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Center for Adaptation of the Civil Service to the Standards of the European Union
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*Development of a Network of Policy Analysis Groups
in the System of Central Executive Bodies in Ukraine*

Priority Efforts for the Integration of Unified Power System of Ukraine into Unified Power Systems of the European Union

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Foreword

Development of the Ukrainian State and its movement towards the European community requires establishment of modern, professional civil service that would function in accordance with the requirements of democratic governance. Civil servants of Ukraine must be politically neutral and professional, armed with modern knowledge and skills in public administration.

Among the key functions of public officials in democratic countries is the development of policy recommendations and policy alternatives to solve the existing problems in specific sectors. Civil servants also hold consultations with stakeholders and carry out monitoring and evaluation of the policy efficiency and effectiveness.

Comparing with EU practice, the system of policy coordination and development in Ukraine is not sufficiently transparent and is too centralized. Requirements to analyze policy alternatives and hold consultations with stakeholders are not always fulfilled. The Ukrainian officials often lack practical skills to analyze policy problems and their causes, possible consequences and obstacles to implementation of various options for problem solution.

In order to strengthen the capacity of civil servants to analytical support of the strategic government decisions, the Main Department of Civil Service of Ukraine during 2005–2008 supported a number of initiatives dealing with activities of a network of the policy analysis groups in the central executive bodies in Ukraine. Around 130 civil servants of top and middle managerial levels from the Secretariat of the President of Ukraine, Secretariat of the Cabinet of Ministers of Ukraine, National Bank of Ukraine, ministries and other central executive bodies received training and acquired relevant public policy skills and knowledge needed for application of democratic procedures to the decision-making process.

Results of the policy analysis groups' activities include publication of green and white policy papers. This is an effective tool used in the EU member states and other developed countries to ensure efficiency, transparency, consistency and predictability of work of public authorities.

Requirements to the quality of public policy development and implementation become even more exacerbated in the context of preparation of the EU – Ukraine Association Agreement. Success of the relevant negotiation process largely depends on the capacity of the Ukrainian officials to formulate a coherent, effective and far-sighted strategy of mutual relationships.

Given the magnitude of the obligations of Ukraine in the framework of the future Association Agreement with the European Union, in 2008 the Main Department of Civil Service of Ukraine put forward an initiative, which was supported by the Government, to expand the network of policy analysis groups and to focus their work on the issues of implementation of Ukraine's commitments under the future Free Trade Agreement with the EU.

In December 2008 the initiative on “Development of a Network of Policy Analysis Groups in the Central Executive Bodies in Ukraine” was launched by the Center for Adaptation of the Civil Service to the Standards of the European Union. It was implemented by the Center of Social Expertise of the Institute of Sociology of the National Academy of Sciences of Ukraine. 10 cross-sectoral groups were created to deal with the sectoral issue of the EU–Ukraine Free Trade Agreement and 3 policy analysis groups—to deal with issues of the civil service reform. Each of the groups consisted of 7–10 top-level civil servants (II–IV categories).

Policy analysis groups dealing with priority issues of the EU-Ukraine Free Trade Agreement:

- Development of a strategy to overcome technical barriers to trade: standardization and compliance assessment.
- Development of a strategy in the field of financial services.
- Development of a strategy in the field of trade in services: the movement of capital.
- Development of a strategy in the field of public procurement.
- Development of a strategy in the field of sanitary and phytosanitary regulations.
- Development of a strategy in the field of protection of intellectual property.
- Development of a strategy in the transport sector.
- Development of a strategy in the environment sector.
- Development of a strategy in the energy sector.
- Development of a strategy in the field of taxation.

Policy analysis groups dealing with priority issues of the civil service reform:

- Reform of the classification system in connection with the civil service compensation system.
- Introduction of new approaches for the annual performance evaluation of civil servants’ activities.
- Reform of the system of professional development for civil servants.

In 2008–2009 the main task of policy analysis groups was the development of the sectoral strategies to meet the obligations imposed by the future Association Agreement with the EU. These strategies defined objectives and steps of implementation of the Agreement, as well as resources needed to implement a strategy (financial, human, and institutional). The draft strategies, discussed with all stakeholders, will enable to prepare for implementation of future Agreement and strengthen the position of the Ukrainian party at the currently running negotiations with the EU.

Public discussions of policy options for solving sectoral problems will promote better understanding and support by the stakeholders of the government policy and provide a feedback for the government.

This year, the policy analysis groups have had a number of innovations. First of all, it is their inter-ministerial structure: representatives of the Ministry of Justice, the Ministry of Economy and the Secretariat of the Cabinet of Ministers participated in almost all policy analysis groups. Secondly, the number of involved public officials and authorities significantly increased comparing to previous years—130 civil servants from 20 central executive bodies as well as from the Secretariat of the Cabinet of Ministers and the National Bank of Ukraine took part in policy analysis groups. In addition, analytical support to members of policy analysis groups was provided by both international and local sectoral experts from the International Center for Policy Studies (ICPS) and the Ukrainian-European Policy and Legal Advice Centre (UEPLAC).

During the year members of policy analysis groups participated in trainings and seminars guided by the EU and Ukrainian experts. They mastered the methodology of development of policy documents and decision-making procedures according to the European standards. The groups organized public consultations aimed at discussion of proposed drafts strategic documents with representatives of NGOs, business community and experts. Considerable number of received comments and suggestions greatly improved the quality of the policy documents.

The key to successful implementation of this initiative was a permanent monitoring and evaluation of the results of policy analysis group's work. According to the survey, most participants consider such trainings in policy analysis as very useful and effective because they provided opportunity to get equipped with skills in policy analysis, cost-benefit analysis and effective communication in the context of the requirements posed by the process of adaptation of the Ukrainian legislation and norms to the EU norms and standards, taking into account national interests of Ukraine.

Moreover, activities of policy analysis groups generate a multiplication effect; they become a basis for the new quality civil service and new administrative capacity of the central executive bodies. Despite the fact that only about ten civil servants are official participants of the policy analysis group, the practice shows that the number of public officials involved into the process of development of strategic policy documents is actually bigger.

In 2008, the School of Senior Civil Service was established, the task of which is to create institutional conditions for developing leadership in the civil service and public administration reform. Given the fact that policy analysis groups have proved their effectiveness as a progressive form of the civil servants' on-the-job training, the follow-up initiatives relating to policy analysis groups are planned to be carried out on the basis of the School of Senior Civil Service. This will contribute to further development of both policy analysis groups' network and strengthening of the in-service training system of the civil servants.

Introduction

Currently a world is characterized by rapid globalization processes aiming to reach more stable, secure and predictable state of economy and society for each individual country as well as to avoid critical situations through free access to world commodity and service markets.

The primary role in these processes belongs to the stability of electric power supply. In this area the interconnection of individual countries' energy systems is moving towards the establishment of the respective trans-national trans-continental power systems.

Electric power industry is a specific sphere of technological processing and utilization of primary fuel and energy resources forming the technological mainstay of the civilization and has special significance for both nowadays and for the nearest future.

At the European scale, Ukraine occupies the unique geopolitical and geographical position within the context of global energy integration processes. It borders on the western EU member-states, which creates favorable conditions for establishing transit routes.

For implementation of Article 3 of the Decree of the President of Ukraine "On the Program of Ukraine's integration to the European Union" dated September 14, 2000 ¹ 1072 the Cabinet of Ministers of Ukraine has adopted the Ukraine – EU Action Plan (hereinafter the Action Plan) (the Decree "On approval of measures to implement Ukraine – EU Action Plan in 2005", dated April 22, 2005, ¹117-δ).

The action plan envisages elaboration of measures for progressive adjustment of the Ukrainian unified power system (UPS) in accordance with UCTE requirements in order to integrate the UPS of Ukraine into the Energy Union of the European States.

The concept of integration of the UPS of Ukraine into Trans-European electric power grids is a part of the Energy Strategy of Ukraine for the period until 2030.

Implementation of the Concept will enable taking a full advantage of Ukraine's geographical and geopolitical position and ensure the further development of the Ukrainian UPS for domestic power supply purposes, scaling up export and transit of energy resources and creating environment for the integration of Ukraine into the European Union.

The document is developed in accordance with the Order of the Cabinet of Ministers of Ukraine dated December 30, 2008 ¹ 43542/99/1-08 by a policy analysis group in the sphere of energy, consisting of the representatives from the Ministry of Fuel and Energy of Ukraine, National Electricity Regulation Commission of Ukraine (NERC), Ministry of Justice, and the Cabinet of Ministers of Ukraine.

To discuss this document, the Ministry of Fuel and Energy of Ukraine held a round table on June 3, 2009. The meeting was attended by representatives of the Ministry of Fuel and Energy of Ukraine, NERC, NEC "Ukrenergo", NJSC "Energy company of Ukraine" and the Ministry of Coal Industry of Ukraine.

Abbreviations used:

UCTE – Union for the Co-ordination of Transmission of Electricity.

UPS – Unified Power System.

1. Context Description

1.1. Analysis of the situation and key problem-related factors, including statistical data.

Integration of the Ukrainian UPS into energy systems of the Western Europe has its pre-history. Developed as a part of the unified energy complex of the former USSR, the power system of Ukraine holds a leading place in the elaboration and development of the energy system “Mir”. Unified energy system “Mir” for over thirty years (1962–1992) used to be the most powerful in the world. Later, in 1992–2002, as both the Unified Electric Power System of USSR and Unified energy system “Mir” collapsed, the configuration of the European energy unions has changed – some energy systems of the Eastern European countries were integrated into the energy unions of the Western and Central Europe.

Poland, Czech Republic, Slovakia and Hungary have separated from energy system “Mir” and have established an independent energy system CENTREL (60 GW, 300 0Wh per year), which in 1995, after reorganization and technological re-equipment of power plants and power grids, has joined UCTE (Union for the Coordination of Transmission of Electricity), known at that at that moment as UCÐTE (Union for the Co-ordination of Production and Transmission of Electricity).

Energy systems of Romania and Bulgaria have also separated from the UPS of Ukraine and jointly with energy systems of Greece and former Yugoslavia and after a certain time of mutual cooperation and implementation of the required measures in 2004 started operation in line with UCTE.

These steps resulted in the decrease of electricity export from Ukraine (down to 2,4 billion kWh in 2000).

After the collapse of “Mir” system, UPS of Ukraine has developed a range of schemes that enabled extending of limited technical capabilities of electricity export. Implemented as a transitional option was the scheme under which electricity produced by individual power-generating units was exported through dedicated electricity transmission lines. This scheme did not fully meet the system safety criteria and therefore had a very short-lived existence.

In 1995, Ukraine proceeded to the second stage in development of technical pre-conditions for scaling up electricity export – so called “Burshtynsky island” project aimed at interconnection with UCTE. Upon the completion of the inception stage works and successful (one-year) probationary parallel operation with UCTE system, in July 2003, the UCTE Steering committee based upon the conclusions of the

Technical committee UCTE/Ukraine gave permission for permanent parallel operation of “Burshtynskyi island “ system with UCTE.

UPS of Ukraine, judging by its installed power generation capacity, still remains one of the largest energy systems in Europe and has sufficiently high transmitting capacity of its power grids, including the inter-state ones.

UPS of Ukraine is planning the renovation of the key assets of thermal and hydro-electric power plants, construction of bulk power grids to enable full output capacity for Rivnenska and Khmelnytsky nuclear power plants.

1.2. Legal framework.

Partnership and cooperation agreement between Ukraine and European Union, dated June 14, 1994, has established that Ukraine should approximate its effective legislation in priority areas to the legislation of EU.

In accordance with the Law of Ukraine “On the State Program of Adaptation of Ukraine’s Legislation to the Legislation of the European Union” the power industry is referred to as belonging to the priority areas requiring such adaptation.

Principal acts of the European legislation in the sphere of formation of the single European electricity market are:

- Directive 2003/54/EU of the European Parliament and Council dated June 26, 2003 on common rules for the internal electricity market, repealing Directive 96/92/EU and establishing principal framework for developing internal electricity markets of EU countries in order to create single continental electricity market. Fulfillment of requirements of the Directive 2003/54/EU is an indispensable condition for Ukraine’s integration into the single European electricity market, and into such European energy associations as UCTE and ETSO, that play an important role in the development of both technologic and institutional framework.
- Regulation 1228/2003 of the European Parliament and Council dated 26 June 2003 on conditions for access to the network for cross-border exchanges of electricity.

Moreover, legal, economic and institutional activity basis in electric power industry as well as regulation of relationships in the field of production, transmission, supply and utilization of energy, maintaining security of energy supply in Ukraine, competition and rights protection of both consumers and industry workers are stipulated by the Law of Ukraine “On electric power industry”.

The industry is also governed by the following normative and technical framework:

- GOST 13109-97 “Electric power. Electromagnetic compatibility of technical equipment. Power quality limits in public electrical systems”;
- GDK 34.20.507-2003 “Technical operation of electric stations and grids. Regulations”;

- “Regulations for the design and construction of electrical installations” Ministry of energy of USSR. 6th edition;
- GOST 24278-89 (ÑÒ ÑÝÂ 3035-81) “Stationary steam turbine units for driving electrical generators of thermal power plants. General technical requirements”;
- GOST 24277-91 “Stationary steam turbine units for nuclear power plants. General technical requirements”;
- GOST 12405-81 “Electro-hydraulic controllers for hydraulic turbines. Technical requirements”;
- GOST 183-74 “Electrical rotating machines. General technical requirements”;
- Internal Regulations and operational dispatch Instructions of NEC “Ukrenergo” and its structural subdivisions.

Above-mentioned regulatory documents stipulate the uniform provisions and requirements for organization and performing of safe and reliable operation of electric stations and power grids within the unified power system of Ukraine.

UPS of Ukraine still uses a number of regulatory documents of the former USSR dealing with technical operation of power systems, in cases when there are no respective Ukrainian analogues.

1.3. Institutions engaged into problem resolution and key stakeholders.

Institutions engaged into the problem resolution are Ministry of Fuel and Energy, NEC “Ukrenergo”, SFTC “Ukrinterenergo”, NJSC “Energy company of Ukraine”, NNEGC “Energoatom” and NERC. Ukraine’s integration into the single continental electricity market creates indispensable preconditions for scale-up of electricity export to the said countries.

In the context of liberalization of Ukrainian electricity market there is a risk of competition with Russia at electric power markets of the European countries. Therefore, it is necessary to make provisions for and agree with the EU countries about specified transitional period to protect national electricity producers.

Entrance to the single EU electricity market, the need to adhere to strict environmental requirements of the European law will stimulate Ukraine to introduce technologies for reduction of negative impacts on the environment, facilitate attraction of required investments, and promote development of environmentally safe energy generation facilities.

All of this is a necessary condition for integration of the Ukrainian UPS into the Union for the Co-ordination of Transmission of Electricity (UCTE) and European electricity market. It also creates pre-conditions for increase of the Ukrainian electricity export, leads to increase of the number of European countries importing Ukrainian electricity and facilitates improvement of the investment image of Ukraine worldwide.

It should be noted that parallel operation of the Ukrainian and Russian UPS is the most significant factor of safe and reliable operation of Ukrainian UPS. Termination

of parallel operation for these power systems may result in grave socio-economic consequences. Transition of the Ukrainian UPS to the parallel operation with UCTE considerably neutralizes negative effect of such disconnection.

2. Identification of the Main Challenges

The top-priority issue in the process of establishing proper conditions for stable and reliable parallel operation of the Ukrainian Unified Power System (UPS) with the Union for the Co-ordination of Transmission of Electricity (UCTE) is adjustment of the frequency and voltage of the Ukrainian UPS in accordance with the UCTE requirements, which depends on current conditions of generating capacities of thermal power plants (TPP), nuclear power plants (NPP) and hydro-electric power plants (HEPP) of the Ukrainian UPS.

Currently 92,1% of the TPP power-generating units have expired their estimated service life span (100 thousand hours), and 63,8% of power-generating units have exceeded worldwide accepted service and depreciation limits of 170 thousand and 200 thousand hours, respectively. They require either upgrade or replacement.

Except for the equipment that has been already renovated, the major part on HEPP has also exceeded service lifetime span limits.

Similar situation will, in several years, take place in respect to NPP. Projected operational life of NPP power-generating units in Ukraine (except for X2 and P4) will end in the years 2010–2025.

Moreover, the condition of bulk transmission lines, which are the basic elements of Ukrainian UPS, is deteriorating with every passing year. About 34% of over ground power transmission lines (OGL) with voltage of 220–330 kV are in operation for more than 40 years, whereof 1, 7 thousand km of OGL–330 (13% of total length) and 1,6 thousand km of OGL–220 (52%) require renovation. About 76% of transformer substations' hardware has exceeded its estimated operational life span.

Low operational reliability of the Unified power system is due to insufficient capability of power transmission lines which are unable to pass all electric power, which can be produced by NPPs (Rivnenska, Khmelnytsky, Zaporizhska NPPs); insufficient power supply reliability level in the Crimea, southern areas of the Odessa region, eastern Donbas region; inability to transmit the excessive power from the Western region to the Center and the East of the country; presence of uncompensated reactive power and the need to support required voltage level in the Ukrainian UPS power lines (Western, Central, Southern power systems).

Additionally, there is a negative tendency of reducing volume of the electricity export:

- in 2006 – 10,4 billion kWh;

- in 2007 – 9,2 billion kWh;
- in 2008 – 7, 9 billion kWh.

The main causes of these problem issues are: deficit of investments which restrains development of the national electric power industry and results in technical degradation of its capital assets; inadequate legal framework governing operation of the industry; and fiscal policy in respect to wholesale electricity market, pricing and investment.

According to the preliminary estimates, the volume of financing required for reconstruction and technical upgrade of TPP power-generating capacities amounts to 0, 8 billion US dollars.

Most obvious **consequences** of the failure to solve financing issues related to electric power industry facilities reconstruction and upgrade may be the following ones:

- shortfalls in electricity supply for current needs of economy and society;
- deterioration of the Ukrainian UPS operational reliability and impossibility of Ukraine’s integration to the European power system;
- critical and emergency situations in the UPS of Ukraine caused by technical and technologic disturbances;
- technical degradation of power plant capital assets;
- significant anthropogenic and technogenic impact of the electric power industry facilities on the environment and health of population;
- growing social stress among consumers of electricity.

3. Policy Goals

3.1. General goal: integration of the Ukrainian electricity market into the European energy market.

Achievement of this goal requires:

- enforcement of potential for stable and long-term power supply development in all European countries basis of which is diversification of power sources and types of energy resources;
- expansion of the basis for exchange of advanced technologies, creation of favorable environment for business cooperation and attraction of private investments, including investments into electric power industry;
- more efficient operation of existing power production facilities through

mutually beneficial exchanges, diversification of energy resource export, increase of operational efficiency.

3.2. Specific goals:

- development of the Ukrainian UPS for domestic power supply;
- increase of export and transit of electric power, in 2010 – to 11, 8 billion kWh, of which volume:
 - to UPS of Russia – up to 3,100 million kWh;
 - to Moldova – up to 2,200 million kWh;
 - to Belarus – up to 1,800 million kWh;
 - to Europe – up to 4 700 million kWh.

3.3. Operational goals:

- to develop normative documents on TPP, HEPP, NPP frequency and voltage control in the Ukrainian UPS.
- to carry out renovation and upgrade of NPP, TPP power-generating units:
 - for power units 1000 with turbines of the Research and Production Association “Turboatom” (units 1–6 of the Zaporizhska NPP and units 1 and 2 of the Pivdenno-Ukrainska NPP);
 - for power units 1000 with turbines of the Leningrad Metallurgical Plant (units 3 and 4 of the Rivnenska NPP, units 1 and 2 of the Khmelnytska NPP, units 3 of the Pivdenno-Ukrainska NPP).
- to carry out renovation of 46 HEPP power generating units.

4. Description of Basic Areas of Activity

Transition to the parallel operation of the Ukrainian UPS with UCTE requires:

4.1. Bringing of the regulatory legal framework of the Ukrainian electric power industry in compliance with requirements and recommendations of the European Energy Directives.

It is essential to develop regulatory documents that will govern the operation of all electric power producing utilities of all energy companies with different forms of ownership that constitute UPS of Ukraine, and will specify the responsibility of each

party for the performance of its functions, particularly with regard of market relations, for instance:

- establishment of the efficient, adjustable market competition mechanism;
- strengthening of competitive relations in the sphere of production and supply of electricity, in particular liberalization of pricing and tariffs formation in the industry;
- development of the transparent licensing procedure for construction of new power-generating utilities;
- ensuring independence of the wholesale electricity market infrastructure units and independence of the electric power industry regulatory body;
- provision of equal conditions for operation of all electricity suppliers, including equal access for electricity suppliers to distribution grids;
- introduction of separate accounting and reporting systems for different types of activity in the electric power industry and its vertically-integrated enterprises;
- development and approval of the national quality standards for services provided in electric power industry;
- development and implementation of market support mechanisms for vulnerable categories of consumers;
- extension of the electricity supplier's liabilities in respect to the relevant services provided by them;
- removal of limitations to supply of electricity for household consumers and securing free choice of suppliers for all categories of electricity consumers;
- assessment and control of air quality condition and other environmental protection issues.

4.2. Harmonize technical norms and standards regulating the operation of the Ukrainian UPS in accordance with requirements of the UCTE Manual.

4.2.1. It is necessary to develop a Power Grid Code, which would include:

- rules of access to the inter-state grids based on the principles specified in the EU Directive ¹1228/2003;
- requirements concerning accounting and information exchange systems applied in the process of power grids operation.

4.2.2. To perform revision of technical standards and rules regulating Ukrainian UPS operation and to bring them in compliance with the requirements of UCTE Manual:

- to develop legal instruments regulating operation of electric power industries, energy markets, etc.
- to elaborate technological normative documents, which regulate technical operation procedures of UCTE and electric power industry of Ukraine.

Transition to the parallel operation of the Ukrainian UPS with UCTE may become possible under condition of implementation of major works in Ukrainian UPS in order to ensure its compliance with technical requirements of UCTE Manual in regard of:

- frequency and capacity control;
- voltage and reactive power control;
- maintenance management (collection, processing and communication of technical data, emergency control etc.);
- proper functioning of measuring equipment at the principal power grids network and introduction of electric power metering systems.

4.3. Attracting investments for support of integration of the Ukrainian UPS into UCTE.

The volume of investments for implementation of measures for transition to the parallel operation of the Ukrainian UPS with UCTE required in the nearest future, by the areas of such investments application, is given in the table below.

Table

Investments required for transition of Ukrainian UPS to the parallel operation with UCTE

Measures	Investment amount, million, UAH
1. Compliance with requirements on frequency and capacity control, namely:	5, 059
1.1. Renovation (upgrade) of capital and auxiliary equipment of TPP for primary and secondary power and capacity control with due regard of environmental safety requirements to dust pollution rates	800
1.2. Renovation (upgrade) of capital and auxiliary equipment of NPP for primary and secondary power and capacity control	19
1.3. Renovation (upgrade) of capital and auxiliary equipment of HEPP for primary and secondary power and capacity control and implementation of HEPP service life prolongation measures	400
1.4. Ensuring compliance of prospective PSP (pumped storage plant) with frequency and power control requirements	3, 840
2. Renovation (upgrade) of capital and auxiliary equipment of electric power stations and sub-stations with voltage of 200 kW and higher	3, 860
3. Renovation and upgrade of the existing power grids and construction of new facilities in order to ensure compliance with operation reliability and consistency criteria and reactive power control in UPS of Ukraine	
4. Construction and renovation of telecommunication grids to meet technological requirements to on-line operation control and energy metering	2, 440
Total	11, 359

Therefore, the estimated total amount of investments required for transition of the Ukrainian UPS to the parallel operation with UCTE comes to UAH 11, 4 billion.

Implementation of measures, stated above, will facilitate transition of the Ukrainian UPS to the parallel operation with UCTE, however, it will require improvement of the Ukrainian UPS performance characteristics. Certain measures can be already implemented and the respective investment resources needed for funding of such measures can be attracted at the time when power systems will start parallel operation

Current funding of investment requirements of the electric power industry is very limited. Electric power industry entities are lacking their own funds due to existing size of electricity tariff rates and legal limitation on use of depreciation charges as a source of investment.

In practice, most frequently used are investment components of tariffs for electricity and electricity transmission services, directly allocated by business entities for implementation of investment projects (programs) or formation of special State budget fund, assigned for renovation (construction) of industry's capital assets.

Renovation (construction) of the respective capital assets may also be funded from the investment component of consumer fees at the wholesale electricity market (WEM) for individual business entities. This, however, will require the taxation of profit, acquired by respective business entities within the investment component of such tariff rates.

It should be noted, that for the purpose of tax optimization and reduction of price load on consumers, it would be rational to reimburse credit funds, applied for renovation (construction) of state owned capital assets, by allocations from special State budget fund, assigned for financing renovation (construction) of industry's capital assets.

The return on investments spent for renovation (construction) of capital assets owned by business entities is funded from the investment component of consumer rates (as a part of profit) on wholesale electricity market (WEM) for individual business entities.

4.4. Organizational and technical measures for transition to the parallel operation of Ukrainian UPS and UCTE.

4.4.1. Frequency and capacity control.

Reserve capacity of power plants is sufficient, but only for provision of stand-by reserve. The condition of power plants and UPS in general is completely different in respect to frequency and capacity control.

Elaboration of prospective development options for the Ukrainian power plants in order to meet the demand in electricity and with unconditional observance of the UCTE requirements regarding primary, secondary and tertiary control, should take into account the necessity of:

- maximum utilization of the existing NPP capacities;
- maximum use of TPP installed capacity for a coverage of daily load schedule with use of domestically produced coal as a primary fuel;
- construction and bringing into operation of additional regulated HEPP facilities.

4.4.2. Securing of the N-1 reliability criterion.

The N-1 reliability criterion is one of principal factors characterizing technological capability of the Ukrainian UPS and UCTE synchronous operation.

According to UCTE Manual, N-1 reliability criterion is a condition of the power system, where one potential accident resulting in a failure of one power system element does not endanger safety of the system operation as a whole, which implies cascade tripping or significant downfall of electricity consumption.

Requirements of the N-1 reliability criterion cover the following facilities:

- electricity transmission lines with voltage 220–750 kV;
- transformers and autotransformers with voltage 220–750 kV;
- energy generation units of nuclear, thermoelectric and hydroelectric power plants;
- reactive power compensation utilities.

Results of calculations and relevant analysis demonstrated that most elements of the Ukrainian UPS meet the requirements of the N-1 criterion.

At the same time, in some power grids segments, the acceptable margins of crossover load are ensured by the mechanism of power units' daily load limitation, which does not formally conflict with the UCTE requirements.

In respect to the inter-state crossovers, the N-1 criterion requires:

- mandatory bringing into operation of the South Ukraine NPP - Issachar over-ground power transmission line in order to secure a possibility for the Ukrainian UPS and UCTE synchronous operation mode;
- due to current conditions it is necessary to arrange construction of Ajalyk – Usatove ¹ 2 330 kV OGL which would enable to eliminate bottlenecks in electricity exchange between the Ukrainian UPS and Moldova.

4.4.3. Operational process management, security and automation systems.

To ensure stable information exchange, the bandwidth of communication channels should be at minimum 9600 bit/sec, and in accordance with the UCTE requirements it should be at least 64 Kbit/sec.

Departmental communication channels at the disposal of NEC “Ukrenergo” are operated for over 15 years and have their service life expired. Their current bandwidth is 50–200 bit/sec which makes it impossible to transmit data from sub-stations (of power plants) using international protocols IEC-870-5-101(105). Therefore, communication lines require renovation and replacement with digital (fiber-optic communication line – FOCL).

It is essential to establish own, self-dependent infrastructure of high-speed digital data-transmission channels using fiber-optic communication lines. Such infrastructure will meet the UCTE requirements in regard of Communication structure.

4.4.4. Informational inter-operability of the Ukrainian UPS with the neighboring power systems under condition of parallel operation with UCTE.

Compliance with the UCTE requirements in respect to Communication structure and Information exchange with other UCTE members presupposes:

- to establish two channels through neighboring UCTE members states (e.g. Romania and Poland);

- to analyze information circulating in electric power industry and to identify limits of relevant document disclosure (due to reasons of confidentiality, commercial secrecy, etc.);
- to perform analysis of data flows to be established with other UCTE members in order to determine their format and adaptation, or development of appropriate software for their formation and processing. Lack of such analysis impedes the operational coordination with other members of UCTE;
- to establish telecommunication node with back-up of all primary components.

4.4.5. Energy metering system.

Currently, the Ukrainian UPS operates electricity-metering system at the stage of its production, transmission, distribution and consumption. It includes 20,1 million points of commercial metering.

Points of commercial metering are equipped with:

- 18,4 million single-phase meters;
- 1,5 million three-phase meters.

Almost 170 thousand consumers do not have metering equipment.

Examinations of the NEC “Ukrenergo” sub-stations with respect to their compliance to the regulatory requirements of commercial metering procedures for lines at the disposal of power supply companies demonstrate overall coverage of metering points with up-to-date metering devices registered as WEM entities’ equipment.

However:

- only 20% of metering points of the secondary circuit comply with the requirements of the effective “Regulation on commercial electricity metering procedure” (RCM), meters with which such points are equipped, (under condition of relocation of metering points) may be also used as calculation meters;
- in 26% metering points secondary circuits require additional maintenance procedures;
- 54% metering points require upgrade of secondary metering circuits and additional installation or replacement of metering CT (current transformer) and VT (voltage transformer).

Power industry metering system allows for the following conclusions:

- most power industry facilities are equipped with an up-to-date metering facilities;
- pending is the issue of automated data collection from meters and development of WEM standard of data exchange between wholesale market entities.

At the moment, the automated commercial electricity metering system (ACEMS) of the Ukrainian UPS remains at the initial phase of integration and establishment of single distributed information system. This implies that existing metering facilities are not incorporated into a single system and automated data collection thereof is impossible due to:

- a lack of proper level ACEMS;
- a lack of connection between metering instruments and ACEMS;
- a lack of integration between different ACEMS levels.

Timely development of single distributed information system and resolution of other urgent ACEMS establishment issues, including equipment of currently disconnected inter-state electricity transmission lines with up-to-date metering facilities, involves the development of a milestone plan defining priorities for compliance with UCTE requirements.

4.5. Scaling-up westward electricity export.

The perspective of the westward electricity export increase is connected with the necessity of development and implementation of new policy, which is based not on the forecasted shortfall of electricity in the West, but upon operation in a stiff competitive environment and rightful participation in the Pan-European electricity market. The principal condition for the scale-up of the westward electricity export is a synchronous operation of the Ukrainian and European power systems.

Main factors affecting successful export policy will be the effective operation of power systems, quality, price, reliability and suppliers' guaranties as well as availability of a substantial and stable governmental support for re-acquiring of the lost markets and entering new ones.

Currently, annual consumption of electricity in Ukraine comes to 2/3 of production potential based on the installed capacity of power plants. Transmission capacity of inter-state grids allows increasing export volumes by several times. Actual growth of the Ukrainian electricity export is directly related to the perspective EU countries' energy balance (probable deficit of generating capacities) and electricity market liberalization level.

As forecasted for 2010, the installed capacity reserve in countries of the West, Central and South-Eastern Europe will decrease by 15% (total deficit of 6,7 GW), which implies to the consequent demand for imported electricity.

Capacity reserves of the East European countries (CENTREL) in 2010 will exceed the standard value by 40% (surplus 2,3 GW), retaining some export potential for these countries.

Under condition of electricity market liberalization taking place in EU countries, the increased demand for electric power produced in East European countries (including Ukraine) becomes quite predictable upon availability of the competitive price offers.

The gross installed capacity of the Ukrainian power plants as of 2005 came to 52 GW. Therewith, the maximal load in the recent years has not exceeded 31 GW.

It is conceivable that in the forecasted period by 2010, the gross installed capacity of the Ukrainian power plants will remain unchanged (installed capacity gain will be compensated by removal from the service of the outdated equipment) and maximum consumer load will not exceed 32 GW. In this case, even at possible growth of export rates to 800–1,000 MW, scheduled and emergency repairs of equipment, it allows to suggest that by 2010 the Ukrainian UPS will possess the sufficient reserve of power plant capacity.

5. Policy Outputs, Activities and Policy Implementation Indicators

Implementation of the policy will result in normal functioning of the Ukrainian wholesale electricity market, stable and complete supply of electric power for the population of Ukraine. Besides, the aforementioned activities will contribute to the integration of Ukraine into the European Union.

Interconnection of the Ukrainian power system with UCTE for their parallel operation is a part of political and economic integration process and establishment of single economic space in Europe.

Therewith:

- the opportunity to create the Pan-European **electricity market** will be respectively increased thus facilitating the large-scale **trade in electric power**;
- the potential of stable and long-term development of energy supply to all European countries based on the diversification of energy sources and energy source types will be strengthened furthermore;
- the basis for exchange of **advanced technology** will expand creation of the enabling environment for the development of business cooperation and attraction of **private investments**, including into the sphere of electric power industry;
- implementation of power grids interconnection idea will enable more efficient operation of the existing production capacities through **mutually beneficial exchange, diversification of energy resources export**, advancement of operational **technologic level**.

Inter-connection for the parallel operation will promote:

- **equality of partners** in preservation of specific power system features that do not impede the parallel operation (mutual imposing of eligible requests only);
- ensuring of **reliable energy supply** for economy and population. Inter-connection should not result in increase of acceptable power flows through

internal cross-over facilities of the integrated energy systems caused by alteration of energy system configuration made in the process of inter-connection;

- mutual preserving of the attained **quality and reliability** level of integrated energy systems' operation. This, in the first instance, is the quality of frequency and power control, back-up of emergency control system grids;
- spatial and temporal **delimitation of emergency surges** within the agreed grids and **mutual emergency support**;
- compatibility of **organizational planning and management schemes**, data transmission schemes;
- agreement of mutual requirements to external characteristics of energy unions, including **power balance deviations**;
- **non-discriminatory access** to grids and availability of electricity transit.

These principles imply that norms and standards affecting the parallel operation agreed by the partners should be maximally adapted for decentralized management.

Interaction between energy units will **enable establishment of the single trade and economic space in electric power industry**, including single European market of electricity and power thus promoting mutual benefits of joint efforts, for instance:

- expanding opportunities for electric power trade;
- increased operating reliability of power systems;
- reliability and stability of power systems;
- mutual emergency support;
- opportunity of more efficient utilization of the existing generating facilities and primary energy resources due to the decrease of required capacity reserves and mistiming of the maximal load occurrence;
- increased quality of electric power (first and foremost frequency stability), harmonization of standards and decrease of expenditures for their accomplishment.

Integration (interconnection of parallel operation) will have a **synergizing effect** – creation of new opportunities which are unavailable in separated systems which is evident, for instance, from irregularity of energy systems' integrated load curve, decrease of its daily, weekly and monthly imbalances, reduced dependence of electrical frequency on power balance deviations.

Synergy as well becomes evident from appearance of opportunities to enhance state of energy systems taking into consideration new optimality criteria that include environmental requirements, fuel and energy resources, market condition etc.

Electricity trade contributes to the stability of financial markets, for instance, shares of energy companies, increasing capitalization, attraction of foreign investments.

For Ukraine, inter-connection of power systems is of a strategic significance in terms of cooperation with Europe and integration into Pan-European capital market.

6. Implementation Outcomes

Transition of the Ukrainian UPS to the parallel operation with UCTE may cause the following consequences:

Economic, financial, social and environmental.

Electricity market of different CIS members and Baltic countries remains on different stages of development. Interaction between power systems is governed by bilateral agreements. Under such conditions the establishment of common electricity market is viewed as the task for the future.

Competitive environment at the European electricity market in the coming years will contribute to:

- harmonization of the regulatory model including:
 - legal framework;
 - electricity market participant's code of conduct;
 - supervision of adherence to market and competition rules;
 - criteria and requirements to the electric energy sector;
 - evaluation of financial flow;
 - protection of consumers;
 - compliance with the rules of fair competition and information transparency;
- enhancement and expansion of electricity markets:
 - equalization of market conditions;
 - serving social needs;
 - subsidy and support mechanisms;
 - integration into pan-European electricity market of EU accession countries and EU non-member states (CIS, Balkan states);
 - improvement of international trade regulations;
 - conclusion of international agreements;

environmental standards and energy supply stability standards;
integration of electricity market in the global development context.

Technical measures and assessment of their implementation costs.

Implementation of the primary technical measures requires significant expenditures and approximately amounts to **11, 32 billion UAH** consisting of:

- renovation of power plants and completion of PSP - **5,02 billion UAH**, whereof:
 - TPP – 800 million UAH,
 - HEPP – 400 million UAH,
 - NPP – 19, 1 million UAH,
 - PSP – 3, 84 billion UAH;
- development and renovation of electric grids– **3,86 billion UAH**;
- modernization of maintenance management – **2,44 billion UAH**;
- modernization of measuring equipment and electricity metering systems – **17, 3 million UAH**.

Additionally, it should be born in mind, that there can be an occurrence of additional costs that can be estimated on the basis of the Ukrainian UPS and electricity network condition analysis. With due account for the above consideration, and possible inflation processes, equipment operation and services appreciation, the additional costs may increase by 10–15%.

The existing power plant capacity reserve (52GW) in regard to maximum consumption (31GW) is sufficient only for the stand-by reserve. The condition of power plants and UPS in general is completely different in regard of frequency and power control.

Examination and test results analysis demonstrates current non-compliance, except for Burshtynska TPP, of TPPs generating units characteristics, plant operation control systems with UCTE frequency and power control requirements.

In particular, the results of tests performed at 17 energy generation units had shown that:

- actual turbine controllers dead band exceeds ± 80 MHz, whereas according to UCTE regulations it should not go beyond ± 10 MHz;
- control system sensitivity – 50–100 Hz (20 Hz according to UCTE requirements).

According to the forecast for 2010, the **primary control** reserve of Ukrainian UPS should be equal to 186 MW. Taking into account that primary control load and unload reserves are equal values, the required range of primary control should be $186 \text{ MW} \cdot 2 = 372 \text{ MW}$, respectively.

Due to the lack of “strict” requirements to the distribution of primary control capabilities, the range of primary control was estimated subject to the previous conditions (applied to Burshtynska TPP as well). Namely, it is 5% of power-generating units’ installed capacity. It is sufficient for the Ukrainian UPS to secure primary control at 15 units of 200 MW capacity, which will provide the control range of 149 MW and at 15 units of 300 MW capacity with the overall range of 233 MW. The attained aggregate range will come up to 372 MW.

With due regard for scheduled and emergency repairs of equipment, it is necessary to have additional primary control at 4–5 power-generating units. The Ukrainian UPS needs to perform repairs at approximately 35 TPP power-generating units of 200–300 MW capacity to maintain primary control reserve at the rate of 185–190 MW.

Although NPP turbine control system is able to respond to frequency deviations quickly and precisely, at the current moment, power-generating units of nuclear power plants are prohibited to be used for primary control purposes. However, technically, the ÄÄÄÄ-1000 units within the range of $\pm 2\%$ N-nom and ÄÄÄÄ-440 within the range of $\pm 5\%$ N-nom may be engaged in the primary frequency control without violation of reactor facility operation procedures and other effective regulatory documents. Yet it requires additional research with further implementation of the respective technical and organizational measures.

Inclusion of NPP power units into primary control only in periods of minimal consumption will provide the additional control range up to ± 150 MW. It will also allow decrease of TPP units’ number required to be included into primary control process.

Today, the Ukrainian UPS does not dispose the sufficient reserve of automated secondary frequency and power control. In the Ukrainian UPS only 6 units of Dniprovskä HEPP-1 with maximum capacity of 432 MW are connected to the automated secondary control system. This is insufficient to compensate 1,000 MW generation capacity losses.

In the periods of minimal load, HEPP units are disconnected from the power grids network and are reset to synchronous capacitor mode and can not be used for unloading in this mode. Operation of water reservoirs should comply with the requirements of other water consumers, therefore HEPP must adhere to the daily dispatch schedule and daily discharge schedule. NPP energy units operate in base mode with capacity controllers regulating the constant initial power level, so it is feasible to allocate at least 50% of secondary control reserves in TPP power-generating units.

Due to lack of the required reserve capacity for automated secondary frequency and power control in the Ukrainian UPS, the alteration of balance in case of decreased power plant capacity or demand fluctuations in the Ukrainian UPS is partially compensated from HEPP power reserve, connected to the automated secondary control system alongside with manual alteration of operating TPP and HEPP units’ load upon the command of NEC “Ukrenergö” dispatcher.

For TPP energy-generating units the range of load control equals 40–50 MW per unit with the respective secondary control reserve $\pm (20-25)$ MW. Thus maintenance of 500 MW reserve with regard to scheduled and emergency repairs requires connection

of about 30 TPP energy-generating units to the automated secondary control system. Therefore, renovation of TPP facilities is an indispensable condition for compliance with UCTE requirements.

Operation of the unified energy system is based upon the principle that each partner bears responsibility for own network. For harmonization of unified network management methods, UCTE has developed regulations, procedures and recommendations stipulating each network operation procedure (control zone) to enable safe and reliable interaction.

In current situation, removal of limitations on the electricity exchange between the Ukrainian UPS and Moldova as well as energy supply to consumers in the south-western part of Odessa region almost entirely performed through the inter-state 330 kV “Moldova” SDPP (State District Power Plant) – Artsyz” OGL requires:

- construction of the second 330 kV “Ajalyk-Usatove” OGL with renovation of the 330 kV “Usatove” OGL. Estimated cost of construction around **170 million UAH**;
- construction of the 330 kV “Novoodeska- Artsyz” OGL. Estimated cost of construction is about **265 million UAH**;
- renovation of the 330 kV “Artsyz” OGL and installation of second autotransformer with capacity of 200 MVA. Estimated cost of renovation **27 million UAH**.

Therefore, the total cost of the “Odessa” program will amount to **462 million UAH**.

Besides, voltage increase in the grids of the Odessa region requires installation of static condenser batteries (SCB) with total capacity of at least 230 MVar of which 200 MVar at the 330 kV “Novoodeska” OGL and Usatove, 30 MVar at the 110 kV Bujak, Suvorovo, Kilia, Etalon OGLs.

The total cost of these works will amount to **10 million UAH**.

To comply with UCTE requirements regarding information exchange procedures with other UCTE members it is necessary to perform analysis of:

- information circulating in the electric power industry and set limits for documents content disclosure;
- to perform analysis of data flows to be established with other UCTE members in order to determine their format and adaptation, or development of appropriate software for their data flow formation and processing.

Relatively high costs of telecommunication network development may quickly be quickly compensated under condition of commercial usage of new channels which will be possible due to introduction of high bandwidth rates.

Within the period by 2010 the renovation of transmission network safety and automation systems in Ukrainian UPS should be entirely completed.

Based on the information of already accomplished renovation of relay protection equipment of 400, 500 and 750 kV grids, funded from the loan of the World Bank in 1996–2000, the renovation cost for relay protection and automatic (RPA) equipment of the Ukrainian UPS with voltage 220–750 kV can be estimated as **\$3–4 million**.

The estimation of emergency control (EC) systems renovation cost in the Ukrainian UPS can rely on the estimated cost of EC of Pivdenna NPS which amounts to about **\$5 million**, and total cost of RPA and EC upgrade program is **\$8–9 million**.

EU is constantly striving to reach world leadership in a global effort to reduce negative impact of human activity on the planet's climate and to develop the respective preventive mechanisms.

These efforts resulted in adoption in 2002 of the European Climate Change Program to become basis for countries' activities within the EU.

The important documents of the European Program are Directives – 2003/87/EU, (adopted in October 2003) and 2004/101/EU (adopted in October 2004), covering emission trading as well as Joint Implementation and Clean Development Mechanisms subject to Kyoto Protocol requirements.

Directives promote the integration of the EU emission trading schemes with emission trading schemes of the EU non-member countries.

Environmental activity in power industry is based upon the National environmental law and compliance with the requirement of international conventions signed by Ukraine. Fulfillment of these requirements will allow reaching the existing level of pollutant emission impact on a territorial basis, namely:

- global – limited emission of greenhouse gases;
- regional – limited and decreased transferred flow of SO₂, NO₂ and other substances;
- territorial regulations on allowable concentration of pollutants in TPP location areas.

7. Implementation Plan

	Measures	Performance period	Estimated costs, thousand UAH (VAT excluded)
1.	Organizational (participation of the Ukrainian representatives in the work of the Project group for inter-connection of the Ukrainian and Moldavian power systems with the electric system of UCTE (PG))	2009–2010	320
2.	Training of maintenance and operational dispatch staff	2009–2010	480
3.	Harmonization with the regulatory requirements of trans-European electricity grids	2009	5500
4.	Modernization of operational dispatch management (development of technical solutions, software)	2009	2 440 000
5.	Development and renovation of transmission grids	2009–2010	3 860 000
6.	Renovation of power plants	2009–2010	5 020 000
7.	Upgrade of measuring equipment and electricity metering systems	2009–2010	17 300
	Total:		11 343 600

8. Impact Monitoring and Evaluation

Proposed policy implementation assessment involves systematic monitoring and evaluation of the policy impact.

Policy impact evaluation should be performed by the staff. The respective reports will provide ground for decisions regarding expediency of policy alteration.

Information about the Activities of Policy Analysis Groups

The project “Development of a Network of Policy Analysis Groups in the System of Central Executive Bodies in Ukraine” is aimed at:

- promoting the development of democratic governance in Ukraine;
- promoting the strengthening of institutional capacity of central bodies of executive power for policy making;
- improving the coordination of public policy development;
- strengthening the strategic character and analytical support of decisions and enhancing the quality of overall government planning; and
- enhancing civil servants’ professionalism in developing policy proposals.

The legal basis for policy analysis groups functioning includes:

1. Order of the Cabinet of Ministers of Ukraine on “Activities of Policy Analysis Groups”, dated December 30, 2008 ¹ 43542/99/1-08.
2. Regulation of the Cabinet of Ministers of Ukraine “On approval of the year 2008 “EU – Ukraine Action Plan“, dated August 6, 2008 ¹ 1072-p.
3. Memorandum of Understanding between the Government of Ukraine and the Government of Canada concerning Ukrainian Civil Service Human Resources Management Reform Project, signed on May 26, 2008.
4. Regulation of the Cabinet of Ministers of Ukraine “On Ensuring Functioning of the Policy Analysis Groups in Central Executive Bodies and the Secretariat of the Cabinet of Ministers of Ukraine”, dated February 7, 2007 ¹ 32-p.
5. “Civil Service Development Program for 2005–2010”, approved by the Cabinet of Ministers of Ukraine on June 8, 2004 ¹ 746, with changes approved by the Cabinet of Ministers of Ukraine on September 3, 2008 ¹ 776.

The objectives of the project are the following:

- holding a series of practical target-oriented trainings and ensuring exchange of experience between the groups in respect to policy analysis, including methodology and practice of the comprehensive study of a situation and identification of a problem, assessment of its causes and implications, selection of alternative approaches to problem solution based on cost-benefit analysis and consideration of different stakeholders’ opinions;

- drafting policy documents relating to fulfillment of obligations imposed by the future EU – Ukraine Association Agreement with clear definition of tasks and steps for implementation of this Agreement;
- organizing public consultations aimed at discussion of proposed policy documents.

Policy documents developed by policy analysis groups in 2009:

- A policy on overcoming technical trade barriers: standardization and conformity assessment;
- Improvement of risk management in financial services sphere in Ukraine;
- Consultations on improving the investment climate of the agricultural sector of the Ukrainian economy;
- Dissemination of information on public procurement: adaptation of the Ukrainian legislation to the *acquis communautaire*;
- Strategy for the improvement of state sanitary and phytosanitary control and surveillance at state border crossing;
- Determination of optimal ways to reduce the level of piracy in Ukraine with respect to copyright and related rights in the course of circulation of copyright objects on tangible mediums;
- Harmonization of the national aviation safety system with European standards within the framework of the common aviation area Agreement. Participation of Ukraine in the European Aviation Safety Agency;
- Development of water resources management policy under the “Environment” Section of the EU Association Agreement;
- Priority efforts for the integration of unified power system of Ukraine into unified power systems of the European Union;
- Harmonization of Ukrainian legislation on the application of excise duty on alcohol and tobacco products in the context of the future Agreement on Association with the European Union.

Previous Initiatives on Policy Analysis

This project is a logical follow-up of the previous policy analysis initiatives carried out by the Main Department of Civil Service of Ukraine and international donors:

- “Public Policy Capacity Building” (1999–2003);
- “Establishing Policy Analysis Groups and an Information Resource Centre in the Government of Ukraine” (2000–2001);
- “The Activity of Policy Analysis Groups (PAGs) in Government Bodies in Ukraine” (2005–2006);
- “Strengthening the Institutional Capacity of Central Executive Power Bodies for Policy Making in the Context of the Concept Development of a Training and Consultative Center for the Highest Corps of Civil Servants” (2007–2008).

Firstly, such initiatives were funded by foreign donors, in particular, by the Canadian International Development Agency (CIDA) and the Swedish International Development Agency (SIDA).

Within the framework of the first project “Public Policy Capacity Building” (1999–2003) students of the National Academy of Public Administration under the President of Ukraine (NAPA) were engaged in the policy analysis training. The training included the internship in Canada and drafting of policy papers. Based upon project results, a course on policy analysis was included into the Academy’s curriculum, with practical assignments in drafting policy papers on selected topics.

The next project “Establishing Policy Analysis Groups and an Information Resource Centre in the Government of Ukraine” (2000–2001) was implemented as a joint initiative of the Cabinet of Ministers of Ukraine, International Center for Policy Studies (ICPS), Open Society Institute (OSI) and International Renaissance Foundation (IRF) with financial support from IRF under the tripartite agreement on cooperation between the Secretariat of the Cabinet of Ministers of Ukraine, ICPS and the IRF. The participants of this project were 49 governmental officials of higher and middle rank from the Ministry of Economy, Ministry of Finance and the Secretariat of the Cabinet of Ministers.

The outcome of these projects was inclusion into Regulations of the Cabinet of Ministers of Ukraine of a section that set requirements to policy documents (“policy decisions”), in particular, with regard to analysis of alternative solutions.

Upon the initiative of the Main Department of Civil Service of Ukraine, the efforts towards creation of policy analysis groups in central bodies of executive power continued in 2005. The projects were implemented by the Center for Adaptation of the Civil Service to the Standards of the European Union (the former name – Center

for Civil Service Institutional Development under the Main Department of the Civil Service of Ukraine), and were financed from the State Budget. List of policy documents developed by policy analysis groups during 2005–2008, is presented in Table 1.

In 2005–2006 the International Centre for Policy Studies implemented a project “The Activity of Policy Analysis Groups in Government Bodies in Ukraine”. The Department for International Development of the United Kingdom (DFID) and the Delegation of the European Commission to Ukraine provided assistance in engaging foreign consultants and trainers. The project results demonstrated the need to modify the training programs, to create policy analysis groups in other governmental bodies and to develop the network of policy analysis groups as a permanent forum for the articulation of new policy priorities and discussion of trends and prospects of social development.

The project “Strengthening the Institutional Capacity of Central Executive Power Bodies for Policy Making in the Context of the Concept Development of a Training and Consultative Center for the High Corps of Civil Servants”, which was implemented during 2007–2008, showed the importance of enhancing professional capacity of top civil servants in policy analysis and democratic decisions-making process. The need to acquire more knowledge and skills is emphasized in the context of participation of the government bodies in the Twinning projects.

Table 1. Analytical documents prepared by the policy analysis groups in 2005–2008

¹	Central executive body	Period of activity of PA groups	Subject of study
1.	Secretariat of the President of Ukraine	2005–2006	Strategy of democratic development of Ukraine and institutionalization of public policy tools in work of central bodies of executive government
2.	Secretariat of the Cabinet of Ministers of Ukraine	2005–2006	Democratization of decision-making process and compliance with the European requirements on applying democratic procedures in the decision-making process
3.	National Bank of Ukraine	2007–2008	Building the National Bank of Ukraine on the basis of independent, open and transparent activity
4.	Ministry of Economy of Ukraine	2005–2006	Policy and procedures for the preparation of state budget as the strategy for economic development of the country
5.	Ministry of Finance of Ukraine	2005–2006	State fiscal and taxation policy

6.	Ministry of Transport and Communication of Ukraine	2005–2006	State policy of Ukraine on integration of Ukraine to trans-European transport networks
7.	Ministry of Fuel and Energy of Ukraine	2007–2008	Creation of minimum supplies of oil and oil products
8.	Anti-Monopoly Committee of Ukraine	2005–2006	Policy in respect to liberalization of the domestic market and raise of competition at this market
9.	State Tax Administration	2007–2008	Improvements in tax information exchange
10.	State Committee of Ukraine on Technical Regulation and Consumer Policy	2005–2006	Policy of adaptation of the national legislation to norms and standards to requirements of the European Union
11.	State Nuclear Regulatory Committee of Ukraine	2007–2008	Increasing safety for resources of ionizing radiation in Ukraine
12.	State Agency of Ukraine for Investments and Innovations	2005–2006	Attracting foreign investments to Ukraine: problems and solutions
13.	State Commission on Securities and Stock Market	2007–2008	Increasing the level of corporate governance in joint-stock companies and ensuring of investors' rights
14.	National Electricity Regulatory Commission of Ukraine	2005–2006	Policy on regulation of the domestic electricity market
15.	National Space Agency of Ukraine	2005–2006	Policy on institutional development of the national space industry under market conditions
16.	Administration of State Border Service of Ukraine	2007–2008	Improvement of the system of border crossing in Ukraine for persons and transport vehicles
17.	State Department for the Execution of Punishment of Ukraine	2007–2008	Identification of the most optimal ways for minimizing the number of detainees in custody, and observance of norms for detention procedures in Ukraine

Information edition

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**Priority Efforts for the Integration of Unified
Power System of Ukraine into Unified Power
Systems of the European Union**

developed within the framework of the "Development of a Network of Policy Analysis
Groups in the System of Central Executive Bodies in Ukraine" project

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