СВІТОВЕ ГОСПОДАРСТВО
І МІЖНАРОДНІ ЕКОНОМІЧНІ ВІДНОСИНИ

UDC 330.5

DOI: https://doi.org/10.32782/2520-2200/2019-1-4

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GOVERNMENT ECONOMIC SUPPORT FOR RENEWABLE ENERGY PROJECTS IN UKRAINE

ДЕРЖАВНА ЕКОНОМІЧНА ПІДТРИМКА ПРОЕКТІВ ВІДНОВЛЮВАНОЇ ЕНЕРГЕТИКИ В УКРАЇНІ

The article identifies ways of the government's involvement and participation in setting and conducting renewable energy development process. The research shows how does the government support renewable energy projects by focusing on state's actions and renewable energy policies, barriers that erase voids in the accomplishment of renewable energy deployment and highlights the main interests of stakeholders in shaping and influence on the renewable energy area of development in Ukraine. The regulatory bodies showed improvements of the legislative framework in the field of renewable energy. The most vivid drawbacks of modern politics were also considered, that became significant barriers to the state's strategic energy target 25% of renewable energy in the total supply of energy production in the country by 2035.

Key words: renewable energy, government policy, feed-in tariff, barriers, Power Purchase Agreement, international investments, policy consistency.

В статье определены пути вовлечения и участия правительства в формировании и проведении процесса разработки ВИЭ. Исследование показывает, как правительство поддерживает проекты в области ВИЭ, сосредоточив внимание на действиях государства и политике в области ВИЭ, барьерах, которые сопутствуют внедрению процесса развития ВИЭ, а также демонстрирует основные интересы сторон при формировании и влиянии на область ВИЭ в Украине. Также рассмотрены недостатки современной политики, которые становятся существенными барьерами на пути к государственной стратегической цели 2035, которая заключается в достижении 25% возобновляемой энергии в общем итоге произведенной энергии в стране.

Ключевые слова: возобновляемые источники энергии, государственная политика, льготный зеленый тариф, барьеры, соглашение о покупке электроэнергии, международные инвестиции, последовательность политики.

Вивчення питань складності та суперечливості сучасних процесів державної підтримки інноваційних технологій (особливо у сфері енергетики) має велике теоретичне та практичне значення відтоді, як Україна перебуває на порозі глобального енергетичного переходу задля майбутнього економічного зростання та зміцнення енергетичної та економічної безпеки. Актуальність проблеми державної підтримки відновлюваної енергетики полягає у створенні ефективних механізмів політики та шляхів участі держави в розвитку нового енергетичного курсу країни, приваблені іноземних інвестицій та заохоченні діяльності національних і міжнародних гравців на ринку виробників відновлюваної енергії. Основним управлінським завданням української енергетики у складні часи фінансово-економічної кризи в Україні залишається пошук балансу участі та співвідношення важелів впливу держави як основного інституту законодавчого та правового примусу та інтересів інших учасників ринку у всезагальному процесі розвитку відновлюваної енергетики. Міжнародні інвестори дуже позитивно налаштовані щодо поточної політики поновлюваної енергетики в Україні. Автором особливу увагу приділено основним діям та політиці державної участі в розвитку української відновлюваної енергетики, що націлені на лідируючі позиції України серед країн Східної Європи. Розглянуто

недоліки сучасної політики, що стають суттєвими бар'єрами на шляху до державної стратегічної цілі 2035 року, яка полягає в досягненні 25% відновлюваної енергії у загальному підсумку виробленої енергії в країні. Автором визначено інтереси основних гравців ринку, які досить суттєво впливають на формування політики у сфері відновлюваної енергії в Україні. У статті визначено шляхи залучення та участі уряду у формуванні та розробленні відновлюваної енергетики.

Ключові слова: відновлювані джерела енергії, державна політика, тариф на закупівлю, бар'єри, угода про купівлю електроенергії ("power purchase agreement"), міжнародні інвестиції, узгодженість політики.

Formulation of the problem. Ukraine has started a global energy transition for future economic growth. Current dependence on imported energy resources has provoked Ukraine to choose energy independence as one of the priority directions for development. The government has decided to choose FIT and green rate in euros as a stable incentive for new investment in renewable technology. It is valid until 2030 and gradually decreases every few years. Such a strategy for renewable energy is believed to bring additional investments into Ukraine's economy and open new horizons of development.

Now many European countries are moving from a fixed tariff to more efficient support methods, such as green auctions. The Verkhovna Rada is also drafting a bill that provides for the transition to auctions. It will allow the state to buy green electricity at the most effective price. This will ultimately lead to a reduction in the financial burden on the consumer. For businesses, the transition to auctions means a stable investment climate and clear rules of the game in the market. According to National energy and utilities regulatory commission, over the past 4 years, about EUR 1.5 billion have been invested in "green" projects in Ukraine. In Ukraine, about 300 companies produce electricity from renewable energy sources (RES). Their total capacity at the beginning of November 2018 was about 1.9 GW.

The research was conducted using qualitative methods of documentary analysis (laws), literature search on the topic from scientific articles and internet, as well as interviews with the experts in renewable market of Ukraine. The analysis we have made was inductive, reflecting the results of the data collection and consequently comprehensive, holistic findings were achieved towards the topic of the government's support for RE in Ukraine.

Analysis of recent research and publications. Institutional processes can work through coercive pressures imposed by institutions that directly influence firms [2]. As the basis for our institutional framework, we have chosen to follow institutional isomorphism in the coercive dimension. The renewable energy sector (RES) often receives financial, institutional or educational support from the government. In the case, when firms are affected by institutions, the state plays a role of a powerful regulator, who sets political pressures and conducts organizational decisions.

The regulative (mandatory) structure acts through the coercive mechanism which we usually see in the form of international either local governmental or industrial legislative pressure. So, R. Scott (1995) sees the regulative pillar in rule setting, monitoring, recompense and punishment [14]. The Ukrainian government's supportive incentives of RE are driven by the normative act, the Energy Strategy of Ukraine targeting 25% of the total primary renewable energy supply by 2035, disclosing how is the regulator (government) moving towards this aim, by implementing the legislative framework and RE supporting mechanisms.

Government is associated with the concept of power, mainly with political and economic power in the form of social control, authority or influence [6]. Monetary wealth, access to natural biophysical materials, civil authority, social connections, reputation, belief systems, artifacts such as weapons and technology are seen as sources of power [1; 13]. Consequently politics becomes the processes of distributing resources and the power guides their distribution. In this study I have adopted institutional framework based on Max Weber's understanding of power and look at institutional influence of government with regard to providing an environment through rules and regulations in order to lead firms toward achieving the aims of the government in RES. The company should not be misled by the government's set of drivers but instead being directed toward the government's goals. However, the most important fact that is neglected here is that big, strong companies can be more powerful than government. Is the Ukrainian government powerful enough to lead firms toward achieving its aims, or vice versa? Answering this question will help to analyze the government's action system in supporting RE projects, what actually has been done within the regulative and normative frameworks.

The majority of literature [9; 16] put emphasis on public policies as the main drivers for RE development. A. Marques, J. Fuinhas, J. Manso (2010) determine government support policy in RE as a combination of various schemes and strategies, such as R&D incentive programs, investment

incentives (grants or low-interest loans), incentive taxes, incentive tariffs, mainly feed-in-tariffs, voluntary programs and compulsory renewable targets (production quotas and tradable certificates) [9]. In addition, W. White, A. Lunnan, E. Nybakk, B. Kulisic (2013) in their study stressed the importance of the long-term continuity of policy support in achieving policy goals on renewable energy [16]. Implementation of long-term stable policies helps to minimize uncertainty, that becomes vital for those who want to invest in RESs or support such developments for social or environmental reasons.

A.B. Jaffe et al. (2005) and G.F. Nemet (2009) see two ways the government can influence RE deployment: by funding allocation for energy innovation to technology-push mechanisms, through knowledge creation, research and development (R&D), or by demand-pull mechanisms, through market creation via subsidies or guaranteed markets. Within the abovementioned debates, FITs are used by the government to create a market for renewable technologies. Secondly, by removal barriers to renewable energy projects, FITs are able to quickly deploy RE capacity, provide stability and investor certainty by reducing the premium risk and the energy prices volatility [8; 12].

According to Freeman's theory, stakeholders can be defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives" [4]. According to G. Walker and P. Devine-Wright (2008), CRE projects were characterized by the process dimension, defining the actors that are involved during the implementation of the project, and the outcome dimension showing the actors that are influenced by the results of the project. These two dimensions are transformed into the questions "who is involved and has influence" in the development of a project and "who it is that benefits in economic and social terms" [15].

The purpose of the article is to identify how does the government supports RE projects by focusing on state's actions and RE policies, barriers that erase voids in the accomplishment of RE deployment and highlighting the main interests of stakeholders in shaping and influence on the RE sphere development in Ukraine.

To achieve this purpose, it is necessary to solve the following tasks:

– what is the current policy of the government support for RE projects Ukraine;

– what are the voids in the government's actions to support RE;

– what are the barriers companies are facing now, that block their performance;

– what is expected from the government to be changed in the nearest time;

– who are the other actors in shaping the support of RE projects.

Presentation of the main research material. The regulatory bodies showed improvements of the legislative framework in the field of renewable energy. The following international regulatory framework has been implemented: Paris Climate Agreement in 2015; as a member of the European Energy Community, Ukraine has signed and ratified the Association Agreement with the EU, undertaking the commitment in developing renewable. The following national normative framework is currently in force [7]: Ukraine's Electricity Market Law (Law № 4493) from 13 April 2017 (in force from 2019); Law of Ukraine "On amendments to certain Ukrainian laws and regulations with regard to improvement of urban development activities"; Law of Ukraine "On Electric Power Industry"; National Renewable Energy Action Plan (NREAP) (2014); Corporate income tax exemptions in Ukraine available for renewable energy sector; Green Tariff (Feed-in Tariff) since 2009; Law on Promotion of Biological Fuels Production and Use (№ 1391-VI); VAT and Customs Duties Exemptions (2008); Program to develop biodiesel production (2006); Law on Combined Heat and Power (cogeneration) and Waste Energy Potential (2005); Law on Alternative Energy Sources (2003); Law on Alternative Liquid and Gaseous Fuels; Law on Energy Savings (1994).

The dynamics of RE growth in Ukraine started in 2009 from the introduction by the state authorities a number of economic mechanisms aimed at stimulation of RES energy generation. The main of them are as shown below these [7].

1) Feed-in tariff mechanism that is a special price system for the purchase of electricity generated by plants using RES. According to the Law of Ukraine "On Electric Power Industry" [7], the minimum state guaranteed feed-in tariff is set for wind power plants, solar power plants, small hydropower (with power no more than 10 MW) and biomass power plants. The feed-in tariffs rate is fixed to euro rate that helps to protect investors against possible inflation. The scheme of the government economic support of electricity generation using feed-in tariff is being valid till January 1, 2030. During this period, the state guarantees purchases of the whole volume renewable sources' electricity generated and the payment for such energy in the total volume.

2) Tax and custom benefits:

– exemption from value added tax (VAT) payments and customs duties for imported equipment, that is used for the generation of renewable energy in case of identical equipment with similar quality characteristics is not being produced within the territory of Ukraine;

– withdrawing the land-tax by 75% for territories and lands used for plants constructing, aimed at renewable energy generation.

The international investors are very favorable towards FITs in Ukraine. On January 24th 2019 in Davos on the World economic forum an agreement between the Norwegian NBT, French Total and the European Bank for Reconstruction and Development was signed on the implementation of the Ukrainian wind energy project Sivash. The arrival of NBT and Total is evidence that foreign investors are returning to Ukraine, giving the country the possibility to become the second largest European market now. According to NBT CEO Juara Viken, the company has enough potential to build an additional 700–800 MW of wind capacity in Ukraine [10].

In September 2018, the National Commission for State Regulation in the Fields of Energy and Utilities issued drafts of the following act: Typical contract for the sale and purchase of electric energy between a guaranteed buyer and a producer of electricity from alternative sources of energy ("Power Purchase Agreement"). These documents are important not only for the introduction of a new electricity market, but also for the further growth of electricity from renewable energy sources (RES) and investment attraction. PPA is the first thing, investors will pay attention to, when considering the possibility of financing the RE project. Therefore, approval of this document should facilitate investment in renewable energy projects in Ukraine. In order to attract financing for RES projects, investors need to confirm that they have enough guarantees from the government for the future payments for the electricity generated within the green tariff.

The contract for the sale and purchase of electric energy between the guaranteed buyer and the manufacturer of RES or PPA is a contract starting from July 1, 2019 for the sale of electricity generated from RES (for electricity deduction for own needs) at the "green" tariff for a guaranteed buyer. From September 2017, changes to the current exemplary form of the PPA were provided in the form of pre-PPA, an agreement for producers who intend to produce electricity from RES.

The energy tools implemented by the state should be consistent with the Energy Strategy, Ukraine's international commitments and a long-term national development plan for the industry. As the FIT will be valid till 2030, the future transition to tariff auctions is also an option that is very actively discussed by the government as the competition in the market will be increased and the cost of "clean" electricity for consumers will be reduced. On 4 December 2018, the Committee on Fuel and Energy Complex, Nuclear Policy and Nuclear Safety approved the updated version of the main conditions for the Draft Law on Amendments to Some Laws of Ukraine on Ensuring Competitive Conditions for the Production of Electricity from Alternative Energy Sources.

However, the problem of auctions is very controversial though. The big players of Ukrainian energy sector are against such initiatives. Within the framework of such a serious discussion, which is now taking place on the topic of auctions, their implementation may worsen the position of investors, whose projects are at a late stage of development, non-transparent approaches or inconsistency of positions are unacceptable.

Institutional theory explains the role of the government as a trendsetter of RE policies of RE deployment, by using its power as a main gear. However, in the Ukrainian realities big, strong energy companies are more powerful than government, influencing the behavior of the government. Nowadays, the biggest national company in RE sector of Ukraine is DTEK and its operating company DTEK RES, which is part of DTEK's energy holding. Its share among the Ukrainian "greens" exceeds 11% and amounts to 210 MW of power. By the end of 2020, the company plans to increase its portfolio to 1,000 MW. DTEK RES is currently running the projects in both solar and wind power, among which Botievskaya WPP, Trifanovskaya SPP. Lots of projects, such as Nikipolskaya SPP, Primorskaya WPP, Orlovskaya WPP are on the stage of active development and construction [3]. What is more, the main shareholder of DTEK is a famous Ukrainian politician and businessman, who can lobby the interests of his company, influencing the decisions in policymaking process by the government. The evidence of such an influence was the implementation of the well-known Law 8015, that became a green light for the development of wind power in Ukraine, by: simplification of construction control procedures for facilities producing electricity from wind power; the possibility of building renewable energy objects through the simplified CC1 procedure, which sees little impact on the environment; simplification the requirements of authorized environmental authority for carrying out the examination of projects for the construction of wind power plants by transferring the object from the CC-2 (average) class to the CC-1 (insignificant) of the level of consequences for the surrounding.

However, some obstacles can erase while conducting RE projects in Ukraine, including policy uncertainties. This is because FITs are temporary, and nothing is clear about what will be next, what is waiting for the companies after 10 years. As a result, companies are not confident upon the government's intention to support RE sector.

Conclusions from the study. In conclusion we would like to sum up that Ukraine has really started to be reformed in the energy sector, especially in renewables. I strongly believe that by 2035 Ukraine will reach its target in 25% renewable energy supply and becomes a leader in this field among other countries with transitional economies. Both the international regulatory acts and national legislative framework is being effectively implemented giving the ability for the international investors to return back to Ukraine. However, some problems that are still vital for both national and international investors still create barriers in achieving the main goal of the full Ukrainian RE market development.

As we have stated above, policy consistency is a significant challenge for investors. This is because FITs are temporary; transition to tariff auctions is now discussed actively. However, nothing is clear about what will be next, what is waiting for the companies after 10 years. As a result, companies are not confident upon the government's intention to support RE sector. The state should also clarify the final procedures for purchasing electric energy at the "green" tariff and conditions of Power Purchase Agreement (PPA), as these documents are important are PP the first things, investors 'will pay attention to, when considering the possibility of financing the RE project. First of all, before investing, investors need to confirm that they have enough guarantees from the government for the future payments for the electricity generated within the green tariff. As the result, it will foster investment in renewable energy projects in Ukraine.

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