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MODERN TRENDS IN THE ELECTRICITY MARKET CENTRAL AND EASTERN EUROPE UNDER ASYMMETRIC INFORMATION

Relevance of the study and formulation of the problem. The modern world is characterized by rapid globalization that have affected today in all spheres of economic activity, and above all, the energy sector as the basis of material production. Energy availability and dynamics of energy prices have a significant influence on the development of the world economy and the economies of individual countries. Prospects for growth in energy consumption is largely determined by the depth of the structural shifts in the industry and effective energy conservation programs. Providing guaranteed energy supply is a priority of international economic policy, without exception, all of the world community. Developing effective strategies of domestic firms in international markets to achieve high competitiveness and long-term presence of companies in the European energy markets provides a comprehensive study of the features and operation of the aforementioned markets, their dynamics and state. In the context of global integration of energy processes across Europe, Ukraine has a unique geopolitical and geographical location. Its territory borders with Western EU member states, which creates favorable conditions for transit routes. Ukraine is objectively interested in predictable global energy policy and proper positioning in the global energy processes for the rational use of its resources, transport, processing and scientific potential.

Currently, the development of modern markets is under conditions of asymmetric information, which is an indirect threat to the functioning of national firms in the market, especially when entering foreign. Asymmetry affects consumer choice, and hence the amount of goods sold and profitability, which in turn determines the attractiveness of the international market for the company. This is determined by the relevance of the research topic and its practical significance and objectives.

Analysis of recent research and publications. The issue of globalization of the world economy and the formation of a global business environment, the theory of markets with asymmetric information have become the subject of research in numerous scientific studies of domestic and foreign scholars - such as R. Robertson, J. Daninh, J. Mill, A. Toffler, T. Friedman, E. Heckscher, George Soros, George Akerlof, M. Spence, J. Styhlits, R. Bebchzhuk, J. Mirrlis, V. Vikram, J. Stigler, G. Tirol, D. Harshany, K. J. Arrow, M. Castells, V. Verhun, D. Lukyanenko, S. Avdasheva, N. Rozanov, D. Dmitriev, Y. Makogon, Y. Pakhomov, A. Plotnikov, A. Poruchnik, A. Rumyantsev, A. Filippenko, A. Shnyrkov and others. Processing issues related to the research status and prospects of the global energy market, problems of integration, globalization, Ukraine availability of energy resources in a globalizing world markets, dedicated work of foreign and Ukrainian scientists Amosha O., A. Abolmasov, V. Babic, B. Besedina, J. Wiener, Y. Goncharov, D. Kolodin, R. Nurksa, M. Porter, B. Sally, G. Bahiyeva, S. Berezovenko, I. Alexandrov, N. Baykova, R. Grinkevicha, A. Bilorus, B. Gubskiy, D. Lukyanenko, Y. Saveliev, A. Strickland, A. Thompson, S. Hollensena, W. Behrens, C. Bonera and other leading scientists.

Problem - theoretical generalization features of electricity markets of Central and Eastern Europe under asymmetric information.

The main material of the study. The main body responsible for the development and coordination of EU energy policy is the Directorate General for Energy (before 2010 - Directorate General for Energy and Transport). Next steps include regulating the level of individual member states, each of which can operate various systems Sector Management [1, c. 7; 2, c. 22].

Under Directive 2003/54/EC of 26.06.2003 for the EU member states was established commitment to deregulation and liberalization of the electricity sector. From 1 July 2007 consumers all 27 EU member states have been free to choose the supplier of electricity and gas. The reform European electricity market is a conglomeration of interconnected regional markets (Baltic, Central Eastern Europe, Western Europe Central, South Central Europe, Northern Europe, South- Western Europe and "France- UK- Ireland") [1, c . 9-10].

One of the key issues to create a single EU electricity market at the moment is the presence of congestion on cross-border sections between regional markets. However, in October 2010, the spot exchange EPEX said its pan-European aspirations of European Electricity Index ELIX, calculated on the basis of aggregate demand and supply curves in the regional market EPEX. This corresponds to unimpeded market price, without lack of bandwidth capacity transmission between countries. The market area Germany/Austria, France and Switzerland make up over a third of electricity consumption in Europe. Deviations national market prices compared to ELIX related to network congestion. The purpose EPEX integrated regional market to support greater use of implicit auctioning in case of overload ("market connections"). 9.11.2010 the market was successfully created connections to wholesale markets of Belgium, the Netherlands, Luxembourg, France and Germany/Austria. This means that, along with Nord Pool, currently there is a second cross-border intra trade region. In December 2010 at the Florence Forum proposed to combine the two into a single market area intraday trade platform.

The most developed market is the market in Northern Europe, especially the Scandinavian portion, where the exchange NordPool organized trading "day ahead" and the balancing market. In this market, there are some of the lowest prices in Europe, and the ratio exceeds 30 %.

In the EU operates nine major electricity markets:

NordPool, EEX, IPEX, Powernext, APX NL, APX UK, Belpex, Endex and Omel but in recent years there has been a tendency to merge exchanges and expanding the territory covered by them. All markets trade is in the "day ahead", some of them are also intraday, balancing and futures markets [1, c. 25; 3, p. 12-16].

Despite the ongoing liberalization in many countries remains substantial proportion of regulated power supply. To a greater extent this applies to the new EU members - Bulgaria, Estonia, Lithuania, Latvia, Hungary, Poland, Romania, Slovakia, however, regulated tariffs for consumers persist and in some countries with developed markets such as France and Italy.

Market Power in EU explicitly absent, but in some countries (e.g. Spain), are non-market mechanisms to pay for power: all manufacturers who submit market applications is paid a fixed fee (set by the administration), even if they offer electricity was selected because of rising prices [4, c. 12]. Such market power operates in Russia.

The functions of electricity transmission grids and management regimes in most countries combined and implemented organizational system operator (TSO). In the EU there are currently 34 system operators, combined in association ENTSO-E, which is in accordance with the laws of the Third Energy Package performs the functions of planning and co-ordination of European operating in parallel operation of power systems. However, unfortunately, the third package does not solve the issues of asymmetric information in the market.

The consolidation of regional markets significantly enhances competition in electricity markets. While the Nordic competition authorities carry out their regulatory functions over the years, creating an overall energy exchange Nord Pool, using regional concentrations, the German competition authority still follows a purely national approach. Data on the actual production of electricity from conventional power plants and wind farms and solar power plants are presented up to an hour on the main page EEX.

Germany is the seventh-largest power market in the world after China, the U.S.A, Russia, India, Japan and Canada. Germany uses energy very efficiently. So in 2010, energy consumption in Germany was about 192 kg of fuel per 1000 euro GDP. Annual gross electricity consumption in Germany in 2011 amounted to 607.8 billion kilowatt-hours of network losses of only 4.5 %, which is very low compared to the European average. The total installed capacity of 110 GW of energy supply. Pure lack of capacity of all power plants in Germany amounted to 165,859 MW as of December 31, 2011. Production in Germany was supplemented imports of electricity amounting to 42.0 billion kWh. Exports 59.0 TWh brought once again to the excess of exports over imports. Germany is the center of European trade. After the accident at the Japanese nuclear power plant "Fukushima" Federal Government had introduced a moratorium on exploitation eight obsolete nuclear power plants, resulting in an even greater shortage of capacity in the country at a rate of at least 8.4 GW.

The Federal Government has increased to 46.0 billion euros (46 % of price) excise tax on energy (oil and electricity). Preferential rates are applied to manufacturing and agriculture.

Turnover in 2011 on the European Energy Exchange spot (EPEX: Austria, Germany, France, Switzerland) and the European Energy Exchange (EEX) increased [6, c. 37; 7, c. 5-8].

Data on bilateral agreements provided Bundesnetzagentur (or Federal Network Agency of Germany) show that 4707 TWh were sold in the electricity market in 2009 through brokerage platforms. The financial crisis has only marginally affected the trade and wholesale electricity prices. Spot prices in the electricity market in 2011 exceeded the value of the previous year, although the low temperature end of the year played an important role. Compared with three price zones Germany/Austria, France, Switzerland, Germany/Austria had the lowest prices in the market [7; c. 5-8].

In production, transmission and distribution of electricity in the Czech Republic leading position occupied by the company Ceske Energeticke Zavody (CEZ), which is under the control of 72% of the electricity produced in the country. CEZ is a joint-stock company 67.61 % owned by the state. The main part of consumed electricity produced by thermal power plants that run on coal. In the last two decades, increasing the share of electricity generated by nuclear power plants and hydropower plants.

CEPS AS («CEPS») is the sole operator of the transmission in the Czech Republic, and now its 100 % owned by the state. CEPS is responsible for the parallel operation of power systems of neighboring countries through cross-border lines in accordance with the mandatory provisions UCTE. In 2001, CEPS won the exclusive license for the transmission of electricity, which is valid until 2026. In 2001, the government created a joint-statement «Market Operator". The total nominal capacity of border lines (high voltage) exceeds 50% of the installed capacity of all generating sources of the Czech Republic, but they are used only by 24%. Czech transmission grid provides transit facilities to neighbouring systems. In particular, the system operator interacts with SEPS in Slovakia, PSE in Poland, APG VET in Austria and in Germany and EON. Access to international cross is through the annual, monthly and daily auctions on the basis of bilateral agreements between the operators of transmission systems on both sides.

In the Czech Republic there are eight regional distribution companies («Reas»), each of which has a natural monopoly in the relevant field. CEZ controls the distribution activities of five of them, and the German energy company E.ON has two. Because the market dominance is CEZ, the competition in the wholesale market is limited. Formation of the price of electricity is on the Prague Energy Exchange (RHE) that July 17, 2007 started business with trade electricity in the Czech Republic. Prague Energy Exchange - the first market of its kind in Central and Eastern Europe - enables its participants to trade electricity commodity futures contracts with monthly, quarterly or annual deliveries (futures capacity). According to the Law on Energy, Regulation Sector, responsible for: Department of Energy, Office of Energy Regulation and the State Energy Inspection Board. Protection against anti-competitive behaviour stipulated by the Law on the Protection of Economic Competition 143/2001SB number, as amended (r 143/2001Sb. Every company engaged in the production, transmission, distribution and trading of the retail and wholesale markets must be licensed by the Energy Regulatory Office (except nuclear facilities) while a license for generation, transmission, distribution and operation of the market have a fixed duration not exceeding 25 years, the license for retail supply available in 5 years [8, c. 10-12].

In the Slovak Republic a leading position in the electricity sector is state-owned enterprise to produce electricity Slovenske Elektrane (SE). In January 2002, registered SEPS, as a separate public company for the transfer of energy in Slovakia, which was privatized in 2002. Aggregate demand for electricity in Slovakia in 2011 amounted to 28.9 billion kWh. Domestic production was 31.1 TWh, and the country was a net exporter of 2.2 billion kWh. The size of the retail market (including transmission and distribution losses) amounted to about 26 billion kWh in 2011. Offers for

Slovak market is largely concentrated. Although there are at least 5 individual generating plants larger than 100 MW of installed capacity, the rest of the stations belonging to the same state generating company, SE. At the same time, the country is electrically connected with most of its neighbors. Cross-border capacity is 3,500 MW, equivalent to 44 % of installed generating capacity. For this bandwidth is used only 1,200 MW of long-term agreement on transit. Wholesale electricity market in Slovakia is based largely on bilateral trade between SE, distributors and large consumers. As there is no wholesale market. Prices are formed on the basis of supply and demand on the Prague Energy Exchange, members of which are Slovak companies [9, c. 47-48; 10, p. 31-32].

In 1992, the Hungarian Electricity Trust (MVMT) was converted into a two-tier system involving joint-stock companies, with top-level company was called the "Hungarian Power Company Ltd." (MVM Rt.), which also served as the owner and controller. Power distribution companies and network marketing company created a second level. Act 1994 Electricity Sector prepared for privatization. Established a system of a single buyer, and in late 1995 the six regional distribution companies and the majority of TPP were privatized. MVM Rt. remained state-owned. In February 2002 an independent system operator MAVIR Rt. (formerly the National Center for electricity office) was removed from the MVM Rt. Its new owner was the Ministry of Economy. In 2001, the Hungarian Parliament adopted a new law on electricity, which opened electricity market in Hungary since January 1, 2003. The Hungarian Energy Office is responsible for licensing and sales of electricity supply, oversees the satisfaction of consumer demand and compliance with service standards and protecting the interests of consumers. Under the supervision of the state is 35% of the industry. The largest is the state-owned generation company MVM Rt. Other 65 % owned by private energy companies that are market participants: traders, distribution network operators, universal providers (electricity, gas, heat). Electricity Corporation MVM Rt, Korlea Invest Holding AG, Energy Trading Company, sro (Hungary), Magna E.A. s.r.o, Power Trade a.s, Slovenskй elektrőrne as, Stredoslovenskő energetika as (SK), RWE AG (UK), E.ON AG (Germany), EdF (France) in the electricity market in Hungary have at their disposal hundreds of contracts for the sale of electricity, even in the few countries that allows them to balance electrical and financial flows, winning for resale [11; c. 11].

Hungarian electricity market includes the following segments (submarket): bilateral contracts market, the market of centralized electricity trade (exchange - HUPX, PXE): "day forward" (short term contracts) per year, quarter, month (long term contracts) market centralized trading rights bandwidth interstate transmission lines are protected by the bandwidth carried out by one-sided auction organized by MAVIR Rt with system operators of the countries concerned (electricity suppliers from Austria, Romania, Serbia, Croatia, Ukraine, Slovakia), the market system services provided by the system operator MAVIR Rt market actors in order to maintain the quality and reliability of power supply, the market of financial instruments designated as hedges of transactions of purchase and sale of electricity from unforeseen changes in market prices. A special role is balancing group - CAT, which includes managers balancing market contracts [12, c. 4-9; 13, c. 24-28]. Licensing of retailers is 10 years and can be renewed. As for the licensing of new generating capacity, the licensing procedure depends on the size of the station. For stations over 50 MW, need a license to choose primary fuel station license for the introduction of a new station and a license to generate electricity. For new capacity of 50 MW, these licenses are issued by one so-called "simplified" procedure for licensing.

During the next year the combined Czech and Slovak electricity market will merge with the Hungarian. The corresponding energy companies signed a memorandum of the three countries [7, c. 15-20; 14] .

In Poland, held on separation of generation, transmission and distribution. Measures were taken to liberalize in the production of electricity and adopted new legislation to overcome a number of obstacles created by existing long-term contracts. Polish Electricity Company (Polskie Sieci Energetyczne - PSE) is the operator of the national network and has several long-term contracts with power plants. Such agreements aimed at ensuring the return of capital cost producers and to prevent the loss of their assets. It was also made legal separation of power system operator (TSO). Moreover, Poland is an independent body on regulation in the energy sector (ERA), which, among other things, is responsible for the approval of electricity tariffs and granting concessions for the activities of electricity companies. State-owned enterprises combined into four vertically integrated groups and partially privatized through the placement of minority stakes. This group - Polska Grupa Energetyczna, Energetyka Poludnie, Grupa Energa and Grupa Enea. They combine the production, distribution and trading activities. Poland has developed a competitive wholesale market in which PSE Operator (Polskie Sieci Elektroenergetyczne SA - Polish network company) - is responsible for balancing the Polish power system [7, c. 22-23]. This is achieved by balancing mechanism hourly. Poland has adopted the mode of access third party. Minister of Economy controlled by the President of the Energy Regulatory (ERA). The President of the Office is appointed by the Prime Minister. As a rule, all decisions of the President of the Office may be appealed in court that hears cases consumers and Competition in Warsaw. Appeals against its decisions is the Court of Appeal in Warsaw, and then, in the limited number of cases in the Supreme Court. Operating license issued for a period of not less than 10 years and not more than 50 years. The license may be issued only company that was established in any Member State. The demand for electricity tends to increase. Customs duties on imports of electricity is 5 % of the supply [7, c. 24-28; 11].

The degree of opening of the electricity market in Romania has increased from 40 % to 55 % (in 2006 - 80%) of the Government's decision number 1823 of 2004 28 October sole criterion for obtaining the consumer remains free annual consumption - 1 GWh/year (Order ANRE № 9 of March 8, 2005). The new Commercial Code for the wholesale electricity market, approved in October 2004 called for improving the wholesale electricity market for the day ahead (DAM); create balancing market (BM); improvement of cross-border capacity allocation, improve market support services, prioritizing production (mainly renewable energy and efficient cogeneration). Since October 2004 hourly calculations replaced monthly payments on the wholesale electricity market.

Since November 2004, Romania introduced a system of quotas and green certificates market. Suppliers are required to purchase quotas of green certificates from 0.7 % in 2005 and 4.3% in 2010. Green certificates are issued by TSO producers of electricity using wind, solar, biomass and hydro sources. Green certificates can only be less than 10 MW hydropower. Was introduced and began to work on the scheme in January 2005 to promote efficient cogeneration. According to this scheme, the fixed costs effectively block co-generating covered charges for system services TSO.

Government's decision in August 2004 was cancelled commitments to create a clear regulatory framework for hydraulic manufacturers, hydro-energetics is no longer required to participate in the wholesale electricity market in full control [14].

Built in 1990 only nuclear power plant in Romania "Cernavoda" with two reactors with a capacity of 700 MWh covers 18% of the country's electricity needs. In 2015-16 he was supposed to put in place two blocks of the plant, also of 700 MWh. Romania intends to build a new one, the second one's own nuclear power by 2030.

In Moldova, the state is the owner of monopoly for electricity generation, although there are plans for the privatization of three of the six largest power plants. An independent regulator - the National Agency for Regulation in Energy (NARE) - controls the fares that the company charges for the transfer of power "Moldtranselektro". In Moldova, there are five distribution companies. In 1999, the Spanish firm Union Fenosa bought three of them: RED Nord (22,93% of the total number of consumers, 17,17 % of the total energy - state Company); RED Nord-Vest (13,56% of the total consumers and 8.89 % of the total electricity - state company); RED Union Fenosa (63,51% of the total number of consumers and 73.94 % of the total electricity - a private company). The other two companies - government. The draft Rules of the electricity market, which, along with direct bilateral agreements providing for the formation of the balancing market. 6 of overhead transmission lines (330 kV) provide parallel operation of electric power system of Ukraine. Moldova's electricity system is connected to the systems of Romania and Bulgaria through 400 kV line (MHRES - Isakcha - Dobruzha). Four 110kV overhead transmission lines providing connection to the electricity system in Romania "island mode". Although Moldova produces electricity internally, it is very dependent on electricity imports.

The electricity market in the Republic of Moldova - a regulated market, and now it can not be liberalized. Tariffs for electricity transmission and approved NARE apply to all distribution companies, suppliers and consumers connected to the transmission system. NARE requires the licensee to transfer power to apply the same rate to all participants in the electricity market [10, p. 33, 64].

In Belarus, "Belenergo" manages industrial and economic activities of the enterprise sector. This group consists of six national electricity companies as well as research, design and construction companies. National Electricity Company is a vertically integrated companies owned by the state and consists of plants and electric and thermal networks.

The total installed capacity of electricity generation in 2011 amounted to 8247 MWh. Total electricity production amounted to 29.92 billion kWh. The total electricity imports (mainly from Russia) amounted to 9406 billion kWh (2011) and total exports of electricity - 5062 billion kWh (2011). Currently, electricity trade is with Russia and Ukraine, and power transmission is concern " Belenergo". Total electricity consumption amounted to 30.54 billion kWh (data from 2011). Fees for export and transit of electricity being negotiated between the parties and the administrative units established in the respective contracts. The fee for customs clearance paid after the customs clearance of imports and exports amounting to 0.15 % of the energy supply (excluding export/import from Russia). No export duties. Customs fees are not paid when importing electricity from CIS countries. Fees for electricity that comes from foreign countries is 5 %. Contracts for energy imports in accordance with the economic feasibility imports and energy security of the Republic. Currently, the definition of rules and procedures for allocating transmission power for interstate transmission lines are missing. Wholesale Energy in the Republic by means of a "single buyer" on the basis of bilateral contracts (concern " Belenergo" - is import and wholesale buyer of surplus electricity grids regional and seller of electricity to power deficit). Energy exchange and the market in real time absent and balancing energy provided by contracts [10, p. 32-33, 65, 15].

It should be noted that each year the world's population increases by 80 million people. Currently, about a quarter of the world population 6.9 billion people still lack access to electricity. Electricity consumption is growing faster than any other form of energy. Perhaps the increase in demand will be hampered in the short term due to the current global economic crisis, however, in the medium term these factors will again dominate the development. It is expected that today's electricity consumption 18 921 TWh increase by about 75% to 33,265 TWh worldwide by 2030. In the European Union, this value will be 3700 billion kWh (25%) by 2030. This forecast to Congress in Qatar announced chairman and chief executive of American oil and gas corporation Exxon Mobil Rex Tillerson. In his view, the global economy in this period will more than double [5, c. 8-9].

Findings from the study. At the current rate of annual growth in electricity demand in Europe is about 1.7%. Demand is mainly formed by large industrial and residential customers in Europe, experiencing persistent shortage of the product and are forced to seek new energy technologies.

Electricity prices are determined on the spot market, and have greater volatility, which represents a significant latent threat to the lack of awareness of economic entities on the market. That is a special hidden feature of the market is the asymmetry of information that could lead to such consequences for market participants as adverse selection and moral hazard, and even to the general market decline. Physical withdrawal electricity, tap and economic generation of electricity below cost is the action of the electricity producers, leading to increased moral hazard in the electricity market. In turn, consumers preferring products with additional features companies that are not socially responsible, through their ignorance, provoking reduction in the presence of non-functional characteristics of the product, until the complete disappearance of such goods, which leads to adverse selection in the market.

Each electricity market in Central and Eastern Europe has its own characteristics. However, the markets of EU member states are the most liberalized and deregulated. Pricing of electricity is through market mechanisms, namely the balance of supply and demand in energy markets RHE, EEH.

In electricity markets in Europe legally regulated free entry, evolving competitive environment.

In contrast to the EU markets post-Soviet states remain under state control, especially Belarus and Moldova. Demand is mainly formed by large industrial and residential customers, consumers EU countries experiencing persistent shortage of the product and are forced to develop new energy-saving technologies. Electricity prices are lower by about half in former Soviet countries than in EU countries as well, and specifications of goods, which mainly serves as a barrier to entering the EU market. However, consumer demand for electric power in these markets are not fully satisfied, and remains imperative, as appropriate to promote the sale and production of electricity, providing continued its consumption. And considering the specifics of the electricity market and the fact that the equilibrium price was very volatile and rapidly changing according

to changes in demand, both consumers and producers is difficult to avoid the impact of asymmetric information. Asymmetric information is dangerous for any national market. Even for higher income customers may be reduced to zero effect Engel curve at which an increase in income of consumers opt for better quality products.

Mainly on data from information asymmetries evident in markets such actions on the part of manufacturers as: physical withdrawal electricity, tap and economic generation of electricity at below cost (these actions are related to moral hazard). However consumers preferring products with no additional features through its ignorance, provoking reduce the presence of these non-functional characteristics of the product, until the complete disappearance of such goods (adverse selection), confirmed the theory of markets with asymmetric information.

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