Abstract. The article analyses the energy potential of Ukraine and transit through its territory. It can skillfully use its advantageous geopolitical position. The main directions of energy policy of Ukraine, approved by the energy policy of the European Union, are set. It also analyses the factors that inhibit the process of creating the foundations for the country's EU integration. The main lever in defending Ukraine's energy independence should be its energy transit potential. Ukraine needs to convince the energy suppliers and consumers (EU) that the transit of oil and gas through its territory is a reliable and cost-effective. The expansion of cooperation between Ukraine and the EU program "Eastern partnership" is very promising. Ukraine must come up with new initiatives to provide collective energy security of Europe.

Keywords: cooperation, European Union, energy security, energy resources, energy supply, energy efficiency, diversification, transportation routes of energy resources, nuclear-fuel cycle.

Introduction
The necessary condition for the existence and development of Ukraine as an economically independent state is its energy security. Its constituent elements are: a high level of energy and energy efficiency, diversification of sources of energy supply, efficient use of energy resources transit and protection of the environment from the effects of fuel and energy production. Therefore, the search for the directions to guarantee the energy security of the country is a very important task. A number of works are devoted to the problem of energy security of Ukraine, in particular (Loyko, 2013; Kosse, 2013; Volovych, 2009; Shevtsov, 2004; Ermilov, 2006; Makagon, 2012; Fedorova, 2012). However, only some of the aspects that affect the energy security of the country have been analyzed. This led to the need for a more comprehensive study of the basic principles and possible directions of cooperation between Ukraine and the European Union, which will guarantee its energy security, and will contribute to the collective security of Europe.

Method
The abstract-logical method has allowed to establish the logical relationships between the policy of the EU and energy security, as well as solving environmental and social problems. With synthesis the factors that impede the process of establishing the foundations of the European integration of Ukraine were investigated. The use of induction and deduction allowed to explore the possibility of using alternative sources of energy, which will improve the energy security of Ukraine and EU countries. The use of expert judgments contributed to the establishment of the strength of the impact energy transit potential of Ukraine to reduce its energy dependence. The method of synthesis has allowed to draw a conclusion regarding the main directions that will ensure sustained development of the society in the countries of the European Union and Ukraine.

Results
The policy of reducing external dependency is based on providing reliable imports at affordable prices and on a long term basis. For this, the EU intends to use its political and economic impact on the country's suppliers and transit countries through the conclusion of agreements on mutually advantageous exploitation of energy resources based on sustainable prices, market transparency and protection of the environment (Capros et al., 2010). The ways of energy transportation are of fundamental importance. In this case, Ukraine has advantages and can skillfully use its advantageous geopolitical position. The diversification of sources and routes of energy supplies remains the main direction of reducing the energy independence of the EU. The spread of European energy standards in the Ukrainian legislation allows to significantly improve the
resistance of Ukraine to attempts to politicize the interstate relations in the field of energy, and the accession to the European common market will reduce the opacity of the gas market. Ukraine has signed and ratified the Energy Charter Treaty (Verhovna Rada of Ukraine, 1998). This allows our country to have access to open energy markets of the EU countries, as well as the ability to meet current and future energy issues.

The main directions of the energy policy of Ukraine, approved by the EU policy should be:
- implementation of economically feasible energy needs with maximum reduction in the energy intensity of the national product;
- ensuring a high level of safety and environmental acceptability of energy production;
- improving the efficiency of production, transmission and distribution of electric and thermal energy, energy efficiency in all sectors of the economy;
- reducing the dependence of the Ukrainian economy on imported energy resources;
- optimization of the structure of energy balances and increasing the share of renewable energy in total energy consumption;
- modernization of the energy production in order to ensure its competitiveness;
- ensuring energy security of Ukraine (Shevtsov, 2004).

The main factors that hinder the process of establishing the foundations of the European integration of Ukraine, include: insufficient level of economic development, poor development of basic institutions of the economy and the slow pace of reforms, as well as imperfection, opacity, and instability of economic legislation, which create a high level of corruption, the flaws of tax policy, tariff restrictions on trade with EU countries, the problems of debt and with the protection of intellectual property. In addition, there is bureaucratic interference in economic processes, which leads to the reduction of foreign investment.

In the electricity sector of Ukraine has developed energy complex for the production and supply of electricity, which is a part of united energy system of Ukraine. The energy system has considerable power, which is used for its own needs and export surplus electricity, and is also associated with power systems of the countries of Central and Southern Europe. The wholesale electricity market with mechanisms of economic regulation can be observed as well as the tendency to the growth of export of Ukrainian electricity in EU countries (NTSEEU, 2000).

In the oil and gas industry Ukraine has a developed network of pipelines and underground gas storage. This can be used for the transit of oil and natural gas from the Caspian region and Central Asia to the EU. Ukraine has a fairly powerful oil industry. The explored reserves of natural gas and oil in the future are able to increase the share of local fuels in the energy balance of the country, and this is consistent with the principles of the Energy Charter Treaty of the European Union, because it reduces the countries dependence on energy import.

Ukraine and the European Union are interested in looking for alternative sources of energy, taking into account the fact that the share of imported Russian hydrocarbons to the EU is gradually reduced. In this regard, the cooperation with Turkmenistan, Kazakhstan and Azerbaijan with the purpose of using transmission infrastructure for new projects seems to be interesting. Our country is interested in expanding supply routes of energy resources on its territory. This applies to pipeline White Stream, which will bring gas from Central Asia across the Caspian Sea, the South Caucasus, the Black Sea, and then Ukraine to Europe. It is an alternative to the Russian project South Stream, which will supply gas from the Asian region and will enable to avoid possible blackmail by Russia or Turkey (Volovych, 2009).

Perspective direction of cooperation in the oil sector is the continuation of work for commissioning of the oil pipeline "Odessa - Brody" and its use for transporting oil from the Caspian region to the countries of Central and Eastern Europe (Kosse, 2013).

The cooperation with the EU on the research of the northwestern shelf of the Black sea is also important. According to preliminary estimates, there are significant deposits of oil and gas condensate. In this area Ukraine can cooperate with EU countries like Romania and Bulgaria (Ukrainian Institute of Public Policy, 2011).

Taking into account modern integration processes in our country it is necessary to work together with other states. The following forms of cooperation should be used: participation in the development and exploitation of promising deposits and the distribution of production, as well as joint development and exploitation of their own resources, on condition of their investing and mutual benefit. The main mechanism
that should prevent the likely increase of the cost of domestic production of energy resources, is a technological re-equipment of the industry through innovation.

Reducing energy dependence should occur together with the integration processes that require a flexible and balanced policy of defending its own interests in relations with European countries. The main lever in defending the interests of Ukraine should be its energy transit potential. This approach in solving such complex problems will add to the diversification of mechanisms of control of the external energy dependence. An important condition for the realization of these possibilities should be of high reliability and efficiency of transit, the quality of transport services and accomplishment of the contractual obligations. The flexible and transparent, predictable tariff policy and the search for ways to increase transit will ensure maximum use of existing transport routes and filling of newly constructed pipelines.

The main measures of internal energy independence should be:
– prevention of uncontrolled monopolies on domestic energy markets;
– creation of equal competitive conditions for the activity;
– creation of a state strategic reserves of primary energy commodities;
– creation of a modern legal and regulatory framework;
– excluding theft or misuse at enterprises.

Internal policy of energy saving in the EU is based on the maximum possible increase in domestic production and generation, taking into account the diversification of internal supply sources and increase reserves.

Security of supply the EU countries should not be dependent on any only fuel. In fact, the EU keeps under control the allocation of investments in the energy sector, with appropriate priorities. If a country selection does not coincide with the priorities of the EU and its rejection worsens the country's energy supply, it can make decisions and take action on the development of certain types of energy by agreement with the European Commission.

Policy demand management is also determined by the need to ensure energy security. In addition to market mechanisms, it is necessary to use the mechanisms of regulation at the state level and at the EU level. Energy prices should reflect real costs and promote energy efficiency. Tax policy should also contribute to the economical use of energy.

The problem of energy efficiency concerns economic, political and social activities, so the achievement of significant results is a difficult task. The creation of sustainable energy goals and energy security of the EU countries require concerted action in all directions, including the bringing to consciousness of the society the priority of energy conservation.

Financial and legal restructuring of the business, which is associated with the transit of gas is based on the gas market. The presence in the Ukrainian market energy suppliers from Central Asia is very important. It will give the opportunity to create a competitive environment.

A range of measures to bring prices into line to cover costs and to attract the necessary investment should become the priority. This requires appropriate changes in legislation and regulatory framework that allows the integration of gas markets with different pricing policies (for the public, utility companies, industry) and establishing a single internal price. This is in line with European practice. Such changes will promote the establishment of a transparent and competitive pricing, and this will result in efficient and effective use of energy.

Ukraine needs to convince the energy suppliers and consumers (EU) that the transit of oil and gas through its territory is a reliable and cost-effective. As the demand for fuel and energy resources in the EU is growing, they will be interested in the full load of the Ukrainian gas and oil lines, even if will be put into action projects such as Nord Stream and Nabucco. Today about 30% of the capacity of the transportation system and 50% transit capacity for pumping oil is not used, since the gas transportation system will require an investment of 2.5 billion Euros.

The European Commission and our country carry out a joint project, which allows to assess the safety of nuclear power plants of Ukraine. The work on the stabilization of the Shelter at Chernobyl NPP has been conducted. The construction of a repository for spent nuclear fuel and solid waste was completed. Ukraine has a great potential for expanding cooperation with the countries of the European Union. One trend is the use of projects for construction of new power units together with European experts with the assistance of modern security technologies of new generation reactors in the West, because it is known that the European nuclear
safety is far ahead of domestic. Promising is the creation together with the European experts of the elements of the closed nuclear-fuel cycle (Capros et al., 2010).

Ukraine should insist on signing an extended agreement with the European Union, which will become the basis for further cooperation and will contribute to the integration to the EU and extended contacts in the field of energy. The expansion of cooperation between Ukraine and the EU program "Eastern partnership" is very promising (Lidegaard and Bildt, 2014).

Ukraine must come up with new initiatives to provide collective energy security of Europe (Shevtsov, 2002). They should be based on the following principles:

– every consumer should be able to use different energy sources at various times;
– the structure of energy consumption shall be determined on the basis of economic and environmental feasibility;
– the production of fuel and power should be decentralized, and energy flows – crushed;
– the formation of strategic reserves should be directed towards their universal application;
– to improve flexibility and sustainability of energy supply systems backup power must be selected or created.

Conclusion

Therefore, energy security is one of the major problems, the solution of which guarantees the sustainable development of society both in Ukraine and the EU. The main aspects of the problem are: the reduction of energy dependency, energy efficiency increasing, ensuring the environmental protection and social stability.

All this requires purposeful actions of all branches of government of Ukraine, in particular: management personnel competence, mutual trust between government and citizens, and their willingness to social partnership.

References


