

Green turn. Local turn. The beginning of the transformation

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ARTICLES

Dariusz Michalski, Paweł Hawranek, Financing the green revolution through power purchase agreements (PPAs)

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- I. Introduction
- II. Climate risk accelerates the green transformation
- III. Financial market of the green transformation
- IV. The characteristics of PPAs
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- VI. Final remarks

Summary: The article discusses important issues related to financing investments in renewable energy with the use of power purchase agreements (PPAs). Further development of green energy should be expected and will be closely related to the development of green finance. The attractiveness of energy from renewable sources results from forecasts regarding the increase in the competitiveness of renewable energy in comparison to electricity from conventional power plants burning fossil fuels. The authors also indicate the increasing significance of the climate risk, which becomes an impulse for the development of green finance, creating instruments for responding to this risk.

As a result of lowering investment costs, renewable energy sources (RES) are becoming the cheapest way to develop generation capacity in the global power industry. As a result, on many markets, the purchase of renewable energy for the needs of large industrial plants is competitive in comparison to the traditional power industry. The purchase of electricity from RES makes also possible to protect against price fluctuations caused not only by changes in the prices of fossil fuels, but also by greenhouse gas emission allowances, or the impact on energy prices of the climate change protection policy. Since the production of electricity is not the core activity of industrial plants, it is difficult to obtain positive decisions of owners to invest in renewable energy. Hence, the use of PPA instruments, that are not related to direct capital investments and the construction of fixed assets, is becoming popular. Importantly, PPAs ensure the liquidity of the market risk hedging in the long run, much longer than the liquidity of the futures market. That is why the article discusses the specificity of various types of PPAs and the risks associated with them.

Key words: RES, PPA, power market, climate risk, risk, green finance

JEL: K23, K32, D53, G15

Tomasz Marzec, Legal perspectives on the development of energy cooperatives in Poland

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- I. A global perspective on energy cooperatives
- II. Proposals for incorporating energy cooperatives into Polish law
- III. Energy cooperative – legal definition
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Summary: In 2016, the Polish legal system received a legal definition of an energy cooperative. The aim of an energy cooperative is to generate renewable energy solely for the needs of the energy cooperative and its members. Author presents how energy cooperatives contribute to energy transformation in selected EU members, in order to analyse legal perspectives in Polish law. The Polish Act on Renewable Energy Sources the legal requirements that must be met in order to register the energy cooperative. The dedicated support system (a scheme for prosumers to balance their energy consumption) is only available to registered energy cooperatives. There is currently no energy cooperative registered in Poland. In this light, the aim of this paper is to present the obstacles that prevent the formation of energy cooperatives in Poland and to formulate proposals to resolve them.

Key words: energy cooperatives, cooperative law, renewable energy law, community energy, renewable energy community

JEL: K32

Eva-Maria Thierjung, (Citizen-driven) renewable energy cooperatives in Germany

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- I. Introduction
- II. The status quo in the historical context of the cooperative idea in Germany
- III. The legal nature of cooperatives in Germany and their internal structure
- IV. Energy cooperatives in Germany and the energy transformation
- V. Summary

Summary: The subject of this article is the role of energy cooperatives, especially citizen-driven energy cooperatives, in the context of Germany's energy transition (so-called Energiewende). In the first place, this article develops a precise definition of the term energy transition, followed by a short presentation of the current situation of energy cooperatives, embedded in the historical background of cooperatives. This is followed by an outline of the current legal framework for energy cooperatives in Germany as well as their internal operating structures, based on the so-called cooperative principles. Thereby, the author points out the direct link between these principles and the positive development of energy cooperatives in Germany, emphasizing their social dimension. What follows is a presentation of the possible ways to categorize energy cooperatives, and a more detailed description of the three forms of energy cooperatives most common in Germany. The article concludes with an evaluation of the socio-economic potential of these communities.

Key words: energy transition in Germany, (citizen-driven) energy cooperatives in Germany

JEL: K32

Krzysztof Szczęśniak, About the implementation of corporate power purchase agreements (CPPAs) as an instrument to promote local energy

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- III. The concept of CPPAs
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- VII. Summary

Summary: The aim of this article is to verify the hypothesis about the possibility of using corporate power purchase agreements (CPPAs) as an instrument for promoting local energy. The Author undertakes to define this concept and to introduce the most important features of such a market model. Presented next are the most important legal barriers which result in the limited impact of CPPAs on promoting locating energy generation sources in close proximity to the recipients. The considerations will relate to both the CPPA option of a bilateral agreement – only between the generator and the final customer, and a trilateral agreement – with the participation of the energy supply company. As a result of the analysis, the Author puts forward a thesis about the limited influence of this institution on promoting local energy.

Key words: CPPA, PPA, renewables power purchase agreement, local energy, distributed energy, sale of energy, renewable energy sources

JEL: K230

Dagmara Dragan, Hydrogen law – evaluation of selected legislative plans

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- II. Production and use of hydrogen in Poland – current state
- III. Polish Hydrogen Strategy
- IV. Hydrogen Law
- V. Polish definition of hydrogen
- VI. Hydrogen and the Energy Law Act
- VII. Hydrogen infrastructure in the transport sector
- VIII. Summary

Summary: On 14 January 2021, the Polish Ministry of Climate and Environment published Poland's draft Hydrogen Strategy, which identifies the creation of a stable regulatory environment as one of the main tasks for the development of a hydrogen economy in Poland. In order to accomplish this task, the Polish government announced the preparation of the Hydrogen Law Act, which is to regulate the operation of the hydrogen market in a comprehensive manner. The strategy also lists and briefly describes several areas that will be covered by the Hydrogen Law Act. This article aims to present these areas and assess the proposed

legislative changes, both in terms of their impact on the development of a hydrogen economy in Poland, and their consistency with the plans of the European Commission presented in July 2020.

Key words: hydrogen; Polish Hydrogen Strategy; Hydrogen Law; renewable gases; green hydrogen; hydrogen economy

JEL: K23

Paweł Hawranek, Dariusz Michalski, Daniel Borkowski, Regulatory conditions for algorithmic trading (AT) from the perspective of the energy market in Poland

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- I. Introduction
- II. The world of algorithms. General perspective
- III. Algorithmic trading
- IV. The world of algorithms in the energy market
- V. Regulations of algorithmic trading in Directive MiFID II
- VI. Regulatory conditions for high-frequency algorithmic trading (HFT)
- VII. Final remarks

Summary: The development of the integration of the European energy market and the development of renewable energy sources (RES) contribute to the increased complexity of trade, price volatility and the speed of concluding transactions. This creates both risks and opportunities for companies trading in this market. The complexity of the market is particularly important, both from the perspective of the integration of regional markets in Europe, and the shift of volatility and liquidity to spot and intraday markets. This requires a new approach to trading, where the speed of placing orders and analyzing the emerging trading options, while ensuring risk protection, becomes critical to the success of the trading activity. Algorithmic trading (AT) supports the use of emerging opportunities, making it possible to trade constantly during market hours, considering many different decision variants at the same time, much faster than what traders can do. Moreover, AT also enables simultaneous management of a high number of transactions and more effective position management, because computers can quickly analyze all available data in real time, taking into account the situation in all markets available to AT, considering opportunities, trends and potential risks in energy markets around the world. Computers can immediately generate trades based on these analyzes, generating profits at a speed and frequency impossible to achieve by traders. However, the techniques of algorithmic trading and high-frequency algorithmic trading (HFT) introduce a number of additional regulatory conditions, not only ex ante – requiring the examination of the legal conditions of AT and HFT, but also ex post – regulatory obligations related to transactions concluded within AT and HFT. These conditions are presented in the article.

Key words: algorithmic trading, high frequency trading, power market, energy, renewable energy sources, risk

JEL: K23, K32, D53

Jarosław Greeser, Cybersecurity rules of the energy sector in light of the draft NIS 2 Directive

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- II. Current regulations of the energy sector in the field of cybersecurity
- III. Planned legislative changes
 1. Obligations of key entities and significant entities
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- IV. Summary

Summary: The development of energy sector is interdependent with the growth of information and communications technology (ICT). Implementation of ICT allows for the creation of more efficient energy generation and management systems and is crucial for to transition to renewable energy sources energy system, which is one of the main goals of the EU. Simultaneously, the implementation of ICT poses challenges related to security of its application, which is directly linked with the spectrum of risks stemming from the use of the internet. This subject matter attracted the lawmaker's attention, who has taken some measures aimed at increasing the level of cybersecurity in the EU Member States. This paper analyses and assesses these actions. It is divided into four parts. The first one is devoted to presentation of the issue of energy sector's cybersecurity in the context of EU polices. The next part constitutes the description of currently binding regulations in this field, with particular focus on the Cybersecurity Act and Directive 2016/1148, called also the NIS Directive. The third chapter contains the analysis of the prosed changes included in the European Commission's proposal for a directive replacing the NIS directive, referred to as the proposal for a NIS 2 directive. The last part comprises a summary and assessment of EC proposals.

Key words: cybersecurity, energy sector, NIS 2, essential entities, important entities

JEL: K20, K32

Marcin Wysocki, The principle of no instructions to the President of the UKE and the obligation to reconcile certain decisions with the President of the URE and the President of the UTK

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- II. Independence of the President of UKE in performing tasks under UE law – the principle of no instruction
- III. Decisions of the President of UKE which are subject to cooperation with the President of the URE and the President of the UTK
- IV. Obligation to consult and reconcile in the context of the principle of no instruction
- V. Summary

Summary: The European Electronic Communications Code strengthens the independence of national regulatory authorities by providing a general guarantee that can be defined by the principle of no instruction. This rule to large extent determines the nature of the cooperation of the President of the UKE with other national public administration authorities in the exercise of his powers under EU law. The article focuses on the very important for the development of modern telecommunications networks issue of cooperation of the President of the UKE with

the President of the URE and the President of the UTK in matters related to access to technical infrastructure and compliance of legal provisions in this area in the context of the principle of no instruction.

Key words: European Electronic Communications Code; The President of UKE; independence; instruction; reconciliation; opinion.

JEL: K23

REVIEWS OF LAW AND JURISDICTION

Konrad Zawodziński, Order to cease lignite mining at the Turów mine imposed by way of interim measures indicated in Case C-121/21 R (order of the Vice-President of the Court of Justice of 21 May 2021)

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- I. Introduction
- II. Fundamentals of interim judicial protection in cases pending before the Court of Justice
- III. Specifics of interim measures in actions for infringement
- IV. Summary

Summary: By order of 21 May 2021 in case C-121/21 R, the Vice-President of the Court of Justice ordered the cessation of lignite mining at the Turów mine. The ruling came in a case arising from action for infringement initiated by the Czech Republic against the Republic of Poland. The case illustrates the Court's approach to assessing the credibility of a complaint and the urgency of injunctive relief. While there is no doubt about the possibility of providing interim legal protection in actions for infringement, there are reservations about the fact that the measure imposed by the Court of Justice goes beyond the permitted content of the judgment concluding the proceedings.

Key words: interim measures, conferral principle, action for infringement, Court of Justice of the European Union, EU litigation.

JEL: K41

Andrzej Cylwik, Economic Analysis of the Effects of the Introduction of Poland's so-called 'Distance Law' and the Benefits of the Planned Change in Polish Legislation on the Development of Onshore Wind Energy

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- I. Introduction
- II. Characteristics of the main changes in the Polish national renewable energy industry between 2010 and 2020.
- III. Effects of the inhibition of onshore wind energy development in Poland between 2017 and 2020.
- IV. Estimating the benefits of resuming domestic wind energy development between 2021 and 2030.
- V. Final conclusions

Summary: The purpose of the economic analysis presented was: (1) calculating the losses caused by the introduction of the so-called Distance Law and inhibition of the development of domestic onshore wind energy; estimating the potential for domestic onshore wind energy growth,

following a reasonable amendment to this law, which was planned for early in the fourth quarter of 2020. The author has attempted to gather as much source data as possible obtained directly from wind farm investors and developers, as well as internal cost and financial findings of the Polish Wind Energy Association. According to conservative calculations, the slowdown of wind power in 2017–2019 resulted in a reduction of investment projects by 3400 MWe, which in turn reduced potential demand and ultimately resulted in a loss of 9.317 billion PLN. The expected resumption of domestic onshore wind development between 2021 and 2030 was estimated under three scenarios: (1) reference – no changes to the Distance Law, (2) gradual growth – assumes an amendment to the law and a moderate rate of new investment, (3) comprehensive development – assumes the amendment of the law and acceleration of new investments. In the reference scenario, investments locked in during the crisis period (2017-2019) would be realized between 2021 and 2025, but onshore wind growth would be extinguished in the second half of this decade. In the gradual growth scenario, the additional increase in installed capacity will amount to 3,000 MWe, which would generate 9.545 billion PLN of direct domestic economic benefits (GDP growth). In the comprehensive development scenario, the additional installed capacity would be twice as large (6,000 MWe), and the GDP growth would amount to 19.732 billion PLN. In conclusion, the author points out that further delays in unblocking the development of onshore wind energy in Poland pose a real threat to the completion of national goals in terms of the EU climate and energy policy.

Keywords: Amendment of the Distance Law, removal of the restriction on onshore wind energy development, RES crisis in 2017-2019, losses caused by wind energy inhibition, scenarios for resumption of wind energy development in 2021–2030, estimation of direct benefits from the expected resumption of wind energy development.

JEL: K32

REPORTS

Report on the Energy Law Conference – Local Energy [Energetyka lokalna] (Poznań, 21.04.2021) (Kinga Kalińska)