



СЕКЦІЯ 2 СВІТОВЕ ГОСПОДАРСТВО І МІЖНАРОДНІ ЕКОНОМІЧНІ ВІДНОСИНИ

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NORWEGIAN ENERGY POLICY IN THE CHANGING ENVIRONMENT: EXPERIENCE AND PROSPECTS FOR UKRAINE

The article investigates development and specifics of Norwegian energy policy. The paper presents comprehensive statistical and analytical information on energy industry in Norway. The authors suggest ways to implement Norwegian experience into Ukrainian realities.

Keywords: energy policy, energy security, renewable energy sources, energy market, sustainable development.

Азаренкова О.В., Казакова Н.А. ПЕРСПЕКТИВИ ВИКОРИСТАННЯ УКРАЇНОЮ ДОСВІДУ ЕНЕРГЕТИЧНОЇ ПОЛІТИКИ НОРВЕГІЇ НА СУЧАСНОМУ ЕТАПІ

Стаття присвячена дослідженню і специфіці енергетичної політики Норвегії. У роботі представлені комплексна статистична інформація та аналітична оцінка стану енергетичного сектора Норвегії. Запропоновано можливі напрями розвитку українського енергетичного сектора в сучасних реаліях з урахуванням норвезького досвіду.

Ключові слова: енергетична політика, енергетична безпека, відновлювані джерела енергії, ринок електроенергетики, сталий розвиток.

Азаренкова О.В., Казакова Н.А. ПЕРСПЕКТИВЫ ИСПОЛЬЗОВАНИЯ УКРАИНОЙ ОПЫТА ЭНЕРГЕТИЧЕСКОЙ ПОЛИТИКИ НОРВЕГИИ НА СОВРЕМЕННОМ ЭТАПЕ

Статья посвящена исследованию и специфике энергетической политики Норвегии. В работе представлена комплексная статистическая информация и аналитическая оценка состояния энергетического сектора Норвегии. Предложены возможные направления развития украинского энергетического сектора в современных реалиях с учетом норвежского опыта.

Ключевые слова: энергетическая политика, энергетическая безопасность, возобновляемые источники энергии, рынок электроэнергетики, устойчивое развитие.

Problem statement. Globally, many countries have become victims of the resource curse paradox and/or Dutch Disease after discovering and exploring hydrocarbon resources [1]. The Norwegian experience, however, shows that due to good resource management, cost savings, and investment, Norway remains a model of sustainable development among resource rich countries, and a case for retaining strong government participation, control and supervision within the market regulations. Although it is impossible to transpose the Norwegian model directly, Ukraine could learn from it, at least in elements such as private-public cooperation in a transparent institutional framework and strengthening of government competence, engagement, and control.

Literature review. Taking into account the fact that EU energy policy is a relatively new phenomenon, we should note the absence of the voluminous studies on the subject. Among the most important is the work of I. Pashkova, who address issues of European energy security [2], energy policy of the European Union as a whole [3], as well as its aspects. [4] An important place in the research is occupied by materials of Journal of Energy Security, which examines issues of energy security of countries and regions, including the Europe. The present article uses materials of

E. Christie on the transit of natural gas in Europe [5], P. Doran on the prospects of a collective energy security system in Europe [6], K. Rosner on the relationship between energy policy and national security. [7] The wide range of issues in energy policy, conceptual understanding of system processes in energy sector, issues of energy security and other related policy issues in the energy sector were investigated in the works of Ukrainian scientists such as V. Barannik [8], M. Zemliany [9], O. Sukhodolia [10].

Unsolved problems and issues. Although a number of studies have been conducted during the last two decades there is still not enough research of Scandinavian energy policies and ways to implement their aspects in Ukraine.

Purpose of this article. This paper aims to investigate development and specifics of Norwegian energy policy, present ways to implement Norwegian experience into Ukrainian realities.

The main part. Norway is an energy nation based on a unique set of resources: oil, gas, hydropower and other renewable energy sources.

Major finds of oil and gas below the North Sea have made Norway the world's seventh-largest oil exporter and the third-largest gas exporter. A World Economic Forum study in 2013 ranked Norway top in the world

for management of its energy resources, pointing to its adept balance between sustainability and economic development [11].

The need for change in the electricity industry became apparent at the end of the last century. Until the 1990s for the most of the world, the industry belonged to natural monopolies. Vertically integrated companies (which combined power generation, transmission and sales) held a legal monopoly either in separate regions or in the country as a whole. Tariffs for their services were generally fixed or limited by the state. For quite a long time such system successfully met the needs of economy. But due to considerable rise in prices for hydrocarbon fuel (since the 1970s) and rapid increase in power consumption the former monopolies turned out to be not efficient enough [12]. They often could not react to changes in demand, maintenance of existing facilities and the introduction of new ones was expensive. At the same time, all extra charges of these companies were included in their tariffs and consumers automatically had to cover them. The situation became more complicated due to the tightening of ecological legislation in many countries, which required rapid modernization of power capacities - main environment pollutants.

Liberalization of electric power industry included various processes, also occurring outside the industry [12]:

- development of gas turbine technologies, alongside with the increase in natural gas production, and in some countries removal of restrictions on its use for power generation has led to the spread of highly efficient and relatively cheap generation technologies;

- increased requirements for energy efficiency and «environmental friendliness» encouraged modernization of production capacities and development of energy networks;

- development of networks, especially interconnections (high-voltage transmission lines between the previously limited energy systems), as well as information technology, accounting and control, contributed to an increase in complexity and energy flows, created new opportunities for competition among wholesale suppliers of energy;

- increasing economic and political integration of the region and the neighboring countries (in particular EU member states, North America) also contributed to the development of the wholesale electricity market.

As a result, some states have begun to reconsider their attitude towards the natural monopoly in the power sector. This was achieved by either breaking up of the monopolies by splitting off competitive companies or admitting new participants - independent generators

of electric power, or by implementing both strategies together. In order to be actually independent and to have an opportunity to sell electric power, independent generators should be provided with both the access to power transmission and the ability to fix prices individually. The legislation of the whole range of states entails corresponding regulations. As a result, in some countries there were free market electricity prices established on the basis of supply and demand. England and Wales were the first countries to launch competitive market (which was done in 1990), and in 1991 Norway was the first country in the world to have introduced unrestrained competition in the wholesale power market [12].

Despite all differences between power sector models and the majority of ways to restructure electric power industry, similar measures towards liberalization of the sector are taken in Europe, USA and other regions of the world. They include separation of natural monopoly functions (power transmission, dispatching) from potentially competitive ones (generation, sales); demonopolization of the sector alongside with parallel development of antimonopoly regulation, introduction of non-discriminatory access to infrastructure for independent power suppliers, liberalization of power markets.

Thus, radical changes in the power industry have become a global trend, which affected most of the developed and some developing countries. The liberalization of the industry and its technological developments lead to a qualitative expansion of markets: in Europe and North America, they have crossed the borders of individual energy systems and even national boundaries and gained inter-regional and international importance.

In Norway, the pre-reform generation, transmission and distribution of electricity was formerly carried out by the state company Statkraft (a natural monopoly), which was a part of the Ministry of Water and Power. Electricity tariffs set by the state for up to ten years, did not allow taking into account the rate of inflation and other factors of rising costs. Consequently, at the beginning of reforms in 1991, rates no longer covered costs and Statkraft yield losses for state [1].

To compensate for the loss of utilities, the Government of Norway was forced to increase the fiscal burden on the income of the largest enterprises of other industries: wood processing, metallurgical, machine-building [1]. The solution of a number of problems was made possible by the large-scale reforms in the sector by means of deregulation and restructuring of the electric utilities. This led to the transition to competition in the electricity sector, with following goals:

- improving the functioning of energy facilities;
- relieving the burden on the state budget expenditures;
- attraction of additional investment in the industry;
- achievement of an optimal balance between production capacity and demand for electricity;
- reduction in regional differences in prices for electricity provided to end-users.

The ultimate goal of the government energy reform was a decrease in electricity tariffs for consumers [13]. The basis of the reform was the principle of the separation of vertically integrated companies in the natural-monopoly and competitive activities with the creation of an efficient market infrastructure.

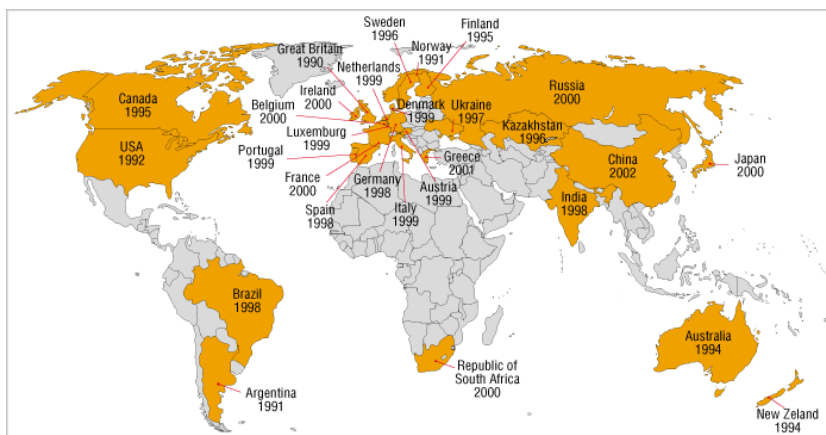


Fig. 1. Liberalization of electric power industry: the year when radical changes started to occur in various countries of the world [12]

The reform of the electricity sector was accompanied by a change in the regulatory framework. The parliament has adopted a number of legislative acts defining the legal framework of power industry reforms. They developed the concept of the market to determine the degree of responsibility to ensure reliable and uninterrupted power supply to consumers.

In 1991, Norway adopted the Law on Energy [1]. The Act provided separation of natural monopoly and competitive activities. According to this law, in 1992 the National Energy Company was transformed into a major national network Statnet, and production company Statkraft [1].

The other an important feature of the Norwegian energy market was the fact that electricity consumers were able to change the provider without any additional costs that contributed to the development of competitive relations [14].

In Norway, state company Statkraft and large municipal companies are engaged in the production of electrical energy. About 220 regional suppliers provide electricity to end-users. The transfer of power in the country is carried out by the company Statnett, which is owned by the state [1].

Nowadays Norway combines the role as a major energy producer with the ambition of being a world leader in environmental and climate policy. Norway has a more than 40 year history of petroleum activity on the continental shelf, including the High North [15]. In order to develop petroleum activities further in a responsible manner, the industries, politicians, governments and consumers work together. As a result of a continuing strong emphasis on the environment, the Norwegian petroleum sector maintains a very high environmental standard.

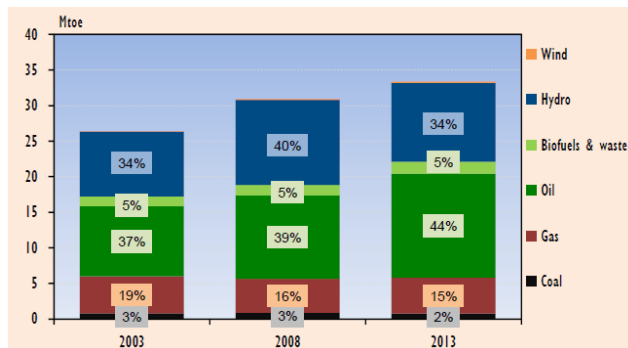


Fig. 2. Total primary energy supply in Norway [1]

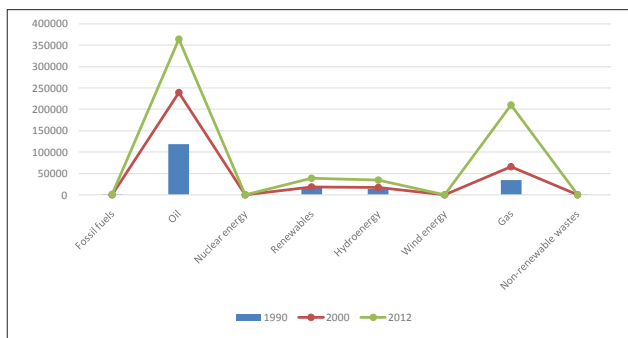


Fig. 3. Trends in energy consumption in Norway, 1990–2012 (developed by the author on the basis of [1])

Thanks to many lakes, rivers and dams, hydropower is Norway is leading source for renewable and clean

energy. For more than a century, Norway has exploited its hydropower resources and there are currently more than 850 plants in the country. Hydropower provides more than 95% of the country's electricity and Norwegian supply industry and consultants have a long history of involvement in international projects [14].

Norway maintains an active national climate policy and uses a wide set of measures to reduce domestic emissions. Approximately 80 per cent of the Norwegian emissions are subject to economic instruments such as CO₂ taxes or quotas. Norway has committed to reduce the global emissions of greenhouse gas before 2020 equivalent to 30 per cent of the emissions in 1990 [15]. Development of new technologies is one of several measures used in order to reduce emissions.

As a nation, Norway has a special responsibility, as well as a national advantage, within the energy sector. Our knowledge and competence will be able to play an important role in the work to find solutions that reduce climate gas emissions from production and use of energy. The focus on research and development is crucial in this context.

Energy research is part of the focus on new environmental friendly technology in the energy sector. A special emphasis is put on research and technology development on renewable energy sources, energy efficiency, hydrogen as an energy carrier and carbon capture and storage. There is a great need for development and demonstration of new technology for capture and storage of CO₂. The Technology Centre Mongstad in Norway is the world's largest facility for testing and improving CO₂ capture. Knowledge gained will prepare the ground for CO₂ capture initiatives to combat climate change. TCM is a joint venture between the Norwegian state, Statoil, Shell and Sasol [156]

Ukraine has to form a national energy policy in the conceptual foundations of energy security and energy efficiency, reinforcing its relevant implementation mechanisms. Comparative evaluation of energy production, energy consumption and environmental performance in Ukraine and in the world shows that one of the basic conditions for sustainable growth of the Ukrainian economy, improvement of its competitiveness is the increase the energy efficiency alongside with a focus on the European or world average figures.

Further research. Each country, depending on its geography, climatic conditions, availability of mineral resources (oil, gas, coal) selects the vector for energy sector. Ukraine has a specific feature of the energy sector – a diversity of energy sources. Depending on the region, we could use different energy sources. This principle and this uniqueness is necessary to maintain and develop in the future, analyze, in what region we can develop renewable energy – hydropower, sun, wind, biomass, and where it is appropriate to use non-renewable energy, develop nuclear power plants, thermal power plants. In Ukraine, we continue to support the principle of reasonable sufficiency and preferred working conditions should be corrected by the legislature. No doubt that Ukraine will have intensive development of this sector, for the entire civilized world goes by increasing renewable energy in the energy mix.

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СУЧАСНІ РИСИ МІЖНАРОДНОЇ МОБІЛЬНОСТІ РОБОЧОЇ СИЛИ

Стаття присвячена аналізу сучасних рис міжнародної трудової мобільності. Наведені дані по міграції, рівням заробітних плат в розвинених країнах та країнах, що розвиваються, грошовим переказам з-за кордону. Розглянуто основні типи міжнародної трудової мобільності, проблеми та перспективи кожного із них.

Ключові слова: мобільність робочої сили, трудова міграція, ринок праці, низькокваліфікована робоча сила, висококваліфікована робоча сила, грошові перекази, внутрішньокорпоративна трудова мобільність.

Дерид И.А. СОВРЕМЕННЫЕ ЧЕРТЫ МЕЖДУНАРОДНОЙ МОБИЛЬНОСТИ РАБОЧЕЙ СИЛЫ

Статья посвящена анализу современных черт международной трудовой мобильности. Приведены данные по миграции, уровням заработных плат в развитых странах и развивающихся странах, денежным переводам из-за границы. Рассмотрены основные типы международной трудовой мобильности, проблемы и перспективы каждого из них.

Ключевые слова: мобильность рабочей силы, трудовая миграция, рынок труда, низкоквалифицированная рабочая сила, высококвалифицированная рабочая сила, денежные переводы, внутрикорпоративная трудовая мобильность.

Derid I.O. MODERN FEATURES OF INTERNATIONAL LABOR MOBILITY

The article is devoted to the analysis of the modern features of labor mobility. The data on migration, wages levels in the developed and developing countries, remittances from abroad are presented. The major types of labor mobility, the problems and perspectives of each of them are reviewed.

Keywords: labor mobility, labor migration, labor market, low-skilled labor, highly skilled labor, remittances, intra-corporate labor mobility.

Постановка проблеми. У більшості випадків причини міграції пов'язані із пошуком роботи. Дослідниками виведена закономірність, що найбільша кількість емігрантів з тих країн, де найнижчий рівень зарплат (тобто висока частка бідних робітників) і низький рівень соціального захисту, а також із країн, де розгорілася гостра конфліктна ситуація [1, р. 3]. Як правило, мігранти стикаються із значними соціальними та економічними проблемами протягом міграційного процесу. При цьому метою більшості мігрантів є країни Великої двадцятки. Дослідження свідчать, що нині 1/5 власного населення країн із розвинутою економікою – це люди

старші за 60 років, до 2050 року очікується, що кількість цієї вікової категорії в розвинених країнах сягне 30%. У той самий час у багатьох країнах, що розвиваються, частка людей понад 60 років не перевищує 10%. Це означає, що в найближчому майбутньому саме трудові ресурси з країн, що розвиваються, будуть забезпечувати нестачу робочої сили в розвинених країнах і наповнювати фонди соціального страхування [1, р. 3]. З огляду на масштабність міграційних процесів у світі, теоретичні свідчення вчених про взаємовигідність цього процесу для розвинених країн та країн, що розвиваються, та наявність багатьох практичних проблем у цьому про-