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**ENERGY STRATEGY OF UKRAINE
through 2035**

***WHITE BOOK
OF UKRAINIAN ENERGY POLICY
"SECURITY AND COMPETITIVENESS"***

Kyiv, 2014

1. Background

By signing the European Union Association Agreement, Ukraine made a historic decision on its development priorities. This decision not only entails a number of obligations having an impact on Ukraine's social and economic development priorities and, in particular, on its energy sector. This fundamental choice made by Ukraine with respect to the country's full integration into the community of European nations determines the need to change Ukraine's approach to formulating the country's energy policy, which has to be consistent with the EU principles and practices.

In this context, the Energy Strategy of Ukraine defines the purpose and the methods of implementing Ukraine's energy policy in the long term, as well as outlines the mechanisms for this implementation. In this way, unlike the current edition of the Energy Strategy of Ukraine through 2030, this Strategy is not a program of action or an organizational and administrative document regulating the development of the fuel and energy complex of Ukraine. This Strategy is a political document formalizing the country's policy, defining the objectives of the public administration system, and setting the mechanism for focusing all public efforts on the achievement of the development goals set for the entire energy sector of Ukraine.

The overall objective of the Strategy is to supply the needs of the society and the economy in fuel and energy sources in a technically safe, cost-effective and environmentally sound manner in order to ensure the country's activity in both ordinary and extraordinary situations.

The Strategy provides for:

- determining the goals of the Ukrainian energy sector based on the priorities of ensuring energy security and implementing Ukraine's aspirations for the European integration;
- introducing modern methodological approaches adopted in the EU, including the development of strategic planning documents and practical measures aimed at state policy implementation in the energy sector;
- developing a coherent system of state the control of the Strategy implementation, providing for the harmonization of the Strategy with the system of country development planning; forming a coordinated system of state management mechanisms aimed at achieving the Strategy goals and creating a system of the Strategy implementation monitoring; and ensuring compliance with the Strategy provisions by all economic agents within its scope.

The Strategy sets the task trajectory of the energy sector development, ensuring the consistency of its priorities with the broader objectives of the society and envisaging the development of the country's energy sector as part of the sustainable social and economic development of Ukraine.

The Strategy envisages:

through 2020:

- transition of Ukraine's energy sector to market principles of operation and competition, promotion of increased efficiency of the energy sector economic agents performance and the efficient use of energy sources by market participants and the society in general;
- the elimination of the critical dependence of Ukraine on energy resources imports from monopolistic sources, and energy security improvement by diversifying the routes and sources of energy supplies for the national economy;

through 2025:

- the integration of the energy sector of Ukraine into the EU energy markets and the European energy security system;
- the assurance of the competitiveness of the national energy sector in the European energy market by creating an enabling environment to encourage investment and technical modernization of the energy sector facilities;

through 2035:

- full-scale integration of Ukraine's energy sector into the European energy market involving the free movement of energy sources, investments and technologies, fast track modernization of the energy sector and increased reliance on domestic energy sources;
- technological upgrade of the energy sector.

The outcome of the Strategy implementation will be turning the country's fuel and energy complex from a troubled sector requiring constant state support into a modern, efficient, and competitive

sector of the national economy, capable of sustainable development in the long term in the conditions of regional integration and competition in the European and global energy markets.

The energy Strategy of Ukraine is an integral part of a comprehensive strategy of Ukraine's social and economic modernization based on dynamic economic growth, sustainable and efficient use of national resources, and Ukraine's integration into the European economic and political space.

Another key objective of the Strategy is to develop a system to ensure the country's energy security and to guarantee the stable power supply to provide for the national economy and the social needs in both ordinary and extraordinary situations.

The political eligibility of the Strategy goals and the efficiency of management decisions in the energy sector will depend directly on their coordination with the resolution of the key strategic objectives of the country's economic policy, including creating favorable conditions for improving the competitiveness of the national economic agents in foreign and domestic markets.

For the period through 2035, the Strategy is based on the need to implement the economic policy aimed at ensuring economic growth and improving the welfare of Ukrainian citizens. The Ukrainian gross domestic product is expected to increase twofold by 2035, i.e., to grow by 3.5% on average annually.

At the same time, the resumption of high economic growth rates on the basis of the traditional economy structure, with a large share of energy-intensive low-technology sectors and without a significant increase in the share of the gross value added in the manufacture of products, goods, and services, is unlikely.

Ukraine needs to remedy the distortions of its real economy by decreasing the share of resource and energy intensive activities, promoting the reduction of energy and ecology intensity of production by introducing modern technologies, streamlining resource consumption, optimizing the industry dispersal, etc. Economy sectors with the lowest power consumption using technological processes characterized by high energy efficiency should become the main growth drivers of the industry.

2. Current State and Priorities of the Energy Policy

The main challenge to the competitiveness of the national economy is the low level of its energy efficiency and the dominance in the economic structure of energy-intensive industries.

To this day, the task of improving the energy efficiency of the national economy has not become a priority. Until recently, Ukrainian state and society continued to operate by inertia, following the stereotypes of the availability of excess energy, while the government's economic policies did not encourage its efficient use. Ukrainian economic agents and the population continue to expect the state to partly offset their energy costs and refrain from any actions aimed at improving their energy efficiency.

The existing mechanisms of rates regulation for energy supply companies in the utility sector create preconditions for the guaranteed receipt of funds through subsidies and support programs. In turn, the "cost-based" method of rates setting discourages companies from improving their energy efficiency. The existing option of refraining from the implementation of energy efficiency projects through the availability of various benefits and the understatement of energy prices is a significant challenge to the government policy in the energy sector.

This situation disrupts the market balance (competition) between different types of energy resources and power supply sources and prevents from improving energy efficiency of the technological processes used by Ukrainian producers, thus decreasing the competitiveness of the national economy and the country in global markets.

The sustainable development of the national economy requires reliable and sustainable energy supply at competitive prices. To fulfill this task, the country needs to respond to the challenges threatening the stable operation of its power supply systems and to resolve a number of pressing issues that hinder the development of its energy sector.

A key challenge that requires an urgent response is the unsatisfactory technical condition of Ukraine's energy sector, which continues to deteriorate due to the wear-and-tear of its physical assets. Most of the country's generating units and energy networks are worn-down and inefficient. Most thermal power units have exceeded their wear limit and require substantial upgrading or replacement,

while most units of nuclear power plants are nearing the end of their design lifetime. The capacity balance of the Ukrainian power grid is characterized by the lack of regulation capacities, resulting in the inefficient use of the existing capacities, and high losses. The emissions of dust, sulfur oxides and nitrogen by Ukrainian thermal power plants exceeds manifold the respective standards used in the developed countries. A large share of main grids and distribution network facilities are worn out and require modernization.

An equally critical situation can be observed in the housing and utilities infrastructure, where poor physical condition results in significant heat losses in heat networks (with total losses in the heat networks amounting to 45%, and in water supply systems, to 40%) and sometimes in heat supply cuts through networks accidents. The stock of buildings is in poor condition, and low thermal insulating capacity of the building results in significant heat losses on the demand side (for most buildings, heat losses amount to 30%).

On the overall, all branches of the energy sector require capital investment. Currently, the modernization in some segments of production, transportation and end-use energy consumption in Ukraine has just started, basing on the existing rates setting mechanisms and the state support under specific programs. This situation calls for the anticipated investment in the technological renovation of energy-generating and energy-using equipment, the provision of adequate incentives in the areas of fiscal and monetary regulation, and the implementation of targeted investment programs.

The incomplete reform of energy markets sets serious challenges to energy sector development prospects. The existing models of market operation in Ukraine do not allow for forming reliable sources of financial security even for the urgent needs of the energy sector required to maintain the functioning of the energy sector at its current level. Subsidies to producers, cross-subsidies between consumer groups, and preferential energy procurement not only reduce the incentives to ensure energy efficiency, but also discourage investment in the development of Ukraine's energy sector.

Overcoming the contradictions between ensuring social protection and implementing market principles of management in the energy sector requires a review of the social policy. The existing practices of ensuring social protection for certain categories of consumers through the use of fuel and energy sector resources make the accumulation of resources required for the sector's modernization virtually impossible.

At the same time, the efforts made in the recent years to reform energy markets did not have the desired effect. The adoption of the Law of Ukraine "On Basic Principles of Electricity Market Functioning" cannot be expected to bring about the real change in the market. The introduction of the special format of mutual settlements within the new electricity market model (bilateral contracts and balancing market model) through the Cost Imbalance Allocation Fund effectively secures the existing system of cross-subsidies for the period through 2030. Retaining the system of cross-subsidies for this model of electricity market operation entails a risk of market segmentation by generation types, making market competition fundamentally impossible and stimulating the increase of production costs and consumer prices. In fact, the Fund's existence makes the implementation of the electricity sector reform impossible.

The operation of the natural gas market, despite the adoption of the Law of Ukraine "On Basic Principles of Natural Gas Market Functioning" remains distorted. Preserving the imbalance between prices for certain categories of consumers would have a number of negative effects. On the one hand, limiting the profitability of state-owned natural gas extraction companies by an obligation to supply gas for the population at discounted prices discourages state-owned companies from increasing the volume of domestic gas extraction. In turn, in a crisis situation this leads to introducing administrative control of the market and restrictions on private companies' activities, undermining the investment climate and the confidence in the Ukrainian state. On the other hand, the imperfect mechanisms of rate difference compensation and the existing subsidies to certain consumer categories result in the lack of interest in performance efficiency on the side of the companies operating in the natural gas market and heat supplies sector.

Petroleum products market is facing significant challenges. Despite sufficient refining capacity, it undergoes recurring crises. Worn-out technological infrastructure and outdated production facilities, unfavorable pricing environment in the market, low oil conversion ratio, high production costs and low product quality have resulted in the decrease in Ukrainian oil refineries process utilization to 7-10% in

2013-2014. There are no refineries in Ukraine capable of competing with the neighboring countries' facilities, and there are no resources available for a large-scale renovation. At the same time, the opacity of the energy policy in this sector has led in recent years to the consistent growth of the share of imported petroleum products in the Ukrainian market. In the recent years, import supplies have accounted for about 80% of the Ukrainian petroleum products market.

The current situation in Donbass, the base area of the national coal industry, makes Ukraine rebuild the system of relations in the coal industry and its operating principles virtually from scratch. The infrastructure destruction and the shutdown of coal producers in several districts of Donetsk and Luhansk regions make Ukrainian coal industry face the threat of losing its role in ensuring the country's energy security. Ensuring the efficient operation of the coal industry in the long term requires the transition to the market environment, completion of privatization processes, and the introduction of a competitive coal market. In fact, the current practice of reducing coal costs by using subsidies from the budget eventually has turned from a mechanism aimed at ensuring a balanced economic performance of state-owned coal producers to provide for social stability and employment in the region into an instrument used to exploit the resources of such producers and to subsidize certain categories of coal products consumers. The current system of state assistance to the coal industry has exhausted itself.

Ukraine is committed to using nuclear power to meet the needs of its national economy, seeing its stable operation as the necessary condition to ensure an adequate level of energy security and sustainable development of the country. Meanwhile, the nuclear power industry of Ukraine has accumulated a number of problems, which in their totality pose a serious threat to the country's energy security. The current rates for electricity generated by nuclear power plants do not cover all operating costs and expenses related to their construction or continued operation, the maintenance of the due degree of safety, spent fuel and radioactive waste disposal, and the accumulation of financial reserves required for power units decommissioning. The sector's own needs have been funded residually. The potential of the Ukrainian uranium mining industry and nuclear-powered complex is mostly a declaration, while the state programs of their development are not being fulfilled. Despite its potential, Ukraine has never managed to this day to set up its own nuclear fuel production to meet the needs of its nuclear power industry.

An additional challenge when planning the development of the energy sector arises from the global climate change and the need to reduce greenhouse gas emissions. In 2009, as part of the UN Framework Convention on Climate Change, its participants produced the Accord stating that global warming should be limited to below 2.0°C. For Ukrainian energy sector, this means the need of implementing a whole package of measures to limit greenhouse gas emissions by its power plants and to minimize the negative impact of the energy sector on the environment.

Without implementing comprehensive reforms, encouraging large-scale foreign investment, and ensuring the sustainability of Ukraine's energy and economic policy, the risks for sustainable development and operation of the energy sector will continue. To strengthen Ukraine's position in the global and regional division of labor and to ensure the sustainable development of the national economy and energy sector, it is necessary not only to introduce a series of unpopular but uncontested changes to the organization of the energy sector operation, but also to carry out urgent reforms of the political, administrative, labor, social, housing and utilities sectors.

During the reform period defined in the national reform blueprint "Ukraine 2020: Development Strategy," the Strategy implementation has to be ensured by the concerted actions of all stakeholders and carried out in compliance with the set state policy principles.

The principles of the energy policy of Ukraine defined for the duration of the Strategy are as follows:

- priority of ensuring the sustainable development of Ukrainian economy;
- transparency of the state regulation of the energy sector, energy policy stability, and continuity of management decisions;
- liberalization of energy market relations, non-discriminatory pricing policy, and guaranteed access to market and networks;
- promotion of competition, independence of energy market regulators, consumer protection against monopoly manifestations, and regulation of natural monopolies activities;

- priority of innovative technological development and encouragement of energy infrastructure modernization;
- inclusion of Ukraine's energy sector into the European energy space and the European system of energy security.

To achieve the Strategy's objectives, the energy sector should be gradually transformed from a subsidized and troubled one into an economically profitable, competitive and mobile sector of the national economy. To make this possible, Ukraine's energy sector requires significant long-term investment to ensure its modernization, security, and competitiveness.

The system-wide tools used for implementing the country's energy policy and achieving the Strategy objectives should include the abolishment of the current system of subsidizing energy supplies, the elimination of cross-subsidies in energy markets, the gradual and predictable transition to market pricing, and the prevention of executive bodies' interference in the operation of energy markets and market participants.

The market pricing will send price signals to businesses and the population to upgrade equipment and change energy consumption practices, and will encourage investment in new energy facilities. At the same time, market pricing will ensure the due level of profitability of energy companies obtaining resources for modernization and sanitize the public finance aimed at supporting not individual energy market facilities, but strategic projects that are not attractive in market conditions, on the basis of public-private partnership.

The efforts to reform the system of energy subsidies should be accompanied by target programs aimed at protecting the vulnerable segments of the population. Such protection of the disadvantaged population should be carried out through monetary mechanisms to encourage prudent attitude of the population towards energy consumption, and to increase the liability and management efficiency of the suppliers.

The transformation of Ukraine's energy sector should begin with a radical review of its energy efficiency policy. Given the financial constraints existing in Ukraine, its energy policy in the near future should focus on improving energy efficiency in energy, housing and utilities sectors. The priority objectives should be improving the energy efficiency of energy consuming installations in buildings and power systems, introducing the instrumental metering of energy resources and services supply and consumption, instituting the mechanisms of apartment buildings management, and attracting investment for energy efficiency from state and private banks.

The reduction of energy demand in the real economy has to become a key priority for the government, especially in terms of introducing new incentives to businesses to improve energy efficiency on the demand side. Introducing demand management mechanisms, such as the mechanism of "energy services" as an alternative to new energy production, meets Ukraine's obligations under the Treaty establishing the Energy Community.

Economic incentives aimed at improving energy efficiency related to their channeling to the target group of energy consumers and to the review of their implementation organization also need to be defined. The implementation of the above goal requires creating institutional conditions for channeling investment to customers through the use of market financial infrastructure and price incentives for businesses to improve their energy efficiency.

The obligations undertaken by Ukraine with respect to reducing the impact of the energy sector on the environment determine the need for additional investment. The priority here is limiting greenhouse gas emissions by large power plants that can be achieved through the implementation of a whole complex of measures in the area of energy efficiency, energy conservation and increased use of renewable energy. With respect to minimizing the negative impact of the energy sector on the environment, the priority areas of the state policy are reducing the formation of harmful substances in the production process by introducing advanced production technology and localizing (trapping) emissions and discharges, with their subsequent neutralization, storage, and disposal.

Given the expected resource limitations in the country, the priority of the energy policy is developing the mechanisms to encourage investments, combining public and private financing, and to attract resources from international financial institutions, international agreements, and capacity development programs. In this context, stepping up and expanding Ukraine's participation in investment mechanisms formed as part of the policy aimed at limiting climate change is equally important. This

will be facilitated by Ukraine's accession to several international agreements, ensuring enlarged access to international carbon finance and other "post-Kyoto Protocol" mechanisms, international financial institutions' programs and increased bilateral cooperation between governments.

The fundamental condition for creating a favorable investment climate in the energy sector is a radical improvement of Ukraine's business climate, including the rule of law, the implementation of independent and strict control of competition and the decisive steps towards market pricing. This urgent task requires the immediate completion of the energy market reform, ensuring market access, stability and transparency of economic conditions, and limiting government interference in markets functioning and business operations.

Completing the privatization of energy assets, with the exception of strategic ones, is a precondition for creating a transparent and investor friendly investment climate. The objective in this area is to create the legal framework that would promote competition in energy markets and become the key to attracting investment and guaranteeing to Ukrainian energy consumers the benefits related to efficient market operations. Ensuring non-discriminatory third party access to networks and the independent and effective control of their activity in the market is a prerequisite for market improvements. To increase revenue transparency and investor confidence, Ukraine has to use the instruments provided by the EU legislation and international initiatives related to ensuring transparency in the extractive industries and increasing the transparency of market operations and transportation routes.

National energy sector regulators have to obtain the status of independent market regulators. The regulator must not only defend the interests of the state in ensuring the implementation and compliance with the established rules of energy markets operation by economic agents and promote the interests of economic agents in obtaining fair compensation for their costs incurred to meet the customers' demand in electricity and energy resources, but also act as a guarantor of consumers' rights to access to energy at the lowest price in a non-discriminatory manner.

The military aggression against Ukraine has clearly indicated the urgency of forming a system to ensure the country's energy security in both ordinary and extraordinary situations. Ukraine should introduce the mechanism to reliably provide for the country's energy needs in case of energy supplies blocking or the energy infrastructure damage.

The diversification of the routes and sources of energy supplies and of energy technology suppliers to the energy market of Ukraine have to become the priority of the country's energy policy. Ukraine's participation in the implementation of infrastructure projects carried out jointly with the EU that would improve the stability of energy supply to Ukrainian market and its energy security should be ensured as soon as possible. The enhancement of technical capacities and the development of organizational and institutional framework for cross-border energy trade with the EU countries will provide not only for the diversification of sources and routes of electricity, natural gas, oil and oil products supplies, but also for the technological integration of Ukraine into the European energy market. Expanding the use of nuclear fuel and technologies in cooperation with the world's leading companies will help reduce the critical dependence of the country's nuclear-powered complex on Russian nuclear technology.

In the face of the growing risks and threats to critical energy infrastructure, substantially revising the policies and building a new protection system for strategic energy facilities is necessary. The ultimate goal is to develop a multi-level, comprehensive, and well-coordinated system of warning and protecting vital facilities from external threats. It is necessary to engage the private sector to ensure the country's energy security and establish the mechanisms to coordinate the actions of public authorities and businesses in crisis situations. Economic agents should also be involved in forming strategic energy emergency reserves. The objective of improving the competitiveness of the energy sector is not only to provide for its economic attractiveness, but also to enable economic agents to analyze risks and ensure their readiness for sustainable operation in the case of the identified threats.

With regard to the expansion of international cooperation and the choice of the energy sector operation and regulation principles, the Strategy defines the goal of the energy policy of Ukraine, which is Ukraine's integration into the EU energy market. Achieving this ambitious goal requires:

- implementation by Ukraine of the provisions of the EU's Third Energy Package aimed at creating competitive and non-discriminatory economic environment in the domestic energy market;

- integration of the unified power system of Ukraine into EU power systems in compliance with ENTSO-E requirements in order to ensure Ukraine's technological integration and to provide access for Ukrainian electricity producers to the European market;
- expansion of cross-border infrastructure of gas supplies between Ukraine and the EU which, besides the diversification of gas supplies to Ukraine, will help create, using Ukrainian underground gas storage facilities, a trading platform, and to ensure Ukraine's comprehensive integration into the European gas market;
- Ukraine's active participation in regional and industrial international organizations to ensure agreed and coordinated solution of common problems, discussion and decision-making on the topical issues of energy security and joint actions during crisis situations in the energy sectors of the countries concerned.

3. Strategy Goals and Objectives

This Strategy is the main instrument of state energy policy defining the general goals of the country's energy sector development in the long-term, setting the objectives and outlining the implementation mechanisms of the state energy policy.

The aim of the Strategy is to provide for the society and the economy demand in fuel and energy resources in a technically safe, secure, cost-effective and environmentally sound manner to ensure improved living conditions of the population.

The target status of Ukraine's energy sector, at which the Strategy is aimed, is determined based on the need to:

- meet the population's demand in both normal and emergency conditions;
- ensure the technically reliable and safe operation of the power supply system;
- provide for the economic efficiency of Ukrainian power supply systems and the energy sector in general;
- ensure the efficient energy use by the population and the national economy;
- find an environmentally sound solution to the environmental and climate impact of the energy sector;
- enable the state to form and implement policies aimed at protecting national interests regardless of the existing and potential internal and external threats to the energy sector.

The quantitative and qualitative targets of the Strategy are defined with due account of the need to ensure the sustainable development of the Ukrainian society in the long term, national economy priorities, and international obligations of Ukraine.

The major targets for the period through 2035 are:

- to reduce **GDP energy intensity** by 2035 to the level of **0.17 koe per 1 USD Ukrainian GDP (PPP)** and to bring this indicator nearer to that of the countries with similar climatic, geographic, and economic conditions;
- to optimize the structure of the country's energy balance basing on energy security requirements and to bring the **share of renewable energy to 20%**;
- to achieve by 2020 the **level of dependence on energy supplies from a single country (company) not exceeding 30% of total imports** (for nuclear fuel, targets are set separately);
- to achieve by 2035 the **level of dependence on supplies from a single country not exceeding 30% of the total consumption of all types of energy**;
- to ensure a guaranteed **compliance of generating capacities to the volumes and modes of energy consumption** in the United Power System of Ukraine, particularly with regard to regulatory capacities availability;
- to ensure by 2025 the technical **integration of Ukrainian and European electricity and gas markets** (cross-border transmission networks) **amounting to at least 15% of Ukraine's domestic market volume**;
- to form by 2035 a **system of guaranteed power supplies** to meet the demand of the national economy and the population during an emergency period **equivalent to 90 days of consumption**.

The detailed objectives of the Strategy outlined on the basis of the strategic objectives in other spheres of life, policy decisions and international obligations of Ukraine are provided in Appendix 1 hereto.

The target structure of Ukraine's energy mix in 2035 necessary to realize the Strategy objectives is provided in Appendix 2.

The Strategy implementation requires a focused and consistent energy policy combined with the flexible application of management solutions with due account of the actual social and economic situation. In this way, specific management decisions made to implement the Strategy should ensure:

- bringing the regulatory and legislative framework, particularly in the energy sector, in line with the principles and provisions of the EU law, in particular those adopted in the Association Agreement by Ukraine, on the one part, and the European Union, the European Atomic Energy Community and their Member States, of the other part;
- refraining from any actions that could compromise competition in energy markets and energy services market, energy efficiency increase, and Ukraine's priorities with regard to low-carbon economy development;
- ensuring, if social assistance is required, its minimum impact on the principles of energy markets operation;
- promoting the development of business initiatives and corporate management quality based on indicative planning and voluntary agreements for the Strategy implementation;
- refraining from adopting legislative acts that would adversely affect the sustainability and predictability of the rules of energy market operation.

The Strategy objectives are achieved by implementing a complex of measures by the set stages. The stage-by-stage approach to Strategy implementation ensures energy policy sustainability with regard to long-term goals and the flexibility of using specific mechanisms of its implementation, based on the actual situation.

The Strategy implementation stages are as follows.

1) Reform Stage (2015-2020), providing for the completion of programs and projects initiated earlier using the existing rules and regulations for administrative, political, and economic activities. During this stage, a number of restrictive factors are preserved, such as the pressure of populist decisions, the relative incapacity of public authorities, etc., making it possible to realize only a small portion of energy sector development objectives. The objectives at this stage include changing the approach to energy sector management, including the completion of privatization processes and energy market reform, the elimination of indirect settlements systems in the energy sector and the transition to direct contractual relations between energy producers and consumers based on market pricing.

In the first place, by 2020, the following targets should be achieved:

- elimination of privilege prices policy for specific consumer groups and the transition to unified pricing principles for all consumer groups;
- completion of privatization and/or corporatization process in the energy sector, definition of the powers and tasks of the energy sector executive bodies;
- completion of the legal framework for energy market reform, ensuring energy markets reform and strengthening the independence of national energy market regulators;
- decentralization of power and transfer of resources and responsibilities for the housing and utilities sector and electric public utility operations to the local level, substantiated decentralization of power supply systems using local fuels and renewable energy;
- introduction of energy management system, energy audit performance, development of legislation in the area of energy services provision (energy efficiency projects implementation by consumers with the support of suppliers);
- implementation of programs aimed at Ukraine's energy systems (electric power and gas transportation) preparation to synchronous operation with the EU power systems;
- diversification of routes and sources of energy to reduce Ukraine's dependence on supplies from monopolist sources;
- introduction of strategic planning with respect to both the regular approval of promising key energy sector development parameters and the analysis of risks and threats to energy security and the assessment of the Strategy implementation process.

Addressing these urgent challenges will help to form a new system of relationships between suppliers and consumers of energy services and to clearly define the liabilities of the economic agents in the energy sector, their capacities, and investment instruments. At the same time, this will increase the liability of energy facilities owners for the efficiency of their operations, encourage economic agents and government bodies to improve energy efficiency, and enable innovative development of the energy sector.

2) Modernization and Corporate Development Stage (2021-2025), when after the completion of urgent political and economic reforms in the country, the establishment of more pragmatic economic relations can be expected, increasing economic agents' liability and commitment to efficient performance. This stage provides for the full implementation of the new models of energy market operation and the expansion of powers and liabilities of local authorities with respect to community activities. The objectives at this stage include reforming the energy sector management system and introducing the legislation on financial and economic energy regulation according to market models, as well as improving corporate culture of economic agents and their ability to use the instruments available on the domestic and international capital market and the resources of Ukraine's energy market. A fundamental improvement of the legal framework to ensure the country's energy security in the liberalized energy market environment, particularly with regard to using available resources in emergency situations is required.

The priorities of this stage are to ensure, by 2025:

- integration, simultaneously with the submission of the application for Ukraine's accession to the EU, of Ukraine's unified energy system to the European Network of Transmission System Operators for Electricity (ENTSO-E) and of Ukraine's gas transport system to the European Network of Transmission System Operators for Gas (ENTSO-G);
- full implementation of the Third Energy Package and other EU Directives;
- development of the institutional environment for the operation of energy markets and businesses in general in the energy sector based on the European model;
- tax reforms in the mining sector to ensure fair business environment and create an attractive investment climate;
- establishment of a comprehensive system of energy and environmental taxes (energy consumption taxation) and the concentration of investment resources for implementing large-scale projects to establish financing funds for energy development projects;
- stiffening of the requirements to energy consuming equipment and buildings (standards, regulations, certification, etc.);
- introduction of demand management system, including the implementation of liabilities for energy services provision;
- establishment of energy security system, coordination of the state authorities and economic agents' actions in peacetime and during emergency period.

Achieving the objectives of this stage will form the basis for innovative sustainable energy sector development in competitive environment. Improving the corporate culture of economic agents will open the door to the implementation of large-scale innovative projects for energy sector development, and ensure the sustainable development of energy companies.

3) Integration and Innovation Stage (2026-2035), at which Ukraine will be fully integrated into the system of international cooperation and the energy sector will operate within the framework of the unified European energy market in compliance with common rules. The objective of this stage is creating a system of state support for scientific, technological and innovative development of Ukraine's energy sector, expanding the activities and opportunities of domestic companies in global energy markets, and innovative modernization of Ukraine's energy sector fixed assets by way of international integration. At this stage, the energy security system should be established.

The stage priorities are:

- providing support for financial market infrastructure with regard to projects aimed at fixed assets modernization in the energy sector;
- implementation of targeted programs for the development of technological platforms that would provide the long-term impact on the country's energy mix and economy structure;

- stiffening of the requirements to energy usage methods, technologies and equipment through the revision of target energy consumption levels and environmental parameters;
- protection of consumer rights with regard to access to high-quality power supply;
- establishment of the system for support of advanced research, development and implementation of new energy technologies, energy usage technologies, etc;
- development of the domestic market for greenhouse gas emissions trading as a market instrument for investment in energy saving projects and emissions reduction;
- use of Ukraine's financial resources and the opportunities for deeper international cooperation for the modernization of the country's energy sector;
- development of a support system for pilot projects of advanced energy technologies and energy usage technologies implementation;
- adjustment of energy (environmental) taxes as a tool for regulating energy mix and implementation of low-carbon economy development priorities;
- development of the tools to support national energy companies for expanding their participation in European and global markets and projects enhancing energy security of Ukraine;
- Ukraine's full and active participation in international agreements system and international projects in the energy sector in order to develop a common energy security system.

Achieving the objectives of this stage will ensure innovative modernization of the energy sector and establish the foundations for its sustainable development in the long term. A new system of relations between the state and the economic agents will be established to provide the institutional framework for engaging economic agents in the task of ensuring the country's energy security and to support domestic companies in the competitive foreign markets.

To coordinate the actions of all stakeholders, the Strategy provides for the adoption at each stage of a general implementation program (action plan) detailing the energy policy priorities by specifying the implementation mechanisms, adopting necessary legislation and appointing responsible persons.

The Strategy envisages the coordination of specific tasks related to individual projects implementation with the existing system of planning and forecasting the country's economic and social development by their inclusion into state target programs, energy sector and other economy sectors development programs, etc. These programs will be employed to allocate resources for the development of the energy sector (specific projects implementation), taking into account the political and economic situation in the country.

The goals and objectives of the complex of state target programs will be coordinated to focus the country's efforts and to ensure the Strategy implementation. The outcome of target programs implementation will be achieving the quantitative and qualitative results determined by the target state of Ukraine's energy sector (Annex 1), forecasted energy balance for 2035 (Appendix 2), and the "road map" for the Strategy implementation (Appendix 3).

4. Development Priorities of the Energy Sector

Achieving the Strategy goals is ensured through the implementation of specific development projects in certain areas of the energy sector in accordance with the defined models and energy market operation rules.

The development forecast for specific energy industry sectors is generated based on the current social and economic situation in the Ukrainian domestic market and global market prices for energy resources and technologies and envisages achieving the overall Strategy objectives, taking into account Ukraine's international obligations and the need to minimize the economic burden of the energy sector to end users.

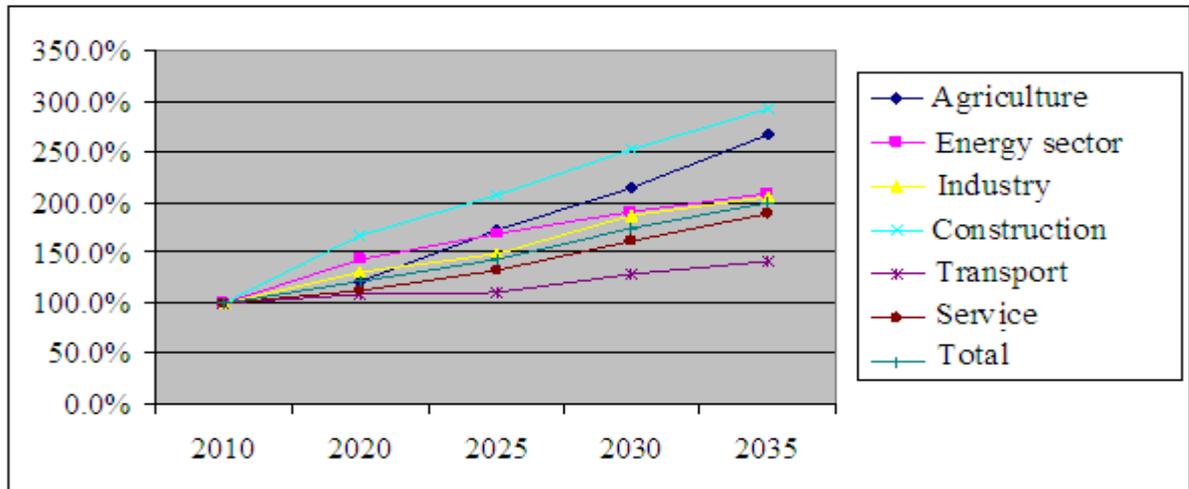
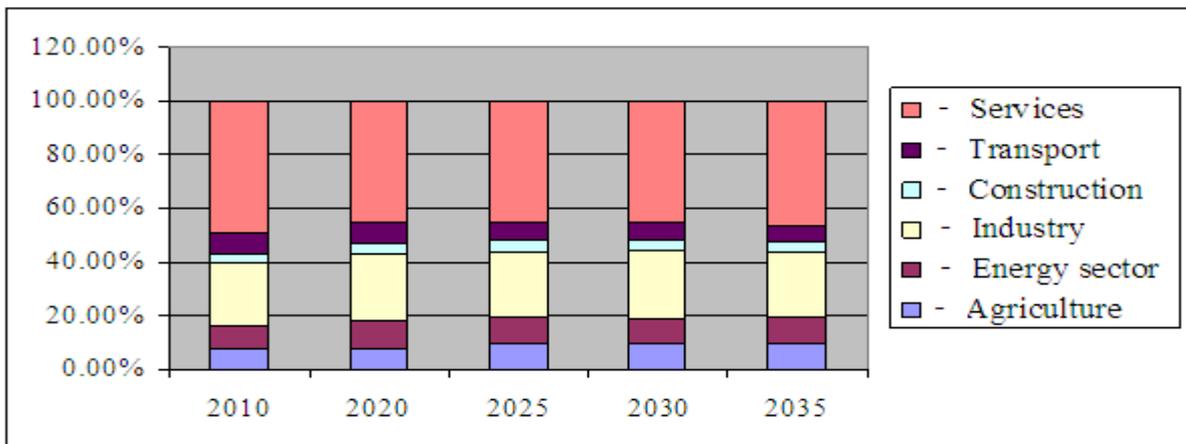
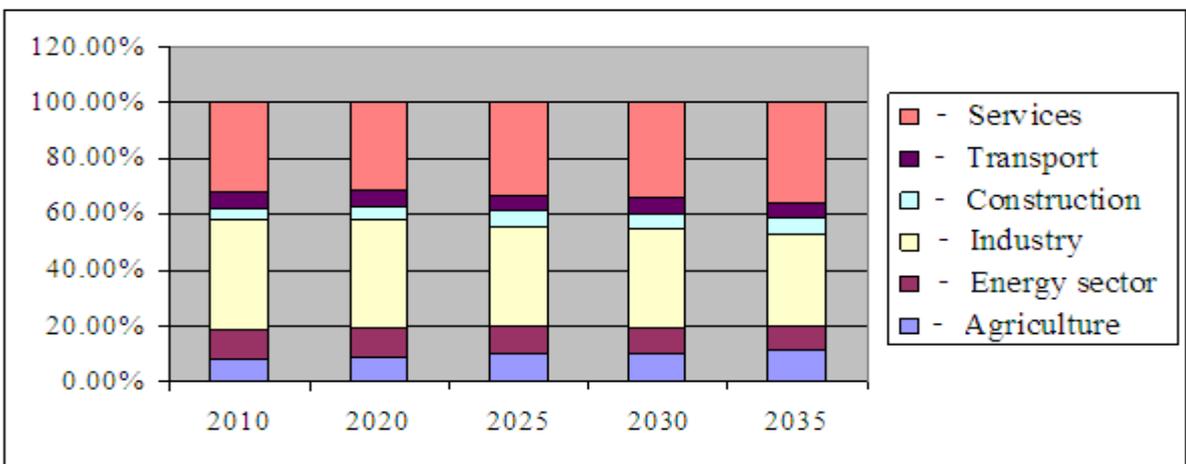
In particular, the current forecast of Ukraine's social and economic development (twofold increase in GDP by 2035) is based on the need for radical technological modernization of the national economy and the social sphere and the implementation of the respective large-scale investment projects. This economic development forecast is based on the need to maximize the use of the domestic potential to achieve the set ambitious goals, providing the grounds for the full utilization of the capacities of metallurgical, construction, transportation, and energy sectors of the national economy.

Forecast GDP and production growth dynamics are shown in Table 1.

Table 1. Forecast GDP and production growth dynamics through 2035

	2013	2020	2025	2030	2035
GDP in 2012 prices, UAH bln.	1411	1728	2032	2427	2878
Production, UAH bln.	3142	3481	3886	4666	5226

Development dynamics for individual sectors of the national economy and GDP structure are given in Fig. 1 and Fig. 2, respectively. Production structure is given in Fig. 3.

**Fig. 1. Forecast GDP dynamics for individual sectors of the national economy****Fig. 2. GDP structure by national economy sectors****Fig. 3. Production structure by national economy sectors**

However, international obligations taken by Ukraine and goals of sustainable development impose a number of restrictions on the national economy and the energy sector in the form of the need for innovation of the energy sector, increased use of renewable energy sources, reducing the energy intensity of the national economy, the impact of energy on the environment and others.

The total projected energy balance of Ukraine until 2035, taking into account of these restrictions, is given in Table 2.

Table 2. Projected balance of fuel and energy resources for the period until 2035

Consumption, Mtoe	2013	2020	2025	2030	2035
Coal	41.4	37.69	38.37	37.27	33.78
Natural gas	39.5	37.33	33.57	33.20	34.17
Oil products	9.85	13.97	14.86	15.74	16.48
Nuclear power	21.9	25.31	25.38	27.39	32.86
Biomass, biofuel and waste	1.56	6.38	8.91	11.85	13.10
Solar energy	0.07	0.37	0.56	0.70	0.84
Wind energy	0.08	0.21	0.32	0.43	0.54
Hydraulic power*	1.14	0.93	1.02	1.21	1.25
Ambient power	0.05	0.78	1.42	1.86	2.40
Net export		-1.03	-1.29	-2.15	-2.58
Total, including	115.55	121.92	123.12	127.49	132.84
Non electric power consumption	4.93	4.72	4.96	5.16	5.31
Electric power consumption	110.62	117.20	118.17	122.33	127.53
Including renewable energy (REN)	3.13	8.66	12.23	16.05	18.12
GDP, USD bln (Purchasing power parity 2005)	391	457	540	638	761
Energy intensity, kg.o.e./ USD 1000 PPP)	0.33**	0.27	0.23	0.20	0.17
Final consumption	69.56	78.89	80.84	85.13	88.91
The share of renewables in the gross final consumption, %	4.5	11.0	15.1	18.9	20.4

* Forecast for 2020-2035 does not include the energy received from the PSPP

** IEA data for 2012 adjusted according to the Committee of Statistics data related to reduction in power consumption in 2012 (Energy balance of Ukraine for 2013)

Strategy objectives shall be achieved via implementation of priority measures in the development of the energy sector areas. The sequence of measures, timing and amount of investment needed to achieve the projected goals will be transferred into the programs adopted to implement the Strategy and will depend on the real indicators of social and economic development and available energy, technology and investment resources for businesses in the energy markets.

In the event of risks of failure to achieve expected goals of economic development or lack of investment resources for the implementation of the energy projects, the absolute values of the energy plants commissioning and production processes will be adjusted accordingly, which, however, will not affect the task of achieving the general systemic objectives of the Strategy.

Priorities of the Electric Power Industry Development

The priorities of the Electric Power Industry development include optimization of the generating capacities structure, taking account of the involvement of the renewable energy in the energy balance and the development of electricity networks to lower transition and convergence of power supply from

the high voltage network to the consumer, increased flexibility through the implementation of the smart network principle.

Development of **thermal generation** is determined by the presence and values of the deposits of own coal and natural gas, as well as the development of biomass and other fuel energy conversion technologies. The expected high costs of the natural gas provide for the preservation of a significant proportion of coal-fired thermal generation. At the same time, the requirement to limit the negative impact of energy production on the environment will require large-scale modernization and upgrading of generating capacities of thermal generation, which will cause a relative stabilization of the total installed capacity of coal-fired thermal power plants at the existing level.

These requirements will form a significant need in investment capital for the construction of replacement capacities based on a modern technology base. Within the period of the Strategy implementation, at least half of the existing thermal power units are expected to be replaced with the new ones based on new technologies that meet the European standards on pollutant emissions and use of other fuels. The remaining thermal units will be modernized and equipped to ensure compliance with environmental requirements.

The transmission and distribution networks also need substantial upgrading, which will cause the need in large investments from both the direct owners (within the corporate development plans) and the government (as part of the integration program of the Unified Power System (UPS) of Ukraine to the ENTSO-E grid).

The forecast of the further development of the **nuclear energy sector** for the period up to 2035 is based on the fact that the share of nuclear power generation in the electricity output will remain at about 50%. It provides for life extension of the existing units and construction of the two units at the Khmelnytsky NPP site in the period up to 2025. The construction of new nuclear power units will be subject to the achievement of the operating nuclear power plants capacity factor of 80%, if the capacity output of electric power lines and electricity exports are at the appropriate level.

Another priority of the nuclear and industrial complex of Ukraine will be production of its own nuclear fuel (except for uranium enrichment stage), the commercial development of the manufacturing technologies necessary for zirconium products, building infrastructure for spent fuel and radioactive waste management. In addition, the call for energy security will lead to the program enabling diversification of nuclear fuel and technology for the needs of the Ukrainian nuclear and industrial complex.

An important priority of the nuclear energy sector should be an increase in its competitiveness in an open liberalized energy market of Ukraine, which will require making a strategic choice of market regulation of the company-operator of nuclear power plants and the nuclear fuel producer.

A sustainable growth of the use of all types of **renewable energy** is expected, which will be one of the tools to guarantee the energy security of the State. The share of the REN production in the final gross energy consumption is expected to increase up to 20%. The share of the electric power industry sector which uses solid biomass, biogas as a source of energy will grow due to relative sustainability of the production (availability of the resource base) and the tendency to form local generating capacities. The priority will be given to simultaneous production of heat and electric power in co-generation units under decentralization of the power supply system.

At the same time, the increase in electricity production based on renewable energy from wind and solar power is restricted by the ability of the electricity system to compensate for fluctuations in the power supply and the level of the economic burden on the consumer. However, these types of power generation directly at the consumer do not fall under the electric system expansion of these types of generation at the consumer's level does not fall under energy system restrictions and generates a perspective of dynamic local development.

The sustainable growth of the **hydro electric power generation** will remain. It is expected that the total installed capacity of large hydro energy will reach at least 15% of the total installed capacity in the Unified Power System of Ukraine. Additional hydropower potential can be achieved by the use of mini and micro hydropower plants.

Target power generation is shown in Table 3.

Table 3. Target power generation until 2035

		2013	2020	2025	2030	2035
Installed capacity	GW	54,6	52,0	57,5	60,6	66,8
TPP (including CHP)	GW	34,2	27,2	29,8	29,8	31,8
including TPP on REN	GW	0,02	0,8	1,8	2,3	2,4
NPP	GW	13,8	14,8	15,0	15,0	18,0
HPP	GW	4,6	5,0	5,4	6,2	6,2
PSPP	GW	0,87	2,6	3,6	4,7	4,7
WPP	GW	0,34	1,4	2,1	2,7	3,4
SPP	GW	0,75	1,0	1,6	2,2	2,7
Electricity production	TWh	194,4	209,7	233,2	258,3	276,3
TPP	TWh	95,5	93,2	111,5	122,6	117,3
including TPP on REN	TWh		5,5	12,3	16,0	17,1
NPP	TWh	83,21	97,0	97,3	105,0	126,0
HPP	TWh	14,47	10,8	11,9	14,0	14,5
PSPP	TWh		5,1	7,1	9,1	9,1
WPP	TWh	0,64	2,5	3,7	5,0	6,3
SPP	TWh	0,57	1,2	1,9	2,6	3,2
Fuel consumption for electricity production	Gramm.coil equivalent/ kWh	396	390,4	373,4	357,9	332,7

Priorities of heating systems and heating supply to the settlements

As for the heat supply, the heat consumption growth will occur in the commercial and residential sector due to the expected increase of the living surface per person and the increase in requirements for quality of service.

At the same time, as a result of the increased efficiency of heat consumption, reduction of heat losses in the heat supply networks and buildings as well as implementation of new technologies in heating, it will be possible, after 2030, to achieve moderate growth in consumption of thermal energy. The structure of the heat production however will mainly depend on its relative cost of production on the basis of each source of energy.

A significant increase in the share of renewable energy in heating is expected. The use of biomass for energy needs will be done at fast pace, especially in the medium term, based on the need for increased energy security of Ukraine. The priority will be given to the most energy efficient solutions, including the co-generaion of heat and electricity, the production of second-generation biofuels, the production and use of biomethane. Increased use of biomass as a fuel is to be expected at the local level as part of decentralization of power supply.

Given the economic attractiveness of heating supply decentralization, political and administrative reforms and inter-budget reforms, the role and responsibility of the local authorities for the effectiveness of life support systems of the communities will increase. Local authorities will have more rights and opportunities to attract investment in municipal energy systems. At the same time at the national level, the appropriate institutional, legal and regulatory framework will be developed for methodological support and control over the performance of the businesses in heating supply field. A forecast of heating supply is shown in Table 4.

Table 4. Heat supply

	2013	2020	2025	2030	2035
Heat production, TWh /year	190.24	228.0	242.9	262.2	286.2
Heat production, mln. Gcal/year	164*	196.6	209.4	226.0	246.7
Fuel consumption in heat production, mln. t	14.6	20.5	19.1	19.0	20.0
REN, mln.t	0.3	3.6	5.2	7.2	8.1
Share of REN, %	2.05	17.4	27.3	37.9	40.6

* according to statistic survey of 013 (11-MTH form)

Priorities of the Extractive Industries

The strategy involves the modernization of Ukraine's **oil and gas industry**. It is forecasted that **production of conventional gas** will have moderate annual growth and perspectives of gas production in Ukraine will rely heavily on the use of new technologies of intensive conventional and non-conventional gas production. It is predicted that total production will increase, and by 2035, Ukraine will reach the level of self-sufficiency in natural gas at 33 billion cubic meters.

At the same time, the liberalization of the natural gas market and its integration into the European gas market will create a mechanism to ensure reliable gas supplies in case of emergency situations in any area of export and import operations. The condition for such achievement is the expansion of the Interconnector system between the Ukrainian and European systems and the creation of virtual sales points for natural gas trading based on the Western Ukrainian underground storage of natural gas.

The growth of **oil production** in Ukraine in the short term is significantly limited due to the depletion of large deposits, lack of investments in exploration in recent years, absence of exploration of new deposits and low oil recovery factor. With the substantial increase in investment in exploration during the coming years, there may be some field development with a relatively small amount of proven resources. Additional potential of oil production increase can be achieved by the successful exploration of the deep deposits.

At the same time, the national economy will demand some 17 million tons of oil and oil products per year in 2035, requiring imports. Ukraine will diversify supplies from various sources for the functioning of the national economy in the event of termination of supplies from a single source. Prospects for the refining industry, especially given the current low level of profitability of refinery in the European market, will depend on government's economic policy in this area. It makes sense to attract a strategic investor (company – oil producer) to build at least one modern refinery producing diesel fuel for Ukrainian and European markets in Ukraine.

Government's main priority in regulating the production of liquid hydrocarbons in the coming years should be stimulation in increase of the scope of exploration and drilling operations by improving economic and tax policy in this area, the use of new technologies, intensification of production and attracting strategic foreign investors within expanding bilateral cooperation.

The development of **the coal industry** will depend on the success of the recovery of coal mines based on technological modernization of equipment and radical reforms in relations in the coal market. The main objective is to transform the coal industry into an unsubsidized and self-sustainable energy sector.

It is expected that after 2020 the coal industry will begin full functioning in a market economy, and the government will not subsidize and regulate the activity of coal enterprises. Sector reform will create a framework for private investment in its development, preserving its role in ensuring country's energy security.

At the same time, Ukraine will foster transport infrastructure development for export and import operations to maintain coal production and competitiveness of the Ukrainian coal producers abroad. Target production of the domestic energy resources is given in Table 5.

Table 5. Target production of the domestic energy resources

Production	2013	2020	2025	2030	2035
Natural gas, bcm	21,2	22,9	27,5	33,8	42,1
Oil, m.t	3,1	3,3	3,7	3,9	4,2
Coal, m.t.	40,7	37,7	39,9	41,3	42,8

Priority areas of energy efficiency and climate change prevention

Completion of transition to market pricing will significantly increase energy consumer's interest in energy-saving. Providing instrumentation for metering of energy resources consumed and creation of the institution of property management (control) of the apartment blocks will significantly increase the energy efficiency of the public utility. Optimizing power consumption in buildings, insulation of buildings, energy-saving technologies for heating, air conditioning and lighting has a significant potential in terms of achieving the goals of the Strategy.

Elimination of expenditure method in pricing, improvement of the legal framework for governing energy markets, enhancing their competitiveness will force energy suppliers to provide a significant increase in energy efficiency in the production and supply of energy resources. An additional incentive for energy saving projects will be introducing a mechanism of demand management, ie requiring suppliers to provide "energy services" to the consumer in terms of energy efficiency projects.

Implementation of the energy efficiency potential in industry will be provided through the introduction of energy management, public policy stimulating energy efficiency and gradual increase of requirements for energy efficiency by reviewing standards for energy consumption. Public-private partnerships have to become an effective coordination tool for policy goals and interests of enterprises in improving energy efficiency. Provision is made for introduction of the legislative requirements for energy audits, certification of buildings, marking of energy consuming equipment.

Provision is also made for activation of unlocking the potential of energy efficiency in office buildings and budgetary institutions because of more budget constraints, decentralization of authority, increased accountability of managers in the field. The mechanism of implementing energy saving potential in this area should be the energy-efficiency outsourcing contracts and implementing energy saving programs in the public sector. Significant influence on the consumer behavior will be exerted the policy of promoting energy saving at both regional and state level.

Policy against climate change should be agreed with the policy of energy efficiency. In order to reduce greenhouse gas emissions and the negative impact of energy on the environment, a package of incentives and regulatory measures will be created. Improving the tax system in the energy and environmental sectors (introduction of a carbon tax) will encourage consumers to reduce greenhouse gas emissions and provide financial resources for significant energy efficiency projects. In future introduction of a domestic carbon market will ensure implementation of energy modernization projects based on the principle of the least economic burden on the consumers.

5. Strategy implementation

Defined Strategy objectives, which are an integral part of the national security strategy and priorities of social and economic development should be conveyed to the policy in other areas and coordinated with other official documents of strategic development.

The Strategy will require not only implementation of the proposed package of measures in economic, technical or environmental sectors, but also supporting measures in the social and political, organizational and administrative areas.

Duration of achieving certain stages of the Strategy, the achievement of objectives at these stages will depend on decisions taken in other policy areas, which may lead to adjustments in the timeframe of the Strategy.

In the economic sphere, the successful implementation of the Strategy will require:

- independence of the legal system, increasing transparency of public governance, implementing effective anti-corruption measures, strengthening the rule of law and effective guarantee of property rights;

- setting up and effective functioning of the stock market, capitalization growth of the energy companies, development of the stock exchange system;

- efficient and transparent tax system, improving rent relations, introduction of stimulating rates of carbon tax and excise duties, creation of the effective system of penalties for failure to meet the requirements;

- development of the banking system and health insurance for funding long-term investment projects;

- strengthening antimonopoly regulation in limiting the impact of monopolies on functioning of the energy markets, ensuring the independence of national regulators in the energy sector and enforcing rules for the functioning of energy markets;

- introduction of a new model of inter-budget relations, ensuring decentralization and strengthening the financial capacity of local governments, including facilitating the access of local budgets to loan resources (improvement of the legal framework that regulates fundraising by local authorities);

- reforms of housing and public utilities (raising tariffs to economic levels and setting of rates by local authorities);

- improvement of the state target program tool, shifting from the sectoral principle to the principle of "technology platforms", including the latest technologies of generation and use of energy

The social and political sphere should ensure:

- stability of public governance, consistency and succession of the ruling in passing election cycles;

- decentralization of authority and increased responsibility of local governments for their performance, reforms of inter-budget relations;

- reform of subsidies, and the unification of state social assistance considering transition to monetary energy and housing subsidies, regulation of protection (support) of the staff employed in the energy sector within the national social policy;

- legislative base for consumers' economic responsibility for paying the energy consumption and energy services and providers' rights to disconnect power supply to the debtors.

The field of science and technology should:

- ensure renewal of facilities and resources of the research institutions and higher education institutions which provide training of the staff for the energy sector;

- establish a program to provide grants for research conducted by Ukrainian scientists in the Framework Programs of the EU and other international programs and initiatives, funding research in the field of energy;

- provide state support for basic science and applied research and technological development for the needs of the energy sector (as a percentage of private companies spent for scientific purposes);

- establish a public-private partnership in science, technology and innovation;

- introduce new specialties and training programs to enable the energy sector to operate in a competitive market;

- introduce instruments of public support of innovation in the energy sector (grants for implementation, business incubators, technology transfer centers, etc.).

The priorities of **the public area and corporate management** are:

- introduction of the system of strategic planning in the energy sector, including periodic Strategy revision, preparation and publication of periodic national reports on implementation of the state's energy policy, annual reports on the implementation of the Strategy, development of sectoral action plans that will include measures to achieve the objectives of the Strategy, including clear targets, timeframes necessary measures and sources of funding;

- introduction of public-private consultations with representatives of the business community, including foreign investors, to discuss priorities for the development of the energy sector, legislation, coordinated actions to implement the objectives of the Strategy;

- getting the energy sector ready to meet the needs of the national economy in energy crisis (in case of sudden cessation of energy from a single source, destruction of energy infrastructure);
- improving corporate culture of the enterprises, introduction of energy and environment management, quality control, etc., in order to develop the ability of companies to attract investment resources in the world markets;
- legal definition and implementation of requirements for energy companies to carry out risk analysis and response to threats to energy security, corporate plans for emergencies in the national system of energy security.

The strategy sets priorities for Ukraine's long-term energy policy and mechanism of focusing efforts of the main stakeholders in its implementation.

Coordination and monitoring of the Strategy implementation is carried out by the Cabinet of Ministers of Ukraine and National Security and Defense Council of Ukraine within their authority.

Cabinet of Ministers of Ukraine controls the adoption of the necessary organizational and administrative measures for mandatory consideration of the Strategy provisions in:

- approving the programs and plans of the executive body;
- drafting legislative and normative acts;
- adoption of social and economic development (at national, sectoral and local levels);
- provision of the state aid to enterprises (soft loans and taxes, certification and licensing, etc.);
- annual approving the forecast (5 years) of the balance of production and consumption of energy resources in Ukraine (according the IEA form, sample in Appendix 2);
- implementation of requirements for preparation of corporate plans in case of emergencies, including in terms of their response to emergency situations to provide energy security of the country;
- setting and periodic revision of performance indicators of energy security with consideration of the current threats and risks in the energy sector.

Goals, objectives and mechanisms for implementation of the Strategy ("Roadmap") should be taken into account in making plans by public authorities, businesses and government in developing target programs (Appendix 3).

Ministries, agencies and regulators involved in the legal relations in the energy sector, are involved in policy making and implementation of the Strategy in the relevant fields. The Strategy provisions are also accounted for by the state and local governments, business entities in their planning.

The development of the Strategy, performance monitoring, coordination and revision of measures for its implementation is the responsibility of the main body in the system of central executive authorities responsible for the public policy making and implementation of it in the energy sector (Ministry of Energy and Coal Industry).

The Ministry of Energy and Coal Industry monitors implementation of the Strategy and submits proposals to review the targets and mechanisms of its implementation. Monitoring of the Strategy implementation is carried out according to the indicators listed in Appendix 1.

To ensure sustainability of the State Energy Policy and achievement of the Strategy objectives Ministry of Energy and Coal:

- enables the development of an overall program of implementation (action plan) of the Strategy. The program details the objectives, activities and resources for the implementation of the "Roadmap" on the stages of implementation of the Strategy;
- provides for preparation and publication of the National Report on the implementation of the State Energy Policy. The report analyzes in detail the dynamics of the Strategy objectives, performance measures taken (causes of failure), as well as mechanisms and instruments to ensure the implementation of measures for the next stage of the Strategy;
- provides for annual monitoring of compliance with the Strategy in the activities of the energy sector companies and publishes a respective report;
- provides annual reports on the status of implementation of the Strategy to the Cabinet of Ministers of Ukraine, the National Security and Defense Council of Ukraine.

The Ministry for Economic Development provides consideration of the Strategy in public policy making and implementation of the economic policy by way of:

- reflecting the Strategy in the programs of social and economic development (state, local and sectoral target programs);
- making state programs of business support and implementation of public-private partnerships;
- coordination of foreign policy, setting priorities of economic cooperation during the dialogue with trading partners.

The Ministry of Foreign Affairs provides consideration of the Strategy in the foreign policy of Ukraine:

- negotiations and conclusion of the international agreements, participation of Ukraine in international initiatives on energy and climate change;
- presentation of Ukraine's position in international organizations, formulating strategic initiatives in the field of energy and environment at the international level;
- promoting the interests of the energy sector of Ukraine in projects related to development of cross-border energy infrastructure, regional energy market development;
- initial consultations and negotiations on how to diversify sources of energy supply in the country and how to export to foreign markets.

The national regulators provide:

- consideration of the objectives and strategies in developing the legal acts regulating activity in the energy markets and related services
- limiting monopoly power of the energy suppliers and providers of the related services and providing free access for new participants to the energy market;
- a balance of interests of the state, natural monopolies and consumers of goods (services) produced (provided) by natural monopolies;
- a reflection of the provisions and objectives of the Strategy in the requirements for carrying out the licensed activity on energy markets and related services.

Local authorities, local authorities ensure the implementation of the Strategy within their jurisdiction, in particular by:

- development and approval of plans (schemes) of local energy system development ;
- coordination of investment plans of municipal power companies;
- making use of the potential of energy saving and efficiency, local use of renewable energy.

The civil society carries out public control over the activities of public authorities in implementation of the Strategy through:

- a public review of normative legal acts and approach papers;
- participation in civil expert boards at the operating government agencies on implementation of the energy policy;
- informing the public about the activities of public authorities in implementation of the Strategy.

Strategy target status indicators

Indicators	2013	2020	2025	2030	2035
Technically reliable and safe energy sector functioning					
Share of maneuvering capacity in the total installed capacity,%	8,6	12	14	16	18
System Average Interruption Duration Index (SAIDI) per customer, min/year	500	400	300	200	100
System Average Interruption Frequency Index (SAIFI) per customer, number per year	6	5	4	3	2
Share of legal entities (owners) of apartment buildings in the total volume, %	80	70	100		
Economic efficiency of the energy sector functioning					
Level of residual life of energy assets,%	20	30	50	60	80
Share of the energy resource trading, % of domestic consumption	10	25	50	60	70
Share of non-heating energy production by non-governmental companies in total volume,%			> 50	> 70	
Share of extraction of energy resources (coal, oil, gas) by non-governmental companies in total volume, %			> 50	> 70	
Share of production of the Ukrainian energy engineering market, %			> 40		> 60
Energy efficiency in the use of fuel and energy resources					
Energy intensity of GDP, kg.o.e./1 \$ of GDP	0,33	0,27	0,23	0,20	0,17
Share of losses in distribution grids,%	12	11	10	9	8
Share of losses in heat networks,%	20	18	14	12	10
Fuel consumption for electricity supplied by TPP, g.c.e./kWh	396	385	373	357	332
Unit costs in the production of heat by boilers, kg.c.e./Gcal	165	160	155	150	145
Unit costs for heating of buildings, kWh/m ² /year	200	160	120	80	60
Environmental acceptability of the energy sector impact on the environment					
Reduction of specific CO ₂ emissions per final consumption of fuel,% of 2010 data		>5	>10	>15	>20
Reduction of specific CO ₂ emissions in the production of 1 kWh, %		>5	>10	>15	>20
Reduction of specific CO ₂ emissions in the production of 1 Gcal, %		>5	>10	>15	>20
Share of the thermal power generation capacity that meets the environmental requirements of the EU (SO ₂ , NO _x , ash emissions), %		>20	>40	>80	100
Share of household waste disposed in landfills,%	85	80	70	50	30
Provisions of the needs of national economy to the normal and special status					
Share of REN in gross final energy consumption, %	4,5	11	15	18	20
Share of local alternative fuels in local fuel and energy balance,% of total consumption		10	15	18	20
Ration of stocks to extraction volumes of natural gas (R/P Ratio), in years of consumption	50	55	60	65	65
Availability of energy resources for the state in crisis situations, months of consumption	0,5	1,0	1,5	3	4
Availability of energy resources of private companies for the state in crisis situations, months consumption	0,5	0,5	1	1	1
Strategic energy reserves, months of consumption			0,5	2	3
Diversification of supply and integration into the European energy market					
Share of imports of primary energy (excluding nuclear fuel) from one country (company) in total consumption, %		30	30	<30	<30
Share of one supplier in the nuclear fuel market, %	>90	< 70	< 60	< 50	< 50
Herfindahl-Hirschman Index (by markets)	< 3200	< 3200	< 2600	< 2200	< 1800
Level of integration of electricity (gas) market of Ukraine and EU, % of interconnector capacity relative to size of the domestic market	2 (20)	2 (30)	15 (40)	15 (40)	18 (40)

Projected target balance of Ukraine in 2035

Thousands tonnes of oil equivalent

SUPPLY AND CONSUMPTION	Coal and peat	Crude oil	Oil products	Natural gas	Nuclear energy	Hydro power	Wind, solar energy	Biofuel and waste	Electric energy	Heating energy	Total
Production	33782	4500	-	34166	-	1250	3775	13100	-	-	90572
Import	0	9500	2341	0	32865	-	-	0	0	-	44706
Export	0	0	0	-	-	-	-	0	-2582	-	-2582
Total supply of primary energy	33782	14000	2341	34166	32865	1250	3775	13100	-2582	0	132696
Electricity production	-18735	-	-49	-2820	-32688	-1250	-812	-3042	23786	-	-35609
Heating production	-980	-	-31	-13407	-177	-	-2964	-5149	-828	24632	1096
Oil refineries	-	-13969	13969	-	-	-	-	-	-	-	0
Own consumption by energy sector	-62	-	-477	-540	-	-	-	-	-3039	-863	-4981
Losses of transportation and distribution	-245	-6	-2	-399	-	-	-	-	-1674	-1807	-4133
Final consumption	13760	25	15753	16999	0	0	0	4909	15662	21967	88915
Industry including	12325	-	1326	3183	-	-	-	403	7175	5208	29621
Metallurgy	10954	-	191	371	-	-	-	0	3045	894	15455
Chemical industry	15	-	25	387	-	-	-	0	339	1143	1909
Engineering	3	-	33	162	-	-	-	0	1147	203	1549
Food industry	102	-	148	124	-	-	-	343	536	1669	2922
Other industrial sectors	1747	-	930	385	-	-	-	60	2108	1298	6528
Construction	2	-	181	21	-	-	-	0	90	55	350
Transport	27	-	3508	2118	-	-	-	223	1077	0	6953
Agriculture	16	-	1978	61	-	-	-	459	606	441	3561
Services and other consumers	188	-	1188	589	-	-	-	52	2298	6994	11308
Population	206	-	6310	9073	-	-	0	3772	4416	9269	33046
Non energy use	498	25	1261	3709	-	-	-	-	-	-	5334
Production	33782	4500	-	34166	-	1250	3775	13100	-	-	90572

The Road Map of the Strategy implementation

The 1 st stage (till 2020)	The 2 nd stage (till 2025)	The 3 rd stage (till 2035)
OBJECTIVE 1: RELIABILITY OF MEETING CONSUMERS' NEEDS IN ENERGY		
<i>Sub-objective 1.1. Sustainability and reliability of energy infrastructure functioning</i>		
Tasks:		
<ul style="list-style-type: none"> - Security of energy supply to consumers, protecting their rights and interests - Safety of work and security of energy infrastructure - Reserving energy supply systems and interchanging types of energy resources 		
Setting up requirements to equipment operation (concerning reliability, facilities protection, reserving energy supply) in accordance with the obligations under the Association Agreement with the EU Defining the minimum standards of security of energy supply, setting up requirements to the energy supply and the order of "vulnerable consumers" protection	introducing standards of operating safety of power supply system functioning implementing EU standards in the field of energy	optimization of existing power supply systems, development of automatic control systems, transition to "smart" networks
Setting up and enforcement of requirements to the quality of energy supply, in particular concerning: annual average duration (SAIDI) and frequency of systemic disorders (SAIFI); energy supply standards and rules of consumers' protection; quality standards of energy supply services (energy and fuel quality, modes, etc.);	enhancing requirements to the quality of power distribution and supply	
ensuring the practice of the annual development forecast of energy supply systems, the needs assessment and the forecast for putting into operation the facilities, taking into account the impact of the climate change upon the levels and modes of energy consumption and adaptation to these changes ensuring the approval the annual development plan of the united energy system of Ukraine for the next ten years evaluating of promising areas for construction of renewable energy units, taking into account the principle of dispersion (for wind farms and solar power plants)	ensuring the annual approval of the development plan of the unified energy system of Ukraine for the next ten years, taking into account the Strategy	
developing legislation and approving schemes (plans) of decentralization of power supply systems at the local level (developing local programs of decentralization of power supply including the approval of schemes of settlements heating supply (with the expansion of the share of renewable energy and local fuels, especially biomass and waste), the schemes of integrated using of water and hydropower resources of small rivers of Ukraine and placing small hydropower units on them, etc.);	ensuring implementation of projects of energy supply decentralization at the local level (based on the use of renewable energy)	
preparing the emergency action plan at the national level, improving the state control system of the energy facilities safety, the information-analytical system of monitoring the energy facilities safety(i)	introducing the state system of physical protection of critical energy infrastructure and legal definition of the source of funding work, security systems and protection units.	
Approving the program of laying off and extending the operation time in the beyond project period for NPP power units according to the priority task of synchronization of the energy systems of Ukraine and the EU by 2025	Ensuring the implementation of the program of extending the operation time in the beyond project period for NPP power units	ensuring the implementation of the program of laying off the NPP power units after an addition time of operation

Introducing the practice of annual report publication on the results of monitoring of the energy supply security	implementation of the national evaluation system for risks of critical energy infrastructure	
adoption of legal acts to improve the procedures of designing of construction and putting into operation the energy infrastructure units	introduction of the principle of a guaranteed level of the energy supply to consumers in the case of termination of one of the largest supply infrastructure unit, blocking supply from one direction	
introduction of the rebuilding program of infrastructure units, energy facilities destroyed owing to the armed aggression of the Russian Federation in line with the needs of the new economic structure of the region and on the basis of modern technology		
<i>Sub-objective 1.2. Renewing basic assets of branches of the fuel and energy complex</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> - To carry out technical upgrade of energy sector facilities - To ensure technological renewing of the energy sector 		
specifying technical requirements to the basic assets of branches of fuel and energy complex		
using international financial institutions, technical assistance programs, etc.	Creating a comprehensive system of energy and environment related taxes (taxation of the energy usage)	
improving legislation of public-private partnership as regards requirements to achieve clearly defined goals of projects implementation in the energy sector matched with the objectives of the Strategy	concentration of investment resources for the implementation of large-scale projects (the formation of the State Fund of Energy) due to: <ul style="list-style-type: none"> - Revenue from applying energy and environment related (carbon) taxes; - Payments under the application of the "white certificates" mechanism; - Payment of "cut off" by regulators of income of monopolists on the energy markets 	
developing a program for structural adjustment of energy sector according to the updated structure of the national economy of Ukraine and the integration of energy markets of Ukraine and the EU	implementation of structural adjustment programs of the energy sector accordingly and the integration of energy markets of Ukraine and the EU	
<i>Sub-objective 1.3. . Ensuring innovative development of the energy sector</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> - Introduction of effective functioning of training and retraining system for employees in the energy sector (introduction of new specialties, reconsidering qualification requirements, retraining programs functioning); -Providing support to the basic and applied studies; -Formation of the support system for the introduction of new energy technologies and management systems. 		
providing the state support for implementation of energy technologies and management systems (the support program of the basic and applied studies, promotion of innovative technologies), creating a system of scientific and technical centers of technology development, scientific research and development of workforce capacity of the energy sector	Ensuring participation of national research institutions in the science and technology programs of the EU to bring Ukraine closer to the European Research Area	creating of national energy companies (hydropower engineering companies with production and supply) and the support of their access to foreign markets

(grants, scholarships, funding of study abroad)		
formation of the national network of technology transfer of energy technologies, the government support of technology transfer (technology purchase), localization of production of energy technologies	formation of venture capital support systems and transfer of energy technologies, development of Ukrainian engineering companies.	Introduction of pilot projects, including the capture and storage of carbon, a full cycle of waste processing, etc.
introduction of new specialties for the energy sector and new educational programs in educational institutions in order to prepare the staff for the work on energy markets in the following areas: - "Energy Economics" (energy resources trade, "a day in advance" markets, balancing markets and ancillary services markets); - "Energy technologies" (modern innovative energy technologies); - "Project analysis in the energy sector" (business planning projects); - "Energy security" (risk assessment and responding to threats to the energy security, international energy markets).	providing the first graduation by universities according new study programs.	improving educational training programs to meet the needs of Ukrainian companies in competition at the European energy markets
OBJECTIVE 2: ECONOMY EFFICIENCY OF THE ENERGY SECTOR FUNCTIONING <i>Sub-objective 2.1. Introducing the market model for energy markets functioning</i>		
Tasks: -Reducing costs of market entry; -Increasing profitability of management on the market; - Increasing the corporate culture of management; -Ensuring competitiveness and sustainability of energy resources (energy) suppliers at the market		
Providing simplification of licensing procedures, issuance terms and reducing the quantity of permit documentation (introduction of a "single window")	introducing legislation to limit the share of market presence (response to the excess of Herfindahl-Hirschman Index)	
completion of privatization processes (corporatization for strategic objects of the state property) and ensuring the market regulation of activity, stopping the practice of administrative interference into the activity of business entities;	Enabling the functioning of the institutional environment of activity regulation on energy markets (market operators, recording system operators, calculations centers, trading floors, security, analysis, and monitoring institutions);	improving the institutional framework for regulation of energy market activities and ensuring the integration of Ukrainian and European markets;
- Finalizing development of regulations needed to reform the energy markets (electricity, natural gas, oil and oil products, coal) (ii) - Ensuring legal unbundling of vertically integrated companies in the energy markets	Ensuring the full implementation of the "Third Energy Package" Directives of the EU	
approval of legislation (by 2016) and ensuring reforms (by 2018) of energy subsidies system by means of: - The gradual price increase for the population and achieving economically viable level by 2018; - Ensuring a smooth transition to the introduction of a system of targeted monetary help starting from 2019 to offset the increase in energy prices for low-income consumer groups;	The switch to the usage of the system of "social bank cards" or "certificate of payment", which will be replenished by the amount of the difference between the actual price and the discounted price for a particular group of consumers	
completion by 2019 transition to uniform pricing principles for all consumers, the elimination of cross-subsidies	introduction of legislation in terms of "cutting off" revenues of market participants by regulators to avoid excessive profits of monopoly/quasi-monopoly participants encouraging	

introducing the moratorium at the legislative level on granting new preferential prices and tariffs for particular branches and consumers of electricity, gas and heat energy	competition and consumer protection	
Stopping practice of allocation of expenditures from the state budget to support economic profitability of market actors		
elimination of the "expenditure" tariff setting in areas where the introduction of competition is limited by natural monopoly (power supply system)	implementation of the methodology of investment stimulation in establishing market pricing for energy markets and tariffs of natural monopolies taking into account the need of investments payback and objectives of energy sector development	
forming the institutions of the management of apartment buildings (primarily condominium associations)	opening information for consumer concerning tariff structure for natural gas, electricity, heat, energy transportation	
Ensuring the full-fledged instrumental registration of the flows of energy resources and energy and the transition to calculations based on indication of instrumental registration	ensuring the transition to the system of commercial accounting and payment for consumed energy based on quality indicators (energy values)	
At the market of electricity		
Ensuring the elimination of cross-subsidies in the electricity sector (withdrawal of preferential tariffs and prices for certain business entities and pricing for all consumers according to market conditions)	implementation of the accumulation mechanism of resources to finance works for ceasing the extension of their service life, nuclear reactors operation, management of spent nuclear fuel and radioactive waste of NPPs (components in the revenue structure of a NPP operator - tariff/price structure controlled by the regulator and used solely for these purposes)	
Amendments to the Law of Ukraine "On the Principles of the electricity market of Ukraine" in terms of: - Removing from the law the Fund for the cost imbalance settlement; - Reviewing the purchase mechanism of electricity generated at the power plants that use alternative sources of energy (by definition of a guaranteed buyer responsible for purchasing electricity according to the "green" tariff); - Introduction of EU Directive "third energy package";	Enforcement of functions of a buyer of electricity for "green" tariff by the guaranteed buyer; Clarifying the mechanism of support for renewable energy through the "green" certifications system.	introduction of "green" certificates system to support the production of electricity from renewable energy sources
- introduction of provisions of the EU Directive of the "Third Energy Package"; - ensuring the unbundling of transmission and distribution from other activities of business entities that operate on the electricity market	assessment of the efficiency of the electricity market model and developing, if necessary a mechanism to guarantee return on investment in the construction of new generating capacity;	creation and entering of the Ukrainian hydropower company (power engineering and power generation) to foreign markets
ensuring the annual publication of the "Plan of development of the unified energy system of Ukraine" for the next decade	Ensuring that the Ukrainian UPS joins the European Network of Transmission of Electricity system operators (ENTSO-E)	ensuring the full-fledged synchronous operation of the Ukrainian UPS and ENTSO-E and the free entry to the markets of third parties
the introduction of national standards for technical features of the instrumental registration system of energy resources, enabling the remote reading enabling the functioning of information systems for electricity market support	Introducing the "energy ombudsman" to guarantee consumers free choice of provider, establishing clear procedures and deadline for changing a provider	establishing requirements and the technology development plan for "smart grids» (Smart Grid).

The legislative mechanism of decision-making for problem settlement of mutual debts of past years of business entities of the electricity market and related markets (<i>allocation "toxic assets" in a separate fund</i>).		
Drafting energy legislation on rendering the energy services by energy supplier (introduction of the "white" certificates system) (i, ii)	introduction of the demand management system and rendering energy services by energy suppliers (introduction of the "white" certificates);	Clarifying the mechanism of rendering energy services, setting the target indicator - a decreased energy consumption at 1.5% per year
At the market of natural gas		
Amendments to the Law of Ukraine "On Principles of Functioning of Natural Gas Market" in terms of the implementation of provisions of the EU Directive of the "Third Energy Package"	introduction of the demand management system and transition to rendering energy services (introduction of the "white" certificates system)	improving the institutional framework for regulation of activity at energy markets and the supply
adoption of legislation and regulations on the market liberalization: <ul style="list-style-type: none"> - reforming monopoly structures (for unbundling the extraction activity from transportation, storage and supply of natural gas) - providing clear and unimpeded access to the infrastructure of gas transmission - defining the usage patterns of gas distribution networks (concluding contracts for long-term maintenance or privatization). 	de-monopolization of the natural gas market, establishing restrictions on a market share for one supplier (trader) - the requirement of the response to excess of the Herfindahl-Hirschman Index	compliance and clarification of restrictions concerning the share presence on the market
renegotiation of the contract of KP with "Gazprom" of 19.01.2009 on market conditions	creating conditions for transferring the point of natural gas purchase from Russia towards the eastern border of Ukraine (the introduction of registration units, development of the institutional framework of trading, etc.)	
the infrastructure, legal and organizational preparation to gas purchase at the virtual trading points (VTP) of the EU countries (Austria, Germany, the Netherlands) development of legislation to prepare the internationalization of the market of Ukraine, including the participation of foreign entities in the formation of complex market services based on underground gas storage in Ukraine the gradual introduction of the spot and futures transactions to determine the market price of natural gas through a transparent mechanism of its formation	ensuring of the full-fledged operation of the underground gas storage based on Western Ukrainian storages and his involvement in commercial transactions at the markets of Ukraine and the EU (formation of the Eastern European Gas Hub)	extension of maintenance byt the Eastern European Gas Hub for the entire Ukrainian market
ensuring the reform of the subsidies system in the supply of natural gas, taking into account: <ul style="list-style-type: none"> - ensure the gas supply at a regulated rate, its narrowing in the 2015-2016 only to the sector of utility companies - bringing release prices for the gas of the domestic extraction for the state gas-extracting companies to market prices in proportion to the gas tariff increase that goes for the population's needs - for the period of completion of the prices unification, to reserve natural gas of domestic extraction to the needs of the household. 		

At the coal market		
to complete privatization of viable plants of the industry and to close hopelessly unprofitable mines	to ensure the public safety control of working conditions, monitoring and ensuring of meeting the requirements of the legislation at enterprises of the coal industry.	
to establish a system of conservation of closed plants of the coal industry in the technologically and environmentally safe condition		
to close down the state coal wholesaler (SE "The Coal of Ukraine"), to liberalize the market of coal production, sales and pricing mechanisms, to introduce the exchange trade of coal products	ensuring the functioning of the liberalized domestic market of the coal production	
to stop the mechanism of the state support (subsidies for transaction costs) for coal companies starting from 2019 and switch the self-sufficiency of coal extraction and reducing the state support only for ensuring the technologically and environmentally safe condition of coal enterprises by 2020.	to assess the need and to take steps for the expansion of the transport networks of export and import operations with coal products	
to create a system of social support and job retraining of displaced workers;	implementation of the activities program for increased mobility of workers	
At the oil products market		
approving the program of reconstruction and modernization of the oil refining industry and implementation of Euro environmental standards in Ukraine, gradually bringing the quality of all produced oil products to the environmental standards Euro 5 and 6	ensuring the modernization of refineries with bringing depth of processing up to 75%	to meet at least 50% of needs of the domestic market for oil products of the environmental class not lower than Euro-5 with products from Ukrainian enterprises
introducing of the requirement that the annual import volume of oil/oil products from one source should not exceed 30%.	to attract investors (oil producing company) to build in Ukraine a modern refinery producing diesel fuel for the Ukrainian and European markets	
improvement of the state system of quality control of oil products (increased motor fuel quality standards and monitoring their compliance by the retailer network)	the full-fledged implementation of market surveillance for the quality of oil products, increased public awareness about the companies responsible for the distribution of low-quality fuel	
elimination of unjustified forms of the state support of oil refineries, refraining from providing them with tax benefits etc.	implementation of usage programs of alternative fuel as motor fuel (second-generation biofuels, liquefied gas, mixed fuel, etc.).	implementation of the program of development of the transport infrastructure for the use of vehicles running on alternative fuels (electric vehicles, biofuels, etc.)
At the market heating supply		
to complete the installation of metering devices across the whole heating supply system including heat meters for each building and to analyze opportunities for advancement towards the every-apartment accounting	to ensure the metering device accounting of the heat consumption for the entire chain of "production - supply - consumption (including households)»	to introduce a system of commercial calculation based on quality indicators of service delivery of heating supply and cooling
to ensure the transition to the rates corresponding costs and consumption volumes, the abolition of cross-subsidization	the completion of the liberalization of the domestic market of thermal energy, unbundling of the market of the heat supply and the heat production	
optimization of the local heating system based on cost-effectiveness, coordination of centralization and decentralization of the heating supply	the implementation of the mechanism of the "alternative boiler" involves identifying economically viable price ceiling for thermal energy corresponding to the price of thermal	

	energy from alternative sources of heat supply while applying the best available technologies.	
<i>Sub-objective 2.2. Reforming of the system of the economic regulation of the energy sector</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> - The elimination of administrative interference in the activities of the energy sector entities; - Introducing a system of economic regulation of the energy sector (taxes, rental rates, loans and insurance); - Development of market financial infrastructure of projects implementation in the energy sector (banks, investment funds, stocks, bonds, etc.); 		
clarifying the mechanism and rate of the environmental tax, the target surcharge to the current tariff for electricity, heat energy and natural gas	Introduction of a tax regulating the energy usage (carbon tax) as a source of the state fund of the energy sector development (due to a combination of other taxes and fees)	introduction of the domestic system of emissions trading ("carbon market")
ensuring the stability and constancy of the fiscal regime for business entities of energy markets	improving the economic instruments regulating the functioning of energy markets (loans, insurance)	Ukraine's joining the international development projects, resource base, technology transfer,
alignment for enterprises of all propriety forms the fees for the use of the subsoil during the extraction of oil and gas according with the schedule of reducing subsidies and equalization of prices for different categories of customers (commercial/residential sector)	improving energy stimulation of extraction of natural gas and oil by reducing the rates of rent payments of enterprises extracting hydrocarbons from the exhausted deposits, low debit wells and deposits with complex mining	
simplification of licensing procedures for: <ul style="list-style-type: none"> -issuance of special permits for subsoil use; -registration of land plots during exploration work and commercial extraction of hydrocarbons; -registration of land plots for construction of energy facilities, the pipelines and power grids; -use of transparent and competitive tender procedures for obtaining licenses, extension of licenses -defining an comprehensive list of grounds for revocation of licenses, prohibition of the license revocation without costs compensation and increased control over the execution of license conditions 		
<i>Sub-objective 2.3. Formation of a favorable investment climate</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> - The opening of access to the market for third parties - Ensuring equitable access to energy infrastructure based on economic parameters 		
forming the legal basis for strategic investments in the long term perspective (agreements on production distribution, concession, agreements on cooperation)	clarifying mechanisms for encouraging investment attraction on the development of the identified priorities according with the objectives of the Strategy (taxes, rental rates, loans and insurance)	to consider options for international partnership to purchase licenses for innovative energy technologies and materials
raising the guarantee level of investors' rights through a clear formalization and drawing up a comprehensive list of reasons or suspension of licenses, special permits, property rights, etc.	formation of the fund to support the development of innovative energy technologies and projects	
introducing requirements for exchange trading of energy resources	increased use of exchange trade, attracting foreign suppliers and consumers to work on Ukrainian trading platforms	Fostering the development of energy resources markets, energy trading derivatives (futures, options, etc.)

implementation of the legal framework for attracting foreign investors in the management of state facilities of the energy sector, energy infrastructure operators (operators of underground gas storage, transmission network operators)	Forming the support system for implementation of strategic projects in the energy sector (<i>National Energy Foundation (Bank) supports major projects in the energy sector</i>)	
access of third-party to the power transmission and distribution systems based on published tariffs, suitable for all consumers (i)	introduction of the requirement for the operator of the transmission and distribution system to obligatory disclose any daily information on presence (absence) of spare capacities	
OBJECTIVE 3: EFFICIENCY OF USAGE OF FUEL AND ENERGY RESOURCES		
<i>Sub-objective 3.3. Improving the energy efficiency of the national economy</i>		
Tasks:		
<ul style="list-style-type: none"> - To ensure the sustainable economic development while minimizing energy consumption growth - To increase the competitiveness of domestic production (GDP achievement of competitors' level) 		
setting requirements for equipment and technologies concerning power consumption and environmental parameters (introduction of new standards, technical regulations, certification, energy efficient labeling, etc.)	practical use of mechanisms to support energy efficiency (energy services, energy audits, services market of ESCO companies)	strengthening requirements for equipment and technologies concerning power consumption and environmental parameters
development and implementation of legislation regarding the distribution of energy management systems (for entities with significant amounts of energy used), energy audit (for companies which are natural monopolies) and energy certification (buildings) (i)	formation of the concentration infrastructure and the provision of financial resources to business entities for the needs of technological modernization (capital market development, expansion of commercial lending)	
introduction of the practice of voluntary agreements between undertakings and associations of different industries to enhance energy efficiency and implementation of new technologies	monitoring and enforcement of adopted energy efficiency targets, including compliance with the actual and expected performance	
using of international financial institutions and programs of technical support for financing energy efficiency projects	ensuring the participation of Ukraine in international institutions on energy efficiency	
<i>Sub-objective 3.2. Improving the efficiency of final energy consumption</i>		
Tasks:		
<ul style="list-style-type: none"> - Improving the energy efficiency of energy consuming equipment. - Reduction of energy resource losses in the supply chains. - Reducing the specific costs per unit of output (generated energy unit) 		
creating an owner of housing in apartment buildings (condominiums creation) as a tool for implementing collective measures of improvement of the energy efficiency of apartment buildings	introduction of mechanisms to encourage energy efficiency in the housing sector of energy consumers (system of energy services, energy audits, financial instruments, etc.)	
ensuring co-financing by the state and condominiums of the first overhaul of the residential building		
ensuring 100% commercial metering of energy resources in the housing sector		
introducing energy efficiency requirements for household, the office and heating equipment, energy use in buildings (i)	ensuring the elimination of energy inefficient equipment from the market	reviewing of energy efficiency grades for equipment according to a new level of the technological development
	adopting energy efficiency standards for road transport	
setting targets for reducing energy consumption of buildings of public sector facilities	ensuring the implementation of target program of the energy	

and introduction of energy monitoring system of public sector facilities (at the level of the local authority and the departmental subordination according to the main budget owner)	saving in the public sector enforcement of contracts of energy efficient companies (ESCO) in the public sector	
introduction of tariff support for business entities - companies, which are natural monopolies to implement the energy saving investment projects	introduction of the demand management system and rendering energy services (introduction of the "white" certificates system) (i,ii)	
introducing legislation on contracts of energy efficiency companies (ESCO) (i)		
establishing mechanisms to support municipalities to develop energy efficiency projects, which are attractive for financing.	enforcement of contracts of energy efficient companies (ESCO) in the public sector	
stimulating the end-user of energy to use the best practice of energy consumption, creating consulting and financial infrastructure in order to implement projects of energy efficiency by business entities and the population;	distribution of support mechanisms of individuals as end users of energy services (crediting the population on favorable terms, providing the grant aid, tax breaks, etc.)	
<i>Sub-objective 3.3. Increasing the public support for energy efficiency</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> - Creating the informing system and promoting energy efficiency - Increasing the availability and reliability of disaggregated energy statistics, energy efficiency indicators - Creating a system of training in efficient usage of the energy resources 		
creating a system of data collection, analysis and use of data on final consumption of energy for the formation of comparative framework on energy resources efficiency comparable with international practice	creation and regular renovation of electronic databases, indicators on energy efficiency	
<ul style="list-style-type: none"> - introduction of energy-efficient labeling to encourage the spreading of energy-efficient household, office and heating equipment at the market, reducing energy consumption in buildings (i, ii) - ensuring the state supervision over compliance of energy consuming goods with the requirements of technical regulations on energy labeling. - reflecting in the procedure of public procurement of the energy consuming equipment the compliance with the high-end efficiency grade as a prerequisite 	implementation of demonstration projects on energy efficiency (pilot investment and innovation projects in the energy sector, buildings with zero power consumption, etc.)	
<ul style="list-style-type: none"> - implementation of educational programs for training specialists in modern technologies in the field of energy and energy conservation; - introduction of the practice of national advertising campaigns demonstrating the benefits of energy saving 	implementation of information support system for the population on the energy efficiency of households	
OBJECTIVE 4: ENVIRONMENTALLY ACCEPTABLE LEVEL OF ENVIRONMENTAL IMPACT OF THE ENERGY		
<i>Sub-objective 4.1. Reducing the negative impact of the fuel and energy complex on the environment</i>		
<u>Tasks:</u>		
<ul style="list-style-type: none"> -Reduction of emissions (greenhouse and harmful gases), limiting the impact on water and land -Minimizing of waste of the energy sector -Restricting the use of land for purposes of FEC (decommissioning of land plots due to waste pollution) 		
introduction of measures to limit the impact of the energy sector on the environment (s):	to ensure that the levels of payment for environmental pollution and use of natural resources correspond to the caused economic and social losses	
<ul style="list-style-type: none"> - environmental management systems and environmental audit (EMAS); - legal acts on ensuring air quality; 		

- assessment of the environmental impact of certain public and private projects		
implementation of legal acts on issues of strategic environmental assessment (SEA) as a tool to improve the planning process in general and the integration of environmental aspects into policies, plans and programs of businesses entities and public bodies (ii)	ensuring the development of advanced technologies of safe, environmentally friendly and energy-efficient road transport	
To approve the National Action Plan for reducing emissions of pollutants into the air from large combustion plants (SO ₂ , NO _x and dust) - (program of reconstruction and modernization of power plants and combined heat and power units) (i)	modernization of generating capacity, the introduction of environmentally friendly technologies to reduce pollutant emissions to the level defined by international obligations, in particular by Directive 2010/75/EC on industrial emissions	to implement construction projects of overcritical and supercritical coal-fired power plants and the projects of "disposal of carbon emissions" TPP (CCS)
to approve the program of reducing environmental impact and use of slag waste for enterprises of the energy sector	ensuring development of recycling technology of waste in the energy sector to promote the use of energy sector waste as secondary raw materials for the economy	
implementation of legal acts on ensuring quality and sulfur content of certain liquid fuels (ii)		
creation of waste management (reducing and using of biodegradable waste landfill)	clarification of legal acts on ensuring the emission of pollutants, wastewater, waste of enterprises of the energy sector	
- to specify plans for a full cycle of treatment of spent nuclear fuel and radioactive waste, distribution of responsibility according to various stages of management of spent fuel and radioactive waste (ii) - to define the operator (on the steps of the design, construction and operation) of the centralized repository for spent nuclear fuel - to adopt a decision on the construction of storage facilities for radioactive waste disposal in stable geological formations	to complete the formation of a cycle of treatment of spent nuclear fuel and radioactive waste to define the operator, to provide design and set the deadlines for construction of the geological repository for radioactive waste;	construction of the deep geological repository for radioactive waste;
<i>Sub-objective 4.2. Providing low-carbon development of the national economy</i>		
<u>Tasks:</u>		
-Ensuring reducing of the level of CO ₂ emissions per unit of gross domestic product -Restructuring of power generating capacity towards low carbon technologies -Reduction of greenhouse gas emissions from stationary and mobile energy consuming plants		
development of the legislation for the implementation of the trading scheme for greenhouse gas emission (ii)	introduction of a system of evaluation and monitoring greenhouse gas emissions and its adaptation to introduce a scheme for the trade with quotes for greenhouse gases (carbon market)	ensuring the functioning of the internal Ukrainian carbon market, its agreement with the European carbon market
to clarify the potential participation of Ukraine in the agreements on the climate change for the period after 2020, particularly in global GHG emissions trading and other market mechanisms and in the technology transfer mechanism	to ensure the implementation and the use of "post-Kyoto" tools of the "green" investment and the trading with greenhouse gas emissions	
establishing criteria for sustainability of production of biofuels and biomass and reducing greenhouse gas emissions in the air, ensuring conformity of production with sustainability criteria (ii)		

OBJECTIVE 5: DIVERSIFICATION OF ENERGY SUPPLY AND ENTERING ONTO THE EUROPEAN ENERGY MARKET		
<i>Sub-objective 5.1. Optimization of the structure of the fuel and energy balance</i>		
Tasks:		
<ul style="list-style-type: none"> - Expansion of technical and economic opportunities to obtain energy resources from alternative sources - Increasing the share of renewable energy in the primary balance of primary energy resources consumption - Expansion the share of the local fuel in the energy balance 		
clarification of the classification of reserves and the forecast resources of oil and combustible gases and methodologies for evaluating the ratio of the stocks to the volume of mining (R/P Ratio)	a significant increase in domestic extraction of natural gas through activation of natural gas extraction by traditional and non-traditional technologies	access to self-sufficiency concerning natural gas due to extending of the extraction of the traditional gas reserves and implementation of projects of extraction of the unconventional gas
updating of the national program of mineral resource base development in Ukraine until 2030, clarifying the potential of development of uranium deposits and other minerals, coal, exploration of new oil, gas and condensate deposits	Introduction of a tax on energy use as a tool for regulating the structure of the fuel and energy balance (by establishing rates on the use of energy resources types)	
formation of local energy systems based on the cost effective consideration of the capacity of local fuels, the supply logistics, the regional and the national energy infrastructure (development of local energy schemes and energy programs)		
<i>Sub-objective 5.2. Diversification of energy resources supply</i>		
Tasks:		
<ul style="list-style-type: none"> - Ensuring the technical and economic feasibility of diversifying energy resources supplies (oil, oil products, natural gas - at least from three sources, nuclear fuel from at least two sources) - Providing that the share of one supplier in the total supply volume of fossil fuel types should not exceed 30% 		
expansion of the natural gas reverse supply from Slovakia, the maximum use of available reversible resources in Hungary and Poland and construction of other interconnector between Poland and Ukraine	implementation of new gas infrastructure projects in order to further diversify gas supply routes	
upgrade and increase of the capacity of Ukrainian underground storage facilities in the Western Ukraine	assessment of the technical and economic feasibility of the LNG project - the terminal in Ukraine	
improvement of operation of the oil products market and creating conditions for attracting foreign investment from companies producing oil in order to build a modern refinery in Ukraine	supplying Ukrainian refineries with products, at least 30% of the market while limiting supplies from a single source at the level of 30% of the total volume of fuel imports	ensuring the share of Ukrainian refineries at the level at least 50% of the market ensuring supplies from a single source at most 30% of imported raw materials required for the production of motor fuel
introduction of the exchange trading with coal products and the unimpeded access to the market of imported coal	providing consumers with the domestic coal production in the amount of not less than 70% of the market	
ensuring corporatization of the NPP operator of Ukraine	- estimating the feasibility of attracting a strategic foreign investor to manage the NPPs of Ukraine (partial privatization - while maintaining the state ownership and	creating strategic alliances with foreign companies on the development and the use of advanced nuclear technologies
ensuring the participation of Ukraine in international programs of nuclear studies at		

research reactors and at nuclear plants	the management control over the activities of the company) - signing an agreement on cooperation with a supplier of an alternative nuclear technology (for building new nuclear power units)	in Ukraine, the implementation of the program of substitution of the dropped out NPP units with the new ones
setting targets and ensuring diversification of supply of nuclear fuel for Ukrainian NPPs from two external sources	establishing requirements for construction projects of new nuclear reactors to prevent the dependence on the fuel of the Russian origin only	
to clarify the national program "The Nuclear Fuel of Ukraine" concerning the creation of new elements of the incomplete nuclear fuel cycle under the observance of international law in the field of the nuclear power (uranium mining, production of zirconium and necessary products from zirconium, nuclear fuel fabrication) to study the question of the application of market mechanisms to the project financing for construction of a nuclear fuel fabrication plant and to create market mechanism of warranties for the fuel purchase (long-term commercial agreements for the fuel supply with the NPP operator, the project financing)	ensuring the functioning of the nuclear fuel fabrication plant in Ukraine to supply the fuel to the domestic and foreign market	
<i>Sub-objective 5.3. Providing development of the renewable energy sector</i>		
<u>Tasks:</u> - Expanding the use of renewable energy sources in final energy use - Increasing the share of biofuels in the transport market, increased use of second-generation biofuels - Diversification of supply and creation of optimal conditions for the distributed power generation based on available resources at the local level		
adoption of the Scheme of complex usage of water and hydropower resources of Ukrainian rivers and clarification of the unused cost-effective hydropower potential introduction of practice of establishing national indicative targets for the next 10 years concerning the usage of renewable energy sources (adoption and the periodic review of the National Plan)		
establishing the procedures for the issuance, use and termination of guarantees of origin for electricity for business entities that generate electricity from alternative (renewable) energy sources.	introduction of a new mechanism for supporting the production of heat energy and electricity from renewable energy sources; introduction of the principle of mutual exclusion of support mechanisms for the renewable energy sector (tax incentives or "green" tariffs)	introducing a mechanism of the termination of support of the renewable energy sector in the case of the leveling prices for conventional and renewable energy sources
improvement of legislation imposing requirements on the use of renewable energy at the local level	Formation of a system of the logistic support (infrastructure) for collecting biological raw materials, marketing and transportation to the consumer	
- adoption of the commitment to gradually increase the share of alternative fuels for vehicles based on requirements for the fuel sustainability (reducing greenhouse gases emissions) - to develop the technical requirements to the production and usage of biofuels and bioliquids with the reduction of greenhouse gas emissions - to develop sustainability criteria for liquid and gaseous fuels produced from	imposing stricter requirements regarding the content of alternative fuels and the use of the second generation biofuels in vehicles; ensuring the production of synthetic fuels from coal, biomass, etc.	implementation of programs of creating infrastructure for using electric vehicles and transport on alternative fuels

biomass and used for vehicles, as well as liquid fuels produced from biomass and intended for energy use other than transport, including the production of electricity, heat and cooling energy.		
introducing a mechanism to support the "technology platforms" for the development of certain types of renewable energy sectors (biogas, biomethane production, biomass usage, infrastructure development of alternative fuels usage for transport, electric transport, waste usage, etc.)	improving the mechanism of the "local content" to stimulate the production of power equipment in Ukraine development of loan programs of national production of equipment for the renewable energy sector, raising finances from international funds, funds and programs of the EU	
shortening the time of issue and the number of permits needed to implement projects using renewable energy sources	introducing the mechanisms to encourage the end consumer to use the equipment of the Ukrainian producer	preparation for decommissioning and recycling of renewable energy equipment (utilization of solar panels, etc.)
<i>Sub-objective 5.4. The entry of Ukraine's energy sector into the European energy market</i>		
<p><u>Tasks:</u></p> <ul style="list-style-type: none"> - Ensuring the smooth flow of resources, energy, technology and capital between the energy markets of Ukraine and the EU - The entry of energy systems operators and national regulators in European cooperation formats - The entry of Ukraine's energy sector to the European system of the energy security - The market growth of Ukrainian companies at the European energy markets 		
introduction of legal acts concerning the technical adaptation of the legal and technical regulation of the energy sector with the relevant approval of the technical requirements for power facilities in accordance with the requirements of ENTSO-E implementation the target program of the integration of the United Energy Systems of Ukraine to the energy association of the energy systems of the European countries (ENTSO-E) by 2018	joining the united energy system of Ukraine to ENTSO-E	Entry of investors and suppliers from the EU countries onto the Ukrainian energy market; integration of Ukraine into the European single market
the infrastructure preparation to supply natural gas from the countries of ENTSO-G (realization of the gas interconnector projects with Romania, Hungary, Slovakia, Germany, Poland) legal and organizational preparation for the creation of virtual point of sale (The Eastern European Gas Hub) basing on the Ukrainian underground storage of natural gas.	ensuring the normal functioning of the Eastern European Gas Hub and the participation of the operator of underground gas storage in commercial transactions in the domestic and European markets	transferring the purchase point of the natural gas from Russia towards the eastern border of Ukraine
OBJECTIVE 6. EFFICIENCY OF THE GOVERNMENT MANAGEMENT IN THE ENERGY SECTOR		
<i>Sub-objective 6.1. Creating a system of the energy security management</i>		
<p><u>Tasks:</u></p> <ul style="list-style-type: none"> - The introduction of the system of the strategic planning with the development of the fuel and energy complex - Ensuring the functioning of the monitoring system for energy security conditions 		
Creating a system of monitoring and analysis of energy markets, global trends of the energy sector development and critical risks to the energy security of Ukraine on the basis of public resources of the energy sector Defining the responsible for risk and threats assessment to the energy security and for	carrying out training and publishing an annual report on the analysis of the energy security of Ukraine, security of energy consumers	gaining membership in the International Energy Agency (IEA), Nuclear Energy Agency (NEA) and other international organizations in the field of the energy sector

coordinating the implementation of energy policy in this area		
introduction of the system of indicators of the implementation status of energy policy and of the state of the energy security and ensuring their annual monitoring	training and periodic (every 5 years) publication of the National Report on the state of the Energy Strategy of Ukraine	
ensuring the full implementation of standards of the Initiative Extractive Industries Transparency (EITI), imposing requirements for accounting and financial reporting formation of mining companies according the international standards (IFRS)	introduction of requirements to energy companies on informing about prospective agreements with external partners in terms of their impact on the objectives of the Strategy	
ensuring the full-fledged participation of Ukraine in the European systems of early warning of threats to the energy security (early warning mechanisms, publication of data on production, energy resources transportation, etc.)	ensuring the full-fledged participation of Ukraine in the European energy regulators association (ACER), participate in the coordination group.	the full-fledged entering of Ukraine to the system of solidarity mechanisms ensuring the European energy supply
ensuring the public participation in the formulation and implementation of the energy policy (involvement of non-governmental organizations, analytical centers, etc.)	establishing a mechanism for monitoring of "merging and acquisitions" processes in the energy markets and preventing from monopolization of markets	
	introducing legislation concerning the reduction of risks of the hostile "takeover" of the strategic state assets and the operators of energy infrastructure.	
<i>Sub-objective 6.3 Meeting the needs of the national economy in the particular period</i>		
<p><u>Tasks:</u></p> <ul style="list-style-type: none"> - Formation of the legal framework of the energy sector in a particular period (risks and threats forecasting, the formation of the state management system, limiting the activities, fundraising from the private sector) - Ensuring the preparedness of the fuel and energy sector to meet the needs of the national economy in the situations of the energy crisis 		
introduction of the legislation in terms of improving the system of the physical security of energy facilities, (development of the Concept of the energy infrastructure security of Ukraine)	improving coordination and formation of public and private partnerships to respond to threats to the energy security	
legislative regulation of the functioning of the national economy and in particular the energy sector in times of emergency (the special period), giving the right to the state to buy back the energy resources existing in the private sector, in order to ensure the functioning of the national economy for the period of the state of emergency	implementation of the practice of agreements (with foreign contractors: system operators, suppliers) on assistance in case of accidents or ensuring the guaranteed reserve for an agreed period of time (interrupted contracts)	
drafting legislation regarding the formation of public and private partnerships in reserving energy resources and introduction of strategic energy resources reserves	adoption of legislation to create a mechanism of "reserving" of energy resource of private companies in the amount of 30 days of consumption by the state, in particular: <ul style="list-style-type: none"> - fundraising by private companies in case of the crisis situation (foreclosure settlement of specified volumes at market prices) - implementation of trade interventions to stabilize energy markets in the crisis situation 	providing the mechanism of "reserving" of energy resource at private companies in the amount of 30 days of consumption by the state.
identifying and empowering the responsible for establishing a system of strategic energy resources reserves (i)	Creation of the state system of strategic reserves of energy resources (oil, oil products and natural gas) in the amount of 30 days of domestic consumption.	Creation of the state system of strategic energy resources reserves in the amount of 61 day of average daily domestic consumption
<i>Sub-objective 6.4. Reforming the management system of the energy sector</i>		
<p><u>Tasks:</u></p> <ul style="list-style-type: none"> - The elimination of administrative regulation of mutual settlements on the market - The introduction of the system of the strategic planning of the energy usage and the management of the development of the fuel and energy complex 		

reviewing the functions and the delegated powers of the government authorities to regulate markets, the legislative strengthening of the delegated powers and of the independence of national regulators for each of the energy markets in accordance with the requirements of the Third Energy Package (ii)	ensuring the control of national regulators in the energy sector over the proper level of transparency in monopoly markets and the efficient supervision of compliance with competition	
introduction of the modern European standards of the corporate managing of state own energy companies development of legislation to implement at the level of a business entity the practice of analysis and response to threats to the operation of energy facilities (contingency planning)	introduction of contingency planning in the energy sector (introduction of the system of risk assessment by business entities of the energy sector (standard and systems of voluntary agreements) and response system for threats to the energy security (threat passport) and the plan of emergency response)	
decentralization of the state delegated power and transition of resources and the responsibility for the functioning of housing and communal services and the municipal energy sector onto the local level, decentralization of the energy supply systems using local fuels and renewable energy sources	forming a system of monitoring and evaluation of the implementation of the provisions of the state energy policy at the local level expansion of the public participation in the formation and implementation of the energy policy (involvement of non-governmental organizations, analytical centers, etc.)	providing support to the activities of national energy companies at the European and global markets and their participation in international projects (creating credit agencies, "political" risk insurance, etc.)
ensuring the improvement of energy statistics: the formation of monitoring systems of the fuel and energy balance, energy efficiency indicators, emissions and verification of greenhouse gases, energy resources reserves, etc.	ensuring the annual publication of: - the expanded energy statistics, the actual energy balances - ensuring the preparation and publication of annual energy long-term balances (over 5 years)	ensuring improving the functioning of the monitoring of the fuel and energy balance
amendments to legal acts, conditions and rules for licensing activities, preparation of guidelines for negotiations, preparation for national target programs regarding the provisions and objectives of the Strategy		
providing an opening the tariff structure for natural gas, electricity, heat, their transportation for consumers (i)		

i- According to Ukraine's obligations under the agreement about joining the European Energy Community.

ii - According to the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, of the other hand.