



## **White paper: Strategic Communication in Energy Sector**

The White paper is aimed to design the voids and good practices in communication between civil and governmental actors. It will be worked out with the weaknesses and recommendations for all actors with the precise guidance in cases of an energy crisis.

### II Strategic Communication in Energy Sector in Ukraine - Vitalii Martyniuk

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## 1. Energy Sector in Ukraine - Overview

Energy Sector in Ukraine comprises all energy clusters - coal industry; gas and oil; electricity, including nuclear energy; renewable energy, and all energy activities – production, consumption, import and export. Ukraine's geographic position and proximity to Russia explain its importance as a natural gas and petroleum liquids transit country.

In general, Ukraine is an energy deficit country. The total supply of energy resources is 89,6 mtoe, according to the Energy balance of Ukraine of 2017<sup>1</sup> (Table 1). It includes domestic energy production (58,8 mtoe), energy export (1,9 mtoe) and import (35,3 mtoe).

Table 1. Energy balance of Ukraine (2017), thousands of tons

<b>Supplies and consumption</b>	Coal and Peat	Crude oil	Oil products	Natural Gas	Nuclear energy	Hydro-electro-energy	Wind, Solar energy	Biofuel and waste	Electro-energy	Thermal-energy	Total
Production	13637	2208	-	15472	22453	769	149	3618	-	546	58851
Import	12993	1331	9671	11262	-	-	-	-	4	-	35261
Export	-567	-139	-246	-	-	-	-	-542	-449	-	-1944
International bunkering	-	-	-251	-	-	-	-	-	-	-	-251
Changing stocks	-366	-49	334	-2180	-	-	-	-30	-	-	-2291
<b>Total supplies of primary energy</b>	<b>25696</b>	<b>3351</b>	<b>9507</b>	<b>24554</b>	<b>22453</b>	<b>769</b>	<b>149</b>	<b>3046</b>	<b>-445</b>	<b>546</b>	<b>89625</b>

This demonstrates that Ukraine depends on import of energy resources on 39,3%. It is primarily in coal industry (14,5%), gas sector (12,6%), oil products (10,8%) and crude oil (1,4%).

The structure of Ukraine's energy supply has changed dramatically in the past five years. Ukraine became independent from direct gas imports from Russia (which constituted about 20% of primary energy supply in 2013) and nuclear fuel replaced coal as the primary fuel in electricity production.

The primary energy sector in the Ukraine energy mix is the coal industry, which comprises 30% of Ukraine's energy (Fig.1). Other energy sectors are natural gas (29%), nuclear energy (25%), oil sector (12%), and other.

<sup>1</sup> Energy balance of Ukraine. State Statistic Service of Ukraine. 2017. [http://www.ukrstat.gov.ua/operativ/operativ2012/energ/en\\_bal/arh\\_2012.htm](http://www.ukrstat.gov.ua/operativ/operativ2012/energ/en_bal/arh_2012.htm)

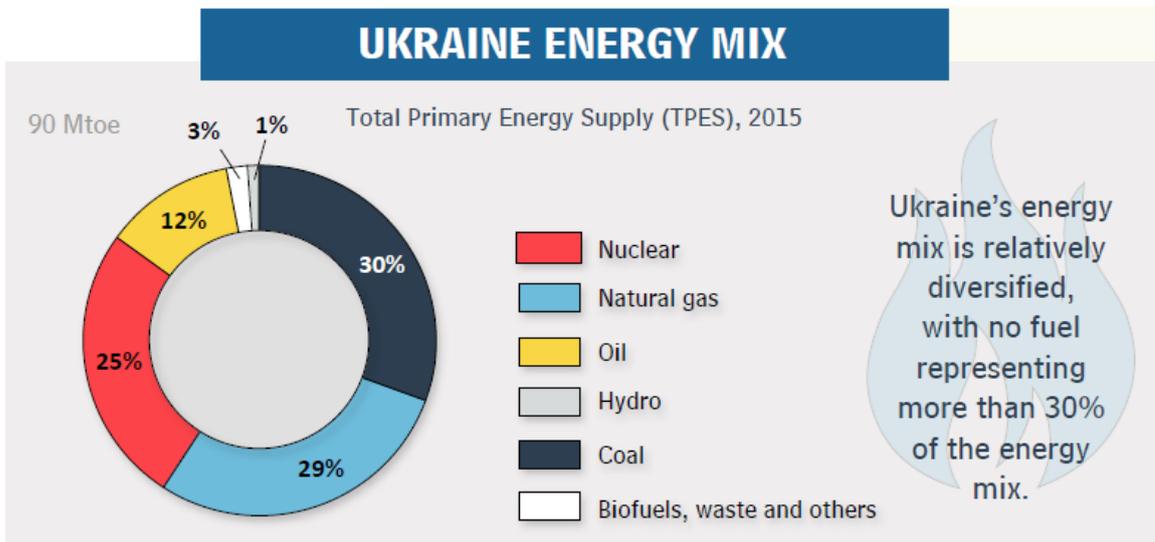


Fig.1. Ukraine Energy Mix

Source: International Energy Agency.

Ukraine is one of the most inefficient countries in the world. Today, Ukraine is 3.8 times more energy intensive than the all 28 neighbouring EU member states<sup>2</sup>. The level of energy consumption in Ukraine is 200kW per one square meter<sup>3</sup>, when in the EU countries it is up to 80kW. The industry is the largest final consumers of energy resources in Ukraine (Fig.2). But in the gas sector the largest consumers are households.

### TOTAL FINAL CONSUMPTION

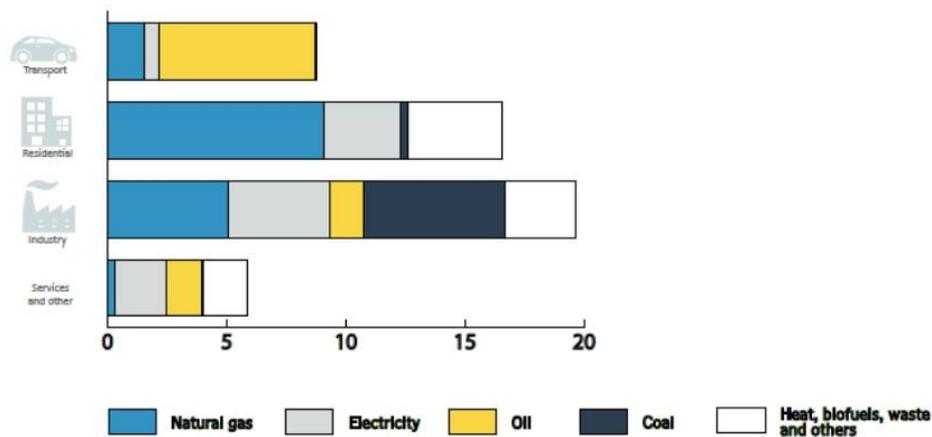


Fig.2. Energy Consumption in Ukraine

Source: International Energy Agency.

Ukrainian **electricity system** is the basic branch of the Ukrainian national economy. Its effective

<sup>2</sup> "Ukraine can reduce energy consumption by 30% due to effective reforms and political will". State Agency on Energy Efficiency and Energy Saving of Ukraine. (May 2014). <http://sae.gov.ua/uk/news/240>

<sup>3</sup> "Energy consumption in Ukraine is twice higher than in Europe – Zubko". Finance.ua. (February 2019). <https://news.finance.ua/ua/news/-/443544/energospozhyvannya-v-ukrayini-u-ponad-vdvichi-vyshhe-nizh-u-yevropi-zubko>

functioning is vital for sustainable economic growth, provision of energy security and energy independence of the state.

The Wholesale Electricity Market (WEM) of Ukraine was created in 1996 on the model of the “power pool” of England and Wales. The regulatory and legislative framework of the Market operations is formed by the Verkhovna Rada, the President and the Cabinet of Ministers of Ukraine. The Ministry of Energy and Coal Industry of Ukraine is the central governmental body authorized to form and implement long-term and medium-term programs for development of the power industry. The National Commission for State Regulation in the energy and utilities (NKRE-KP) is a state regulator authorized to implement state price and tariff policies in the industry, to defend the interests of consumers in the market of natural energy monopolies.

The basis of Ukraine's electric power industry is the Integrated Power System (IPS) of the country, which provides centralized electricity supply to consumers, interacts with power systems of neighbouring countries, provides export, import, and transit of electricity. The IPS combines power generating capacities and distribution networks of regions of Ukraine, which are interconnected by system transmission lines. Major transmission players are the State Enterprise NEC “Ukrenergo” and regional distribution system operators (Oblenergos) (Fig.3).

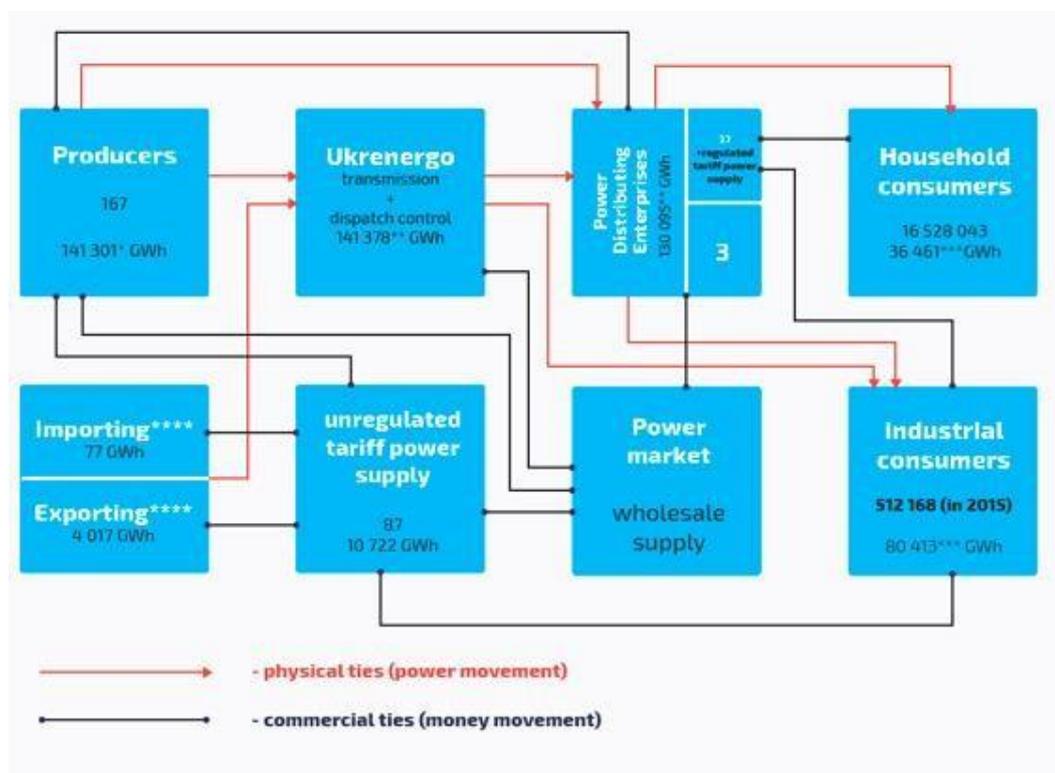


Fig.3. The scheme of electric power market

*Source: National Commission, Which Carries Out State Regulation in the Fields of Energy and Utilities*

The SE “NEC Ukrenergo” is the owner and operator of trunk power grids of the voltage class 220 kV - 750 kV, performing dispatching functions of the technical operator of the WEM. The Integrated Power System (IPS) of Ukraine is under its operational and technological control.

Ukraine produces more than 50% of electricity from nuclear and 30% from coal. In 2018, according to Information report on the main indicators of development of branches of the fuel and energy

complex of Ukraine in 2018<sup>4</sup>, its nuclear power plants produced 84,4TWh (53%), while thermal PPs – 58,8TWh (36,9%), hydro PPs – 12 TWh (7,5%), alternative PPs – 2,6 TWh (1,7%).

Centralized electricity production in Ukraine is carried out by 14 of the most powerful thermal and 8 hydro power plants that are part of the six state and private equity power generating companies: ZakhidEnergo, CenterEnergo, DniproEnergo, KyivEnergo, DonbaEnergo subordinated to the Ministry of Energy and Coal Industry of Ukraine, and 4 nuclear power plants that are part of the National atomic energy generating company "Energoatom".

Historically being reliant on Russian **nuclear fuel**, in 2000, Ukraine started a program to enable alternative supplies to be used in Ukrainian reactors. In the first trial phase 2005–2009, six fuel assemblies manufactured by the Japan-American company “Westinghouse” were tested and a contract for supply of nuclear fuel for annual reloading of three WWER-1000 units in 2011 – 2015 was signed. Six of 13 Ukrainian nuclear energy blocks use fuel provided by Westinghouse. Other, however, still run on nuclear fuel imported from Russia.

**Coal industry** is well developed in Ukraine. There are 160 mines, 140 of which are state-owned. In 2018 coal mining enterprises of Ukraine produced coal by 286.9 thousand tons (or 0.9%) more compared to the corresponding period of last year. The total volume was 33,3 billion tons.

The cumulative coal stocks were decreasing in 2013-2015 after a period of rapid growth in 2012 that is explained by an artificial oversupply of coal from state-owned mines. After the beginning of the armed conflict waged by Russia against Ukraine in April 2014, coal supplies from the occupied zone (especially, the deficit A+T grades<sup>3</sup>) dropped substantially and coal stocks fell below the critical threshold of 1.5 million tons. This caused coal shortages at several power plants and subsequently electricity supply black-outs in several regions and mothballing of around 80% of power plants that is fuelled by A+T coal. Current levels of about 3 million tons of coal are considered to be sufficient for the safe functioning of the existing coal fired power plants.

The deficit of coal for TPPs was initially planned to be covered by imports but low import bulker capacities of Ukrainian sea ports (the max. capacity of coal imports now is 0.75 million tons per month) and lack of free A+T grades on the world market at accepted prices made these plans unreachable. Ukraine currently imports coal from the Russian Federation (61,91%), the USA (29,94%), Canada (4,78%) and other countries.

**Natural gas** demand has been falling at increasing speed from 59.3 bcm in 2011 to 33.7 bcm in 2015, and 32,3 bcm in 2018 (Fig.4). The substantial decline by 33% between 2013 and 2015 is due to a combination of factors. Donetsk, Luhansk and Crimea contributed about 14%, 7% and 4% of Ukraine gas consumption – so the conflict in parts of Donetsk and Luhansk oblasts and the annexation of Crimea might have cut about 15% of Ukraine’s pre-conflict gas consumption.

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<sup>4</sup> Information report on the main indicators of development of branches of the fuel and energy complex of Ukraine in 2018. Ministry of Energy and Coal Industry of Ukraine. (December 2018).

[http://mpe.kmu.gov.ua/minugol/control/uk/publish/article?art\\_id=245343597&cat\\_id=35081](http://mpe.kmu.gov.ua/minugol/control/uk/publish/article?art_id=245343597&cat_id=35081)

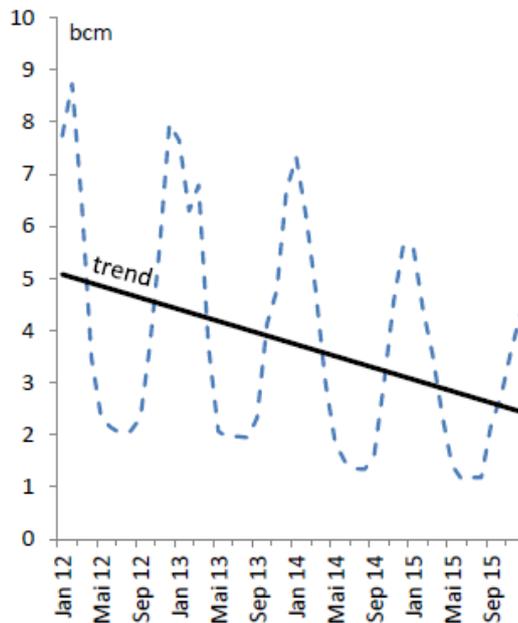


Fig.4. Gas consumption in Ukraine

Source: *NJSC Naftogaz of Ukraine*

Correspondently, Ukraine has decreased gas import three times from 33 bcm in 2012 to 10,4 bcm in 2018. Ukraine stopped importing natural gas from Russia and receives it from the Slovak Republic (61% in 2018), Hungary (32%) and Poland (0,7%). Internal production was 21 bcm, that was 2% higher than the previous year.

Ukraine is a key transit country to transport natural gas from the Russian Federation to consumers in Europe. The volume of gas transported in 2018 through the territory of Ukraine from the Russian Federation to the European countries was 86.8 bcm. Compared to 2017, transit volumes decreased by 6.7 bcm, or by 7.2%.

The main energy players in the gas sector of Ukraine are: NJSC “NAK Naftogaz of Ukraine” and its daughter companies – UkrGasVydobuvannya, Chornomornaftogaz, Ukrtransgaz, and PJSC Ukrnafta.

**Oil** production in Ukraine provided 1,85 billion tons in 2018 that was 4% more than a year before. The key oil provider is Naftogaz of Ukraine. In 2018, 830.7 thousand tons of oil raw materials from Ukrainian fields (oil with gas condensate) were delivered to the oil refineries and Shebelinka gas refinery. Within that amount, the last one received 454.0 thousand tons of gas condensate of domestic production, which was 39.5 thousand tons (8.0%) less compared to 2017.

In 2018, the volume of oil transit through Ukraine decreased by 598.0 thousand tons (or 3.7%) compared to 2017 and constituted 2 billion tons. At the same time, to the countries of Europe (Slovakia, Hungary, Romania, Poland, Moldova) Ukraine transported by 602.4 thousand tons (or 4.3%) less, and for the needs of Ukraine - by 4,4 thousand tons (or 0.2%) more compared to 2017. The key companies in the oil sector are Ukrtransnafta, Ukrnafta, Chornomornaftogaz. There are six refineries in Ukraine: Kremenchug refinery, Lysychansk refinery, Kherson refinery, NPK Galychyna, Odesa refinery, Naftohimik Prykarpattya.

According to the **Energy Strategy of Ukraine till 2035**<sup>5</sup>, Ukraine should be one of the biggest gas producers in Europe and the key transit state for oil and gas from the East to the European consumers, reduce intensity of its national GDP more than twice and increase the share of

<sup>5</sup> Energy Strategy of Ukraine till 2035 “Security, Energy Efficiency, Competitiveness”. Cabinet of the Ministries of Ukraine. (August 2017). <https://www.kmu.gov.ua/ua/npas/250250456>

renewable energy to 12% by 2025 and to 25% by 2035 (including all hydropower and thermal energy).

## 2. Structure of Strategic Communication in Energy Sector (based on interviews)

- Communication with civil society
- Communication between state institutions and private energy sector entities
- Communication with other countries and external actors

Strategic communication in Ukraine is at the stage of being developed. It also concerns the energy sector. There is no national general strategic document of strategic communication. Meanwhile, strategic communication is mentioned in different governmental and ministerial documents. For example, in 2017, the Ukrainian Government adopted the Communication Strategy in the sphere of European integration for 2018-2021. In its turn, the Ministry of Energy and Coal Industry of Ukraine developed a ministerial Action Plan on implementation of this document. Tasks of this Action Plan define mostly information activities to inform the Ukrainian society about actions in the energy sphere of the European integration process.

The Ministry of Energy and Coal Industry of Ukraine adopts annual Communication plans. The last one contains a task to develop a Communication Strategy of the Ministry of Energy and Coal Industry of Ukraine, which should be based on the Energy Strategy of Ukraine till 2035. Nevertheless, by this time, the Ministry has not adopted its Communication Strategy. In the Energy Strategy, strategic communication is mentioned in the context of attraction of domestic and foreign investments - *“a communication policy should stimulate the entry of international strategic and financial investors”*.

Strategic communication in the energy sphere of Ukraine is not well formulated and its structure is not defined. Meanwhile, there are state bodies, which are responsible for strategic communication in energy, and which should play the key role and formulate rules to be met by other energy institutions and companies in Ukraine.

These state bodies responsible for strategic communication in energy are:

*Ministry of Energy and Coal Industry of Ukraine.* It should keep direct contacts with other Ukrainian bodies, energy companies, expert groups and think tanks, as well as foreign states. The Ministry has already had the Department on Communication and Organisational Work, which is responsible for communication activities.

*Ministry of Foreign Affairs of Ukraine.* It is responsible for strategic communication with foreign governments and international institutions in the energy sphere.

*Ministry of Economic Development of Ukraine.* It is also responsible for foreign economic cooperation, including energy one.

*Ministry of Internal Affairs.* This body is involved in civil security and protection of the critical energy infrastructure of the state, that is why it is responsible for strategic communication in this segment.

*National Security and Defence Council of Ukraine.* Being headed by the President of Ukraine, it should communicate in cases of energy security issues.

*National Commission for State Regulation in the energy and utilities – NKRE-KP.* This body is responsible for market rules according to the EU directives and is one of the main communicators with Ukrainian consumers of energy resources.

According to the results of deep interview conducted in Ukraine in February – April 2018 within this project<sup>6</sup>, other institutions should be involved into the structure of strategic communication in the energy sphere. They are state companies (Naftogaz of Ukraine, Ukrnafta, Ukrenergo, Energoatom) and the third sector (NGOs, think tanks, energy professional associations).

Communication with **civil society** representatives depends on a separate state body or a company. Almost all officials and representatives of energy companies support communication with the non-governmental sector and think tanks, but the content depends on the complexity of a topic.

Ukrainian think tanks (both state and non-governmental) have and initiate regular contacts with governmental bodies (usually with the Committee on Energy of the Verkhovna Rada, the Ministry of Energy, NKRE-KP), but less regular contacts with energy companies like NAK Naftogaz of Ukraine or Energoatom. While communicating with non-governmental think tanks, the Ukrainian state bodies and energy companies prefer to focus on the issues of their expertise and public support for different initiative in the energy sphere.

Usually think tanks (mostly) and **energy companies** are initiators of such communication. Relations with state bodies and companies are assessed by think tanks as good or satisfied.

Frequently, the state institutions don't take into account analytical report of think tanks, because they use reports of state institutions or international organisations (like European Commission, European Parliament, Energy Charter Secretariat, Energy Community Secretariat, ENTSO-G, International Energy Agency), and this is a big problem. From time to time the Ukrainian state bodies and energy companies use expertise of some foreign think tanks like Hungarian Regional Centre for Energy Policy Research (REKK), Natural Gas World, Atlantic Council, Center for Strategic and International Studies (USA), Brookings Institution, (USA), Carnegie Institution for Science (USA) and Oxford Institute for Energy Study (GB).

Neither state bodies nor state energy companies don't order expertise of the Ukrainian think tanks. State bodies don't allocate money for these purposes. Moreover, the Ministry of Energy does not have capacity to define its needs for think tanks' expertise. Think tanks usually share their papers, prepared within their projects, implemented with the financial support of foreign foundations or diplomatic missions in Ukraine. This concerns such Ukrainian think tanks as Razumkov Center, Centre for Global Studies "Strategy XXI", EIR Centre and National Institute for Strategic Studies.

Meanwhile, the state institutions and companies could be interested in the following expertise of think tanks: suggestions, recommendations and advises; analysis of a crisis situation and possible reaction on it; expertise on some practical or theoretic aspects on market functioning.

Energy companies need statistics, assessments and evaluation, as well as consultations to act together for some results. This concerns both Ukrainian and foreign think tanks. For example, NAK Naftogaz of Ukraine cooperated closely with the Hungarian think tanks to stimulate increasing gas flows from Hungary to Ukraine in the summer 2017.

Ukrainian think tanks' expertise provides the Ukrainian state bodies and energy companies with strategic vision and diversity of views and assessments on energy security issues. At the same time, from the points of view of the Ukrainian state bodies and energy companies, lacks in such analytical research are:

- Sequence, even suggestions, practically oriented recommendations and draft decisions to be taken on what are next steps;
- Ideas and mechanisms to implement policies or new market models;
- Political background of the author or interviewer sometimes is missed;

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<sup>6</sup> The deep interviews were held by the Centre for Global Studies "Strategy XXI" (Ukraine) with representatives of the Ministry of Foreign Affairs of Ukraine, two state companies „NAK Naftogaz of Ukraine” and „Ukrenergo”, the National Institute for Strategic Studies and independent think tank – Razumkov Center.

- Some focus on commercial interests;
- Objective approach to the current situation in the energy sphere of the Visegrad group.

Communication of the Ukrainian state bodies and energy companies with **other countries and external actors** is developed on the base of mutual problems or common interests. The Government and ministries communicate with other governments and corresponding ministries. At the same time, they use capabilities of the Ministry of Foreign Affairs of Ukraine (Ukrainian embassies abroad) to keep permanent contacts with their foreign counterparts.

Ukrainian energy companies prefer to keep direct communication with foreign energy companies, avoiding Ukrainian official representations abroad (embassies), as they consider this way more effective that allow them to react fast and reach quick decisions and agreements. However, they are not against a regional cooperation framework or platform for multilateral communication.

Non-governmental institutions use the same methods and communicate directly with foreign think tanks, international organisations and state bodies. They rarely apply to ministries of energy or foreign affairs if they need to develop some kind of cooperation.

In Ukraine, a coordinator of communication in energy sphere is the Ministry of Energy and Coal Industry of Ukraine, which should develop rules, regulations and needs of this communication. In this regard, the Ministry of Energy and Coal Industry of Ukraine should closely cooperate with the Ministry of Foreign Affairs of Ukraine. The real situation shows that the Ministry does not control overwhelming communication, especially at the level of private energy companies or non-governmental institutions (thick tanks).

### 3. Recommendations

There is a huge interest in Ukraine to develop national and regional communication in energy sphere but mostly among officials, who are responsible for strategic communication or who understand necessity to develop it for solving energy security problems. Officials of lower level are not enthusiastic to discuss energy security problems because of lack of comprehensive vision of this problematic or lack of responsibilities for external discussions.

An authorized national coordinator in the energy security sphere in Ukraine is not fixed because there are two levels of coordination – the governmental level and the national (presidential - NSDCU) level, that impedes comprehensive and effective energy security communication. The lack of national demands for energy expertise in Ukraine results in insufficient analytical materials especially those prepared by non-governmental think tanks and low level of communication of state bodies and energy companies with non-governmental actors.

The following **recommendations** are actual:

1. To establish a position of a special *Envoy (Representative) on energy issues* - Vice-Prime-Minister who day-to-day coordinates all energy security issues and strategic communication in energy sphere.
2. To organize national energy crisis communication and coordination platform, including all corresponding state bodies, energy companies and non-governmental actors (think tanks).
3. To establish the energy sector crisis communication at the regional level (V4+UA based on the Visegrad group) in the form of a Special regional platform.

Special regional platform of energy crisis communication, or a Visegrad platform, should include V4 countries and Ukraine, as well as involve the Baltic countries, Romania, Bulgaria and, may be, other EaP countries, in the case of need. The platform should be organized at a ministerial level.

Such a platform should be centralized but branched out at the same time, because different subjects should be discussed at different levels, but these discussions have to be coordinated. Relevant state institutions, state and private companies and non-governmental think tanks should be engaged. It should contribute to the energy crisis management and deal with energy crisis situations and cyber security issues in the energy sphere.

Missions of the platform:

- Exchange of information on energy security;
- Providing expertise on demand of state bodies and energy companies;
- Development and coordination of common actions;
- Discussion of current problems and challenges;
- Development of ways to solve common problems;
- Work on energy issues of participating countries.

Working groups of the Platform can be established to solve some problems. A working group can be based on one or two states and would focus on certain issues.

The Visegrad energy crisis platform should receive financing from governmental sources through a regional formation (like the Visegrad Fund but for energy security purposes). Visegrad Fund and other donors may be involved.

This Platform should be heard by stakeholders and be influential that its voice could not be ignored.