

Current selected problems in the energy sector

(from the Editors-in-Chief)

Articles

Dariusz Michalski, Paweł Hawranek, Financial instruments of green transmission

Table of contents

- I. Introduction
- II. Green finance
- III. Selected instruments of green finance
- IV. Financing green transition with Power Purchase Agreements (PPA)
- V. Regulatory conditions for PPAs on the Polish market
- VI. Conclusions

Summary: Green transition creates change not only for the real economy, but also for widely perceived finance, exposing them both to risks and opportunities. This is of fundamental significance for enterprises and financial institutions, which need to adapt. Risk increases in areas subjected to regulatory and market pressure, forcing changes in market strategies or production methods. Regulations may present opportunities as well, and those may include clean technologies, in particular technologies aiming to reduce greenhouse gas (GHG) emissions, the development of renewable energy sources (RES), a digital revolution on the energy market, and introducing new elements into the financial market. Taking these trends into account is essential to economic success. Underestimating the progressing climate change, and the intensive human activity in this area, has made climate protection and the need to transform the economy a priority. Consequently, the implementation of green transition requires appropriate funds for the financing of green projects. Considering the above trends in the global economy, the authors strive to present the financial instruments available for supporting the development of green transition, taking into consideration, in particular, the power market. Hence, they discuss the financial instruments used for energy transition and the fight against climate change. The authors point to the importance of green finance, which as an element of the financial system, takes over the responsibility for providing the funds and tools both for financing climate goals, and for effective risk management by the entities involved in this process.

Key words: green transition; climate neutrality; green finance; power sector; financial instruments; risk; management; RES

JEL: F23, L21, M1, G15, G24, G23

Mariusz Szyrski, RES Grant – an attempt to evaluate a new support instrument in the development of renewable energy sources in Poland

Table of contents

- I. Introduction
- II. Definition of a RES Grant, the problem of legal definitions
- III. Principles of awarding a RES Grant
- IV. Summary

Summary: As of the end of 2022, a new support instrument called an “OZE Grant”, that is, a “RES Grant” has been legally introduced in Poland. Among other things, the relevant legislation is intended to implement the objectives of the programme entitled “Replacement of heat sources and improvement of energy efficiency in residential buildings”, insofar as this measure applies to multi-family residential buildings, as well as the programme “Investments in energy-efficient housing for low- and middle-income households”. The main purpose of this study is to analyze the new legal solution meant to serve other owners (?) and managers of multifamily buildings as well as other beneficiaries. The main research question in this article is – in what direction did the polish legislator go, and whether the new legislation corresponds to existing legal rules and is “compatible” with them.

Key words: RES grant; renewable energy sources; energy law; energy industry

JEL: K19, K23, K41

Aleksandra Pęksyk, Green Bonds as debt securities to finance investments in the age of energy transition

Table of contents

- I. Introduction
- II. The genesis of Green Bonds
- III. The legal status of Green Bonds
- IV. The development outlook for the Green Bond market in Poland
- V. Summary

Summary: The purpose of this article is to discuss the origins and legal status of Green Bonds, as well as to identify barriers and prospects for the development of this type of securities in Poland. The analysis is based on Polish and EU legal regulations as well as EU legislative plans regarding the standard of European Green Bonds, and also with regard to the existing policies in the field of the ongoing energy transition.

Key words: green bonds; energy; energy transition; RES; European Union; greenwashing

JEL: K12, K22, K32, K33, K42

Dariusz Michalski, Paweł Hawranek, Impact of climate risk on long-term core activity management in the power sector

Table of contents

- I. Introduction
- II. Global impact of climate risk on the power sector

- III. Importance of climate risk for operations' management in power companies
- IV. Relevance of physical risk for long-term change of operational activities of power companies
- V. Importance of adapting the operations of power companies in order to neutralize transition risk
- VI. New conditions of financing long-term adjustments of the core activities of power companies
- VII. Recommendations for necessary changes of the core activities of power companies; results from the research
- VIII. Final remarks

Summary: The global economy faces the challenges of climate change that generates the climate risk, which essentially affects the operational activity of power companies. The power sector is both, one of the most important greenhouse gas (GHG) emitters, and an industry especially exposed to widely perceived climate risk. Changes in the natural environment cause negative impacts on the energy infrastructure (physical risk), while regulatory changes and society sentiments (transition risk) reshape the conditions of the operational profitability of power companies. These phenomena, currently accelerating changes in the global economy, persuaded the authors to undertake a study on necessary changes in the core activities of power companies, which should secure the resilience of their profits in an uncertain future. The authors performed a comprehensive study of literature on climate risk exposure in the power sector, by researching operational adjustments made by leading power companies in their green transformation process. To meet the abovementioned objectives of the article, the author's presents the results of their research in the part of the article that discusses the recommendations for the necessary changes of the core activities of power companies. The authors intend to identify universal solutions that can be applied by power companies operating in a globalized economy. This requires a long-term process of re-designing the operational activities of power companies, which would secure physical assets responsible for the continuity of their operations, and hedge future profits against transition risk.

Key words: management; power company; strategy; climate risk; climate change; core activity; power market

JEL: M1, M4, F23, L21

Tomasz Długosz, A new concept of polycrisis in the light of Directive 2022/2557 on the resilience of critical actors (CER Directive)

Table of contents

- I. Introduction
- II. The concept of „polycrises”
- III. CER Critical Entity Resilience Directive
- IV. Conclusions

Summary: The author considers the concept of a “polycrisis” (when several crisis interact), which can be used in increasing the resilience of critical entities and protecting critical infrastructure. He comes to the conclusion that this is a concept that draws attention to certain trans-systemic threats, and to the reactivity of social systems to these threats. In his view, the Directive on the resilience of critical actors (CAR Directive) requires the consideration of a wide range of inter-system

interdependencies, and creates a field for the use of the concept of a polycrisis. The author expresses concerns that the possible ideological entanglement of the concept of a polycrisis will lead to disproportionate protection of critical infrastructure.

Key words: polycrisis; critical infrastructure; critical entities; key services; vital services; crisis management; energy sector

JEL: K32

Jakub Faszczka, Selected Aspects of EU Regulations Enacted in Response to the Gas Market Crisis

Table of contents

- I. Introduction
- II. EU intervention in the European gas market
- III. Detailed discussion of adopted (non)market measures
 1. Regulation 2022/1032
 2. Regulation 2022/1369
 3. Regulation 2022/1854
 4. Regulation 2022/2576
 5. Regulation 2022/2578
- IV. Summary

Summary: The objective of this study is to clarify the actions taken at the EU level in response to the ongoing gas market crisis, and to provide a preliminary assessment of their effectiveness. This crisis began prior to Russia's attack on Ukraine, and was intended as a preparatory measure for the planned invasion. An exposition of Gazprom's actions is included in the introduction of the article to enhance comprehension of the contextual backdrop that justified the adoption of these EU Regulations. The substantive section of this article presents a curated selection of the most significant measures implemented in order to mitigate the repercussions of the gas crisis. Concurrently, an endeavor is made to evaluate the effectiveness and potential consequences of these legislative measures. Issues such as sanctions, as well as matters relevant to public aid, fall outside the purview of this study, as they have the potential to warrant their individualized assessments.

Key words: Energy security; Art. 194 TFEU; Art. 122 TFEU; SoS Regulation; gas crisis

JEL: K32

Wojciech Jakubiec, Criminal networks as anti-competitive practices of the liquid fuels market

Table of contents

- I. Introduction
- II. Liquid fuels – importance of the sector
- III. Criminal networks on the fuel market
- IV. Crime and fair competition on the liquid fuels market
- V. The economic perspective of combating criminal networks on the fuel market
- VI. Summary

Summary: The aim of the article is to analyze the possibilities of combating organized crime by identifying and analyzing criminal networks in economic terms and their impact on fair competition on the liquid fuels market.

Key words: liquid fuels market; criminal networking, anti-competitive practices, law & economic

JEL: K420

Book review

Izabela Filipiak, Władysław Mielczarski, *Energetyka w okresie transformacji* [Energy in the period of transition], Wydawnictwo Naukowe PWN, Warszawa 2023 (**Marcin Kraśniewski**)