. 22.06.2000)

The National commission on regulation of the electric power industry of Ukraine controls activity in the electric power industry.

The National commission on regulation of the electric power industry of Ukraine regulates activity of subjects of natural monopolies in the sphere of the electric power industry and economic entities acting on allied markets as well as fulfills other functions pursuant to the legislation.

The National commission on regulation of the electric power industry of Ukraine carries out its regulatory activity taking into account requirements of the Law of Ukraine “On principles of state regulatory policy in the sphere of economic activity” (1160-15). (article 11 amended with part pursuant to the Law N 2388-VI (2388-17) dd. 01.07.2010)

Legal, economic and organizational principles of the state regulation of activity of natural monopolies in the sphere of the electric power industry are determined by this Law and other regulatory and legal acts.
Article 12. Main tasks and powers of the National commission on regulations of the electric power industry of Ukraine

Main tasks of the National commission on regulations of the electric power industry of Ukraine include:

Participation in establishment and implementation of the unified state policy as to development and functioning of the wholesale electricity market of Ukraine;

State regulation of activity of natural monopolies in the electric power industry;

Stimulation of competition in the production and supply of electricity;

Ensuring of establishment of price and tariff policy in the electric power industry;

Protection of rights of consumers of electricity and heat energy;

Elaboration and approval of rules for use of electricity;

Elaboration and approval of a procedure for tender conduction as to access to capacities of interstate electricity networks of Ukraine; (part one article 12 amended with paragraph pursuant to the Law N 1164-VI (1164-17) dd. 19.03.2009)

Issuance for economic entities of licenses for production, transmission and supply of electricity; Elaboration and approval of rules for provision and coordination of technical conditions for connection to networks (constructions) of the electric and heat power industry; (part one article 12 amended with paragraph pursuant to the Law N 800-VI (800-17) dd. 25.12.2008)

Control over adherence by the licensees to the rules and terms of licensing activity and imposing of respective sanctions for their violations; (paragraph part one article 12 in the version of the Law N 1821-III (1821-14 ) dd. 22.06.2000)

Creation and keeping of the register of objects of the electric power industry using alternative energy sources (except for blast furnace and coke gas and with use of hydro energy – only small hydro power plants). (part one article 12 amended with paragraph pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)
The National commission on regulation of the electric power industry pursuant to its functions:

Participates in regulation of payment and settlement relations of the wholesale electricity market;

Sets limitations as to combination of activity types by economic entities;

Determines compliance of liquidation, reorganization in form of merger, consolidation, participation in unions as well as acquisition or alienation of more than 25% of shares (stock) in assets of economic entities with terms and rules of exercise of the licensing activity;

Examines cases of violation of licensing conditions and upon results makes decisions within limits of its powers;

Imposes administrative penalties against officials and proprietary sanctions against subjects of the electric power industry, other participants of the wholesale electricity market taking into account active regulated actions in order to ensure stable financial state of the electric power industry and protection of consumers’ rights; (paragraph six part two article 12 in the version of the Law N 1821-III (1821-14 ) dd. 22.06.2000)

Inspects without any hindrance adherence to conditions of licensing activity.

The National commission on regulation of the electric power industry of Ukraine at approval of investment programs of owners of electricity networks shall take into account expenses for connection to electricity networks of the electric power industry objects which produce electricity using alternative energy sources. (article 12 amended with part three pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)

The National commission on regulation of the electric power industry of Ukraine shall annually publish information on expenses for connection to electricity networks of the electric power industry objects which produce electricity using alternative energy sources. (article 12 amended with part four pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)

Article 13. Licensing of activity in the electric power industry

Production, transmission and supply of electricity in Ukraine is subject to licensing. (part one article 13 with changes introduced pursuant to the Law N 3370-IV (3370-15 ) dd. 19.01.2006)
License for production, transmission and supply of electricity is issued by the National commis-
sion on regulation of the electric power industry of Ukraine. (part two article 13 with changes
introduced pursuant to the Law N 3370-IV (3370-15 ) dd. 19.01.2006)

License is issued for each type of activity pursuant to the instruction, conditions and rules for ex-
ercise of single activity types as approved by the National commission on regulation of the electric
power industry of Ukraine.

Activity on production of electricity without a license is allowed if capacity or output of electricity is lower
than indexes stated in conditions and rules for exercise of economic activity on production of electricity.

Energy suppliers having in its composition power and heat plants obtain licenses for activity types
taking into account special conditions for priority satisfaction of needs of consumers of heat on
the territory of the licensed activity exercise.

Section IV
ECONOMIC AND ORGANIZATIONAL
PRINCIPLES OF ACTIVITY IN THE
ELECTRIC POWER INDUSTRY

Article 14. Management of the joint
electric power system of Ukraine

The electric power industry of Ukraine has unified centralized dispatch system of operative and
technological management of production, transmission and supply of electricity.

Functions of the dispatch (operative and technological) management of the joint energy system of
Ukraine are carried out by a state enterprise determined by the central executive body carrying out
management in the electric power industry. The centralized dispatch (operative and technologi-
cal) management applies to economic entities, objects of the electric power industry of which are
connected to the joint energy system of Ukraine.

Structure of the state enterprise carrying out centralized dispatch (operative and technological)
management is determined by the central executive body.
The centralized dispatch (operative and technological) management envisages:

Planning and operative management of capacities of power plants in Ukraine taking into account regimes of centralized heat supply;

Planning and control over adherence to work regime of the joint energy system of Ukraine;

Prevention of emergency situations and liquidation of their consequences within the joint energy system of Ukraine through keeping the necessary balance of capacity and energy, provision of stable and safe functioning of the joint energy system of Ukraine and its parallel work with energy systems of other countries;

Elaboration and carrying out of control of implementation of new systems of emergency and protection automatics as well as communication and dispatch (operative and technological) management tools;

Supervision over operation of emergency and protection automatics systems.

All operative tasks and instructions of the state enterprise carrying out dispatch (operative and technological) management pursuant to the legislation of Ukraine shall be mandatory executed by all economic entities objects of the electric power industry of which are connected to the joint energy system of Ukraine. Interference with dispatch (operative and technological) management of the joint energy system of Ukraine on the side of state bodies, political parties and movements as well as other public organizations is not admissible, except for cases provided by the legislation of Ukraine.

Economic entities objects of the electric power industry of which are connected to the joint energy system of Ukraine are obliged to submit to the state enterprise which carries out the dispatch (operative and technological) management all reports and information as provided by the regulatory and technical documents.

**Article 15. The wholesale electricity market of Ukraine**

Purchase of the whole electricity produced at power plants capacity or output of which is more than overriding criteria as well as at power plants producing electricity with use of alternative energy sources (except for blast furnace and coke gas and with use of hydro energy – produced only
at small hydro power plants) irrespectively their rated capacity or volumes of electricity output
(except for electricity produced at power and heat plants being part of energy suppliers for use at
the territory of licensing activity exercise) and its complete wholesale is carried out at the whole-
sale electricity market of Ukraine. Functioning of other wholesale electricity markets of Ukraine
is prohibited. *(part one article 15 with changes introduced pursuant to the Laws N 1812-III
(1812-14) dd. 08.06.2000, N 1220-VI (1220-17) dd. 01.04.2009)*

The wholesale electricity market of Ukraine is obliged to purchase at “green” tariffs the electricity
produced at the electric power industry objects which use alternative energy sources (except for
blast furnace and coke gas, and with use of the hydro energy – produced only at small hydro power
plants) and not sold at contract prices directly to the consumers or to energy supplying companies
which supply electricity at regulated tariffs. *(article 15 amended with part pursuant to the Law N
601-VI (601-17 ) dd. 25.09.2008)*

The electricity produced from alternative energy sources can be sold at “green” tariffs under direct
contracts with consumers. At this, consumer of the electricity receives from the body authorized by
the Cabinet of Minister of Ukraine a document in the determined form which confirms purchase
of electricity produced from alternative energy sources and stipulates procedure for use of this docu-
ment. *(article 15 amended with part pursuant to the Law N 601-VI ( 601-17 ) dd. 25.09.2008).*

The wholesale electricity market of Ukraine is created on contractual basis.

**Parties to the contract are economic entities activity of which is connected to:**

Dispatch (operative and technological) management of the joint energy system of Ukraine;

Production of the electricity at the power plants;

Transmission of the electricity through main and interstate power networks;

Supply of the electricity through local power networks;

Electricity wholesale supply. *(part article 15 amended with paragraph pursuant to the Law N 1821-
III (1821-14) dd. 22.06.2000)*

The contract shall state the goal and conditions of activity, rights, obligations and liability of the
parties. Such contract shall be approved by the central executive body carrying out management of
the electric power industry, the National commission on regulation of the electric power industry
of Ukraine, the Antitrust Committee of Ukraine.
Rules of the wholesale electricity market are an integral part of the contract and determine mechanisms of functioning of the wholesale electricity market of Ukraine, procedure for distribution of load between generating sources, rules for establishment of market price for electricity.

The wholesale electricity market of Ukraine functions provided adherence to following requirements:

All economic entities producing and transmitting electricity shall have equal access to the wholesale electricity market of Ukraine and services of electric networks after obtaining of a respective license for exercise of certain activity types;

The electricity shall be sold and purchased according to the Rules of the wholesale electricity market of Ukraine;

Prices for the electricity of generating companies and wholesale prices shall be established according to the Rules of the wholesale electricity market of Ukraine;

All participants of the wholesale electricity market shall conclude sale and purchase contracts for the electricity with economic entities which supply electricity on wholesale terms under a contract based on which the wholesale electricity market is created; *(part of article 15 amended with paragraph pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)*

Payment for the electricity and services purchased in a period by the wholesale electricity supplier shall be made in each accounting period (month) in equal per cent to each energy generating company (except for economic entities producing electricity with use of alternative energy sources (except for blast furnace and coke gas and with use of hydro energy – by small hydro power plants) and to the company carrying out centralized dispatch management of the joint energy system of Ukraine and transmission of the electricity through main and interstate power networks. This payment shall be made taking into account payment in arrears pursuant to the contract based on which the wholesale electricity market is created. *(part of article 15 amended with paragraph pursuant to the Law N 2352-IV (2352-15) dd. 18.01.2005; with changes introduced pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)*

*(article 15-1 lost effect for 2005 as to determination of an authorized bank for operation of current accounts with special use regime of the participants of the wholesale electricity market of Ukraine in part of settlements as determined by article 35 of the Law N 2285-IV (2285-14) pursuant to the Laws N 2285-IV (2285-15) dd. 23.12.2004, N 2505-IV (2505-15) dd. 25.03.2005)*
Article 15-1. Settlement procedure on the wholesale electricity market of Ukraine

For settlements for purchased on the wholesale electricity market of Ukraine and consumed electricity energy suppliers which supply electricity on designated area, their separate subdivisions and wholesale supplier shall open in an authorized bank current accounts with special use regime. For settlements on repayment of debts for consumed electricity with use of debt repayment mechanisms as determined by the Law of Ukraine “On measures for ensuring of constant functioning of enterprises in the fuel and energy complex” (2711-15), energy suppliers which supply electricity on designated area and wholesale electricity supplier shall open in an authorized bank current account with special use regime for repayment of debts. The list of current accounts with special use regime in an authorized bank for crediting of payments for the electricity is approved and shall be made known to consumers by the National commission on regulation of the electric power industry of Ukraine. (part one article 15-1 with changes introduced pursuant to the Law N 2711-IV (2711-15 ) dd. 23.06.2005)

Consumers who buy electricity by energy suppliers which supply electricity on designated area shall pay for electricity supplied to them only to the current account with special use regime of the energy supplier in the authorized bank. If consumers pay for electricity to other accounts, beneficiaries shall return such payment upon application of the consumer or on its own initiative within 3 days after crediting of the payment to the account. If the payment transferred to other accounts, not the current account with special use regime, shall not be returned to the consumer within this term, such payment shall be withdrawn to the State budget of Ukraine as sanctions for violation and shall not be credited as payment for electricity. Transfer of the payment to the State budget of Ukraine shall not free the beneficiary from its obligation to return such payment to the electricity consumer.

Funds from current accounts with special use regime of energy suppliers which supply electricity on the designated territory shall be transferred pursuant to the algorithm of the wholesale electricity market exceptionally:

Current account with special use regime of the wholesale electricity supplier;

Current account of the company transmitting the electricity through local electric networks;

Current account of the energy supplier;
Current account with special use regime for repayment of debt of the wholesale electricity supplier. *(part three article 15-1 amended with paragraph five pursuant to the Law N 2711-IV (2711-15) dd. 23.06.2005)*

Payment for electricity purchased at the wholesale electricity market shall be transferred by all energy suppliers exceptionally to the current account with special use regime of the wholesale electricity supplier.

**The said funds shall be transferred from the current account with special use regime of the wholesale electricity supplier only to:**

Energy generating companies and other economic entities which sell electricity to the wholesale electricity supplier;

Company which carries out dispatch management of the joint energy system and transmission of the electricity through main electric networks;

Current account of the wholesale electricity supplier;

Other persons authorized to receive funds with investment component of the wholesale tariff for electricity as approved by the National commission on regulation of the electric power industry of Ukraine, including joint financing of the development of alternative sources of electricity.

Payments credited to the current accounts with special use regime for debt repayment of the energy suppliers which supply electricity on the designated area and wholesale electricity suppliers for purposes of repayment of debts for consumed electricity with use of debt repayment mechanisms as determined by the Law of Ukraine “On measures for ensuring of constant functioning of enterprises in the fuel and energy complex” (2711-15) shall be transferred pursuant to single algorithms of the wholesale electricity market as determined by the National commission on regulation of the electric power industry of Ukraine. *(article 15-1 amended with part pursuant to the Law N 2711-IV (2711-15 ) dd. 23.06.2005)*

Conditions on payment for electricity and on opening of current accounts with special use regime of wholesale electricity suppliers (suppliers of energy which supply electricity on the designated area) are essential conditions of the electricity sale and purchase contract between the wholesale electricity supplier and the energy supplier (contract for supply of electricity between the energy supplier which supplies energy on the designated area and the consumer).

The wholesale electricity supplier is obliged to ensure daily notification of the participants of the
wholesale electricity market and executive authorities on situation with payments on the wholesale electricity market.

Funds on the current account with special use regime cannot be enforced for obligations of the participants of the wholesale electricity market.

No transactions with the current accounts with special use regime can be suspended. *(the Law amended with article 15-1 pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)*

**Article 16. Antitrust restrictions**

Economic entities relations of which are regulated by this Law pursuant to the Law of Ukraine “On protection of economic competition” (2210-14) are prohibited to exercise monopoly activity in any form, except for cases provided by the legislation of Ukraine. *(part one article 16 with changes introduced pursuant to the Law N 1294-IV (1294-15) dd. 20.11.2003)*

Economic entities which produce, transmit or supply electricity and are recognized in established procedure as such having monopoly (dominating) position on the electricity market cannot cease their activity or reduce its volume in order to create deficit of electricity if necessity of such restriction is not provided by the legislation of Ukraine. *(part two article 16 with changes introduced pursuant to the Law N 1294-IV (1294-15) dd. 20.11.2003)*

**Article 17. General principles of establishment of energy tariffs**

Wholesale tariffs for electricity are established at the wholesale electricity market of Ukraine based on a contract. *(part one article 17 with changes introduced pursuant to the Laws N 1812-III (1812-14) dd. 08.06.2000, N 2509-IV (2509-15) dd. 05.04.2005, N 232-V (232-16) dd. 05.10.2006, N 309-VI (309-17) dd. 03.06.2008; in version of the Law N 1565-VI (1565-17) dd. 17.11.2009)* *(as to loss of effect of part one article 17 see the Laws N 3235-IV (3235-15) dd. 20.12.2005, N 489-V (489-16) dd. 19.12.2006, N 107-VI (107-17) dd. 28.12.2007 – par. about loss of effect declared unconstitutional pursuant to the Decision of the Constitutional Court N 10-rp/2008 (v010p710-08) dd. 22.05.2008)*

Wholesale tariffs can envisage expenses for joint financing of development of unconventional electricity sources *(article 17 amended with a part pursuant to the Law N 1565-VI (1565-17) dd. 17.11.2009).*
Electricity tariffs for population with permanent residence in 30-km zone around nuclear power plants are established in amount of 70% of the current tariff for respective population group (article 17 amended with a part pursuant to the Law N 1565-VI (1565-17) dd. 17.11.2009)

Retail electricity price is established by energy suppliers pursuant to Rules and Conditions of the electricity supply taking into account requirement of this Law. (part of article 17 in version of the Law N 1220-VI (1220-17) dd. 01.04.2009)

Tariffs for transmission and supply of electricity through local power networks are regulated by the National commission on regulation of the electric power industry of Ukraine.

Losses of electricity suppliers due to provision of allowances for consumed electricity for single categories of household consumers are remunerated at the expense of the sources determined by the legislative acts providing for respective allowances.

Tariffs for electricity produced at nuclear power stations are regulated taking into account volumes of social and economic remuneration of risks for the population living in the control area. (article 17 amended with a part pursuant to the Law N 232-V (232-16) dd. 05.10.2006) (part six article 17 excluded pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)

Prices for electricity produced at power and heat plants and other co-generation units are established taking into account tariffs for heat energy. Tariffs for electricity produced at wind power plants are regulated by the National commission on regulation of the electric power industry of Ukraine. (part 17 with changes introduced pursuant to the Laws N 1812-III (1812-14) dd. 08.06.2000, N 2633-IV (2633-15) dd. 02.06.2005)

Tariffs for heat energy produced at power and heat plants and other co-generation units are regulated by the National commission on regulation of the electric power industry of Ukraine. (part of article 17 in the version of the Law N 2633-IV (2633-15) dd. 02.06.2005)

Companies which supply electricity through networks being not in their ownership are obliged to purchase electricity at the wholesale electricity market of Ukraine and pay for use of local power networks. The mentioned companies supply electricity to consumers at tariffs as stated in contracts for electricity supply.

Note. Control area is used in the meaning as defined by the Law of Ukraine “On use of nuclear energy and radiation safety” (39/95-VR). (article 17 amended with the note pursuant to the Law N 232-V (232-16) dd. 05.10.2006)
Article 17-1. **Facilitation of production of electricity from alternative energy sources**

“Green” tariff is approved by the national commission on regulation of the electric power industry of Ukraine for electricity produced by economic entities using alternative energy sources (except for blast furnace and coke gas, and with use of hydro energy – produced only at small hydro power plants).

Rate of the “green” tariff is established for each economic entity which produces electricity using alternative energy sources for each type of the alternative energy and for each electric power industry object.

Rate of the “green” tariff for economic entities which produce electricity using wind is determined at the level of the retail tariff for consumers of second voltage class for January 2009 multiplied by coefficient of the “green” tariff for electricity produced using wind.

Rate of the “green” tariff for economic entities producing electricity using bio mass is established at the level of the retail tariff for consumers of second voltage class for January 2009 multiplied by coefficient of the “green” tariff for electricity produced from bio mass. In this Law bio mass are products totally or partially consisting of plant origin products which can be used as fuel in order to transform energy contained in them.

Rate of the “green” tariff for economic entities producing electricity using solar energy is established at the level of the retail tariff for consumers of second voltage class for January 2009 determined with application of the tariff coefficient used for peak periods (for three-zone classification) multiplied by coefficient of the “green” tariff for electricity produced out of solar energy.

Rate of the “green” tariff for economic entities operating small hydro power plants is established at the level of the retail tariff for consumers of second voltage class for January 2009 determined with application of the tariff coefficient used for peak periods (for three-zone classification) multiplied by coefficient of the “green” tariff for electricity produced at small hydro power plants.

**Coefficient of the “green” tariff for electricity produced using alternative energy sources is established at level:**

1,2 — for electricity produced at wind power plants with total capacity not exceeding 600 KW;
1.4 — for electricity produced at wind power plants with total capacity exceeding 600 KW but under 2,000 KW;

2.1 — for electricity produced at wind power plants with total capacity exceeding 2,000 KW;

2.3 — for electricity produced from bio mass;

4.8 — for electricity produced at solar earth power units;

4.6 — for electricity produced at solar units installed on roofs of houses with total capacity exceeding 100 KW;

4.4 — for electricity produced at solar units installed on roofs of houses with total capacity not exceeding 100 KW as well as for objects installed on facades of buildings, houses and constructions irrespectively their overriding capacity;

0.8 — for electricity produced at small hydro power plants.

Coefficient of the “green” tariff for electricity produced at power plants which have been put into operation (or essentially modernized) after 2014, 2019 and 2024 is reduced by respectively 10, 20 and 30 percent from its basic amount as determined by part seven of this article. In this Law essentially modernized power plants which produce electricity using alternative energy sources are objects value of modernization of energy equipment of which amounts to more than 50% of initial value of such equipment.

For economic entities which produce electricity using alternative energy sources the “green” tariff is established till January 1, 2030.

Fixed minimal rate of the “green” tariff for economic entities is established through recalculation in EUR of the rate of the “green” tariff calculated according to rules stipulated by this Law as for January 1, 2009 at official currency rate of the National bank of Ukraine for the stated date.

Rate of the “green” tariff cannot be less than fixed minimal rate of the “green” tariff which is recalculated in national currency at the official currency rate of the National bank of Ukraine for each date of establishment of retail tariffs for consumers.

The stated procedure for facilitation of production of electricity from alternative sources is applied provided that beginning with January 1, 2012 relative density of the raw materials, materials, fixed assets, works and services of Ukrainian origin in the value of construction of the respective power
plant producing electricity with use of alternative energy sources is not less than 30 per cent and beginning with January 1, 2014 – not less than 50 per cent. An additional condition for application of the stated procedure for facilitation of electricity production using solar energy is use at power plants beginning with January 1, 2011 of solar modules in value of the production of which relative density of materials and raw materials of Ukrainian origin is not less than 30 per cent.

The state guaranties that for economic entities which produce electricity from alternative energy sources at power plants put into operation procedure of stimulation of electricity production from alternative energy sources shall be applied as determined pursuant to provisions of this article at the date of putting into operation of power plants which produce electricity from alternative energy sources. In case of changes of the legislation which regulates the procedure for facilitation of production of electricity from alternative energy sources, economic entities are entitled to choose another facilitation procedure.

Retail price for electricity produced by economic entities which implement innovation projects registered pursuant to the procedure stipulated by the law envisaging implementation and production of equipment as well as materials, raw materials and components for production of equipment which produces electricity using alternative energy sources is established at the level of the retail tariff for consumers of the respective voltage class as stipulated for January 1, 2009. *(the Law amended with article 17-1 pursuant to the Law N 1220-VI (1220-17) dd. 01.04.2009)*

**Article 18. Design, construction and reconstruction of objects of the electric power industry**

Design, construction (new construction, development, reconstruction and technical re-equipment) of the objects of the electric power industry is carried out based on construction legislation. Equipment of electric power facilities is carried out by means of an auction. *(part one article 18 with changes introduced pursuant to the Law 741-IV (741-15) dd. 15.05.2003)*

Financing of capital construction, reconstruction and maintenance of objects designated for common needs of electric power enterprises and enterprises of other industries is carried out at expense of customers (owners) and users of such objects.

If for electricity supply any networks (objects) which shall become an integral part of existing networks (objects) need to be constructed (reconstructed), such construction is carried out according to technical conditions issued by enterprises of the electric power industry at the expense or by efforts of the customers (owners) and users of the said objects with their further transfer into
the balance of electric power enterprises and reimbursement of expenses for their construction in the amount and pursuant to the procedure as stipulated by the Cabinet of Ministers of Ukraine. (article 18 amended with part pursuant to the Law N 800-VI (800-17) dd. 25.12.2008)

In case of construction or reconstruction of buildings, roads, bridges, other objects any works connected to arrangement or relocation of air and underground power networks, heat networks and other electric power facilities are carried out by customers ordering construction or reconstruction works according to approved project and design estimates and requirements of respective regulations and under supervision of owners of buildings or power networks.

Article 19. Security regime for objects of the electric power industry

Security at particularly important objects of the electric power industry list of which shall be determined by central executive bodies responsible for management in the electric power industry and approved by the Cabinet of Ministers of Ukraine is provided by departmental paramilitary security service in collaboration with special units of other departments.

Security at other objects of the electric power industry is provided pursuant to the legislation of Ukraine.

The objects of the electric power industry have special access regime.

The departmental paramilitary security service at the objects of the electric power industry is equipped with firearms and special self-defense means. Use of firearms and special self-defense means is regulated by the legislation of Ukraine.

The departmental paramilitary security service is provided with a uniform at the expense of the electric power enterprises.

Restriction as provided by the legislation of Ukraine as to use of land are applied to the protection zone of the objects of the electric power industry and of other particularly important objects of the electric power industry.

Nuclear power plants are protected pursuant to the Law of Ukraine “On use of nuclear power and radiation safety” (39/95-VR) and the Law of Ukraine “On physical protection of nuclear facilities, materials, waste and other sources of nuclear radiation” (2064-14). (part seven article 19 with changes introduced pursuant to the Law N 747-IV (747-15) dd. 15.05.2003)
Article 19-1. Establishment of a special security regime for restricted and controlled areas of hydro power facilities

The territory of restricted and controlled areas of hydro power facilities shall have a special security regime.

Access of third parties and all transport means to such territory is allowed only pursuant to the procedure as determined by the owner of the hydro power facilities or a body authorized by it.

Any works in the restricted area of hydro power facilities are executed by third parties according to the procedure as approved by the Cabinet of Ministers of Ukraine, and in the control area of hydro power facilities – according to the procedure as stipulated by the owner of the hydro power facilities or a body authorized by it.

Security for the restricted or controlled areas of hydro power facilities is provided by the departmental paramilitary security service. The restricted area of hydro power facilities has special (internal facility and pass control) regime.

Peculiarities of the regime in the restricted and control areas of hydro power facilities is determined by the Cabinet of Ministers of Ukraine.

Provisions of this Article are not applied to small hydro power plants. Subjects of small hydro power industry shall ensure any necessary security measures for small hydro power plants and adjacent territories. *(article 19-1 amended with part six pursuant to the Law N 601-VI (601-17) dd. 25.09.2008)*

*(the Law amended with Article 19-1 pursuant to the Law N 1330-IV (1330-15) dd. 25.11.2003)*

Article 20. Environmental protection

Power industry enterprises are obliged to adhere to requirements of the legislation as to environmental protection, are liable for its violation and shall take technical and organizational measures directed at reduction of harmful effect of the objects of the electric power industry on the environment.

In case of violation of environmental protection legislation the decision on limitation, temporary prohibition (suspension) or termination of activity of power plants, main and interstate power networks is made by the Cabinet of Ministers of Ukraine.
Decision on restriction, temporary prohibition (suspension) or termination of activity of other power industry objects shall be made by local executive and self-government authorities and specially authorized executive bodies in the sphere of environmental protection within limits of their powers as determined by the legislation of Ukraine.

In order to ensure safety of the population resident in the area of location of the electric power industry objects special sanitary and protections zones are established, size and procedure of use for which is determined in regulatory legal acts and designs for such objects approved pursuant to the stipulated procedure.

Any kind of economic activity in sanitary and protection zones allowed by the regime of their use can be exercised only upon approval of the owner of the object of the electric power industry or a body authorized by it.

In order to prevent technogenic or natural emergencies due to cease of electricity supply for consumers ecological electricity supply shield shall be stipulated for them. *(article 20 amended with part six pursuant to the Law N 982-IV (982-15) dd. 19.06.2003)*

Ecological electricity supply shield by non-payment or partial payment for consumed electricity by consumers having such shield is financed out of the state or local budgets and respective income sources of such consumers. The Cabinet of Ministers of Ukraine shall approve the procedure for making a list of consumers and their equipment for which ecological electricity supply shield shall be established. *(article 20 amended with part seven pursuant to the Law N 982-IV (982-15) dd. 19.06.2003; with changes introduced pursuant to the Law N 309-VI (309-17) dd. 03.06.2008) (as to loss of effect of part seven article 20 see the Laws  N 489-V (489-16) dd. 19.12.2006, N 107-VI (107-17) dd. 28.12.2007 – paragraph about loss of effect is recognized as unconstitutional pursuant to the Decision of the Constitutional Court N 10-rp/2008 (v010p710-08) dd. 22.05.2008)*

**Article 21. Peculiarities of work conditions in the electric power industry**

Enterprises, institutions and organization of the electric power industry are obliged to ensure employment of highly qualified personnel and its further training, as well as guarantee it reliable social security.

Employees ensuring production processes in the electric power industry are obliged to undergo special training and knowledge assessment (attestation) pursuant to the legislation, including regulatory and legal acts of the Ministry of Energy of Ukraine, other ministries and departments.
List of such professions and positions shall be approved by the Ministry of Energy of Ukraine and agreed with the State labour protection committee of Ukraine.

Employees of the electric power industry without respective training shall not be authorized to work.

Expenses for training and retraining of personnel, maintenance of specialized educational and training and industry coordination centers shall be put to the gross expenditures of the production and turnover.

The knowledge assessment (attestation) of the personnel is carried out at the expense of the owners of the objects of the electric power industry.

Employees of main professions working at enterprises of the electric power industry are authorized for a bonus to the tariff rate or salary for uninterrupted service in the electric power industry pursuant to the procedure as approved by the Cabinet of Ministers of Ukraine with putting of expenses to the gross expenditure of the production and turnover. The personnel of energy facilities, exposed to radiation, heat or electromagnetic emissions or any other harmful and dangerous factors, is subject to special medical examination and obligatory insurance at the expense of the enterprises.

Jobs for employment of invalids at the enterprises of the electric power industry are created at the rate of four percent of the general personnel number employed at the non-industrial production.

**Article 22. Strikes at the electric power industry enterprises**

Strikes at the enterprises of the electric power industry are prohibited in cases if they can lead to violation of the integrity of the joint energy system of Ukraine or heat supply within the autumn and winter time.

**Article 23. Energy supply in state of emergency and special periods**

In case of imposing of an emergency state pursuant to the Law of Ukraine “On emergency state” (2501-12) all enterprises, institutions or organizations of the electric power industry located in areas where the emergency state has been imposed are obliged to execute instruction of the au-
authorities taking emergency measures in the respective area as to energy supply for consumers ir-
respectively terms of concluded agreements.

In case of imposing of special periods subjects of the electric power industry shall act pursuant to
the Law of Ukraine “On mobilization training and mobilization” (3543-12), Provisions on mo-
bilization training of the national economy of Ukraine and regulatory and legal acts of the central
executive authorities responsible for management in the electric power industry which regulate
functioning of the electric power industry within conditions of the special period.

Article 24. Rights, obligations and liability
of energy suppliers

(name of article 24 in the version of the Law N 982-IV 982-15) dd. 19.06.2003)

Energy suppliers shall agree with respective consumer the size of the ecological electricity supply
shield which shall be approved by the State inspection for energy supervision over electricity and
heat consumption regime. If the consumer and the energy supplier cannot agree on the size of the
ecological electricity supply shield final decision shall be made by the State inspection for energy
supervision over electricity and heat consumption regime. (article 24 amended with part one pur-
suant to the Law N 982-IV (982-15) dd. 19.06.2003)

If the consumer does not pay in whole for the consumed energy, the energy supplier is entitled to
limit energy consumption at the level of the ecological electricity supply shield or, if not provided,
to stop supply of the electricity to the consumer. (article 24 amended with part two pursuant to the
Law N 982-IV (982-15) dd. 19.06.2003)

Procedure for limitation of electricity supply to consumers at the level of the ecological electricity supply
shield or complete stop of electricity supply (93-2004-p) is determined by the Cabinet of Ministers of
Ukraine. (article 24 amended with part three pursuant to the Law N 982-IV (982-15) dd. 19.06.2003)

The energy suppliers are entitled to reimbursement of electricity value unpaid by the consumer
which has been supplied to it at the level of the ecological electricity supply shield at the expenses
of the state or local budgets. (article 24 amended with part four pursuant to the Law N 982-IV
(982-15) dd. 19.06.2003)

The energy suppliers are obliged to ensure safe supply of the electricity pursuant to the terms of
licenses and contracts.
The energy suppliers supplying electricity in the designated area are not entitled to refuse conclusion of contracts for electricity supply with consumers located in such area, except for cases there is no technical possibility. In case of reasoned refusal the energy supplier is obliged to inform about it the licensing authority (licensor). If for creation of technical possibility for electricity supply construction (reconstruction) of networks (objects) which shall become an integral part of already existing facilities is necessary, such construction can be carried out pursuant to technical conditions issued by the enterprises of the electric power industry at the expense or by efforts of the customers (owners) and users of such objects with their further transfer to the balance of the enterprises of the electric power industry and reimbursement of expenses for their construction (reconstruction) in amount and pursuant to the procedure as determined by the Cabinet of Ministers of Ukraine. *(part of article 24 in the version of the Laws N 1821-III (1821-14 ) dd. 22.06.2000, N 800-VI 800-17)dd. 25.12.2008)*

The energy suppliers using for energy transmission their own networks are obliged to ensure equal access to such networks for all economic entities which obtained pursuant to established procedure a license for exercise of respective activity and concluded contract for energy transmission. The energy suppliers using for energy transmission their own networks are not entitled to refuse access to such networks for any economic entity producing electricity out of alternative energy sources. The energy suppliers using for energy transmission their own networks shall provide in their investment programs expenses for connection of electric power industry objects which produce electricity out of alternative energy sources. *(part seven article 24 with changes introduced pursuant to the Law N 1220-VI 1220-17) dd. 01.04.2009)*

The energy suppliers exercising their activity in designated area shall be liable for violation of terms and rules of exercise of licensed activity taking into account improper settlements with wholesale electricity supplier and with economic entity which transmits electricity belonging to the energy supplier if such electricity is supplied through networks being not in its ownership *(part of article 24 in the version of the Law N 1821-III (1821-14) dd. 22.06.2000).*

The energy suppliers having as their part co-generation units shall supply energy first of all to the territory of the licensed activity exercise.

The energy suppliers shall be liable to the consumers of electricity for breaks in electricity supply due to fault of the energy supplier in amount of double value of the not supplied electricity (pursuant to terms of electricity use contracts). *(part ten of article 24 with changes introduced pursuant to the Law N 2706-IV (2706-15)dd. 23.06.2005)*

In case of supply of electricity parameters of which are beyond indexes stated in the contract for electricity use, the energy supplier shall be liable in the amount of 25% of value of such electricity.
The energy supplier shall not be liable for material damage incurred by the consumer or third parties due to stop or limitation of electricity supply made pursuant to the established procedure (article 24 amended with part twelve pursuant to the Law N 982-IV (982-15) dd. 19.06.2003).

In case the energy supplier which supplies the electricity in the designated area violates Rules and Conditions of licensed activity on electricity supply or any other obligations provided by this Law taking into account obligations as to protection of the electricity consumers’ rights and settlements for purchased by the energy supplier electricity as well as with economic entity transmitting the electricity belonging to the energy supplier the National commission on regulation of the electric power industry of Ukraine imposes for such energy supplier following sanctions:

- warning;
- penalty;
- appointment of an interim manager (administration);
- suspension of the license for exercise of economic activity on electricity supply in the respective area;
- annulment of the license for exercise of economic activity on electricity supply in the respective area.

(article 24 amended with part pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)

Article 25. **Rights of the electricity consumers**

Energy consumer has the right to:

Connection to the electric network provided adherence to rules of electricity use;

Choice of an electricity supplier;

Obtaining of information as to quality of electricity, price, payment procedure, terms and regimes of its consumption;
Receipt of electricity with quality characteristics according to state standards;

Reimbursement of losses incurred due to violation of its rights according to the legislation;
Reimbursement of losses connected to construction (reconstruction) by it of networks (buildings) pursuant to technical conditions issued by enterprises of the electric power industry in the amount and pursuant to the procedure as determined by the Cabinet of Ministers of Ukraine (part one article 25 amended with paragraph seven pursuant to the Law N 800-VI (800-17) dd. 25.12.2008)

Protection of electricity consumers’ rights and mechanisms for protection of their rights is regulated by this Law, the Laws of Ukraine “On consumers’ rights protection” (1023-12), “On economic competition protection” (2210-14), “On energy efficiency” (74/94-VR), other regulatory and legal acts. (part two article 25 with changes introduced pursuant to the Law N 1294-IV (1294-15) dd. 20.11.2003)

Article 26. Obligations and liability of energy consumers

Energy consumption is possible only based on a contract with an energy supplier.

Energy consumers are obliged to adhere to requirements of normative and technical documents and the energy supply contract.

Safe operation of consumer’s energy equipment and their proper technical condition shall be ensured by the consumer itself.

The energy consumer shall be liable for violation of terms of the contract with the energy supplier and rules for use of electricity and heat energy as well as execution of instructions of state inspections for energy supervision over electricity and heat energy use regimes pursuant to the legislation of Ukraine. Rules for use of the electricity and heat energy (1357-99-p, 1198-2007-p) for population are approved by the Cabinet of Ministers of Ukraine.

All consumers (except for population, vocational-technical schools and higher education establishments with I-IV accreditation level being in state or municipal ownership) by consumption of electricity over contractual volume within accounting period shall pay to the energy supplier double price for the difference between the actually consumed and the contractual volume. (part five article 26 with changes introduced pursuant to the Laws N 1158-IV (1158-15) dd. 11.09.2003, N 2229-IV (2229-15) dd. 14.12.2004, N 2706-IV (2706-15) dd. 23.06.2005)

If the contractual capacity volume is exceeded, consumers (except for population, vocational-
technical schools and higher education establishments with I-IV accreditation level being in state or municipal ownership) shall pay to the energy supplier double price for the difference between the highest capacity volume recorded within accounting period and the contractual capacity volume. *(part six article 26 with changes introduced pursuant to the Laws N 1158-IV (1158-15) dd. 11.09.2003, N 2229-IV (2229-15) dd. 14.12.2004, N 2706-IV (2706-15) dd. 23.06.2005)*

Consumer receiving electricity from a supplier which exercises the economic activity on electricity supply in designated area shall transfer payments for it only to the current account with special use regime of the energy supplier. In case the consumer pays in other form and/or to other accounts such payments are not considered as payment for consumed electricity. *(article 26 amended with part pursuant to the Law N 1821-III (1821-14) dd. 22.06.2000)*

In case of partial payment for consumer electricity the consumer shall limit its electricity consumption to the level of the ecological shield or stop it completely if there is no such shield. *(article 26 amended with part pursuant to the Law N 982-IV (982-15) dd. 19.06.2003)*

The consumer shall ensure free access for authorized representatives of the energy supplier, enterprise transmitting the electricity to its electric equipment in order to control electricity consumption as well as to disconnect or limit the consumption pursuant to the established procedure. If the consumer denies access for such representatives to its electricity equipment, officials of the consumer shall be liable pursuant to the legislation. *(article 26 amended with part pursuant to the Law N 982-IV (982-15) dd. 19.06.2003)*

**Article 27. Liability for violation of the electric power industry legislation**

Violations in the sphere of the electric power industry entail stipulated by the legislation of Ukraine civil, administrative and criminal liability.

Violations in the sphere of the electric power industry are:

Theft of electricity or heat energy, unauthorized connection to objects of the electric power industry and consumption of energy without accounting units; *(paragraph two part two article 27 with changes introduced pursuant to the Laws N 2598-IV (2598-15) dd. 31.05.2005, N 2706-IV (2706-15) dd. 23.06.2005)*;

Damage of accounting units;
Dismantling and damage of objects of the electric power industry, theft of property of such objects;

Hindering of state energy supervision and execution of works connected to maintenance of objects of the electric power industry; (paragraph five part two article 27 in the version of the Law N 2706-IV (2706-15) dd. 23.06.2005)

Violation of security rules for power networks;

Violation of rules for energy use;

Acts of violence hindering operative personnel and officials of the objects of the electric power industry to execute their duties;

Failure to supply energy to consumers which do not violate their obligations towards energy suppliers (paragraph nine part two article 27 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005).

Economic entities are liable for violations in the sphere of the electric power industry:

Non-provision of information or provision of misleading information as required by licenses for production, transmission or supply of electricity and by regulatory legal acts regulating issues of functioning of the joint energy system of Ukraine and consumption of energy – penalty in amount of up to one thousand tax free allowances;

Avoidance of execution of or delayed execution of decisions or instructions of the National commission on regulation of the electric power industry of Ukraine, the State inspection on operation of electric power plants and networks, the State inspection on energy control over consumption regimes for electric and heat energy and violation of license conditions – penalty in amount of up to five thousand tax free allowances.

The National commission on regulation of the electric power industry, state inspectors on operation of electric power plants and networks, state inspectors on energy control over consumption regimes for electric and heat energy based on inspection protocol executed according to the established procedure, provided violations envisaged by this article, issue within limits of their competence resolutions for economic entities on imposing of penalties pursuant to established form. Actions as to imposing of penalty can be appealed against in court proceedings.

Amounts of penalties shall be transferred to the State budget of Ukraine.
Sanctions provided by part eight article 24, part three, four and five of the article 26 and part three of this article shall be applied in procedure (1312-99-p) established by the Cabinet of Ministers of Ukraine. (part seven article 27 in the version of the Law N 1821-III (1821-14) dd. 22.06.2000)

Citizens and officials shall bear administrative liability for avoidance of execution or delayed execution of instructions of the State inspection on energy control over consumption regimes for electricity and heat regimes in form of a penalty in amount of up to five tax free allowances according to the procedure as established by the legislation. (part eight article 27 with changes introduced pursuant to the Law N 2706-IV (2706-15) dd. 23.06.2005)

The legislation of Ukraine can determine liability for other types of violations in the sphere of the electric power industry.

Use of objects of the electric power industry for purposes contradicting with interests of human and state security or which violates public order is prohibited. In case of repeated violation of these conditions enterprises, institutions and organizations of the electric power industry are entitled to cease use of services of objects of the electric power industry pursuant to stipulated procedure.

Methods for calculation of damages incurred by the energy supplier due to theft of electricity (122-2006-p) shall be determined by the Cabinet of Ministers of Ukraine (Article 27 amended with part eleven pursuant to the Law N 2598-IV (2598-15) dd. 31.05.2005.)
Section V

INTERNATIONAL COLLABORATION

Article 28. International collaboration

Subjects of the electric power industry participate in the international scientific and technical, foreign economic and other forms of international collaboration pursuant to state programs, international treaties and legislation of Ukraine.

Article 29. International treaties

If any international treaty party to which is Ukraine stipulates other rules than such provided by the legislation of Ukraine on electric power industry, rules of the international treaty shall be applied.

Article 30. Peculiarities of electricity export

In order to export electricity energy suppliers shall purchase necessary volume of it on the wholesale electricity market of Ukraine at wholesale prices.

Access to capacities of interstate power networks of Ukraine for export of electricity is provided at auction terms. The auction for access to transmission capacities of interstate power networks of Ukraine for a term not exceeding one year is carried out by the subject of the electric power industry which transmits electricity through interstate power networks of Ukraine. Subjects of the electric power industry which have license for electricity supply, are members of the wholesale electricity market of Ukraine, do not have debts in payment for electricity purchased at the wholesale electricity market of Ukraine participate at the auction. The auction is carried out at least once a month provided availability of free capacities in the interstate power networks of Ukraine.

The highest offer shall become winner of the auction. If the winner uses the capacities of the interstate power networks of Ukraine received at the auction within two calendar days on the row in the volume under 70% in average in month, such capacity of the interstate power networks of Ukraine shall be put at the auction again.

The auction procedure shall be approved by the National commission on regulation of the electric power industry of Ukraine and determines:
Financial guarantees of payment for access to the capacities of the interstate power networks of Ukraine;

Volume of capacities of the interstate power networks of Ukraine by different lots;

Initial price for access to capacities of the interstate power networks of Ukraine;

Terms for refusal in granting access to the interstate power networks of Ukraine;

Terms for early termination of access to the interstate power networks of Ukraine in case of non-fulfillment by the energy supplier of terms of the contract on access to the interstate power networks of Ukraine or requirements of the legislation;

other Rules and Conditions.

Funds received in result of the auction on access to the capacities of the interstate power networks of Ukraine shall be distributed pursuant to the procedure determined by the National commission on regulation of the electric power industry of Ukraine.

**Purposes of use of such funds:**

Repayment of restructured debts of the wholesale electricity supplier to energy generating companies and subjects of electric power industry which transmits the electricity through interstate power networks of Ukraine proportionally to the amount of such debts;

Financing of investment programs of the subjects of the electric power industry which transmit the electricity through interstate power networks of Ukraine.

At implementation of projects on construction (new construction, development, reconstruction) of main, interstate power networks of Ukraine, including objects of network infrastructure which allow to increase capacities of the interstate power networks of Ukraine funds received in the result of auctions for access to the additionally created capacities are used in order to ensure payout of respective construction projects.

Electricity intended for export is transmitted based on a contract with the subject of the electric power industry which transmits the electricity through interstate power networks of Ukraine. This subject of the electric power industry shall conclude with the winner of the auction a contract on access to the capacities of the interstate power networks of Ukraine, including technical conditions for ensuring electricity export. Standard form of the contract on access to the capacities of the interstate power networks of Ukraine is approved by the National commission on regulation of the electric power industry of Ukraine.
Subject of the electric power industry of Ukraine transmitting electricity through interstate power networks of Ukraine is obliged to publish information as to capacity of the interstate power networks of Ukraine, their current load, ratio and free capacities of the interstate power networks of Ukraine on monthly basis pursuant to the procedure stipulated by the National commission on regulation of the electric power industry of Ukraine. (section V amended with article 30 pursuant to the Law N 1164-VI (1164-17) dd. 19.03.2009)
Section VI

FINAL PROVISIONS

1. This Law shall come into force as of the date of its publishing.

2. The Cabinet of Ministers shall till December 1, 1997:

- Submit for consideration of the Parliament of Ukraine a draft law of Ukraine on peculiarities of privatization of the state property of enterprises of fuel and energy complex;
- Submit for consideration of the Parliament of Ukraine proposals as to bringing legal acts of Ukraine in compliance with the Law of Ukraine “On electric power industry”;
- Bring decision of the Government of Ukraine in compliance with this Law;
- Ensure revision and annulment by ministries and other central executive bodies of regulatory acts contradicting with this Law.

3. The Cabinet of Ministers of Ukraine shall:

- till January 1, 1998 develop regulatory acts as to establishment of border lines for coal calorific capacity supplied to heat generating plants;
- till June 1, 1998 develop and provide for consideration of the Parliament of Ukraine a draft law of Ukraine on principles of functioning of the wholesale electricity market of Ukraine.

President of Ukraine L. Kuchma

City of Kyiv, October 16, 1997
N 575/97-VR
Appendix 3.

THE GAS MARKET IN UKRAINE

Maryna Ilchuk
THE GAS MARKET IN UKRAINE

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       Natural gas ingress and allocation for 2010

Annex 2. LAW OF UKRAINE “ON THE PRINCIPLES OF NATURAL GAS MARKET FUNCTIONING” ...................... 230
1. GENERAL DESCRIPTION OF THE GAS MARKET IN UKRAINE

Ukraine ranks among the first ten countries of the world in respect of gas consumption. The country highly depends on the imported gas, its share in Ukraine making up ca 75% of the consumed Blue Fuel with only 20 - 25% covered by the domestic gas production. Natural gas is currently the most important energy source in Ukraine as compared with its alternatives (coal, nuclear power) (Picture 1).

![Picture 1. THE STRUCTURE OF PRIMARY ENERGY CONSUMPTION IN UKRAINE](image)

The estimated individual consumption of gas is ca 35%, only about 1% thereof is used by heat power stations (i.e. is converted into a secondary power source), the rest is consumed by the industry (Table1).

<table>
<thead>
<tr>
<th>Consumer category</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>17,1</td>
<td>16,6</td>
</tr>
<tr>
<td>Boiler houses</td>
<td>10,5</td>
<td>10,4</td>
</tr>
<tr>
<td>Budget organisations</td>
<td>0,9</td>
<td>0,8</td>
</tr>
<tr>
<td>Chemical enterprises</td>
<td>7,7</td>
<td>4,8</td>
</tr>
<tr>
<td>Metallurgical works</td>
<td>8,4</td>
<td>5,5</td>
</tr>
<tr>
<td>Cement plants</td>
<td>1,7</td>
<td>0,4</td>
</tr>
<tr>
<td>Heat power stations</td>
<td>1,6</td>
<td>0,4</td>
</tr>
<tr>
<td>Other consumers</td>
<td>11,4</td>
<td>7,6</td>
</tr>
</tbody>
</table>
2. NATURAL GAS MARKET PARTICIPANTS

2.1. Naftogaz of Ukraine

The National Joint-Stock Company “Naftogaz of Ukraine” (hereinafter – Naftogaz of Ukraine NJSC) is a branch leader in the fuel-energy complex and one of the largest Ukrainian companies.

Naftogaz of Ukraine NJSC produces one eighth of the internal gross product in Ukraine providing the tenth of the State budget earnings. The total number of persons employed by the Company’s enterprises is 175 thousand, making up ca 1% of the country’s capable individuals.

Naftogaz of Ukraine NJSC combines the largest gas-and-oil producing enterprises. It holds a monopoly on natural gas transit and its underground storage, as well as on oil piping within the country’s territory.

Naftogaz of Ukraine NJSC is a vertically integrated gas-and-oil company performing the full operation cycle on gas exploration and development, operational and test well-drilling, gas and oil transport and storage, consumer supply of natural and liquefied gas. Over 90% of gas and oil in Ukraine have been produced by NJSC enterprises.

Naftogaz of Ukraine processes gas, oil and condensate at five gas processing NJSC plants (GPP), producing liquefied gas motor fuels and other products. Naftogaz of Ukraine has its own petrol station network.

Presently, the state is the only stockholder of Naftogaz of Ukraine.

The Structure of Naftogaz of Ukraine NJSC (Picture 2):

— Subsidiary companies (SC) – Ukrgasproduction, Ukrtransgaz, Gas of Ukraine.

— Subsidiary enterprises (SE) – Ukrnaftogazkomplekt, Naftogaz VZP, Naukanaftogaz, Gas-Heat, LIKVO.

— State joint-stock companies (SJSC) – Chornomornaftogaz, Ukrspetstransgaz.

— Open joint-stock companies (OJSC) – Ukrnafta, Ukrtransnafta.
Ukraine has considerable proved deposits and potential resources of natural gas. The potential resources thereof make up 5.4 trillion cubic metres.

Gas, condensed gas and oil are produced by the Company’s subsidiaries, such as Ukrgasproduction, Ukrnafta OJSC and Chornomornaftogaz SJSC covering 91% of Ukrainian gas production.

1) Ukrgasproduction SC, the main natural and condensed gas producing company. The company consists of 4 gas-producing enterprises, a well-drilling enterprise and a department for gas and condensed gas processing (2 gas-processing plants).

2) Chornomornaftogaz SJSC performs prospecting and test well-drilling, gas and oil production in the water area of the Black and the Azov Seas, gas piping and storage in the Autonomous Republic of the Crimea.

3) Ukrnafta OJSC is the main oil producing company. The Partnership comprises 25 main production and service departments, including 6 well-drilling enterprises, 6 gas and oil producing departments and 3 gas-processing plants.

**TRANSPORT**

1) Ukrtransgaz SC. The operator of the Ukrainian gas-piping system is Ukrtransgaz SC, a company referring to Naftogaz of Ukraine NJSC. It covers the full-scale transportation and storage of natural gas within the territory of Ukraine (except for the Autonomous
Republic of the Crimea), consumer supply, transit supply of Russian gas to European countries and to Turkey (ca 80%), maintenance and construction of gas transmission system units. The affiliated company is comprised of 18 main production and service departments, including 6 enterprises operating high pressure gas pipe-lines. The company transports yearly 50-60 thousand million m3 of natural gas to Ukrainian consumers and 110-120 thousand million m3 as transit to Western and Central European countries.

2) Ukrtransnafta OJSC. Supplies oil to the country’s refineries as well as provides transit for Russian and Kazakh oil exported to other European countries. The company comprises three subsidiaries: Transdnieper oil-trunk pipelines, Southern oil-trunk Pipelines and “Druzhba” Oil-trunk pipelines.

3) Ukrspetstransgaz SJSC

The Company provides services on delivery of cliquified gas in special gas tanks from producer plants to consumers within the country and abroad.

**ALLOCATION AND MARKETING**

Gas of Ukraine SC. The Company sells natural and liquefied gas in the territory of Ukraine to individuals, public utility companies, budget organizations as well as to industrial consumers, energy-producing companies and other business entities; it coordinates the activities of gas supply and gasification companies and manages the development and operation of gas distribution networks.

Gas distribution via low-pressure gas pipelines is a natural monopoly representing a unified technical and technological complex of national importance. Gas of Ukraine SC controls the use of public property and ensures the unified technical policy.

**PRODUCTION MANAGEMENT**

1) Ukrnaftogazkomplekt SE. The company delivers equipment, components and expendable materials with further supporting service for Naftogaz subsidiaries.

2) Naukanaftogaz SE provides scientific management of the branch. Its subsidiaries are the UkrNIIgas and NDIAS Ukrtransgas institutes, the Information Analysis Center for Geological and Geophysical Research in the Gas and Oil Branch, and the Meteorological Center.
3) LIKVO SE. The militarized rescue (gas) service LIKVO develops and implements a set of engineering measures to prevent and eliminate the emergency cases such as gas and oil water inflow or open oil gushers.

According to the new law “On the Principles of the Natural Gas Market Operation”\(^1\), the structure of Naftogas NJSC will be changed in order to plan the company’s functions regarding transport, allocation, production and supply of natural gas.

### 2.2. Oblgaz companies

*(Gas supply and gasification companies)*

There are 42 gas supply and gasification companies providing natural gas supply and transportation to ultimate consumers. They exist in the form of OJSC. Oblgas companies had been privatized in the middle 90s (Table 2). Private Oblgas companies are not owners of gas-distributing pipelines – they operate them on lease terms.

The low pressure gas-distributing pipelines system is a natural monopoly forming the unique technical and technological complex of national importance. The state declared it not subject to privatization, and thereby transferred it into use to gas supply agencies. By order of Naftogaz of Ukraine NJSC, Gas of Ukraine SE participates in administration of Oblgas companies via contributing the work of supervisory boards and auditing committees.

Oblgaz companies provide the following services:

- Natural gas supply to individuals, industrial, public utility companies and other gas consumers;
- Natural gas transportation and allocation through distributing pipelines;
- Preparation and provision of specifications for consumer access to municipal gas pipelines as well as coordination and feasibility analysis of gasification projects;
- Development of documents for gasification under pressure up to 1.2 MPa, electroprotection against corrosion, and commercial gas accounting points;

\(^1\) *Law of Ukraine “On the Principles of the Natural Gas Market Operation” d.d 08.07.2010 № 2467-VI*
— Repair and check of residential and industrial gas meters;
— Scheduled and unscheduled inspection of gas accounting points of legal and natural persons etc.

Table 2. THE OWNERSHIP STRUCTURE OF CERTAIN GAS-DISTRIBUTING COMPANIES AS OF JULY 2009

<table>
<thead>
<tr>
<th>Company name</th>
<th>Share of Naftogaz of Ukraine</th>
<th>Other shareholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinnitsagaz</td>
<td>47.059%</td>
<td>50.923% structures of D. Firtash</td>
</tr>
<tr>
<td>Volyngaz</td>
<td>23.416%</td>
<td>57.368% structures of D. Firtash</td>
</tr>
<tr>
<td>Gadyachgaz</td>
<td>51.000%</td>
<td>40.65% Sodruzhestvo Concern</td>
</tr>
<tr>
<td>Dnepropetrovskgaz</td>
<td>51.000%</td>
<td>24.9% Gaztek; 10.5% PolyInvestGroup LLC (structure of V. Yakubenko and V.Ukrainskiy)</td>
</tr>
<tr>
<td>Dneprogaz</td>
<td>1.200%</td>
<td>81.15% structures of V. Wechselberg</td>
</tr>
<tr>
<td>Donetskgaz</td>
<td>0.000%</td>
<td>60.25% structures of V. Wechselberg; 10.82% Kobyzycha LLC</td>
</tr>
<tr>
<td>Donetskoblgaz</td>
<td>38.280%</td>
<td>29.01% Sheludchenko family (Ex-Head of Naftogaz of Ukraine); 7.56% NPF Kemot LLC; 7.24% Ponomarenko A.B.</td>
</tr>
<tr>
<td>Zhytomyrgaz</td>
<td>15.860%</td>
<td>35.1% Gaztek (structure of V. Yakubenko and V.Ukrainskiy); 24.3% Khmelitskgaz (controlled by Gaztek); 8.54% Lin Yu.F.; 8.39% Naumenko E.A.; 8.39% Shum M.A.</td>
</tr>
<tr>
<td>Zakarpatgaz</td>
<td>6.340%</td>
<td>60.4693% structures of D. Firtash; 9.36% Tizhuk S.V. (Ex-Head of Zakarpatgaz); 9.77% Girya G.D.</td>
</tr>
<tr>
<td>Zaporozhngaz</td>
<td>50%+1 share</td>
<td>24.7599% Gaztek (structure of V. Yakubenko and V.Ukrainskiy); 14.5% Rosukrenergo AG (structure of D. Firtash)</td>
</tr>
<tr>
<td>Ivano-Frankivskgaz</td>
<td>50%+1 share</td>
<td>35.3% structures of D. Firtash</td>
</tr>
<tr>
<td>Kievoblgaz</td>
<td>33.240%</td>
<td>13.6998% Mashdyrbud LLC (I. Voronin – President of Ukrgazenergo, D. Firtash Group); 20.4695% Omega-Kapital LLC (affiliated with I. Voronin and D. Firtash Group); 15.036% Transit-invest LLC (KUA Magistr)</td>
</tr>
<tr>
<td>Company</td>
<td>Ownership</td>
<td>Sources</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Kirovogradgaz</td>
<td>51.000%</td>
<td>13.9418% Finlex-Invest (structure of D. Firtash)</td>
</tr>
<tr>
<td>Korostyshevugaz</td>
<td>22.000%</td>
<td>31.7% Bidenko V.A.; 3.6% Kuz'menko V.S.</td>
</tr>
<tr>
<td>Kremenchuggaz</td>
<td>51.000%</td>
<td>40.985% Sodruzhestvo Group</td>
</tr>
<tr>
<td>Krivorozhnagaz</td>
<td>7.010%</td>
<td>51.03% structures affiliated with Gaztek</td>
</tr>
<tr>
<td>Krymugaz</td>
<td>64.44%</td>
<td>no data</td>
</tr>
<tr>
<td></td>
<td>(including 15.5% Chornomornaftogaz SJSC)</td>
<td></td>
</tr>
<tr>
<td>Lvovugaz</td>
<td>27.550%</td>
<td>65.2624% structures of D. Firtash</td>
</tr>
<tr>
<td>Luganskgaz</td>
<td>51.000%</td>
<td>23.91% Stock Holder CJSC; 16.74% Oxident LLC (presumably structures of D. Firtash); 5.3% portfolio investors</td>
</tr>
<tr>
<td>Lubnyugaz</td>
<td>51.000%</td>
<td>10.486% Tarashevskiy V.S.; 11.379% Kharkhan N.D.</td>
</tr>
<tr>
<td>Makeevgaz</td>
<td>1.620%</td>
<td>24.19% Sheludchenko V.I.; 24.39% Makarova O.V.; 16.389% a resident natural person; 15.353% Ligagaz-2005 LLC</td>
</tr>
<tr>
<td>Mariupolugaz</td>
<td>0.000%</td>
<td>76.883% Margaz LLC</td>
</tr>
<tr>
<td>Melitopolugaz</td>
<td>50.000%</td>
<td>40.822% Finlex-Invest LLC (structure of D. Firtash)</td>
</tr>
<tr>
<td>Nikolayevgaz</td>
<td>50.000%</td>
<td>25.221% Gaztek (structure of V. Yakubenko and V.Ukrainskiy)</td>
</tr>
<tr>
<td>Odessagaz</td>
<td>0.000%</td>
<td>57.696% Odessa Municipal SO Respekt; 11.562 % PIF Industrialny KUA Yug-Invest</td>
</tr>
<tr>
<td>Ternopolugaz</td>
<td>29.963%</td>
<td>42.266% Bobrivets family; 10.09% Gaztek</td>
</tr>
<tr>
<td>Tismenitsagaz</td>
<td>51.000%</td>
<td>24.9% Khmelnitskgaz (control of Gaztek); 11.871% KUA Aktiv Plus</td>
</tr>
<tr>
<td>Umangagaz</td>
<td>40.300%</td>
<td>38.27% natural persons</td>
</tr>
<tr>
<td>Kharkovgaz</td>
<td>17.700%</td>
<td>70.62% structures of V. Wechselberg; 8.45% Megabank</td>
</tr>
<tr>
<td>Kharkovyorgaz</td>
<td>9.910%</td>
<td>60.49% structures of V. Wechselberg</td>
</tr>
<tr>
<td>Khersonagaz</td>
<td>20.827%</td>
<td>54.234% Sodruzhestvo Group</td>
</tr>
<tr>
<td>Khmelnitskgaz</td>
<td>25.998%</td>
<td>50.00% Gaztek</td>
</tr>
<tr>
<td>Chernovtsyagaz</td>
<td>20.393%</td>
<td>64.486% structures of D. Firtash</td>
</tr>
<tr>
<td>Cherkassyagaz</td>
<td>51.000%</td>
<td>14.981% Finlex-Invest (structure of D. Firtash); 15.811% Interregional trade company</td>
</tr>
</tbody>
</table>

Appendix 3. THE GAS MARKET IN UKRAINE
Chernigovgaz | 38.250% | 52.429% structures of D. Firtash
Shepetovkagaz | 27.041% | 32.7261% Podillyagaz PC; 14.938% Turinskiy V.V. (President)
Kozovagaz | 0% | 52.46% Stolyarskiy V.Ya. (President); 20.73% a resident natural person

3. NATIONAL COMMISSION FOR ELECTRIC POWER SECTOR REGULATION. LICENSING

The National Commission on Energy Industry Regulation (hereinafter – NERC) is the central executive body having a special status. It regulates the activities of natural monopoly entities in the fields of electric power industry, gas, oil and oil products market.

The following are the main objectives of NERC:

— Participation in forming and implementing the unified state policy in the field of development and operation of the wholesale electric power market as well as gas, oil and oil products markets;

— State regulation of natural monopolies' activities in electric power generation, and the gas and oil complex;

— Promoting competition in the field of electric power production, supply of electric energy and gas, gas and oil extraction, storage and sale of gas, oil and oil products;

— Providing price and tariff policy in electric power industry and the gas and oil complex;

— Providing effective operation of trade markets by balancing public interests with those of natural monopoly entities and consumers of respective goods and services;

— Protecting consumer rights regarding electric and heat power, gas, oil and oil products;

— Coordinating the activities of state structures in regulating energy resources markets;

— Licensing business entities for production and supply of electric energy; natural gas storage in volumes exceeding the level of those established by terms and regulations (Licensing terms).
LICENSING. Pursuant to Article 9 of the Law “On Licensing of Certain Types of Economic Activities”, the following activities are subject to licensing:

— Transportation of natural and oil gas via pipelines and allocation thereof;
— Natural gas supply at regulated and non-regulated tariffs;
— Natural gas storage in the volumes exceeding the level established by licensing terms.

The National Commission for electric power sector regulation (hereinafter – NERC) is empowered to

— License economic activities in the natural gas market;
— Approve licensing terms for implementation of certain types of economic activities in the natural gas market.

The following are the types of economic activities subject to licensing by NERC:

1) Transportation of oil and oil products via main pipelines, transportation of natural and oil gas via pipelines and allocation thereof;
2) Natural gas supply at a non-regulated tariff;
3) Natural gas supply at a regulated tariff;
4) Gas storage in the volumes exceeding the level established by licensing terms;
5) Sale of self-produced natural gas in the volumes exceeding the level established by licensing term at purchase price to business entities.

Each activity type is licensed separately in the order established by NERC.

Licensing is subject to payment, which shall be entered in the State Budget of Ukraine in the amount and order determined by the Cabinet of Ministers of Ukraine.

A license for a certain economic activity type is issued for the period established by the Cabinet of Ministers of Ukraine, which shall not be less than three years.

2 Law of Ukraine “On Licensing of Certain Types of Economic Activities” d.d 01.06.2000 № 1775-III
3 P.3 Art.4 of the Law of Ukraine “On the Principles of the Natural Gas Market Operation”
4. GAS TURNOVER

4.1. Import and export

According to the Budgeted Balance Sheet on the Intake and Allocation of Natural Gas in Ukraine for 2010 (hereinafter – the Balance) (Annex 1) 27000 thousand million m³ of gas shall be imported for Naftogaz of Ukraine NJSC. Export from the resource of the subsidiary company “Ukr-gazdobycha” is expected in the volume of 9 thousand million m³.

Since 2007 the only gas importer to Ukraine is Russia. Until 2007 Ukriane imported natural gas from Turkmenistan. Now the country cannot buy gas from Central Asia directly because the presently available volumes of gas which can be exported from the respective countries have already been contracted by Russia for a long term.

According to the effective agreements Ukraine has no right to re-export Russian gas. The export commitments of the National Joint-Stock Company “Naftogaz of Ukraine” are fulfilled against the volumes of natural gas produced by its subsidiary company “Ukr-gazdobycha” in the volumes approved by the Cabinet of Ministers of Ukraine.

There is no official information regarding the countries to which Ukraine exports its gas. One of them is presumably Poland, as the annual report of the Polish National Gas and Oil Company “PGNiG” shows increase in the yearly supply volumes from Ukraine from 1.2 million m³ to 5 million m³ in 2009.

4.2. Gas production

As for self-production of gas in the independent Ukraine, it has not exceeded 20 thousand million cubes per year. At present, gas in the country is produced by three companies of Naftogaz of Ukraine. Ukr-gazdobycha produces ca 75% of the aforesaid volume; Ukrnafta ca 17 %, respectively, and Chernomornaftogaz – 4%.

The main gas production area is Dnieper-Donetsk region possessing around 80% of the total gas volume produced in the country. The country’s largest gas reserves are Shebelinskoye and Khres-tishchenskoye. The Black Sea Region reserves concentrated in the Northern area of the Crimea (Glibovskoye, Dzhankoyskoye etc.) only supply the demand of the Autonomous Republic of the Crimea. Gas reserves in the Carpathian region are mostly exhausted. The major ones which still supply gas – Rudkovskoye, Bilche-Volitskoye, Dashavskoye, and Bogorodchansky – are presently used as gasproof shelters.
The latest official data regarding the remaining gas reserves are only available for the year 2005. As of 01 January 2005, such reserves make up 1023.8 thousand million m³.

Changes in the European gas market due to the tendency of conversion to shale gas considerably reduce the importance of Ukrainian pipelines, as various gas production new sources (new pipelines, liquefied gas as well as European shale gas) present an alternative to gas transit via Ukraine. The remaining Ukrainian natural gas reserves alone could meet its gas demands for the next 20 years, thus making the country independent of Russian import. If Ukraine lowers its gas demands, it could even export gas to Europe. In such a way Ukraine could gain a privileged access to the European market due to its geographical proximity and the production capacity of its pipelines. There is information about considerable shale gas reserves in the West of Ukraine. To develop new gas fields and modernize the pipelines, Ukraine certainly requires large investments.

Gas production in the country had undergone a long-term recession. In 1997-2000 the production level became stable at the level of 18 000 million m³ per year. It has grown during recent four years having eventually reached the level of 20 thousand 237.9 million m³ in 2009. Therefore, the volumes of natural gas production in the territory of Ukraine in 2009 increased by 1.3% as compared with 2008.

Considering the dynamics of producing gas fields, as well as the projected changes in the explored hydrocarbon raw-stock reserves, gas production volumes have been calculated for the projected period (Picture 3).

**Picture 3. GAS PRODUCTION DYNAMICS FOR THE PROJECTED PERIOD**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>24.4</td>
<td>20.5</td>
<td>23.2</td>
<td>25.0</td>
<td>26.1</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Gas volumes produced in Ukraine in August 2010 made up 1 644.3 million m³, which is by 4.8 % (or by 83.8 million m³) less than in August 2009. In particular, Naftogaz of Ukraine NJSC group produced 1 512.3 million m³ of gas, which is by 62.6 million m³ less than in 2009.
Within 8 months of 2010 gas production amounted to 13 333.1 million m³, which is by 6.1% (or by 869.5 thousand tons) less than within 8 months in 2009. Thus, the gas volumes produced by Naftogaz of Ukraine NJSC amount to 12 262.2 million m³, which is by 727.5 million m³ less than in 2009 (Picture 4).

Now all economic entities with the public share in the statutory fund directly or indirectly exceeding 50% must sell natural gas produced in Ukraine immediately via Naftogaz of Ukraine NJSC. Therefore, Naftogaz is now the only company, which wholly allocates natural gas produced in Ukraine.

At present the national gas producing branch in Ukraine undergoes decline, having become unprofitable. Thus, Naftogaz Ukraine NJSC purchases fuel from its subsidiary company “Ukrgazdobycha” at 380 UAH ($48 at the rate of NBU) per 1 thousand m³. At the same time, this year’s price for imported gas amounts to $234 per 1 thousand m³. In the recent three years the purchase price for Ukrainian companies has hardly changed, while the price for imported gas averagely increased by $50 per 1 thousand m³. Therefore, the fuel which the state buys for individual consumption is five times as cheap as Russian fuel.

Today 12 percent of the Ukrainian gas market are not owned by the state. However, this is an official statement. Unofficially, experts say that most wells have been used by private structures.

The projects feasibility studies prepared by Naftogas of Ukraine NJSC stipulate that natural gas production outside Ukraine will be commenced by Ukrainian companies in 2010 and will go up to 11.6 thousand million m³ per year in 2030 (Picture 5).

---

4 P.2.1 Decree of the Cabinet of Ministers of Ukraine “On Consumer Natural Gas Supply “ d.d 27 December 2001 № 1729
4.3. Gas Transit

Due to its favourable geographical position the gas transmission system of Ukraine is a kind of “Gas Bridge” between gas-producing regions in Russia and Central Asia and the European consumers. European countries receive over 80% of Russian natural gas via Ukrainian territory.

Over the recent years Naftogaz NJSC has transported 70-76 thousand million m3 of gas to Ukrainian consumers, with more than 120 thousand million m3 of gas transited to countries of Western and Central Europe, respectively.

At present there is a technical possibility to increase gas transit to Central and Western European countries up to 142 thousand million m3 per year without extending the gas transmission system.

According to the current data, during 6 months of 2010 the volume of natural gas transit through the territory of Ukraine made up 79 591.71 million m3, which by 26.08% exceeds the level reached in the similar period of 2009 (63 129.37 million m3) (Table 3).
Table 3. TRANSIT VOLUMES OF NATURAL GAS THROUGH THE TERRITORY OF UKRAINE IN JUNE AND DURING 6 MONTHS OF 2009/2010, thousand million m³

<table>
<thead>
<tr>
<th></th>
<th>June</th>
<th>6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of tank gas, inter alia:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9 798.14</td>
<td>9 128.00</td>
</tr>
<tr>
<td>1. Gas transport to Ukrainian customers</td>
<td>1 574.22</td>
<td>1 840.16</td>
</tr>
<tr>
<td>2. Total gas transport through the territory of Ukraine</td>
<td>8 135.14</td>
<td>7 236.16</td>
</tr>
<tr>
<td>– to Western Europe, in all</td>
<td>7 985.97</td>
<td>7 063.03</td>
</tr>
<tr>
<td>– to CIS countries, in all</td>
<td>149.17</td>
<td>173.13</td>
</tr>
<tr>
<td>3. Internal transportation in Ukraine</td>
<td>88.78</td>
<td>51.68</td>
</tr>
</tbody>
</table>
5. GAS TRANSMISSION SYSTEM (GTS)

The gas transmission system of Ukraine (hereinafter referred to as the GTS) (Picture 6), which is operated by Naftogaz of Ukraine NJSC (Ukrtransgas SE), consists of:

— 37.6 thousand km of main pipelines\(^5\) with different purpose and productivity, including 14 thousand km of pipelines with the largest diameter (1020–1420 mm);

— 246.1 thousand km of gas distribution network with pressure up to 1.2 MPa (the required gas supply conditions in this network are provided by ca 51 thousand of gas regulation points);

— 73 compressor stations with 110 compressor units and 703 gas-pumping aggregates with the total capacity of 5.4 thousand MW;

— 1607 gas distribution stations;

— 13 underground gas storages (hereinafter referred to as UGS) with the Europe’s largest (after Russia) active gas volume of more than 32 thousand million m\(^3\), or 20% of the overall European active capacity (Picture 7). According to these indices, it ranks second in Europe after Russia. As of 1st July 2010, the underground gas storages contain 16.5 thousand million m\(^3\) of gas.

The overall length of Ukrainian pipelines is 283.2 thousand km.

The respective maximum input of natural gas is 290 thousand million m\(^3\) with the output of 175 thousand million m\(^3\), including 140 thousand million m\(^3\) towards Western and Central European countries.

\(^5\) According to part 4 Art. 7 of the Law of Ukraine № 192/96-BP d.d 15.05.1996 “On pipeline transport”, privatization of state main-pipeline transport enterprises is forbidden.
Table 4 illustrates the capacities of all export and main import gas pipelines of Ukraine (excluding the gas mains from Byelorussia).
Transit pipelines Urengoy-Uzhgorod, Jamburg-Western Border and Orenburg-Western Border are also import gas pipelines supplying gas to the territory of Ukraine.

The Balkan pipeline receives gas from two gas mains:

- Ananyev-Tiraspol-Izmail (one run\(^6\))
- Shebelinka-Krivoy Rog-Izmail (two output runs)

The Ananyev compressor station receives gas through Yelets-Kremenchug-Krivoy Rog and Kremenchug-Ananyev pipelines.

The aforesaid mains in the South of Ukraine supply gas both for export and to the internal market. Therefore, complete filling of export pipelines in the winter is conditioned by simultaneous operation of all respective pipelines.

**Table 4. EXPORT AND IMPORT GAS PIPELINES OF UKRAINE**

<table>
<thead>
<tr>
<th>Gas pipeline Name (gas-measuring input-output station in Ukraine)</th>
<th>Capacity, thousand million m(^3)/h</th>
<th>Number of runs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenburg-Western Border (Sokhranovka-Uzhgorod)</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>Urengoy-Uzhgorod (Sudzha-Uzhgorod)</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Jamburg-Western Border (Sudzha-Uzhgorod)</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Dolina-Uzhgorod (Uzhgorod)</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Komarno-Drozdovichi (Drozdovichi)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Uzhgorod-Beregovo (Beregovo)</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Khust-Satu-Mare (Tekovo)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ananyev-Tiraspol-Izmail (Orlovka)</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Shebelinka-Krivoy Rog-Izmail (Orlovka)</td>
<td>24</td>
<td>3-2</td>
</tr>
<tr>
<td><strong>All export capacities:</strong></td>
<td><strong>143</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Main import pipelines:**

| Yelets-Kremenchug-Krivoy Rog (Sudzha)                         | 31                                   | 1              |

---

6 *Main elements of the main pipeline are pipes welded into continuous run forming the pipeline itself.*
6. PRICES AND PRICE FORMATION

The limiting (upper) levels of natural gas prices for all consumer categories are approved by NERC in accordance with regulatory documents – application methods approved by NERC. These methods provide for addition of prospecting, transmission and gas supply costs to overall production costs. Naftogaz of Ukraine NJSC sends to NERC prices and reasoning thereof required for further revision of tariffs, as well as for revision of tariffs for gas transmission via main pipelines and for natural gas supply.

The CMU Decree d.d 27.12.2001 N 1729 “On provision of consumers with natural gas” stipulates that the natural gas requirement shall be satisfied for:

1) Individuals and religious organizations from the natural gas resource which is formed via sale of the total self-produced natural gas volume by enterprises with the state share in the authorized fund exceeding 50 percent to Naftogaz of Ukraine NJSC;

2) Institutions and organizations which are financed from state or local budgets, economic entities producing heat power, including block (modular) boiler houses, boiler rooms placed on roofs or attached ones – from imported natural gas resources of Naftogaz of Ukraine NJSC;

3) provision of technological and other production needs for Ukrtransgaz SE of Naftogaz Ukraine NJSC, economic entities licensed for economic activities regarding allocation of natural and oil gas – from imported natural gas resources by Naftogaz of Ukraine NJSC;

4) gas-producing enterprises with respect to production and processing costs and for individual needs, as well as liquified gas production from volumes of self-produced natural gas.

<table>
<thead>
<tr>
<th>Route</th>
<th>Distance</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yelets-Kurs-Dikan’ka (Sudzha)</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Kursk-Kiev (Sudzha)</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Ostrogozhsk-Shebelinka (Valuyki)</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Urengoy-Novopskov (Pisarevka)</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Petrovsk-Novopskov (Pisarevka)</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Orenburg-Novopskov (Sokhranovka)</td>
<td>18</td>
<td>1</td>
</tr>
</tbody>
</table>
At present there are both regulated and non-regulated natural gas prices for Ukrainian consumers.

The main factor of state regulation is establishment of stately regulated prices and tariffs for services provided by monopolists.

6.1. Gas supply at regulated tariff

Gas supply at regulated tariff is a type of economic activities on immediate gas supply to consumers provided by a licensee pursuant to Licensing terms under established price formation rules.

NERC establishes:

— Natural gas price limiting levels for institutions and organizations which are financed from the state and local budgets as well as natural gas price limiting levels for industrial consumers or other economic entities upon endorsement by the Ministry of Economy;

— Natural gas retail prices for individuals;

— Tariffs for transmission of natural gas, oil, oil products, ammonia, and ethylene products supplied to Ukrainian consumers via main pipelines;

— Tariffs for natural gas pumping, storage and extraction;

— Tariffs for natural gas allocation and supply.

As of 1st August 2010 the following are the effective natural gas retail prices for individuals (Table 5):

---

7 Gas consumer is a legal entity (religious organization) (excluding volumes used for production and commercial activities), an institution/organisation financed from the state/ local budget or a natural person (individuals), obtaining gas under a gas supply agreement and using it for individual needs (n.1.3 Decrees of NERC d.d 13 January 2010 № 11 «On approval of Licensing terms for exercising economic activities on natural gas supply at Regulated Tariff»).

8 Ibidem

9 According to item 8 of Addendum to the Decree of CMU d.d 25.12.1996 N 1548 "On establishment of powers for executive authorities and executive bodies of city councils regarding price (tariff) regulation"

10 Decree of NERC № 812 d.d 13.07.2010 “On approval of retail prices for natural gas used for individual consumption...”
According to the Decree of the Cabinet of Ministers № 619 d.d. 8 June 1996, unless gas metres are available, gas shall be calculated with regard to the natural gas consumption norm for individuals (for those living in flats or houses with gas stoves and hot water supply, the established monthly norm is 9.8 m³ of gas per person).

Table 5. NATURAL GAS PRICES FOR INDIVIDUALS

<table>
<thead>
<tr>
<th>№</th>
<th>Price differentiation</th>
<th>Price per 1 m³ inclusive of VAT, kop.</th>
</tr>
</thead>
</table>
| 1  | Provided that the annual natural gas consumption does not exceed 2500 m³:  
— with gas metres available | 72.54 |
|    | — without gas metres ¹¹ | 79.80 |
| 2  | Provided that the annual natural gas consumption does not exceed 6000 m³:  
— with gas metres available | 109.80 |
|    | — without gas metres | 120.78 |
| 3  | Provided that the annual natural gas consumption does not exceed 12000 m³:  
— with gas metres available | 224.82 |
|    | — without gas metres | 247.32 |
| 4  | Provided that the annual natural gas consumption does not exceed 12000 m³:  
— with gas metres available | 268.56 |
|    | — without gas metres | 295.41 |

Natural gas for religious organizations (with exclusion of bulks used for production and commercial activities) is sold at retail prices approved for individuals by NERC.

NERC sets prices for self-produced gas pursuant to the Decree of the Cabinet of Ministers № 41 d.d. 6 February 2008. The whole bulk of gas produced by enterprises with the state share exceeding 50 percent as well as the gas produced under joint activity agreements with such enterprises are meant to satisfy the demands of individuals according to current legislation.

On 27 July 2010 NERC established the following price levels for self-produced gas (net of VAT): Ukrgazvydobuvannya SE – 350 UAH per 1 thousand m³, Chornomornaftogas SJSC – 456 UAH per 1 thousand m³, Uknafta OJSC¹² – 458 UAH per 1 thousand m³, the effective date being 1st August 2010.

¹¹ According to the Decree of the Cabinet of Ministers of Ukraine № 619 d.d. 8 June 1996, unless gas metres are available, gas shall be calculated with regard to the natural gas consumption norm for individuals (for those living in flats or houses with gas stoves and hot water supply, the established monthly norm is 9.8 m³ of gas per person).

¹² For Uknafta the price was raised by 2.2 times from 210 up to 458 UAH per 1 thousand m³ (net of VAT).
6.2. Gas supply at non-regulated tariff

Gas supply at non-regulated tariff is a type of economic activities on immediate gas supply to consumers\(^{13}\) made by a licensee under the Licensing terms under contract principles at free prices and under competitive conditions\(^{14}\).

Therefore, the licensee sets at its own discretion the price for natural gas, which is not to exceed the upper price level for natural gas established by NERC. A non-regulated tariff shall be introduced in order to create a certain competitive environment.

The upper price level for natural gas for institutions and organizations financed from the state and local budgets, industrial consumers and other economic entities equals to 2187.20 UAH per 1000 m\(^3\).\(^{15}\)

The upper natural gas price level for economic entities producing heat power equals to 1309.20 UAH per 1000 m\(^3\).\(^{16}\)

Natural gas is supplied to industrial consumers and other economic entities in the volumes which do not exceed the standards set in the Licensing terms.

Such supplies cannot be made within the territory where the licensee is carrying out supplies at regulated tariff.

Economic activities on gas supply at non-regulated tariff are only possible, inter alia, on condition that the licensee has previously concluded sale and purchase agreements (contracts) with gas owners, as well as agreements on transmission of natural and oil gas through main pipelines and agreements on transmission of natural and oil gas through distributing pipelines.

---

\(^{13}\) Gas consumer is a legal entity or an individual entrepreneur which receives gas under a gas supply agreement and uses it for individual consumption as fuel, raw stock and/or for production and processing needs (item 1.3 of the Decree of NERC d.d 13 January 2010 № 10 “On approval of Licensing terms for economic activities on natural gas supply at non-regulated tariff”).

\(^{14}\) Ibidem

\(^{15}\) Decree of NERC d.d 30 July 2010 № 1009 “On approval of the upper price level for natural gas for industrial consumers and other economic entities” and № 1008 “On approval of the upper price level for natural gas for institutions and organizations financed from the state and local budgets”

The price net of VAT, a charge to the established tariff for natural gas in the form of target bidding, transport fees, allocation and supply of natural gas at regulated tariff.

\(^{16}\) Decree of NERC d.d 13 July 2010 № 813 “On approval of the upper price level for natural gas for economic entities producing heat power, including block (modular) boiler houses, boiler rooms placed on roofs or attached ones”.
In April 2010 NERC issued a license to Gazprom Sbyt Ukraine for supply of 7.5 thousand million m³ of gas per year at non-regulated tariff for the term of 5 years.

In February 2010 NERC issued licenses for economic activities on natural gas supply at non-regulated tariff to the following Oblgaz companies: Chernovtsygaz (up to 100 million m³ of supplied gas yearly), Chernigovgaz (up to 150 million m³), Ivano-Frankovskgaz (up to 100 million m³), Volynsgaz (up to 100 million m³), Zakarpatgaz (up to 150 million m³) and Lvovgaz (up to 250 million m³). The licenses were issued for 5 years’ term. Oblgaz companies will be able to supply gas to other Ukrainian consumers, except for territories where each of the Oblgaz companies distributes and supplies natural and oil gas at regulated tariff.

7. SUPPLY SCHEME

For more than 15 years gas had been supplied to Ukraine via dealers. The first was Igor Bakay firm “Republic” in 1994. Within two years it was ousted by the Firm Itera. The latter made room for the Hungarian company Eural TG in 2003. In 2005 gas from Central Asia was supplied to Ukraine by RosUkrEnergo.

As of 2006, the actual scheme for supply of imported gas to Ukraine was the following: the mixture of Russian and Central Asian gas was purchased from Turkmenistan, Uzbekistan and Kasakhstan by Gazprom Export, the daughter company of Gazprom, upon which the gas was immediately resold by RosUkrEnergo (50% – Gazprom, the other 50% – Ukrainian businessmen Firtash and Fursin). RosUkrEnergo was an exclusive supplier of gas to Ukraine. RosUkrEnergo resold gas to Ukrgazenergo at the Ukrainian border (50% – RosUkrEnergo, 50% – Naftogaz). UkrGazEnergo sold it further on immediately to industrial enterprises and to Naftogaz. Finally, the gas (both imported and self-produced) went to traders, regional distributing companies (Oblgaz), industrial enterprises and individuals via Naftogaz of Ukraine NJSC and its daughter companies.

In January 2009 Naftogaz of Ukraine NJSC and Gazprom signed a direct contract by which RosUkrEnergo was excluded from the scheme of gas supply to Ukraine and beyond its borders. This was done upon agreement with Gazprom which owns 50% of RosUkrEnergo.

According to the current gas market model, Naftogaz of Ukraine NJSC combines the functions of transporting and supplying gas (Picture 8). Transportation is in charge of its “daughter”, Ukrtransgaz SE, which is the only operator of GTS (gas transmission system) and GUS (gas underground storage), whereas the supplier is Gaz of Ukraine SE, another NJSC structural subdivision. Gas of Ukraine possesses the monopoly right to sell gas to individuals and enterprises of Teplokom-
Gazprom Sbyt Ukraine LLC also purchases natural gas from Naftogaz of Ukraine NJSC for its further sale to Ukrainian enterprises in the volume not exceeding 25% of all imported natural gas intended for industrial consumers of Ukraine.

On 16 July 2010 the President signed the Law “On the Principles of the Natural Gas Market Operation”. The Law provides for novelties which are expected to cardinaly change the current scheme of the gas market organisation in Ukraine (Picture 9). One of the major novelties is the changed structure of Naftogaz of Ukraine NJSC which devises the company’s functions on gas transportation, allocation, production and supply. Particularly, the Law definitely stipulates that the company which is entrusted with one of these functions cannot be given another of the two remaining functions. Implementation of the new scheme will be two-staged, the first stage beginning on 1 January 2012 and the second one on 1 January 2015, respectively.
8. BASIC AGREEMENTS

On 12 March 2008 Russia (Gazprom OJSC) and Ukraine (Naftogaz NJSC) signed the Understanding on development of relations in the gas sphere. Picture 10 provides the gas supply scheme according to this Understanding. According to its provisions, the price for gas amounted to $179.5 per 1000 m³. The gas seller was represented by a trader, the RosUkrEnergo Company or Gazprom OJSC. The gas buyer at the Ukrainian border was immediately Naftogaz of Ukraine NJSC, which cleared and sold the Central Asian gas on the territory of Ukraine without right to re-export. Therefore, the intermediary UkrGazEnergo CJSC disappeared from the Ukrainian market.

The purchase volume for Central Asian gas was minimum 49.8 thousand million m³ per year, and for gas originating from Russian it was up to 1.4 thousand million m³ per year, the transit rate for Russian natural gas through the Ukrainian territory to countries of Europe remained unchanged, $1.7 per 1000 m³ per 100 km.
On 19 January 2009 Gazprom and Naftogaz signed the Sales and Purchase on natural gas in 2009-2019. It replaced the preceding Agreement dated 12 March 2008 completely. According to its provisions, Ukraine undertakes to purchase gas from Russia in the volume of 40 thousand million m³ in 2009, and starting from 2010 – 52 thousand million m³ yearly. Ukraine has no right to re-export gas. The Buyer also undertakes to conclude with Gazprom Sbyt Ukraine OJSC a long-term agreement for gas supply to be effective from 01.01.2009 till 31.12.2019 in the volume, making up yearly 25 percent of the entire gas import for sale to industrial consumers in Ukraine. Thereby, RosUkrEnergo is excluded from the preceding scheme as an intermediary.

On 21 April 2010 Gazprom OJSC and Naftogaz of Ukraine HJSC signed the Addendum to the Gas Supply Contract dated 19 January 2009, according to which the Ukrainian party was given a reduced gas price, which equaled the value of the reduced export duty for gas supply to Ukraine.

The duty has been applied from 1 April 2010 and is effective till 2019 inclusive. With the con-
tract gas price below 333.33 dollars per 1 thousand m³, the duty will amount to 0. If the price will equal or exceed 333.33 dollars per thousand m³, the duty will be determined as the difference between 30% of contract price and the sum of 100 dollars. I.e., if the price is 333.33 dollars per 1 thousand m³ or above, the allowance will amount to 100 dollars. But if the gas price is lower than 333.33 dollars per 1 thousand m³, the allowance will be 30 percent from that price.

If the volume of gas supply exceeds 30 thousand million m³ in 2010 and 40 thousand million m³ per year, starting from 2011 the actual gas price will not be subject to reduction. On volumes of gas exceeding these indices there will be imposed a common 30% tax for export of gas from Russia.

The allowance in the new price formula means that Ukraine will buy natural gas in the second quarter of 2010 at the price of 233 dollars per thousand m³, in the third quarter the price will be 245-255 dollars and in the fourth – 255-265 dollars.

However, considering that Ukraine has already imported nearly 6.5 thousand million m³ of natural gas in the first quarter of 2010 for 305 dollars, the average price for imported natural gas in 2010 will make up ca. 260 dollars which by 24% exceeds the average price of 210 dollars in 2009. Moreover, according to the aforesaid Addendum the obligatory volume of gas to be purchased changed in 2010 from 33.75 thousand million m³ to 36.5 thousand million m³.

9. REFORMS IN THE GAS SECTOR

Reforming of the gas sector of Ukraine is a complex of systemic reforms, which require long-term cooperation of the Parliament, the government, NERC, Naftogaz of Ukraine NJSC, other involved ministries and departments. The complex of systemic reforms must cover, in particular:

— Amendments to current regulatory legal acts;

— Drafting and approval of new legislative acts and by-laws;

— Structural changes in Naftogaz of Ukraine NJSC;

— Reforming the gas prices and tariffs for all gas market participants.

A new model of gas market organization is one of the basic requirements of the International Monetary Fund, the European Commission and other international organizations, for Ukraine to obtain financing in form of credits, including for modernization of the GTS.
In March 2009 the government of Ukraine, the European Commission, the European Bank for Reconstruction and Development, the European Investment Bank and the World Bank signed in Brussels a general declaration on the results of the international donor conference on modernization of Ukrainian GTS. The text of declaration underlines that the government of Ukraine is ready to provide independence for the operator of Ukrainian gas transmission system, and will let it work on the commercial base. According to international financial standards the Government promises to provide transparency and openness of the creditor intended for GTS modernization.

The Ukrainian government has undertaken to develop by the end of 2009 the Program of reforming the gas sector for implementation of measures on reforming the gas sector in 2010-2011, which would comply with the contexts of the Association Agreement between the EU and Ukraine and on Ukraine’s entry in the Energy Community.

To improve cooperation, Ukraine concluded a number of bilateral agreements with such states as: Kazakhstan, Turkey, Russian Federation, Azerbaijan and other states. Besides, the respective relations are also regulated in the Agreement on partnership and cooperation between Ukraine and European communities and member states thereof.

9.1. Economic reforms program for 2010-2014

On 3 June 2010 the President of Ukraine Viktor Yanukovich presented the Program of Economic Reforms in Ukraine for the next 5 years (hereinafter – the Program). The Program is meant as the basic strategy for cardinal changes in the country’s economy which, in the President’s opinion, is going to bring Ukraine in the top twenty economies of the world within ten years. The document sets forth the new power’s vision of existing problems, their roots and ways to eliminate them.

According to provisions of the Program, it is necessary to restructure Naftogaz NJSC in order to reform the gas branch structure and to attract investments in each and every segment thereof, particularly:

— to allocate the main transport network and storages (Ukrtransgaz) from Naftogaz NJSC as a single independent company with 100% remaining in state ownership;

— to provide for equal access to the main transport network of Ukraine for extraneous organizations, with transit tariffs of the natural monopoly regulated by the state which would not only allow to modernize the gas transmission system, but also make its operation more effective.
One more triggered discussion is concerning the schemes for gas distribution networks usage – via long-term commissioning or privatization (on condition of state regulation for tariffs).

The Program provides for abolition of reduced gas prices for certain branches, introduction of blanket tariffs for natural gas applied within certain categories of individuals. Therefore, it is planned that tariffs for transmission, storage and supply shall be established separately. Moreover, the level of tariffs must cover all costs, including the investment component.

It is also provided for abolition of the requirement to gas producing companies to sell gas to Naftogaz of Ukraine NJSC at regulated prices.

For non-contracted natural gas volumes to be sold at free prices, the Program of economic reforms provides for setting up special electronic platforms.

9.2. Law of Ukraine “On the Principles of the Natural Gas Market Functioning”


The pattern for the new Law was the EU legislation on gas market regulation, namely the Directive 2003/55/EU and Regulation (EU) 1775/2005, which define the model of gas market organization in the EU. The main purpose of implementing reforms in the EU gas branch is the openness of gas markets in EU member states, which means designing a competitive gas market model providing for legally approved equal opportunities for:

— consumers to freely select natural gas suppliers;

— operators to gain free access to the network infrastructure, including main and local pipelines and UGS.

Particularly, the most important principles of natural gas market organization, which are set forth in the law and comply with European standards, are the following:

1. Opening of the gas market.

The declared principle of opening the market for each and every operator is the main condition for
establishing real competition in the Ukrainian gas market. Opening the market means the guarantee of right for consumers to freely select gas suppliers, which requires equal opportunities to gain access to the market for both companies existing in the market and for those which recently appeared therein. Thus, the only restraint for access to the market is the licensing system which admits such types of activities as transportation, distribution, supply, storage, or production based on objective, transparent and non-discriminating access criteria determined by the regulator.

2. *Separation of functions regarding transportation, distribution, supply and storage of natural gas.*

A transit operator is not allowed to perform activities regarding production and supply of natural gas, while a distribution operator is deprived of the opportunity to enter in the markets of natural gas production, supply, storage and transportation.

If a transit or a distribution operator is a constituent part of a vertically integrated company, it must be legally and organizationally separated from other types of such company’s activities, which are not directly connected with transportation and/or allocation of natural gas. Independent activities of such operators should be achieved via prohibition of holding more than one office in the structure of a vertically integrated company and by means of making independent decisions regarding current financial and other business operations.

3. *Equal opportunities for third parties to gain access to GTS and UGS in Ukraine.*

According to Article 7 of the Law, entities operating in the natural gas market have equal rights of access to the integrated gas transmission system of Ukraine. This norm is one of the main instruments for demonopolization of gas markets.

The only criteria, which allow the network infrastructure operators to deny gas market entities access to the network, are absence of free transmission capacity and/or the customer’s violation of requirements for access to the network infrastructure.


Although there has been a regulator in the gas market of Ukraine, – NERC – it has not really been really independent in decision-making because of its indefinite legal status, which allowed executive authorities or the President to directly influence the NERC’s activities. The new Law clearly sets the status of NERC along with its independence principles.
The main functions of NERC are:

- licensing market operators;
- establishing tariffs for using the network infrastructure;
- developing rules for access to the network infrastructure;
- exercising functions of control over fulfillment of the said Law.

However, the Law contains a restriction regarding the seller market for gas-producing companies, as well as their daughter companies and subsidiaries, including those which do not refer to participants of agreements on joint activities. Competition is limited by the current order, according to which all companies producing gas in Ukraine with more than 50% of state share, are obliged to sell gas to Naftogaz. This step might be regarded as the state’s will to reserve low gas prices for individuals for a certain period, in order to smooth over the negative social impact resulting from increase in tariffs.

Owing to implementation of the new Law the current gas market model in form of a state monopoly will apparently become a thing of the past. As a result of the process of vertical division the state monopolist – Naftogaz of Ukraine NJSC – will probably be divided into a number of companies, which will produce, transit, allocate and supply of natural gas. Establishment of the internal gas market will be followed by competition increase in the gas production, allocation and supply areas, including those with participation of foreign companies interested in the relatively large Ukrainian market. At the same time, the operators’ real independence will be followed by market price formation, which will let them make investments on account of their own profit, as well as attract resources on the external capital markets. Establishment of a competitive market model will also considerably advance Ukraine’s cooperation with international organizations regarding tranches of loans for modernization of Ukraine’s GTS which at the moment is in great need of investments.

10. CROSS-SUBSIDIZING

The gas sector of economy has been considerably distorted by various types of cross-subsidizing. Firstly, internal consumption is subsidized at the expense of transit operations. Secondly, considering internal consumption, individuals buy gas at prices which are lower than the net cost and are being subsidized at the expense of industry. Thirdly, besides individuals, public utility companies also pay

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18 Cross-subsidizing is the practice of differentiated gas tariffs according to consumer groups, based on non-economic reallocation the total burden of gas payments. Cross-subsidizing results in reduction of payment burden for one consumer group via increase of payment burden for other consumers.
subsidized prices. Fourthly, gas produced inside the country is mostly sold in the internal market at prices which lag behind the international level and thus further subsidize the internal market.

All these subsidies cause considerable distortions which result in such problems as quite high consumption rates, insufficient investments in the infrastructure as well as uncertainty in future operating environment.

If gas actually costs 100 standard units, and the government lets someone pay 50, it means that someone else must pay 150. In other words, the so-called “cross-subsidizing” takes place.

As a result individuals consume more gas with respect to low tariffs, while industry which has to pay more raises prices for its products which individuals buy. This is why the “cross-subsidizing” produces a converse negative effect.

At present, the net cost of gas in Ukraine amounts to 600 hryvna per thousand m3, which is by 35% more than its transfer price for individuals. Municipal and private households in Ukraine are mostly supplied with self-produced gas. That is, preserving the reduced prices for such consumer categories, Ukraine does not invest in its own production.

This scheme of operation has a negative impact on operation of gas-producing companies, thus leading to underdrawal of funds by NJSC, and less inflow into the state budget, respectively. In recent years the gas sector of Ukrainian economy received less than required capital investments, which resulted in worsening of the situation within the branch: the considerably reduced volume of explorations, less self-production of gas, underfinancing of gas transmission system. This state of things considerably influences the further development of the branch.

This situation may be solved by gradual adjustment of tariffs to cost-effectiveness. Effectiveness of the natural gas market in Ukraine is only possible on condition of full price refund by all consumer categories. Prices for all consumers should wholly recover the costs incurred by gas-producing, gas-transporting and gas-supplying organizations. The consumer in its turn must be aware that any commodities or services should be paid for at its actual price.

Therefore, the existing practice of cross-subsidizing must be completely cancelled. The current support of all population through reduced prices must be replaced with addressed subsidies for low-income individuals financed from the state budget.

Appendix 3. THE GAS MARKET IN UKRAINE
Gas balance is a document indicating the proportion between the gas volume annually transferred to the country and allocation thereof among consumers.

Based on the Balance, Naftogaz of Ukraine NJSC draws up for each following month a (planned) balance of payment for ingress and allocation of natural gas in Ukraine, which is brought to notice of the Ministry of Fuel and Energy, the Ministry of Finance, the Council of Ministers of the Autonomous Republic of the Crimea, regional, Kyiv and Sebastopol city administrations, as well as of NERC minimum 3 days before a month’s beginning.

**PREDICTIVE BALANCE OF NATURAL GAS INGRESS AND ALLOCATION FOR 2010**

<table>
<thead>
<tr>
<th>I. Natural gas resources – in common,</th>
<th>60892</th>
<th>20519</th>
<th>11468</th>
<th>10561</th>
<th>18344</th>
</tr>
</thead>
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<tr>
<td>Including:</td>
<td>20672</td>
<td>5286</td>
<td>5116</td>
<td>5065</td>
<td>5205</td>
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<tr>
<td>1. Gas produced in Ukraine – in common,</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Ukrgazdobycha Subsidiary Enterprise,</em></td>
<td>14750</td>
<td>3798</td>
<td>3626</td>
<td>3585</td>
<td>3741</td>
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<tr>
<td><em>including joint activities</em></td>
<td>91</td>
<td>24</td>
<td>23</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td><em>Ukrneft OJSC,</em></td>
<td>2872</td>
<td>715</td>
<td>717</td>
<td>723</td>
<td>717</td>
</tr>
<tr>
<td><em>including joint activities</em></td>
<td>240</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td><em>Chornomornaftogaz SJSC,</em></td>
<td>1100</td>
<td>273</td>
<td>278</td>
<td>277</td>
<td>272</td>
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<tr>
<td><em>including joint activities</em></td>
<td>189</td>
<td>49</td>
<td>48</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td><em>Other gas-producing companies</em></td>
<td>1950</td>
<td>500</td>
<td>495</td>
<td>480</td>
<td>475</td>
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<tr>
<td>2. Ingress of imported natural gas for Naftogaz of Ukraine NJSC</td>
<td>27000</td>
<td>7000</td>
<td>5530</td>
<td>5496</td>
<td>8974</td>
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### 3. Withdrawal of natural gas from underground storages – in common:

<table>
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<th>13220</th>
<th>8233</th>
<th>822</th>
<th>4165</th>
</tr>
</thead>
</table>

**Including:**

- **Self-produced natural gas of Naftogaz of Ukraine NJSC for individuals – in common:**
  | 5255  | 3421 | 1834 |

**therefrom:**

- **from underground natural gas storages of Ukrtransgaz SE**
  | 4955  | 3260 | 1695 |

**Pumped from resources:**

- **of Ukrtransgaz SE**
  | 3047  | 1352 | 1695 |

- **Ukrneft OJSC**
  | 1908  | 1908 |      |

- **Chernomorneftegaz SJSC (pumped from resources of Chernomorneftegaz SJSC)**
  | 300   | 161  | 139  |

- **Imported natural gas**
  | 7965  | 4812 | 822  | 2331 |

- **Natural gas of Naftogaz of Ukraine NJSC via replacing imported natural gas with self-produced gas or vice versa**
  | 1718  | 722  | 946  |

**Allocation of natural gas – in common:**

<table>
<thead>
<tr>
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<th>11468</th>
<th>10561</th>
<th>18344</th>
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1. In Ukraine – in common:

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<tr>
<th></th>
<th>57113</th>
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<th>10234</th>
<th>8416</th>
<th>17948</th>
</tr>
</thead>
</table>

**Including:**

- **For manufacturing needs – in common:**
  | 6593  | 1858  | 1530  | 1360  | 1845  |

**therefrom:**

- **for Ukrtransgaz SE**
  | 4879  | 1299  | 1199  | 1056  | 1325  |

- **For manufacturing needs of other gas-distributing companies**
  | 888   | 348   | 130   | 105   | 305   |

- **For gas-producing companies – in common:**
  | 826   | 211   | 201   | 199   | 215   |

**therefrom:**

- **Ukrtransgaz SE**
  | 400   | 99    | 100   | 100   | 101   |
- **Ukrneft OJSC**
<p>| 393   | 102   | 94    | 92    | 105   |</p>
<table>
<thead>
<tr>
<th>Company/Service</th>
<th>25</th>
<th>8</th>
<th>5</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Other gas-producing companies</td>
<td>8</td>
<td>2</td>
<td>2</td>
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<td>For production of liquid gas and stable gasoline</td>
<td>163</td>
<td>41</td>
<td>40</td>
<td>41</td>
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<td>for Ukrainian consumers – in common:</td>
<td>50357</td>
<td>18616</td>
<td>8664</td>
<td>7015</td>
<td>16062</td>
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<tr>
<td>therefrom:</td>
<td>17553</td>
<td>7880</td>
<td>2314</td>
<td>1193</td>
<td>6166</td>
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<tr>
<td>Gas of Ukraine SE – in common:</td>
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<td>7652</td>
<td>2226</td>
<td>1151</td>
<td>6020</td>
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<td>including natural gas:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Of Gazdobycha SE</td>
<td>9196</td>
<td>3622</td>
<td>1560</td>
<td>521</td>
<td>3493</td>
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<tr>
<td>Ukrneft OJSC (including joint activities)</td>
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<td>584</td>
<td>597</td>
<td>606</td>
<td>584</td>
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<td>Chernomorneftegaz SJSC</td>
<td>527</td>
<td>186</td>
<td>69</td>
<td>24</td>
<td>248</td>
</tr>
<tr>
<td>Naftogaz of Ukraine NJSC from underground natural gas storages of Ukrtransgaz SE</td>
<td>4955</td>
<td>3260</td>
<td></td>
<td></td>
<td>1695</td>
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<tr>
<td>Chernomorneftegaz SJSC – in common:</td>
<td>504</td>
<td>228</td>
<td>88</td>
<td>42</td>
<td>146</td>
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<tr>
<td>including from Glebovskoye underground natural gas storage</td>
<td>300</td>
<td>161</td>
<td></td>
<td></td>
<td>139</td>
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<td>Budget-financed organizations</td>
<td>704</td>
<td>356</td>
<td>60</td>
<td>22</td>
<td>266</td>
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<tr>
<td>For Teplokommunenergo enterprises and heat electropower stations (for production of heat power for needs of individuals)</td>
<td>8300</td>
<td>3980</td>
<td>800</td>
<td>390</td>
<td>3130</td>
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<td>For industrial consumers – in common:</td>
<td>23800</td>
<td>6400</td>
<td>5490</td>
<td>5410</td>
<td>6500</td>
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<td>including through:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Gas-producing companies of Naftogaz of Ukraine</td>
<td>154</td>
<td>44</td>
<td>34</td>
<td>34</td>
<td>42</td>
</tr>
<tr>
<td>Naftogaz of Ukraine NJSC (imported natural gas)</td>
<td>21591</td>
<td>5829</td>
<td>4935</td>
<td>4869</td>
<td>5958</td>
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<td>2055</td>
<td>527</td>
<td>521</td>
<td>507</td>
<td>500</td>
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</table>
2. Export from resources of Ukrgazdobycha SE

<table>
<thead>
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<th></th>
<th>9</th>
<th>4</th>
<th>1</th>
<th>1</th>
<th>3</th>
</tr>
</thead>
</table>

3. Pumping into natural gas underground storages – in common:

| | 3770 | 1233 | 2144 | 393 |

including:

self-produced natural gas of Naftogaz of Ukraine NJSC – in common:

| | 3449 | 1233 | 2144 | 72 |

including from resources:

of Ukrgazdobycha SE

| | 3149 | 1128 | 1949 | 72 |

Chernomorneftegaz SJSC

| | 300 | 105 | 195 |

Imported natural gas

| | 321 | 321 |

Natural gas of Naftogaz of Ukraine NJSC via replacement

With self-produced gas or vice versa

| | 1718 | 772 | 946 |
Annex 2.

LAW OF UKRAINE
“ON THE PRINCIPLES OF THE NATURAL GAS MARKET OPERATION”

THE LAW OF UKRAINE

On the Principles of the Natural Gas Market Functioning

This Law stipulates legal, economic and organizational principles of the natural gas market functioning.

Section I.

GENERAL PROVISIONS

Article 1. Definition of terms

1. Terms used in this Law shall have following meaning:

1) funds allocation algorithm – procedure for allocation of funds from current accounts by an authorized bank with special use regime without payment orders which is determined by the National commission on electric power of Ukraine;

2) vertical integrated economic entity – a business entity established pursuant to the legislation in order to exercise economic activity on the natural gas market performing at least one function on the natural gas transportation, distribution or storage and at least one function on its supply or production;

3) natural gas owner - a person irrespectively its ownership form and management sphere having ownership rights to the natural gas, including rights established on basis of joint activity agreements;
4) gas production enterprise – an economic entity producing the natural gas on the territory of Ukraine and on continental shelf and/or exceptional (sea) economic zone of Ukraine pursuant to special permit;

5) gas storage enterprise – an economic entity injecting, storing and extracting the natural gas for customers pursuant to license;

6) gas supply enterprise (hereinafter – supplier) – an economic entity supplying pursuant to license the natural gas directly to consumers under concluded agreements;

7) gas distribution enterprise – an economic entity transporting pursuant to license the natural gas through gas distribution networks directly to consumers which owns or uses gas distribution networks and other production facilities and which is responsible for operative and technological management of them;

8) gas distribution networks – production complex consisting of organizationally and technologically interconnected objects designated for distribution of the natural gas from gas distribution stations directly to consumers;

9) gas transportation enterprise – an economic entity transporting pursuant to license the natural gas through main gas pipelines being in its ownership or use and which is responsible for operative and technological management of them;

10) guaranteed supplier – a gas distribution enterprise determined pursuant to procedure stipulated by the Cabinet of Ministers of Ukraine which is not entitled to refuse conclusion of a gas supply agreement with consumers;

11) unified gas transportation system of Ukraine – a production complex consisting of main gas pipelines and gas distribution networks, underground gas storage and other organizationally and technologically interconnected with them objects and constructions designated for the natural gas transportation, distribution and storage;

12) customer – a subject of the natural gas market who based on an agreement orders services on transportation and distribution of the natural gas to consumers, its transit through the territory of Ukraine or its storage in underground storage;

13) qualified consumer – a consumer qualification grade of which corresponds with the grade determined by the National commission on electric power of Ukraine and entitled to buy the natural gas by any supplier;
14) operator of the Unified gas transportation system of Ukraine (hereinafter – operator) – a gas transportation enterprise which is entrusted upon decision of the executive authority responsible for implementation of state policy in oil and gas complex with operative and dispatch management of production, transportation, storage and distribution of the natural gas in order to ensure uninterrupted and accident free gas supply for consumers of Ukraine;

15) operative and technological management – control over functioning of main and distribution gas pipelines, underground storage and other organizationally and technologically interconnected with them objects designated for the natural gas transportation, distribution and storage in order to ensure their constant and effective functioning;

16) underground gas storage – technological complex – an artificially constructed in natural or artificial groove gas storage and technologically connected to it constructions designated for periodical injection, storage and extraction of gas;

17) natural gas household consumer (hereinafter – population) – individuals receiving the natural gas in order to use it for their own household needs, including cooking, warming of water and heating of their houses;

18) natural gas supply – economic activity on the natural gas market subject to licensing and consisting of provision of services and connected to sale of the natural gas directly to the consumers under agreements concluded with them;

19) natural gas, oil gas (associated gas), coalbed gas (methane) and shale gas (hereinafter – the natural gas) – a mineral being mix of hydrocarbon and non-hydrocarbon components in gas-like form under standard conditions (pressure – 760 mm HG and 200C) and being a commercial product;

20) natural gas market – combination of legal relations arising in the process of sale and purchase of the natural gas, provision of services on its transportation, storage, distribution and supply;

21) natural gas distribution – an economic activity on the natural gas market subject to licensing and connected to transportation of the natural gas through gas distribution network in order to deliver it to consumers;

22) consumer – a legal entity or a private entrepreneur receiving the natural gas under
natural gas supply agreement and using it as fuel or raw material;

23) natural gas reserve stock (hereinafter – reserve stock) – volume of the natural gas created by the gas supplier in underground gas storage and used by it for covering deficit of natural gas resources, if any, during its delivery to consumers;

24) natural gas market subject – owner of the natural gas, gas production, gas distribution, gas transportation enterprise (operator), customer, supplier, consumer and other individuals or legal entities relations between which are established under agreements;

25) commercial natural gas – produced natural gas, except for volumes of actual losses and production and technological use of the natural gas during its production, preparation for transportation which shall not exceed determined normative volumes;

26) natural gas transportation – an economic activity on the natural gas market subject to licensing and connected to moving of the natural gas through pipelines for purposes of its further storage, distribution or supply directly to consumers and customers, except for transportation through internal production pipelines (connected network).

Other terms shall be used in the meaning as stated in the Laws of Ukraine “On oil and gas” (2665-14) and “On pipeline transport” (192/96-VR).

**Article 2. Legal framework for functioning of the natural gas market**

Section II.

STATE ADMINISTRATION, REGULATION AND CONTROL IN THE SPHERE OF THE NATURAL GAS MARKET

Article 3. State administration

1. State administration in the sphere of the natural gas market is carried out by the Cabinet of Ministers of Ukraine and central executive authority responsible for implementation of state policy in oil and gas complex within limits of powers as determined by the legislation.

2. Central executive authority responsible for implementation of state policy in oil and gas complex:

   1) ensures implementation of the state policy;

   2) ensures establishment and improvement of relations in the sphere of functioning of the natural gas market;

   3) develops target programs, in particular as to diversification of natural gas supply sources;

   4) carries out state control in the oil and gas industry;

   5) exercises other powers as stipulated by the legislation.

Article 4. State regulation

1. State regulation of activity of the natural gas market subjects, including subjects of natural monopolies and economic entities acting on allied markets, is carried out by the Cabinet of Ministers of Ukraine, the National commission on electric power of Ukraine and central executive authorities within limits of their powers.

2. National commission on electric power of Ukraine while making its decisions follows principles of independence from state authorities, local self-government authorities, their officials and economic entities as well as political parties and other public unions or their bodies.
3. Powers of the National commission on electric power of Ukraine include:

1) state regulation of relations of the natural gas market subjects;

2) licensing of the economic activity on the natural gas market;

3) approval of licensing conditions for exercise of certain economic activity types on the natural gas market;

4) control over adherence by licensees to licensing conditions for exercise of economic activity on the natural gas market according to the legislation and procedure stipulated by the National commission on electric power;

5) approval of procedure for access to the Unified gas transportation system of Ukraine;

6) ensuring implementation of tariff and price policy on the natural gas market;

7) establishment of tariffs for:
   — transportation of natural, oil, and coalbed (methane) gas through main gas pipelines;
   — transportation of natural, oil, and coalbed (methane) gas through distribution pipelines;
   — supply of the natural and coalbed (methane) gas on regulated tariffs;
   — injection, storage and extraction of natural and coalbed (methane) gas;

8) monitoring of licensing activity through obtaining from the natural gas market participants of information, in particular as to prices and tariffs for the natural gas and services subject to regulation pursuant to the legislation, and publishing of the monitoring results;

9) imposing of sanctions pursuant to established procedure upon the natural gas market subjects according to procedure stipulated by this Law;

10) approval of funds allocation algorithm;

11) approval of procedures for:
   — pricing, calculation and establishment of prices for the natural gas for economic entities producing it as stated in Article 10 hereof;
— establishment of retail prices for the natural gas for the population;
— establishment of tariffs for transportation, distribution, supply, injection, storage and extraction of the natural gas;
— control over adherence to licensing conditions;
— development of investment programs;

12) approval of procedure for establishment and review of tariffs for services on transportation, distribution, supply, injection, storage and extraction of the natural gas;

13) approval of Rules for use of the natural gas by legal entities;

14) approval of methodology for establishment of tariffs for services on transportation, distribution, supply, injection, storage and extraction of the natural gas;

15) approval of standard contracts for:

— natural gas sale and purchase (between owners and suppliers of the natural gas);
— natural gas transportation through main gas pipelines;
— natural gas storage (injection, storage, extraction);
— connection to gas networks;
— natural gas distribution;
— natural gas supply on regulated tariffs;

16) setting of restrictions as to combination of activity types by respective natural gas market subjects;

17) determination of compliance with licensing conditions of liquidation, reorganization in form of consolidation, merger, participation in unions as well as acquisition or alienation of more than 10% of shares (stocks, equities) of assets of economic entities;

18) free access to premises, documents and information of the natural gas market objects;

19) approval of the Procedure for compensation of losses incurred by gas supply or gas distribution enterprises due to violation of the Rules for provision of gas supply services to population by consumers, or incurred by consumers of the natural gas due to violation of the Rules for provision of gas supply services to population by gas supply or gas distribution enterprises;

20) ensuring protection of consumer rights on issues connected to tariffs and prices for the
natural gas, safety of its supply, as well as quality of services provided by the subjects of natural monopolies;

21) determination of the consumer qualification grades;

22) stimulation of competition on the natural gas market;

23) other powers provided by the legislation.

Article 5. State supervision (control)

1. State supervision (control) in the sphere of the natural gas market is carried out by the central executive authority responsible for implementation of state policy in oil and gas complex, the National commission on electric power of Ukraine, the central executive authority on standardization, the specially authorized central executive authority on industrial safety, labour protection, the state mining control and state regulation in the sphere of safe handling of explosive materials with industrial designation, specially authorized central executive authority in the sphere of effective use of energy resources and energy efficiency, as well as other state authorities of the state supervision (control) as stipulated by the law within limits of their powers.

2. State supervision (control) on the natural gas market includes:

1) analysis of implementation of state programs for ensuring effective use of the natural gas resources, increase of its production and effective processing;

2) ensuring safe and reliable technical operation of objects of the Unified gas transportation system of Ukraine;

3) evaluation of compliance of work of technological objects of gas production, gas transportation, gas storage, gas distribution and gas consumption enterprises to requirements of technical operation, timeliness of their diagnostics and scheduled repairs;

4) adherence to stipulated natural gas supply, distribution and consumption regimes;

5) maintenance of duly technical condition of systems, assembles and devises for accounting of the natural gas on objects of its production, transportation and storage, as well as on gas processing enterprises;
6) ensuring duly carrying out of construction, installation, putting into operation of the gas using equipment;

7) ensuring effective use of fuel and energy resources by enterprises, institutions and organizations of the Unified gas transportation system of Ukraine irrespectively their ownership form;

8) development of measures directed at protection of the environment and localization of the impact zone of hazardous and dangerous substances discharged during accidents and catastrophes on objects of the oil and gas industry;

9) adherence to licensing conditions pursuant to the Procedure on control over adherence to licensing conditions as approved by the National commission on electric power of Ukraine by economic entities exercising licensed activity on the natural gas market;

10) adherence to tariffs (and their structure) for transportation of the natural and oil gas through main gas pipelines, storage of the natural gas, distribution and supply of the natural, oil and coalbed (methane) gas as stipulated by the National commission on electric power of Ukraine;

11) adherence to stipulated funds allocation algorithm.

The state supervision (control) in the oil and gas industry is carried out pursuant to the requirements of the Law of Ukraine “On main principles of the state supervision (control) in the sphere of economic activity” (877-16).

**Article 6. Licensing of the economic activity on the natural gas market**

1. Activity connected with transportation and distribution through pipelines, supply on regulated and not regulated tariffs, storage of the natural gas in volumes exceeding the amount as stipulated by the licensing conditions, sale at procurement prices to economic entities as determined in Article 10 hereof of the natural gas of own production in volumes exceeding the amount as stipulated by the licensing conditions is subject to licensing.

2. License for exercising activity connected to transportation and distribution through pipelines, supply on regulated and not regulated tariffs, storage of the natural gas in volumes exceeding the
amount as stipulated by the licensing conditions, sale at procurement prices to economic entities
as determined in Article 10 hereof of the natural gas of own production in volumes exceeding the
amount as stipulated by the licensing conditions is issued by the National commission on electric
power of Ukraine.

3. Single license is issued for each type of activity pursuant to procedure as determined by the Na-
tional commission on electric power of Ukraine.

4. The amount of the license issuance fee and terms of its transfer to the State budget of Ukraine are
determined by the Cabinet of Ministers of Ukraine.

5. The validity term of the license for exercising of a certain economic activity type is determined by
the Cabinet of Ministers of Ukraine, but shall be at least three years.

Article 7.  Access to the Unified gas transportation
system of Ukraine

1. Subjects of the natural gas market shall have equal access rights to the Unified gas transportation
system of Ukraine.

2. By adherence to requirements of the physical and chemical indexes, technical norms and safety
standards pursuant to the legislation combustible gases of any origin can be inserted and trans-
ported through the gas transportation system without any technical hindrances.

3. Gas transportation, gas distribution and gas production enterprises during transportation and dis-
tribution of the natural gas through pipelines being in their legal ownership or use are obliged to
grant access on contractual basis to such networks for the natural gas market subjects upon their
application.

4. Operator shall yearly develop and approve a projected annual balance on supply and distribution
of the natural gas in Ukraine taking into account the capacity of the gas transportation system
with specially authorized central executive authority responsible for implementation of state pol-
icy in oil and gas complex pursuant to the stipulated procedure and submit it for approval to the
Cabinet of Ministers of Ukraine.

5. Based on the projected annual balance on supply and distribution of the natural gas in Ukraine
as well as on information received from suppliers on their resources and projected volumes of the
natural gas sale, the operator pursuant to the procedure stipulated by the central executive authority responsible for implementation of state policy in oil and gas complex shall develop a budgeted (account) balance on the natural gas supply and distribution for each following month and shall execute and approve a planned distribution of the supply of the natural gas to consumers.

6. The operator shall balance the volumes of the natural gas and functions of the operative and dispatch management of the gas transportation system on transportation, storage and distribution of the natural gas in order to take respective measures influencing the correlation of the natural gas volumes put into the gas transportation system and the natural gas volumes distributed and supplied to consumers which would ensure such pressure in the Unified gas transportation system of Ukraine being of no threat to safety and operational efficiency of the system, uninterrupted and accident free gas supply to consumer of Ukraine.

7. The operator and gas transportation and gas distribution enterprises are entitled to refuse access to the Unified gas transportation system of Ukraine in case:

1) there are no free transfer capacities;

2) violation by the customer of requirements as to access to the Unified gas transportation system of Ukraine;

3) temporary restriction of access to networks provided in the Procedure on access to the Unified gas transportation system of Ukraine. Availability or lack of free transfer capacities is determined by the operator, gas transportation or gas distribution enterprise under methodology as approved by the central executive authority responsible for implementation of state policy in oil and gas complex.

8. In case the operator and subjects of the natural gas market transporting or distributing the natural gas through gas pipelines refuse to grant access to networks for the customer they shall notify about this the customer and the National commission on electric power of Ukraine not later than within 10 business days with indication of reasons for such refusal.
Article 8. Powers of state authorities and local self-government authorities in relations with the natural gas market subjects

1. The powers of the state authorities and local self-government authorities in relations with the natural gas market subjects pursuant to the legislation comprise:

1) ensuring efficient use of natural, labor and financial resources;

2) ensuring participation at elaboration and approval of plans for prospective development of gas pipelines on the respective territories;

3) support of gas distribution network development;

4) ensuring participation in formation and approval of lists of enterprises which in periods of seasonal cooling shall be transferred to reserve fuel types;

5) ensuring adherence to requirements of the legislation of Ukraine on environmental protection;

2. The state authorities and local self-government authorities are not entitled to interfere into the processes of regulation of the regimes for supply, transportation, storage, distribution, consumption and ceasing of consumption of the natural gas.
Section III.

ORGANIZATIONAL PRINCIPLES FOR FUNCTIONING OF THE NATURAL GAS MARKET

Article 9. Principles of functioning of the natural gas market

1. The natural gas market functions on competitive basis except for activity of natural monopolies.

2. Activity of the natural gas market subjects is exercised on following principles:

   1) free selection of the natural gas suppliers;
   2) free trade with the natural gas, including on auctions and exchange markets, as well as in tenders on gas supply, except for cases stipulated in Article 10 hereof;
   3) regulation of tariffs for transportation, distribution, supply, storage, injection and extraction of the natural gas;
   4) ensuring equal possibilities for access to the Unified gas transportation system of Ukraine and underground gas storage, including newly constructed gas pipelines;
   5) equality of rights for sale and purchase of the natural gas and exercise of the foreign economic activity;
   6) fair competition between participants of the natural gas market under conditions of equal rights and possibilities;
   7) prevention of actions directed at infliction of losses by other market participants;
   8) liability of the market participants for violation of rules of activity on the natural gas market and breach of contractual terms;
   9) adherence to national standards, norms and rules by all participants of the natural gas
market activity of which is connected to management of systems and production, transportation, distribution, storage, supply and consumption of the natural gas;

10) ensuring of protection of rights and interests of the natural gas consumers;

11) protection of the environment and rational use of energy resources;

3. The natural gas market subjects shall exercise their activity based on agreements (contracts) concluded according to the legislation.

**Article 10. Satisfaction of population’s needs in natural gas supply**

1. Enterprises with state share of 50 or more per cent in their charter capitals, economic companies with 50 or more per cent of their stock (shares, equities) being in the charter capital of other economic companies with state major share as well as daughter enterprises, representative and branch offices of such enterprises and companies, parties to joint activity agreements and/or persons authorized under agreements on joint activity concluded with participation of said enterprises, shall monthly sell whole commercial natural gas produced on basis of special permits for subsurface use within territory of Ukraine, its continental shelf and exceptional (sea) economic zone in order to create assets of the natural gas which is used for needs of population directly to the subject authorized by the Cabinet of Ministers of Ukraine for creation of such assets at purchase prices annually stipulated for each economic entity – owner of the special permit for use of the oil and gas subsurface resources by the National commission on the electric power of Ukraine pursuant to the Procedure on creation, settlement and establishment of prices for the natural gas for economic entities producing the natural gas as approved by the Commission.

2. Transfer of the produced natural gas by the subjects stated in part one of this Article under commission agreements, processing of raw materials, other agreements not providing for transfer of ownership rights to it directly to the subject authorized by the Cabinet of Ministers of Ukraine is not admissible.

3. This Article shall be applied only to such parties to agreements on joint activity pursuant to which the value of the share of enterprises with state share of 50 or more per cent in their charter capitals, economic companies with 50 or more per cent of their stock (shares, equities) being in the charter capital of other economic companies with state major share as well as daughter enterprises, representative and branch offices of such enterprises and companies amounts to 50 or more per cent of the general value of shares of the parties to the joint activity agreements.
4. Population’s needs in natural gas shall be satisfied using assets of the natural gas produced by the gas production enterprises stated in part one Article 10 hereof, and in case of its insufficiency from other gas assets of the subject authorized for creation of the natural gas assets for population in order stipulated by the Cabinet of Ministers of Ukraine.

5. Sale of the natural gas for satisfaction of needs of the population is carried out by guaranteed suppliers at retail prices established by the National commission on electric power of Ukraine.

Article 11. Natural gas accounting

1. Accounting of the natural gas, including commercial (apparatus), is carried out in order to receive and register true information on volumes and quality of the natural gas during its production, transportation, distribution, supply, storage and consumption.

2. Commercial (apparatus) accounting of the natural gas is carried out in order to determine by means of natural gas accounting unit volumes of its consumption and/or sale based on which settlement is done.

3. Allotment of the natural gas to consumers is carried out provided availability of the natural gas accounting unit, except for population which by lack of such unit consumes the gas according to norms stipulated by the legislation.

4. The natural gas accounting unit is a complex of measuring equipment and auxiliary devices designated for measuring under working conditions, registration, storage of measurement results and accounting of gas volumes brought into standard condition.

Requirements to components of the natural gas accounting unit, operation rules for accounting devices, procedure for measurement of volumes and quality of the natural gas as well as procedure for takeover are stipulated by the technical regulations and norms, rules and standards in the industry of the natural gas supply as determined and approved by the central authority responsible for implementation of state policy in oil and gas complex.

Article 12. Natural gas supply

1. The natural gas is supplied under an agreement where the supplier obliges to supply to the consumer the natural gas of such quality characteristics as stipulated by standards, in volumes and on terms as provided in the agreement, and the consumer obliges to pay for the accepted natural
gas in the amount, on terms and conditions as provided in the agreement.

2. Obligatory conditions of the agreement between the guaranteed supplier and the consumer of the natural gas on regulated tariffs are determined in the standard agreement on the natural gas supply.

3. Prior to conclusion of the agreement on the natural gas supply the consumer has the right to receive information on supplier’s resources of the natural gas, its quality characteristics, prices and payment conditions.

4. The supplier is entitled to stop supply of the natural gas to consumer provided at least one of the following reasons:

   1) gas supply systems have been declared unsafe according to procedure stipulated by the central executive authority responsible for implementation of state policy in oil and gas complex;

   2) violation of payment terms of the consumed natural gas and services on its supply as provided in the agreement;

   3) unauthorized extraction of the natural gas;

   An unauthorized extraction of the natural gas is extraction:

   — from main gas pipelines, gas distribution networks or underground gas storages without purchased on contractual basis volumes of the natural gas;

   — without conclusion of a respective agreement with the supplier;

   — through self-willed connection, consumption of the natural gas with intentionally damaged equipment of its accounting or beyond accounting units.

5. Subject authorized by the Cabinet of Ministers of Ukraine for creation of assets of the natural gas for consumers of Ukraine is obliged to ensure guaranteed supplier with natural gas assets in necessary amount pursuant to agreements concluded with consumers.

6. The guaranteed supplier shall perform functions on supply of the natural gas under conditions provided in this Article and shall have all the rights and obligations of a supplier provided in Article 20 hereof.
Article 13. Natural gas transportation

1. The natural gas shall be transported under an agreement. Under agreement on transportation of the natural gas a gas transporting enterprise is obliged to transport the natural gas entrusted with it by the customer through main gas pipelines to the point of takeover and transfer it to the customer, and the customer is obliged to pay to the gas transporting enterprise the price for transportation as stated in the agreement.

The gas takeover point is an object of the Unified gas transportation system of Ukraine equipped with a natural gas accounting unit where the takeover of the natural gas between the participants of the natural gas market takes place.

2. Obligatory conditions for the gas transporting enterprises and consumers of services provided by such enterprises are determined in the standard agreement on natural gas transportation.

3. Prior to conclusion of the agreement on the natural gas transportation the consumer has the right to receive information on availability by the gas transporting enterprise of main gas pipelines, their capacity, prices and payment conditions for services on the natural gas transportation.

4. Gas transporting enterprise:
   1) is obliged to ensure equal access rights to its networks for all suppliers and consumers of the natural gas;
   2) during transportation of the natural gas is obliged to adhere to requirements as to gas transportation, determined regulatory and legal acts and regulatory documents;
   3) is entitled to transport the natural gas through territory of Ukraine, exercise of such activity cannot limit possibilities of the enterprise as participant of the natural gas market.

Article 14. Natural gas distribution

1. The natural gas distribution is carried out on basis of an agreement under which the gas distribution enterprise is obliged to transport the natural gas entrusted with it by the customer through gas distribution networks to the gas takeover point and to transfer it to the consumer who according to the legislation is entitled to receive the stated gas, and the customer is obliged to pay for the gas delivery in the amount provided in the agreement.
2. Obligatory conditions for the gas distribution enterprises and consumers of services provided by such enterprises are determined in the standard agreement on the natural gas transportation through gas distribution networks.

3. Prior to conclusion of the agreement on the natural gas distribution the gas owner has the right to receive information on availability by the gas distribution enterprise of gas distribution networks, their capacity, prices and payment conditions for services on natural gas delivery.

4. Gas distribution enterprise is obliged:

   1) to ensure equal access rights to its networks for all suppliers and consumers of the natural gas;

   2) is obliged during transportation of the natural gas to adhere to requirements as to gas transportation, determined regulatory and legal acts and regulatory documents.

Article 15. **Natural gas storage** (injection, extraction)

1. Storage (injection, extraction) of the natural gas is carried out based on an agreement under which the gas storage enterprise is obliged to store in its storage facilities the natural gas transferred to it by the gas owner or any other person entitled to transfer the gas for storage, and to return it to the person entitled to receive such gas on terms stated in the agreement.

2. Obligatory conditions for the gas storage enterprises and consumers of services provided by such enterprises are determined in the standard agreement on the natural gas storage.

3. Prior to conclusion of the agreement on the natural gas storage the gas owner has the right to receive information on availability by the gas storage enterprise of its capacities for gas storage, prices and payment conditions for services on natural gas storage.

4. Gas storage enterprise ensures:

   1) equal access rights to its natural gas storage capacities for all participants of the natural gas market;

   2) adherence of requirements as to storage of the natural gas, determined regulatory
and legal acts and regulatory documents, in particular fulfillment of obligations as to volumes and terms of injection, storage and extraction of the natural gas, creation and use of its reserve in full amount pursuant to concluded agreement.

**Article 16. Separation of functions on the natural gas transportation, distribution and supply**

1. A gas transporting enterprise is not entitled to exercise activity on the natural gas production and supply.

2. A gas distribution enterprise is not entitled to exercise activity on the natural gas production, supply, storage and transportation.

3. If a gas transportation or a gas distribution enterprise is a part of any vertically integrated economic entity it shall be a legal person and organizationally independent from other activities of the vertically integrated economic entity which are not connected to transportation and/or distribution of the natural gas.

4. Main principles determining independency of any gas transportation or gas distribution enterprise within a vertically integrated economic entity are:

   1) prohibition on positions overlapping within vertically integrated economic entity;

   2) independency of decision making on current financial transactions, operation, construction or modernization of gas transportation system objects or gas distribution networks for exercise of the respective license activity and operative and technological management.

5. Gas transportation or gas distribution enterprise shall annually prepare a plan of action which will ensure separation and independency of the economic, in particular license, activity of such enterprises as provided in this Article, from activity of the vertically integrated economic entity. Such plan of action and reports on its implementation shall be submitted to the National commission on electric power of Ukraine for monitoring purposes pursuant to Article 4 hereof and their publishing.

6. This Article shall be not applied to small gas distribution and gas supply enterprises.
Article 17. **Peculiarities of the accounting and financial reporting**

1. Subjects of the natural gas market economic activity of which is subject to licensing as to each activity type pursuant to the legislation shall keep separate accounting according to the procedure established by the legislation with obligatory disclosure of financial information on economic activity types subject to licensing.

2. Methodical recommendations as to application of national provisions (standards) of the accounting respectively to industrial peculiarities of the oil and gas industry (in particular, as to calculation of the self-cost of the produced hydrocarbon raw materials) are approved by the central executive authority responsible for implementation of state policy in oil and gas complex.

3. Financial reporting of enterprises exercising economic activity on the natural gas production executed in accordance to methodical recommendations stated in part two of this Article and the Procedure for pricing, calculation and establishment of the natural gas prices, including oil (associated) gas for economic entities which pursuant to Article 10 hereof produce the gas, is applied for calculation of the purchase prices for the natural gas.

4. The natural gas market subjects (except for population) shall submit their financial reporting to the National commission on electric power of Ukraine according to the procedure stipulated by the legislation together with reporting on types of the economic activity subject to licensing.

Article 18. **Procedure for payment for the natural gas by all categories of consumers with to the natural gas suppliers**

1. Payment for the delivered natural gas is made out by consumers pursuant to the conditions of agreements concluded with guaranteed supplier of the natural gas.

2. For payment for the consumed natural gas guaranteed suppliers, their structural subdivisions and enterprises selling the natural gas to guaranteed suppliers for purposes of sale of the natural gas for all categories of consumers shall open in institutions of authorized banks current accounts with special use regime for crediting of funds received as payment for consumed gas from all categories of consumers.
Authorized banks operating current accounts with special use regime shall be determined by the Cabinet of Ministers of Ukraine.

The procedure for opening (closing) of current accounts with special use regime and the Procedure for payment for the consumed natural gas shall be approved by the Cabinet of Ministers of Ukraine.

3. It is prohibited to credit funds received as payment for the natural gas consumed by all categories of consumers to other accounts.

4. Guaranteed suppliers and their structural subdivisions shall state in a respective agreement on opening of a bank account the right of the bank to contractual debiting (transfer) of funds credited as payment for the consumed natural gas from current accounts with special use regime.

5. The list of current accounts with special use regime of the guaranteed suppliers and their structural subdivisions as well as enterprises selling the natural gas to guaranteed suppliers for purposes of sale of the natural gas for all categories of consumers shall be submitted by the authorized bank to the National commission on electric power of Ukraine for approval and shall be disclosed to all parties of settlements through publishing in official printed issue of the Cabinet of Ministers of Ukraine. The guaranteed suppliers shall inform the consumers within 10 business days about current accounts with special use regime opened in an authorized bank.

6. Within two months after publishing in official printed issue of the Cabinet of Ministers of the list of current accounts with special use regime the guaranteed suppliers and their structural subdivisions shall conclude with consumers new agreements (supplementary agreements) with indication of the respective account with special use regime for crediting of funds received a payment for the consumed natural gas exceptionally to such account.

7. The consumers shall pay the price for the consumed natural gas through transfer of funds to the current account with special use regime for crediting of funds received as payments for the consumed natural gas opened in institutions of an authorized bank by guaranteed suppliers and their structural subdivisions.

8. The funds shall be transferred from current accounts with special use regime for crediting of funds received as payment for the consumed natural gas opened in institutions of an authorized bank by guaranteed suppliers and their structural subdivisions according to the funds allocation algorithm only to:

1) current account with special use regime of the enterprise which sells the natural gas to the guaranteed supplier;
2) current account of the gas transportation enterprise;
3) current account of the gas distribution enterprise;
4) current account of the guaranteed supplier.

9. Conditions for payment for consumed and supplied natural gas as well as opening of a current account with special use regime by the guaranteed supplier or its structural subdivisions shall be obligatory indicated in the natural gas sale and purchase agreement concluded between the guaranteed supplier and the enterprise which sells the natural gas to it, and in the natural gas supply agreement concluded between the guaranteed supplier and the consumer.

Article 19. Rights and obligations of consumers

1. The consumer has the right to:

   1) free selection of the supplier;
   2) obtaining information on supplier’s assets of the natural gas, its quality characteristics, price and terms of settlements;
   3) connection according to the established procedure to the gas distribution networks of the gas supply system;
   4) supply of the natural gas with its physical and chemical indexes corresponding with norms, in volumes according to concluded agreements, except for cases when gas supply is ceased (restricted) pursuant to requirements of the legislation and agreements;
   5) compensation of losses inflicted due to violation of its rights pursuant to the legislation;
   6) other rights provided by the legislation.

2. The consumer is obliged:

   1) to conclude a gas supply agreement;
   2) ensure timely payment in full amount for services on natural gas supply according to conditions of agreements;
3) to prevent unauthorized extraction of the natural gas;

4) to take measures for improvement of efficiency of the natural gas use and introduction of energy-saving technologies;

5) to ensure access for representatives of enterprises/organizations maintaining the gas pipeline network to which the consumer is connected to gas accounting units (including for installation of gas accounting units) located on the territory of the consumer;

6) to ensure pursuant to requirements of regulatory documents in gas takeover points measurements of gas quantity received into the system of its gas pipelines (except for population);

7) to execute and to sign with representatives of gas supply, gas transportation and gas distribution enterprise takeover protocols for the natural gas (except for population);

8) to submit to enterprises/organizations maintaining the gas pipeline network to which the consumer is connected operative information on volumes of consumed natural gas and its distribution, as well as any other information in order to produce gas balance;

9) to stop (restrict) consumption of the natural gas upon request of the supplier, gas transportation or gas distribution enterprise with adherence to requirements of the legislation (except for population);

10) to ensure access of officials of the state supervision (control) authority to objects of the Unified gas transportation system of Ukraine being in its ownership or use pursuant to the Law of Ukraine “On housing and public utility services” (1875-15);

11) to perform other obligations as provided by the legislation.

3. In case of violation or non fulfillment of its obligations the consumer shall be liable pursuant to the laws.

4. Protection of rights of the natural gas consumers is regulated by this Law, the Law of Ukraine “On consumer rights protection” (1023-12) and other regulatory legal acts.

5. Consumers can receive the natural gas only provided conclusion of respective agreements with suppliers.
Article 20. Rights and obligations of suppliers

1. The suppliers shall have the right of access to the Unified gas transportation system of Ukraine, free selection of the natural gas seller and provision of services on transportation of the natural gas through main gas pipelines, gas distribution networks, services on injection, extraction, storage in underground gas storage according to conditions of concluded agreements and the legislation.

2. The supplier has the right to restrict or cease the natural gas supply to consumers according to the procedure stipulated by the Cabinet of Ministers of Ukraine, in case:

   1) settlements for the consumed gas are not performed as provided by the agreement;

   2) consumption of the natural gas in amount exceeding volume stipulated by the gas supply agreement.

3. The suppliers are obliged:

   1) to adhere to licensing conditions and terms of gas supply contracts;

   2) create reserves of the natural gas in volumes and according to the procedure stipulated by the Cabinet of Ministers of Ukraine;

   3) supply the natural gas in volumes of their assets and pursuant to concluded agreements;

   4) ensure gas supply with adherence to requirements as to its quality and pressure stipulated by state standards and regulatory and technical acts;

   5) to ensure free access for officials of the state supervision (control) authority to objects of the Unified gas transportation system of Ukraine being in their ownership or use;

   6) provide information on prices for natural gas and tariffs for its distribution, transportation and supply as established by authorized executive bodies on their official web-sites and in regional mass-media;

   7) provide information on available assets and sale volumes of the natural gas to the operator;
8) to execute and to sign together with gas transportation, gas distribution or gas production enterprises and consumers protocols on volumes of the natural gas transported to consumers with which suppliers have natural gas supply agreements;

9) to ensure 100% pre-payment for the natural gas to owners of the assets being supplied to qualified consumers pursuant to conditions of concluded agreements;

10) to perform other obligations stipulated by the legislation.

**Article 21. Rights and obligations of gas transportation and gas distribution enterprises**

1. Gas transportation and gas distribution enterprises have the right to:

1) receive payment of services provided by them under agreements on transportation, supply and distribution of the natural gas;

2) restrict or cease of transportation and supply of the natural gas to consumers according to the procedure stipulated by the Cabinet of Ministers of Ukraine in case:

   — settlements for the services on storage, transportation and distribution of the natural gas are not performed in full amount;
   — consumers fail to fulfill contract terms, including exceed volumes of the natural gas consumption over purchased volumes for respective period of time;
   — non provision of budgeted volumes of the natural gas supply (limits);
   — internal building gas supply systems are declared to be unsafe;
   — non-compliance of characteristics of smoke flues and ventilation pipes with the stipulated norms;

3) free access to land plots of all ownership forms where objects of gas transportation and gas distribution enterprises are located in order to reform their duties as provided by the Security rules for main gas pipelines and other regulatory and legal acts;

4) other rights as provided by the legislation.
2. Gas transportation and gas distribution enterprises are obliged to:

1) ensure equal access rights to their networks for all subjects of the natural gas market, except for cases provided by the legislation;

2) execute and sign with consumers and representatives of gas transportation and gas production enterprises the natural gas takeover protocols;

3) provide services on transportation and distribution of the natural gas according to terms of the concluded agreements;

5) ensure observance of the discipline on transportation and distribution of the natural gas according to terms of the concluded agreements;

6) ensure injection, storage and extraction of the natural gas, including the natural gas reserve according to concluded agreements provided its separate accounting (except for gas distribution enterprises);

7) adhere to requirements as to gas transportation as stipulated by the regulatory and legal, regulatory and technical acts;

8) provide operator with necessary information for the accounting period in order to ensure control over volumes of gas transportation, supply and distribution as per suppliers and consumers;

9) execute and sign with consumers and suppliers gas takeover protocols;

10) perform other obligations according to concluded agreements pursuant to the legislation;

11) ensure free access for officials of the state supervision (control) authority to its objects;

12) adhere to norms of production and technological use, auxiliary expenses and norms of average use of the natural gas for gas transportation and gas distribution enterprises;

13) execute orders of the state supervision and control authorities.
Article 22. **Rights and obligations of gas production enterprises**

1. Gas production enterprises have the right to:

   1) exercise their economic activity on the natural gas production from subsurface site based on special permit for use of oil and gas subsurface resources issued for such site, technological projects of research and industrial development or industrial development as well as complex development project for such subsurface site;

   2) establish prices for the natural gas sale, except for gas production enterprises for which the procedure for application and approval of purchase prices is stipulated according to Article 10 hereof;

   3) access to the Unified gas transportation system of Ukraine;

   4) sell the produced natural gas and supply it to consumers according to issued license, including consumers directly connected to internal industrial networks of the gas production enterprise according to agreements;

   5) receive payments for the natural gas and provided services on gas transportation from such consumers according to terms of concluded agreements;

   6) restrict or cease supply of the natural gas according to the procedure as stipulated by the Cabinet of Ministers of Ukraine, provided consumer directly connected to inter industrial transportation networks fails to pay in full amount for the consumed natural gas and transportation services;

   7) not to create the natural gas reserve;

   8) other rights as provided by the legislation.

2. Gas production enterprises are obliged to:

   1) observe rules for oil and gas deposits exploitation as approved by the decision of the central executive authority responsible for implementation of state policy in oil and gas complex;

   2) adhere to technological projects of research and industrial development or industrial
development as well as complex development project for oil and gas subsurface sites, including as to losses and production and technological expenses, environmental protection;

3) submit to the National commission on electric power of Ukraine information on planned for the following calendar year indexes of total cost of the produced natural gas, rent as well as forecast volumes of the gas production in order to determine, calculate and establish purchase prices for the natural gas for economic entities producing it according to the Procedure approved by the National commission on electric power of Ukraine and in cases provided in Article 10 hereof – conclude agreements on the natural gas sale at purchase prices;

4) execute and sign the natural gas takeover protocols with suppliers and representatives of gas transportation and gas distribution enterprises;

5) account the produced natural gas by means of application of systems for measurement of the quality and determination of physical and chemical indexes of the produced natural gas;

6) ensure transfer to the gas transportation enterprise of the natural gas with adherence to requirements as to its physical and chemical indexes as stipulated by state standards and regulatory and technical acts;

7) ensure free access for officials of the state supervision (control) authority to objects of the Unified gas transportation system of Ukraine being in their ownership or use.
Section IV.

LIABILITY OF THE NATURAL GAS MARKET SUBJECTS

Article 23. Liability for violation of the legislation on functioning of the natural gas market

1. Individuals, private entrepreneurs and legal entities who have violated the legislation on issues of functioning of the natural gas market shall be liable according to the laws.

2. Violations on the natural gas market are:

   1) violation by licensees of the respective licensing conditions for exercise of the economic activity;
   2) unauthorized extraction of the natural gas;
   3) consumption of the gas in volumes exceeding volumes confirmed by suppliers in the established order;
   4) non-submission or delayed submission of the financial reporting, untrue statements in the financial reporting;
   5) use of the natural gas accounting units untested or uncertified according to the stipulated procedure;
   6) unreasoned refusal in access to the Unified gas transportation system of Ukraine;
   7) unauthorized interference into operation of the Unified gas transportation system of Ukraine, natural gas accounting units;
   8) free-willed connection to the Unified gas transportation system of Ukraine, breaking or damage of the seals, marks of certification, plugs etc. which influences the safety of the natural gas supply or measurement results;
9) denial of access for employees of authorized gas supply, gas distribution and gas transportation enterprises to premises, residential and auxiliary premises, where gas equipment (devices), gas meters are located;

10) failure to execute resolutions, instructions, decrees, decisions and orders of authorized state bodies exercising state managements, state regulation, state supervision and control over adherence to requirements of the legislation on the natural gas market as well as creation of obstacles for performance of duties by representatives of the stated authorities;

11) failure to provide or delayed provision to the operator and authorities of state regulation, state supervision and control of information necessary for performance of their duties or provision of misleading information;

12) creation of obstacles for performance of works connected to maintenance of the natural gas supply systems, taking measures for complete or partial stop of the natural gas supply to consumers;

13) violation of technical regulations, norms, rules and standards;

14) unreasoned refusal to execute and sign takeover protocols on the natural gas;

3. Authorized central executive authorities, the State inspection on energy efficiency, other state supervision (control) bodies within limits of their powers and based on inspection protocols executed according to the established procedure, provided violations as envisaged by this Article, shall execute respective files to hold the subjects of the natural gas market to liability as provided by the legislation.

4. In case of violation by gas transportation and gas distribution enterprises of respective licensing conditions and/or other obligations as provided by this Law, obligations as to protection of rights of the natural gas consumers following sanctions can be imposed for such enterprise:

1) notice on elimination of violations;

2) penalty;

3) suspension of the license;

4) annulment of the license.
5. Economic entities shall be liable for violations on the natural gas market.

Non-provision or provision of misleading information stipulated by the respective licensing conditions for exercise of certain economic activity types on the natural gas market shall result in penalty in amount from one hundred till ten thousand tax-free allowances.

Failure to execute or delayed execution of decisions of the National commission on electric power of Ukraine shall result in penalty in amount from five hundred to fifty thousand tax-free allowances.

The National commission on electrical power of Ukraine based on an inspection protocol executed according to established procedure provided violations as envisaged in this Article shall issue resolutions on imposing of penalties on economic entities within limits of its powers.

6. Decision on imposing of penalties can be appealed against in courts.

7. The penalty amounts shall be transferred to the State budget of Ukraine.

In case of non-payment, penalty amounts shall be collected in a judicial proceeding.

Section V.

INTERNATIONAL COOPERATION

Article 24. International cooperation

1. Subjects of the natural gas market shall participate in international, scientific and technical, foreign economic and other forms of international cooperation according to the legislation and international treaties of Ukraine.
Section VI.
FINAL AND TRANSITIONAL PROVISIONS

1. This Law shall come into force as of its publishing, except for single provisions with other coming into force terms provided in this section.

In order to ensure gradual and consecutive transition to full-scaled market of the natural gas as provided by this Law a transitional period shall be established which shall have such stages:

— first stage including separation of functions on distribution and supply of the natural gas, determination of consumers as qualified, determination of guaranteed suppliers by the Cabinet of Ministers of Ukraine shall begin as of January 1, 2012;

— second stage including determination of all consumers as qualified shall begin as of January 1, 2015.

Until a guaranteed supplier is determined according to the procedure as stipulated by the Cabinet of Ministers of Ukraine function of such supply shall be performed by economic entities having license for the natural gas supply on regulated tariffs.

2. Until adjustment of the legislation of Ukraine to this Law, laws of Ukraine and other regulatory and legal acts shall be valid in parts not contradicting with provisions of this Law.

3. It shall be stipulated that licenses for exercise of activity envisaged by Article 6 hereof issued prior to coming into force of this Law shall be valid for the term of their validity.

4. Amendments shall be introduced to following laws of Ukraine:


Part one Article 5 after third paragraph amend with new paragraph with such wording:

“storage of the natural gas in volumes exceeding amount stipulated by conditions
and rules for exercise of economic activity on the natural gas storage (licensing conditions)”.

Respectively, paragraphs four to eleven shall become paragraphs five to twelve;

Article 6:
paragraph 3 shall be excluded;
shall be amended with paragraph nine with such wording:
“sale of the natural gas (including oil (associated) gas and coalbed (methane) gas of own production in volumes exceeding amount as provided by the licensing conditions”;

3) the Law of Ukraine “On licensing of certain activity types” (1775-14) (News of the Verkhovna Rada of Ukraine, 2000, # 36, p.299 with following changes):

Part two Article 2 after words “licensing in the sphere of electric power and use of nuclear power” shall be amended with words “licensing of the activity on the natural gas market”;

Article 9:
clause 18 shall be presented in following version:
“18) transportation of oil, oil products through main pipelines and their distribution”;

clause 19 and 20 shall be excluded;


Paragraph eleven Article 1 shall be excluded;

Article 35:
Part one shall be amended with words “investment project (program) prepared and approved according to the procedure stipulated by the Cabinet of Ministers of Ukraine”;
part three shall be amended with words “with obeisance of indexes of the investment project (program)”;
paragraph 5 part two Article 36 words “and complex project of its development executed according to current legislation” shall be replaced with words “complex
project of its development executed according to the legislation and the investment project (program)”;  

Article 37 after paragraph four shall be amended with new paragraph with following wording: “observe indexes of the investment project (program)”.  

Respectively, paragraphs five to eleven shall become paragraphs six to twelve;  


Article 1:  
paragraph one clause 1.1 work “gas producing” shall be replaced with word “gas production”;  
clause 1.12 shall be excluded;  
sub-clause 7.1.3. clause 7.1. Article 7 word “gas producing” shall be replaced with word “gas production”;  

6) part two Article 2 of the Law of Ukraine “On basic principles of the state supervision (control) in the sphere of economic activity” (877-16) (News of the Verkhovna Rada of Ukraine, 2007, #29, p.389; with changes and amendments introduced by the Law of Ukraine as of June 1, 2010 #2299-VI) (2299-17) shall be amended with words “state supervision (control) over adherence to licensing conditions for transportation of the natural and oil gas through pipelines and its distribution, the natural gas supply, the natural gas storage in volumes exceeding the amount stipulated by the licensing conditions for exercise of the economic activity on storage of the natural gas”.  

President of Ukraine V. Yanukovych  
Kyiv, July 8, 2010  
# 2467-VI
Appendix 4.

COAL MINING IN UKRAINE

Anastasiia Shtanieva & Sophia Shavlak
COAL MINING IN UKRAINE

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1. ECONOMIC OVERVIEW

1.1. General information

1.1.1 Amount of coal resources

Ukraine is ranked first in Europe according to its coal resources.

According to the World Energy Council (WEC), Ukraine was the world’s 8th ranked country in terms of total coal reserves. The WEC reported that Ukraine’s total proved recoverable reserves at the end of 2007 was about 34 Mt, of which about 15 Mt were bituminous and anthracite, about 17 Mt was subbituminous, and about 2 Mt were lignite. The amount of explored resources is 50 billion tons. The amount of hypothetical coal resources is approximately 120 billion tons. Commercial coal reserves are estimated at 34.2 bn t, of which 6.5 billion tons are located in active mines. Of these reserves, some 3.5 billion tons is steam coal and 3 billion tons coking coal. 90% of coal mines contain methane gas.

The amount of hypothetical coal resources according to Cabinet of Ministers of Ukraine is 117,5 billion tons out of which 56,7 billion tons of proven reserves. In the structure of existing organic fuel resources in Ukraine coal has 95,4% while oil has 2% and gas 2,6%.

1.1.2 Geographic location of coalbeds

Geographically coal resources are situated in Eastern Ukraine (Donetsk, Luhansk, Dnipropetrovsk region, which together consist the so-called Donetsk Basin) and Western Ukraine (Lviv and Volyn region, the Lviv-Volyn Basin). Donetsk Basin accumulates 92.4% of all Ukrainian coal resources, Lviv-Volyn Basin – 2.5%. Dnieper Basin contains mostly brown coal and is situated in Central Ukraine along the Dnieper River (see the picture below).
1.1.3. Dynamic of coal mining during years of independence

Ukraine ranks among the top ten coal-mining countries of the world. However, its technical and economical parameters and the occupational health and safety situation in its mines, lag behind many other coal-mining countries. The main factors that influence occupational safety and the high accident rate in the coal sector are the difficult mining and geological conditions, as well as the outdated state of the mines and mining equipment.

The average depth of mining has reached 700 meters. The maximum depth of coal mining has reached 1,332 meters, and some preparatory work is being undertaken at a depth of 1,386 meters. High-level scientific support is required for such operations. However, a lack of funding since 1991 has drastically reduced the number of scientists in scientific and technical organisations. The result is a fall in scientific research, as well as in occupational health and safety in the Ukrainian mines.

1 http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=35489
Ukrainian regions depend heavily on coal mining. Many small cities in the Eastern Ukraine do not have any other enterprises except coal mines. So the question of their functioning is crucial as the whole cities’ infrastructure were built around coal mines and the inhabitants of such cities often do not have any other working places available than those on coal mines. Considering this fact and the need of high economic results of coal mining in 1998 Free Economic Zone status was given to Donbass region. The problem is that the most important for investor privileges such as immunity from payments for use of natural resources during the projecting period, special customs area, and favourable mode of taxation were repelled.

The amount of extracted coal was declining in the past twenty years (See picture below).

As one can see, the least amount of coal was extracted in 1996 due to economic crisis of that period. This influenced the beginning of the restructurisation in the same year. The Decree of President #116 “On restructuring the coal industry” was adopted on 07.02.1996. This document contained definition of the purpose, objectives and main directions of reforming the coal industry, tasks of development of the state program of closing unprofitable coal enterprises, while providing social security measures for workers that are being dismissed due to restructuring.

According to U.S. Energy International Administration the amount of production due to the crisis declined from 65,729 million short tons in 2008 to 60,609 million short tons in 2009. The consumption of coal has also declined from 78,009 million short tons in 2008 to 63,991 million short tons in 2009. During the period of 2008-2009 Ukraine has been ranked 16 in the world as to the production of coal and 12 as to the consumption of coal. Notwithstanding the fact that Ukraine has the seventh-largest
amount of coal resources in the world (in some sources – e.g. the World Energy Council – the eighth-largest) due to the underinvestment it stays a net coal importer during all years of its independence.

### 1.1.4. Coal industry employees

The coal industry in Ukraine employs more than 300,000 people. A trade union of coal sector employees is functioning in Ukraine. However, this trade union is not a big force in the country as many workers depend on their jobs heavily and strikes that occur do not help to enforce the worker’s rights.

Coal sector employees experience troubles with payment of their salaries. When the cases of unpaid salaries became serious the Cabinet of Ministers issues Decrees similar to the Decree from 20.01.2010 #112-p “On questions of payment of salaries to coal mines employees in January” and tries to find money in the State budget.

Due to the outdated equipment and lack of discipline in mines (while trying to extract more coal, the workers may be put in dangerous working conditions) Ukraine has the world’s second largest fatality rate in coal mining accidents after China.

### 1.1.5. Major coal consumers

Major coal consumers are organic-fuel power-stations and by-product coke industry. The third place takes community facilities.

### 1.2. State sector of coal industry in Ukraine

140 out of 160 existing mines are state owned and are being supervised by the Ukrainian Ministry of the Energetics and Coal Industry.

In 2009 state enterprises extracted 38.4 million tons of coal. The Government is planning to increase the amount of extracted coal to 60 million tons by the year 2015 with help of investment projects. The increasing quantity of mines is involved in work in conditions, difficult due the gas factor. There are about 20 mines in Ukraine on which methane capture projects are attractive and can be used for electricity generation and can be co-financed by JI-mechanism. (the most interesting are this mines: A.F.Zasjadko, Krasnoarmeyskaya Western, Krasnolimanskaya, Komsomolets of Donbass, Krasnodonskaya and Makeyevskaya group of mines).
1.3. Private sector of coal industry in Ukraine

The private sector mines are more effective than state owned mines. For example, in 2009 the total amount of coal extracted was 72,303 million tons, out of which state coal enterprises extracted 38,400 million tons. The private mines, which consist 1/8 of all mines, are extracting on regular basis almost twice as much coal as state mines. The very much alike percent ratio can be seen in further example: during November 2010 the total amount of coal extracted in the state owned mines was 3388.1 thousand tons, while the total amount of extracted coal was 6548.8 thousand tons. According to the Concept of State Programme of increasing of the level of labor protection and industrial safety on enterprises of coal mining sector of 12.08.2010 53% of all coal in Ukraine shall be extracted in state mines and 47% - in private mines.

Private coal enterprises are united in the organisation called “Ukrainian Coal Union”, which is working on establishing market prices, further privatizations of mines, increasing the level of social responsibility of enterprises and exchange of experience in improving technical process. In 2011 “Ukrainian Coal Union” unites 23 private coal enterprises.

2. STATE POLICY

2.1. State programs for the development of coal sector

2.1.1 The Programme of Economic Reforms of Ukraine for 2010-2014

of the President of Ukraine of 02.06.2010 involved questions of reforming the mining sector. According to the Programme the main aims of reforms are: development of an effective, competitive coal sector, which will provide the economy with coal for competitive prices; liberalization of coal market, including the liberalization of selling coal and establishing prices. The main step of liberalization will be the permission to state heat generating enterprises to buy coal not only from the state enterprise “Coal of Ukraine”.

In order to meet targets set by the Program of economic reforms in Ukraine for 2010-2014 of the
President of Ukraine Viktor Yanukovych, the Ministry of the Coal Industry takes measures to attract investments in the coal mining industry prior to their privatization through a mechanism of public-private partnership. For the effective implementation of public-private partnership for modernization and technical restate of state coal mining companies Ministry of Energetics and Coal Industry has carried out and published on its web-site a detailed list of coal mines that are attractive to potential investors. The Ministry of Energetics and Coal Industry of Ukraine has also expressed its readiness to consider investment propositions and establish a thurstworthy and reliable partnership in future.

Thus, Ukrainian government aims to attract foreign and in-land investments in order to increase the amount of extracted coal and to provide necessary working places in the regions that highly depend on functioning of coal mines. These intents become obvious from the adopted documents and programmes. In previous years a number of legal programme documents and plans of actions were adopted.

### 2.1.2 A Programme “Ukrainian Coal”

was adopted by the Resolution of the Cabinet of Ministers on 19.09.2001 No. 1205. The Programme provided a set of measures that were aimed at increasing the amount of extracted coal and its competitiveness. The aimed level of technical and economic development was not achieved because of permanent underfunding.

### 2.1.3 “Concept for the Development of the Coal Industry”

(adopted on 07.07.2005 by the Order of Cabinet of Ministers of Ukraine No. 236-p) outlines the conceptual principles approved for the leading mines until 2030 and beyond. This Concept expressed the need for existence of market prices and regulated coal auctions. For the first time the need for removing the barriers was regulated: providing open access to gas pipelines for coalbed methane producers and market reflecting prises setting are the aims of the government.

### 2.1.4 The “Energy strategy till 2030”

was adopted by the Order of the Cabinet of Ministers on 15.03.2006 (No. 145-p). It mostly repeats the provisions of the “Concept for the Development of the Coal Industry”.
2.1.5 Concept for the Reformation of the Coal Sector

was approved on 14th May 2008 by the Government of Ukraine. Its main objective is to involve non-state investments and to enable the sector to work efficiently in the market environment. It is planned that the privatisation of the state enterprises will take place exclusively through open auction. The Government has conducted the privatization during years of independence of Ukraine (in 2005 out of 167 mines 93% were state owned; in 2011 out of 160 mines 87.5 % are state owned).

Reorganization is the key point of liberalization of the market. Government plans to implement the reorganization until end of 2012 – after the end of privatization of coal extracting enterprises and thermal power plants that are main coal consumers. Government expects that by the end of 2014 the privatization of investment attractive mines will be finished. It is also expected to decline heavily the amount of state subsidies for operational costs.

2.2. Public-private partnership in coal mining

New government is now declaring a new phase of cooperation with private partners. One of the proofs for this declaration is the adoption of the Law “On public-private partnership in Ukraine” that entered into force on 30.10.2010. Draft regulation of Cabinet of Ministers “About special features of Public-Private Partnership in coal industry” is published on the web-site of the Ministry of Energetics and Coal Industry of Ukraine. Under this draft PPP in coal industry will not be longer subject of regulation of Cabinet of Ministers from 17/04/2009 #530 “Questions of attractions of investments by state enterprises, institutions and organisations” and of decree of Cabinet of Ministers from 7/05/2008 #703-p “Questions of conclusion of some agreements”. The Ministry of Energetics and Coal Industry is supposed to be the responsible authority of executive power for PPP in coal industry. This draft will establish the Order of organisation of investment activity concerning reconstruction, modernisation and technical re-equipment of coal industry enterprises based on Public-Private partnership; the Order of carrying out a competition on determination of a private partner in PPP in coal industry, the Methods of discovering risks in conducting PPP in coal industry, the Order of conducting analysis of effectivity of PPP in coal industry. By the end of February 2011 this draft is still being discussed by state authorities, scientists and businessmens. Until it will be passed, the cooperation of state and private partners can take place in forms of production sharing contracts. The possibility of establishing new joint enterprises remains in question. Though such form of PPP is mentioned by Minister of Coal Industry and other authorities, it is not mentioned in the new Law of Ukraine “On Public Private Partnership in Ukraine”. Futhermore, this law provides that there can be only contractual forms of PPP (creation of joint enterprises is not foreseen, for example). Establishing of enterprises goes beyond cotractual forms of conducting PPP.
The Ministry of Energetics and Coal Industry of Ukraine has worked on inventorying of state coal enterprises and mines in order to attract private investments in the development of coal industry. While working on attraction of private investments such actions were taken according to the Order of the Ministry of Energetics and Coal Industry of Ukraine of 16.04.2010 No.11-p:

— an inventorying form for every functioning mine was carried out and filed with the Department of technical policy and development of mining fund of the Ministry of Energetics and Coal Industry of Ukraine;

— passport documentation containing main characteristics (e.g. financial state, amount of coal reserves, number of employees, technical equipment etc.) were prepared for each investment object of state enterprises.

As the result of that work a list of state mines was prepared and published on the web-site of the Ministry of Energetics and Coal Industry of Ukraine on 30.11.2010. This list contains three groups of mines: mines that are attractive for investors; mines that may be attractive for investors if special measures will be taken; and mines that have already used all their productive resources of coal.

3. LEGAL FRAMEWORK OF COAL MINING ACTIVITIES

3.1. Ownership of coal

According to Art. 24 of Code on Subsoil of Ukraine legal entities that have the right to use the subsoil are entitled to ownership of extracted mineral resources unless otherwise provided by the law or license.

All mineral resources are owned by the state. The owner of the mine has the ownership both of the mine and its coal resources but has to pay a fee for usage of mineral resources on a permanent basis. This fee is set in a fixed sum to each ton of coal extracted (point 9 of Art. 263 of the Tax Code of Ukraine).
3.2. Application of legislation on free economic zones for purposes of coal mining

3.2.1 General provisions

General issues of functioning of special economic zones are governed by the Law of Ukraine “On general grounds of establishment and functioning of special (free) economic zones” of 13.10.1992 No.2673-XII.

The Law of Ukraine “On Special Economic Zones and Special Mode of Investment Activity in the Donetsk Region” of 24.12.1998 No. 356-XIV determines the procedure of establishment and functioning of Special Economic Zones in the Donetsk Region and introduction of the Special Mode of Investment Activity in the Territories of Priority Development. Under this Law Territory of Priority Development is the territory within the city, regional borders, which faces unfavorable social-economic conditions and where Special Mode of Investment Activity is introduced with the purpose of creation of new jobs. Special Mode of Investment Activity is the mode, which provides tax and customs relieves and other privileges stimulated by this Law, for the subjects of entrepreneurial activity performing the investment projects approved by the Board of the Special Economic Zones and the Special Mode of Investment Activity in the Donetsk Region.

List of priority areas of economic activities on the territories of Priority Development in Donetsk region with special mode of investment activity includes mineral mining (mining of energy resources including mining and agglomeration of coal).

Special Economic Zone “Donetsk” created for 60 years is located in the Southern part of Donetsk city with the total area of 466 hectares. Special Mode of Investment Activity is introduced in the territories of Priority Development for the period of 30 years, and working in the priority types of economic activity determined by the Cabinet of Ministers of Ukraine. The next cities within their administrative-territorial boundaries, pertain to the territories of priority development: Artyomovsk, Ugledar, Gorlovka, Dzerzhinsk, Dimitrov, Dobropolie, Donetsk, Druzhkovka, Yenakievo, Zhdanovka, Zugres, Ilovaysk, Kirovskoye, Konstantinovka, Kramatorsk, Krasnorneisk, Krasniy Liman, Makeevka, Mariupol, Novogrodovka, Seldovo, Slavyansk, Snezhnoye, Torez, Khartsyzsk, Shaktyorsk and also Amvrosievka district, Volnovakha district, Konstantinovka district, Mariinka district, Slavyansk district, Starobeshevsky district and Shakhtyterskiy district.

Investment projects executed within the Territories of Priority Development are priority for granting loans provided by foreign states, international financial organizations, foreign banks, other financial-credit institutions under state guarantees.
3.2.2 Permissions for investment activities

Enterprises in these territories are working on the basis of the permission of appropriate Board on the Special Economic Zones and the Special Mode of Investment Activity in the Donetsk Region (hereinafter referred to as “the Board).

The Board certificate of the investment project approval is the basis for concluding a contract between the body of local governing and the investor and state registration of the subject of entrepreneurial activity, conclusion of contracts about lease of land, premises, etc by the Body of Economic Development of Special Economic Zone. The order of conclusion the contract is determined by the Board. If the subject of entrepreneurial activity carries out activity which is subject to licensing, the appropriate permits (licenses) are to be given out according to the legislation.

3.3. Licences

Extracting of coal is an activity that requires a licence according to the Law of Ukraine “On Licensing of Certain Types of Economic Activity” of 21.10.2000 No. 1775-III. Under Art. 9 of this Law the search for (prospecting of) minerals is also subject to state licencing.

The Ministry of Ecology and Natural Resources of Ukraine has the authority to sell licences for usage and geological study of subsoils. Such licences are sold through open auctions. According to the Resolution of Cabinet of Ministers of Ukraine of 14.11.2000 No. 1698 the State geological service of Ukraine has the authority to give licences for extraction of mineral resources from deposits that have the state-level importance and are included in the State Fund of Mineral Resources Deposits.

3.4. Privatisation

The Program of economic reforms for the years 2010-2014 (decree of Cabinet of Ministers #1725 dated 23.06.2010) foresees privatisation of coal enterprises. At present Ukrainian Government concentrates on investment projects rather than on preparation for privatisation projects. The problem lies not in legislation. Big debts of coal mines can consist a serious obstacle to privatisation. Mostly the creditors are employees, state (budget), social insurance funds. Minister says that debts relief is not an option, though there are examples of debts relief.

The possibility of privatisation is stated in the Law of Ukraine #2163-XII from 04.03.1992 “On privatisation of state property”. The Law was stated in a new wording of February 19, 1997.
According to the Law state property privatization is alienation of the property in state ownership and the property belonging to Autonomous Republic Crimea in favor of natural persons and legal entities who may be buyers according to this Law. Privatization is performed with the purpose of increase of social economic effectiveness of production and attraction of funds for Ukrainian economy restructuring.

The objects having all-state significance as well as special government enterprises shall not be subject to privatization. To the objects which have all-state significance refer enterprise property compounds, their structural units which main activity is production of goods (works, services) which have all-state significance.

There exist a list of objects of state property that can not be objects of privatization. This list is prepared by the Cabinet of Ministers and adopted by the Parliament. Coal mines do not belong there.
4. USAGE OF METHANE GAS

4.1. General information on methane in Ukraine

Methane (CH4) is a greenhouse gas that remains in the atmosphere for approximately 9-15 years. Methane is 21 times more effective in trapping heat in the atmosphere than carbon dioxide (CO2) over a 100-year period and is emitted from a variety of natural and human-influenced sources (see the picture of worldwide methane emission). Human-influenced sources include landfills, natural gas and petroleum systems, agricultural activities, coal mining, stationary and mobile combustion, wastewater treatment, and certain industrial process.

Methane is also a primary constituent of natural gas and an important energy source. As a result, efforts to prevent or utilize methane emissions can provide significant energy, economic and environmental benefits.
Ukraine is the world’s fourth largest emitter of methane emissions from coal mining activities (31.9 million metric tonnes of CO\textsubscript{2} equivalent in 2000). Most of the attention to coal mine methane (CMM) development has been focused on the Donetsk basin due to its vast coal and methane reserves, large number of coal mines, high ranked coal deposits, and great depth of mining (often in excess of 2000 feet). Only about 4% of CMM liberated in Ukraine is used, presenting ample opportunities for coalbed and coal mine methane development.

For example, in Ukraine CMM falls into a mineral resource category regulated at the national level, as it falls under the Code of Ukraine on Mineral Resources. The code states that the people of Ukraine own the country’s mineral wealth. Thus, the standard mineral licensing procedure has to be applied to CMM. At the same time, coal seam degassing is performed during coal production (following compliance with mining safety rules).

In present time for gas extraction in most cases used the usual technology of drilling underground and surface degasation holes with subsequented their connection to vacuum-pump stations. Percentage of methane in a mix is very low in a range from 5% up to 62%, and on 74% of mines the content of methane is lower than 25%. Only at 6% of mines it exceeds 45% and on 9 mines the content of methane exceeds 35%.

**Structure of coal bed methane deposits in Ukraine**

- **Dnipro basin - 0.09%**
- **Lviv-Volynsk Basin - 3.47%**
- **Donetsk Basin - 96.44%**

Because of difficult geological conditions of conducting mountain works, there are no universal methods of degasation carrying. In each concrete case the original sequence of degasation performance which can give the maximal positive effect is selected. Now in Ukraine processes of
mines privatization became more active, especially the mines getting coking coal. This implies that legal problems of possession of gas received from realization of degasation projects practically are not present. In the Ukrainian legislation rules of licensing on operation of entrails are precisely enough described. It is rather difficult procedure, but it is solved. Besides the Ukrainian legislation provides an opportunity of development of the license area to two or several partners on basis of contract about joint activity.

4.2. **State regulation of activities involving methane**

Main legislation act in this area is the Law of Ukraine “On Coalbed Gas (Methane)” of 19.06.2009 No. 1392-VI. This Law establishes legal, economic and organizational grounds for activity in the field of geological research of coalbed gas (methane), including research and industrial development, extraction and removal during degassing, and further use of it as a material and/or energy resource. Methane is defined in this law as a mixture of gases that accompanies coal beds and adjoining rock.

The Law applies to relations that arise in association to improvement of labor conditions and labor safety for miners; geological exploration of mineral resource reserves; further extraction of coalbed gas (methane) from coal deposits not developed industrially, regardless of their future use; extraction of coalbed gas (methane) during degassing of active mines, mines being prepared for exploitation and abandoned coal deposits; use of coalbed gas (methane) as a material and/or energy resource. According to Article 8 of the Law, the right to extract coalbed gas (methane) during degassing of active mines is granted to a holder of a special permit for industrial development of a coal deposit within a respective mining lease, or to another entity by consent of the permit holder, according to a procedure established by the Law.

Article 10 of the Law establishes that state supervision and control over adherence to legislation in the field of geological exploration, extraction and use of coalbed gas (methane) is carried out by authorized central bodies of executive power in the issues of geological, mining and environmental supervision (control) and control over efficient use of energy resources.

According to Article 13 of the Law, extraction of coalbed gas (methane) within mining leases of active mining enterprises, as well as geological exploration, including research and industrial development, and industrial development of coal deposit for the purpose of gas (methane) extraction is carried out by a certain special permit issued by the central body of executive power in the issues of geological exploration and ensuring efficient use of mineral resources:
• to a holder of a special permit for industrial development of a coal deposit (user of bowels) within a specific mining lease;

• another applying business entity within the mining leases of active mines, only by written consent of the user of bowels.

Access to gas transporting networks for the purpose of transporting, supply and storage of coalbed gas (methane), as well as mixes with natural gas, is carried out according to the procedure for access to the Unified Gas Transport System of Ukraine as established by the legislation. The quality of coalbed gas (methane) must correspond to the requirements of the subject of economic activity of the respective gas transport system, with consideration of state standards (Article 15 of the Law).

According to Article 16 of the Law, in order to ensure environmental safety during extraction and use of coalbed gas (methane), business entities shall provide for:

• mandatory insurance of the bowel user’s property risks during research and industrial or industrial development and use of coalbed gas (methane) in case of environmental harm caused by accidents, fires or technical failures, according to the procedure established by the insurance legislation;

• adherence to regulations, norms and standards in the field of mining and environmental protection.

It is prohibited to burn coalbed gas (methane) extracted during degassing, directly from the well in open-cut mining, without the use of special equipment with appropriate operational documentation.

The final provisions of the Law establish that the provision of Article 12 of the Law, according to which exploitation of coal deposits with a high coalbed gas (methane) concentration is forbidden without the necessary ventilation and degassing that regulate the coalbed gas (methane) concentration to the specified levels, comes into effect starting January 1, 2011.

The activity of extracting, storing or transporting methane requires a licence according to the Law of Ukraine “On Licensing of Certain Types of Economic Activity” of 21.10.2000 No. 1775-III.

The law establishes the uniform procedure for issuance of licenses. For the purposes of obtaining a license it is necessary to submit a standard application and other necessary documents to a relevant licensing body, which within 10 days (unless specific laws governing relations in some fields of
economic activity provide for other deadlines) makes a decision on whether to issue the license. The application should also be accompanied by a copy of certificate for state registration of subject of entrepreneurial activity. For some types of economic activity - subject to licensing - the application for obtaining license shall enclose documents, the full list of which is to be determined by the Cabinet of Ministers of Ukraine.

Article 12 provides for tenders on obtaining licenses for those economic activities performance of which is related to use of limited resources. The procedure for carrying out such tenders is established by the Cabinet of Ministers of Ukraine, if otherwise is not envisaged by the Laws of Ukraine. Types of economic activity, performance of which is related to use of limited resources include

Para.14 Part. 3 Art. 9 provides that the transportation of coalbed gas (methane) and distribution of it as well as supplying methane on the basis of regulated and non-regulated prices and storage of methane in amounts that exceed the amount envisaged in the licencies for transportation or supplying of methane.

According to Art. 4 of the Law of Ukraine “On grounds of functioning of natural gas market” of 08.07.2010 No. 2467-VI the National Comission on Regulation of Energetics has the authority to give licencies for activities in the market of natural gas (including methane). It also has the authority to set tariffs for transportation of methane through main and distributing pipelines, for supply and storage of methane.

4.3. Special regulation on taxation

According to Section XX “Transitional statutes”, point 16 Subsection 4 “Features of taxation of the corporate profit tax” the Tax Code of Ukraine enterprises that extract or use methane gas are exempt from paying profit tax on such activities till 1 January 2020. According to the Resolution of Cabinet of Ministers of Ukraine of 21.07.2010 No. 600 profit tax payers that extract or use methane from coal mines with special licencies and are exempted from paying profit tax on such activity are obliged to use funds, which it would otherwise pay as taxes, only for increasing the amount of extraction, technical re-equipment, using innovative technologies of extraction and usage of methane. Such funds should be transferred to the special account with the regional body of the State Tresury of Ukraine. The said tax payer is also obliged to file a report on usage of said funds with the State Tax Service. If said funds will be used not in order with this Resolution they will become object of taxation and the tax payer will be fined.
Appendix 5.

ENERGY MARKET: maps and graphics

Sophia Shavlak
PROPERTY STRUCTURE IN NATURAL GAS PRODUCTION AND TRANSPORTATION

Natural gas field, state property

Gas well, private or state property

Underground gas storages are state property. Natural gas in them is private or state-owned

Consumer

Distribution pipelines may be in state, municipal or private property, but no distribution pipelines constructed prior to 15.06.1996 can be privatized

Transmission pipelines and their service buildings are state property, privatization is forbidden
PROPERTY STRUCTURE IN THERMAL ENERGY TRANSPORTATION

Normally they are integrated companies, but cross subsidization is forbidden.

These companies may be state, municipal or private, but there are exceptions under the Law on state property objects which are not subject to privatization (e.g.):

- Krivorozhskaya TPP, cogenerating heat and power plants in Simferopol, Kerch, Lysychansk (Lugansk region), Nikolayev, Odessa, ESCHAR Scientific and Technical Center in Kharkov region, Kharkov, Kherson, Cherkasy, Chernovtsy, Kyiv (plants #5 and #6) and Sevastopol

- Saki thermal networks, Central enterprise of thermal networks Odessa, Okhtyrka thermal network (Sumy region), Kyiv thermal networks, Dneprodzerzhinsk thermal network
PROPERTY STRUCTURE IN THE ELECTRICITY TRANSPORTATION SYSTEM

- **Power plant**
- **Transmission grid owned by a state enterprise (National Energy Company “Ukrenergo”):** Voltage – 800 kV, 750 kV, 330-400 and 500 kV
- **Transmission substation owned by a state enterprise (National Energy Company “Ukrenergo”)**
- **Grids in apartment buildings are operated by city district municipal utilities or private NPOs of apartment-owners**
- **Distribution grids and substation, property of private, municipal and state distribution companies “Oblenergo”**
- **Electric network in a private apartment is property of its owner**

Appendix 5. ENERGY MARKET: maps and graphics

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Transmission lines
- 800 kV
- 750 kV
- 330–400 kV
Appendix 5. ENERGY MARKET: maps and graphics
NUCLEAR POWER PLANTS

- Zaporizhzhya NPP
- Rivne NPP
- South Ukraine NPP
- Khmelnitsky NPP
HYDRO POWER PLANTS

- Kyiv HPSPP
- Kyiv HPS
- Kaniv HPS
- Kaniv HPSPP (under construction)
- Kremenchuk HPS
- Dniepropetrovsk HPS
- Dnipro HPS
- Kakhovsk HPS
- Dniester HPS
- Dniester HPSPP (under construction)
CAPACITY OF INTERSTATE ELECTRICITY NETWORKS IN UKRAINE (as of May 2011)

Russia — 1000 MW
Belarus — 900 MW
Moldova — 550 MW
Poland (Zamość) — 215 MW
Slovakia, Hungary, Romania — 245 MW
Head Office
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