The Road to Energy Justice as a Result of Interdisciplinary Cooperation in the Energy Policy Field

by

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CONTENTS

Abstract

This article pertains to the role of law in regulating the energy market. Justice and solidarity in this area require a debate that should not be fragmented but must, instead, take place in an interdisciplinary manner. The key question that arises relates to the role that the law should play in the area of energy transformation, and thus, whether it should only be a tool for the implementation of political plans and action strategies, or whether it should, in itself, stimulate or determine the transition framework, or be a regulator of transformation. The article tackles selected problems related to Demand Side Management (DSM), de-growth, energy

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poverty, Not In My Back Yard (NIMBY) initiatives and Contracts for Differences (CfD), in order to call for interdisciplinary research and cooperation in this context.

Résumé

Cet article porte sur le rôle du droit dans la régulation du marché de l'énergie. La justice et la solidarité dans ce domaine exigent un débat qui ne doit pas être fragmenté mais doit au contraire se dérouler de manière interdisciplinaire. La question clé qui se pose concerne le rôle que le droit devrait jouer dans le domaine de la transformation énergétique, et donc, s'il devrait être seulement un outil pour la mise en œuvre des plans politiques et des stratégies d'action, ou s'il devrait, en lui-même, stimuler ou déterminer le cadre de la transition, ou être un régulateur de la transformation. L'article aborde certains problèmes liés à la gestion de la demande, à la décroissance, à la pauvreté énergétique, aux initiatives «Not In My Back Yard» (NIMBY) et aux contrats pour les différences (CfD), afin d'appeler à la recherche et à la coopération interdisciplinaires dans ce contexte.

Key words: energy law; regulation of energy market; DSM; de-growth; energy poverty; NIMBY; CfD.

JEL: K29, K32

I. Introduction

Undoubtedly, humanity once again faces groundbreaking challenges of energy transition, which will determine the future of mankind. This process has not only been framed by the issue of access to energy, climate change, and solidarity but also by overall wisdom, rationality, and critical thinking. The law seems to be at the center of such fundamental debates and remains both a direct and indirect means of shaping, organizing, and stimulating the most demanding energy expectations of current times.

However, the question arises as to the role that the law should play in the area of energy transformation. Should the law be a tool for the implementation of political plans and action strategies only? Or should the law, in itself, stimulate and determine the framework, or even a direct regulator of the energy transformation process.

This article does not relate to particular problems of energy transformation. It aims to remind us that the law can, or should be recognized as heavily influencing such transition, provided that it is not limited to normative frameworks only constructed out of a wide social context. The thesis of this paper pertains to a statement that without cooperation and consultation with

economists, engineers, behaviorists, psychologists, sociologists, and political scientists, the law cannot meet the demands of smoothing the transformation process, which has been impacted by various, and frequently antagonistic visions, presuppositions, beliefs, analysis and understandings.

In pursuing the aim of this study, one should first refer to the issue of what role law plays in shaping social and economic relations and what purpose it should fulfill in this area. At the very beginning, however, it should be noted that to describe the role of law in the energy transformation, it seems crucial to talk about the mutual relationship between the law and the economy, rather than about the impact of the law on the economy. Law always functions in a certain reality (economic reality determines its content by indicating axiological foundations), which it captures in a certain normative order. Therefore, the law reflects a certain system of values relevant to the society, which should also be taken into account in the framework of economic relations.[1] Referring to the above considerations as to the role of law in the sphere of the functioning of the energy sector, it should be noted that the law, as such, should include in its normative framework current social expectations in the energy field. In other words, the law should reflect the content of public interest in this area, including applicable variables. This applies both to current events, and to the implementation of plans and strategies directed towards the future. As a result, the question should be answered: what are the current energy goals and what role should the law play in their implementation? Should it be a source of change, or should it merely reflect these changes?

Currently, one can even risk saying that regardless of which economy is affected, we are dealing with a change (or replacement) of energy priorities. In fact, instead of technical accessibility, environmental protection, security of supply, and energy justice are in the foreground here as three basic elements that underpin most energy activities.

II. Energy justice and solidarity – challenging definitions

The issue of environmental protection and security of energy supply has already been the subject of extensive scientific research undertaken based on national and European regulations.[2] It is thus justified to try to address the

[1] Rafał Blicharz, and Jan Grabowski, 'Prawo a gospodarka' in Roman Hauser, Zygmunt Niewiadomski, Andrzej Wróbel (eds.), *Public Economic Law. System Of Administrative Law*. (2nd edn, Vol. 8A, Warsaw 2018).

[2] See Kamil Olczak, 'Odnawialne źródła energii jako przesłanka prawna bezpieczeństwa energetycznego' (2020) 117 Studia Prawno-Ekonomiczne 115; Mirosław Pawełczyk,

specific issue of energy justice and the way in which it is included in legal standards. At the same time, this applies both to the method of regulation and to the methods and process of determining its essence.

First, most academic discussions were held under the themes of energy justice and solidarity, and both terms have already been defined at a sufficient level. Nevertheless, they may remain as quasi-slogans due to the demanding and ambitious conflict of interest that characterizes the market.

It should be noted, however, that each of the relevant market participants (undoubtedly also politicians), acting in pursuit of their market mission (duties), should not stop at considering energy justice as a mere slogan, within their competencies (tasks), but should take specific actions in this context. Moreover, it should be assumed in advance that, in principle, each of the indicated groups, to which consumers and energy companies are added, will, or may represent different and sometimes even contradictory interests in the energy market.

One of the fields of discussion refers to the temporal aspect of the energy transformation, indicating that it should be carried out as soon as possible. Among economic and technological factors, legal professionals themselves are accountable for raising the question of whether regulation of the energy market can or should force consumers to swiftly transform, as well as whether imposing such regulation would result in a change in consumers' mental attitudes or habits towards energy consumption.

Additionally, it is fair to say that Artificial Intelligence (AI) can become a game-changer in this field. While it may accelerate the transition, on the one hand, its learning stage would dramatically increase the appetite for energy, on the other. Moreover, it is very likely in this case that there will be disproportions in access to appropriate algorithms and, consequently, differences in the speed of energy transformation processes and the related energy justice.

The only thing that is certain is the general demand of society for affordable and unlimited energy. However, one should not overlook that there are societal groups that strongly support environmental protection, and that these groups are recognized by behavioral economics as being more willing to accept higher energy costs in order to minimize their consumption. In addition to such "green" motivation, new altruistic inspirations have appeared because of the Russian invasion of Ukraine and the resulting solidarity movement in support of Ukraine. Regardless of how strong and long-term these feelings will be, European consumers have become more aware of energy-centered geopolitics. In parallel,

'Bezpieczeństwo energetyczne jako fundament bezpieczeństwa kraju. Zakres pojęciowy' in Mirosław Pawełczyk (ed.), *Współczesne problemy bezpieczeństwa energetycznego. Sektor gazowy i energetyczny* (1st edn, Warsaw 2018).

observation of EU law has shown that regulations initially focused on energy security, subsequently on competitiveness, energy effectiveness and renewables,[3] and finally, due to the tense geopolitical environment, on energy security again.

In the context of a potential field of conflict between individual interest groups in the energy market, one should consider which postulates and courses of action (assuming that the basic determinant of their actions will be the common good) should be adopted by them in relation to the postulate of energy justice. It is in fact the politicians (public administration) who implement, or at least should implement, the strategies developed by the respective interest groups. It is thus fair to say that they are the ones who should strive to balance the interests of consumers (not the professional stakeholders) and energy companies (professionals), in the name of the common good. At the same time, the balancing interests should not only be understood horizontally, but also vertically, that is, balancing interests within these groups. On the other hand, energy companies, in pursuit of profit, and given the provision of services of general economic interest, should take care of the quality of the services provided, their equal and unlimited availability to all customers, and the security of supply. The role played by both industry and consumers is also not insignificant. Having said that, the actions taken by these groups, as well as their motivations, may be quite different, balancing between economic and environmental motives.

Still, the effect of achieving the objectives of different market participants will undoubtedly lead to an energy transformation understood as a change in the market structure, its functions, and rules of operation. The question arises as to what principles (including in particular legal principles) this transition should be based on in order to ensure energy justice.

III. Demand Side Management, De-growth, Energy Poverty, NIMBY and CfD as interdisciplinary phenomena

So how are the aforementioned problems referred to by scientists? In recent years, researchers have focused on Demand Side Management (hereinafter: DSM) in the energy transformation process in an interdisciplinary context claiming that values, beliefs, and norms have a great impact on the effectiveness of both financial and non-financial DSM methods.[4] Bernadeta Gołębiewska

[3] See more: Piotr Lissoń, 'Energetyka obywatelska jako nowy etap rozwoju prawa energetycznego' (2022) 4101 Acta Universitas Wratislaviensis, 801.

[4] Bernadeta Gołębiowska, 'Psychologiczne aspekty zarządzania popytem na energię elektryczną' (2020) 64(5) Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu 85, 86–99.

noted that the realization has been widely agreed upon that new solutions must be identified when it comes to encouraging final energy receivers to take an active role in the process of energy management.[5] Clearly, such goals are difficult to reach and must not generate additional costs for consumers, so as not to discourage them from taking action. Energy transformation, a worldwide phenomenon, must thus be guided by observations from various scientific fields. Among the postulates of Geoffrey Garver from 2013, one unquestionable issue has been stressed, namely that the rule of ecological law "must permeate legal regimes and other disciplines like economies in a systemic, integrated way, and not be seen as a specialty area of the law that applies to isolated problems".[6] What response would be reasonable for the law to react to economic circumstances, support psychological changes, and mitigate political dangers in the context of energy security? The Authors formulate this question due to the need for a deeper, multilateral, and perhaps even more sincere discussion on the role of law.

Many are of the opinion that the fundamentals of energy transformation are determined by different circumstances, so it can be said that the law itself is not and never will be the only game changer in this process. The number and gravity of the varied dependencies should not allow legal practitioners who stand behind the politicians, or politicians with armed jurists, to believe in their diving force. The truth is, however, that legal professionals have historically supported the basic concept of power in a twofold way, i.e., *princeps legibus solutus est* and *lex est rex*. If the energy transition is still to be held according to a detailed, arbitrary, central-governed path, the role of legal professionals will increase not only in prescribing this path, but also in removing the hurdles encountered. If the process mitigates the dominant position of the public government, the law should remain the organizing factor. Both solutions can be conceptually referred to as the new social contract governing the energy sector.[7] However, because of the inequalities in the energy markets, the workability of the "social contract" may remain infeasible. To quote a recent outstanding publication on Energy Poverty: "[…] should researchers and policymakers only aim to address the problems of the (energy) poor or should they also begin to challenge the rich? Rising inequalities and injustices are at the core of the contestation movements. The blurring lines between need

[5] Ibid., 87.

[6] Geoffrey Garver, 'The Rule of Ecological Law: The Legal Complement to Degrowth Economics' (2023) 5(1) Sustainability 316, 326.

[7] See more: Raphael J Heffron and Louis De Fontenelle, 'Implementing Energy Justice Through A New Social Contract' (2023) 41(2)2 Journal of Energy & Natural Resources Law, 141155; Raphael J Heffron and others, 'Pathways Of Scholarship For Energy Justice And The Social Contract' (2023) 41(2) Journal of Energy & Natural Resources Law 211, 211–232.

and comfort have driven up the overconsumption of resources, which is now at the core of growing economies, particularly in abundant countries. Energy has been at the heart of this dynamic, and inequalities concerning energy are sometimes the most striking precisely because energy is so intimately intertwined with the quality of life".[8]

In this sense, the idea of a social contract would be considered as another cliché or slogan, a simplistically vague ideological frame. Regardless of the final answer, at this moment we can classify basic areas in which the law may influence the energy transition, accentuating that groups of interdisciplinary researchers should work together in order to evaluate the pros and cons of two different approaches: supporting and mandating. As we live in the era of technological revolution, which is inseparably connected to the reality of energy transition, legal professionals should include scientists of related areas to participate in the legal discussions that focus more on a vision and strategy for the future. The importance of the energy transformation process requires cooperation with economists, political scientists, social behaviorists, sociologists, and engineers. It is necessary for governments to organize and financially support such discussions. Obviously, geopolitical reasons will play a fundamental role in the transition, but this does not exclude meritocracy. In the context of international energy solidarity – as long as it is agreed upon that it is closer to real life than to an utopia – interdisciplinary academic discussions, in connection to business and political circumstances, should weigh whether energy transition is one-sided, only focused on green energy, or if it is in fact diversified, that is, a long term mix between fossil fuels and renewables.

In shaping different energy programmes, we now refer to economic equal opportunities, redistribution, axiology, and energy solidarity, the academic community seems to be obliged to pursue the answers to the following questions: Should the more developed countries allow those less developed to use fossil fuels and, as a result, place the transition burden on wealthier states, with faster transition into green energy? So should we be talking about regional diversification as part of the transition, rather than the immediate and mandated implementation of green energy by particular States? What are the atypical examples of solidarity in the energy transition process? Does the energy transformation rely on energy saving and how can the final recipients of energy be motivated to participate in this part of the process?

Clearly, these questions are currently related to the policy of sanctions imposed on Russia after its invasion of Ukraine. On the one hand, it has forced many countries to re-frame the aims of their energy strategies. It can

[8] George Jiglau and others, 'Looking back to look forward: Reflections from networked research on energy poverty' (2023) 26(3) iScience 106083.

therefore be argued that those supply changes based on importers of fossil fuels, should be called atypical transitions, as opposed to the increasing shift to available renewable energy sources, seen as a typical transition. In the dynamic world of geopolitical determinants, the subjective transformation should also be recognized as the early stage of the energy transition process.

An issue that currently surfaces in different narratives is the recently published call by the European Energy Agency, modified in April 2023, that asks: "Could the European Green Deal, for example, become a catalyst for EU citizens to create a society that consumes less and grows in other than material dimensions? As global decoupling of economic growth and resource consumption is not happening, real creativity is called for: how can society develop and grow in quality (e.g. purpose, solidarity, empathy), rather than in quantity (e.g. material standards of living), in a more equitable way? What are we willing to renounce to meet our sustainability ambitions?".[9] The European Energy Agency takes seriously into consideration publications claiming that the EU is not capable of achieving its 2050 goals only by way of a transition to renewables. This illustrates how many dependencies shape the energy transition, which we are becoming more aware of, and which must be consequently and deeply analyzed by EU legislators in order not to require people to try to achieve the unachievable.

Furthermore, awareness of the energy gamble may encourage politicians to refer to democracy, and even more importantly to local democracy to pass-on the burden directly to citizens. As Roman Mauger has noticed: "Applying the logic of degrowth to the whole society would require an overhaul of the existing legal framework".[10] De-growth, as a concept, may not be introduced by legal provisions that would oblige individuals to limit their energy consumption. But such rules can allow for local energy self-government, such as Citizens Energy Communities (hereinafter: CECs) or Renewable Energy Communities (hereinafter: RECs).[11] This approach is essentially better than forcing consumers to change, even though it may shift part of the burden of the costs of energy transition to local decision-makers. Furthermore, CECs and RECs embrace another interesting social issue, namely the willingness of energy consumers to

[9] 'Growth without economic growth' (European Energy Agency 20 April 2023) <www.eea.europa.eu/publications/growth-without-economic-growth> accessed 18 August 2023.

[10] Romain Mauger, 'Finding A Needle In A Haystack? Identifying Degrowth-Compatible Provisions In EU Energy Law For A Just Transition To Net Zero By 2050' (2023) 41(2) Journal of Energy & Natural Resources Law 183.

[11] On the postulates on how to regulate CECs and RECs see: Maciej M Sokołowski, 'Renewable And Citizen Energy Communities In The European Union: How (Not) To Regulate Community Energy In National Laws And Policies' (2020) 38(3) Journal of Energy & Natural Resources Law 289.

save energy when their neighborhood does.[12] For legal professionals, it seems necessary to elaborate on the potential solutions in cooperation with sociologists, in view of the fact that currently, de-growth is not a method of reconciliation but basically it is contrary to many social demands.

At this moment, CECs and RECs have been recognized as empowering the prosumer movement, and in the near future, EU Member States will grant them specific legal frameworks within a more or less regulatory approach. The new Polish legislation on energy law and renewables,[13] which implements EU directives, defines CECs as legal entities based on voluntary and open access, in which the decision making and controlling powers are performed by members and shareholders. Significantly, membership in CECs is limited to: individuals, local governments, micro-enterprises, and small businesses, whose actions in the energy sector do not constitute their core activities. The main purpose of CECs is dedicated to:

- in the field of electric energy: production, distribution, sale, turnover, aggregation and storage;
- undertakings that are focused on the improvement of energy efficiency;
- providing services in relation to charging of electric vehicles (EVs);
- providing other services in the energy market, including system services and flexibility services;
- production, use, storage, or sale of biogas, agricultural biogas, biomass, and agricultural biomass.[14]

Without a doubt, energy citizenship has gradually become a legal concept, as opposed to large–scale corporate energy systems.[15] Additionally, such legal forms should accelerate local awareness of the energy transformation. The question is whether they would balance another social challenge of introducing new energy sources into a neighborhood. Renewables and new technologies raise a question of safety among local residents when it comes to building windmills or small modular reactors (hereinafter: SMRs). Therefore, many projects encounter long-term obstacles caused by so called NIMBY – that is, NOT IN MY BACKYARD – responses. Even though the situation should be clearer about SMR as a passive technology, grassroots movements would still appear. Therefore, the law on such technology should, to some extent, but also

[12] See more Christina Kaliampakou, Lefkothea.Papada and Dimitris Damigos, 'Are Energy-Vulnerable Households More Prone to Informative, Market, and Behavioral Biases?' (2021) 11(4) Societies, 126.

[13] The new regulations were introduced by the act of July 28, 2023, amending the Energy Law and certain other acts (Dz. U. 2023:1681).

[14] Art. 3(13)f Energy Law Act, (Dz. U. 2022:1385).

[15] Lissoń (n 3), 801.

in advance, take into account an analysis of the influence of the game between a weak NIMBY and a cooperate non-NIMBY approach.

Quoting Anne Schwenkenbecher: "In short, empirical evidence seems to suggest that stakeholder engagement and procedures that allow for non-standard decision-making will eventually play in favor of a shift to renewables. It seems that people are just not that concerned with wind farms if they consider them 'their own' project. Not only can community consultation ensure that wind turbines are erected where they least disturb local residents, but it seems that if locals become decision-makers or even co-owners, they find them less objectionable. Therefore, the practical conflict between conservation and mitigation concerns seems – at least in principle – resolvable. To the extent that values change during such processes, the theoretical conflict – as to which concern is morally weightier – is resolved, too".[16]

On the other hand, however, extraordinary political circumstances and voters' expectations have led to the enactment of energy allowances, which *per se* remain in breach of the idea of energy saving. This is the illustration of the conflict of interests in the process of energy transition when it comes to final social attitudes in situations when energy prices experience a sudden price hike. Such a rapid change would not motivate users to save energy but would ignite demands for price freezes and allowances. Today – especially in politically polarized societies – politics itself begins to dominate the energy transformation field. Paradoxically, the regulation of energy prices does limit the risk of Energy Poverty (hereinafter: EP) escalation, which seems to be fundamental not only as a form of social solidarity, but as an indispensable prerequisite for an effective and smooth energy transition. It has led to a debate on how to define energy poverty and it is only a matter of time when legal professionals settle on one of the subjective indicators for EP, namely the "inability to keep the home adequately warm".[17]

In 2018, Radosław Mędrzycki and Mariusz Szyrski noticed: "Energy poverty is a multifaceted issue of great complexity. Such phenomena often cannot be easily defined by law, whereas it is difficult to express their nature unambiguously. Unfortunately, this leads to a fragmentary legal approach to such issues and a so-to-speak, patchwork type of regulations that focus on the most critical areas one at a time, which is quite understandable. Such

[16] Anne Schwenkenbacher, 'What Is Wrong With Nimbys? Renewable Energy, Landscape Impacts And Incommensurable Values' (2017) 26(6) Environmental Values 711.

[17] Departament for Business, Energy, & Industrial Strategy, 'Contracts for Difference for Low Carbon Electricity Generation Consultation on policy considerations for future rounds of the Contracts for Difference scheme' (December 2022) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1124050/considerations_for_future_Contracts_for_Difference_CfD_rounds.pdf> accessed 18 August 2023.

an approach, however, leads to a lack of complementarity of various legal regulations and, in effect, creates clear absurdities in the interpretation of the regulations".[18] Since then, brief legal definitions of Energy Poverty have appeared in selected EU directives, but, generally, it is up to the Member States to determine how EP is to be understood.

All this shows that a revolution in the transformation process will make it more fragile, compared to the evolutionary approach, and it is therefore incumbent on legal professionals to carefully observe what must not be regulated. This view is at odds with those who state that "legal regimes should support a radical re-focusing of the economy on reduction of its throughput of material and energy".[19]

Another important issue that needs to be resolved through interdisciplinary research relates to dynamic electricity prices. It is certain at this point that econometrics essentially support the law in formulating both suggestions and conclusions. On the basis of the aforementioned reports, the market is aware that to amplify the practical meaning of such contracts, consumers need to deeply understand how to achieve throughput in the transition to dynamic electricity prices. Specifically, consumers should be provided with the following information: seasonal variations in prices, daily demands for energy, effectiveness depending on a flexible use of appliances, and numbers in past energy consumption.[20] A less obvious question is whether dynamic electricity prices would shape new habits in energy savings, and whether such a change may be recognized as part of the de-growth concept. At first sight, and with consumers fully understanding how this structure works, the system should gradually modify the way in which consumers use energy, as they are directly motivated by the reduction in the cost of their energy bills. Overall, it will have an impact on the efficiency of energy use. Another consideration is the potential instability of consumer incentives since in theory, with a reduction in energy prices, consumers may return to the everyday convenience of higher energy consumption. How can the law contribute to a long-term change in consumer behavior without forcing consumers to change? This question remains open for discussion between legal professionals and sociologists.

Similarly, widely popularized Contracts for Differences (hereinafter: CfD), which support renewables, have recently been re-discussed in the UK,

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[18] Radosław Mędrzycki and Mariusz Szyrski, 'Energy Poverty as a European Union and Polish Legal Issue' (2018) 23(3) Białostockie Studia Prawnicze 125, 128.

[19] Garver, (n 6).

[20] Iakov Frizis and Stijn Van Hummeln, *Research on Consumer Risks and Benefits of Dynamic Electricity Price Contracts. A Risk or an Opportunity to Save*? (1st edn, Cambridge Econometrics 2022) <https://www.beuc.eu/sites/default/files/publications/beuc-x-2022-033-report_risks-and-benefits-of-dynamic-electricity-pricing.pdf> accessed 18 August 2023.

a country, which has hugely leaned on such agreements in order to ensure that CfD "evolves to keep pace with the wider sector and the Governmental priorities".[21] At the same time, energy law has to constantly and dynamically adapt to new circumstances. The UK debate on CfD confirms what J. Liu, J. Wang, and J. Cardinal concluded in 2022: "Moreover, CfD and CM both use long-term contracts (15 years or more) to provide stable electricity prices and encourage enough investment. However, the history of electricity market reforms in the UK tells us that reforms have been increasingly frequent: the first reform (The Pool) lasted for ten years, the second reform for nine years, and the ongoing reform now is only for seven years. It is still debatable whether this long-term concordance of incentives will actually stimulate more RESs. Should the growth of RESs in the UK be attributed more to scientific and technological developments or government policies?".[22]

In the abovementioned context, there are no doubts that legal provisions are pivotal drivers for the future, in the process of creating prosumers. However, without interdisciplinary backup, the law may only end up with short-term experiments.

IV. Conclusions

To conclude, this article clearly shows that legal disputes about the energy transition would not motivate or organize the process of effective energy transformation in the long term, unless they have the backup or equal support from the representatives of the economic, political, and social sciences. Legislative power that rests with legal professionals must remain rational in the regulatory process, also when deciding whether to force or merely encourage change, and it must rely on a wide analytical spectrum regarding the mentality and habits of individuals. The energy transition, apart from its practical and fundamental meaning, refers to unique and exceptional social phenomena that should be strategically and intentionally researched in an interdisciplinary way. The law itself must not be instrumentally used by some of the energy market participants to the detriment of others. Legal professionals should not determine how the interests of consumers, energy companies and individual nation states can be balanced without interdisciplinary assessments.

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[21] Department for Business, Energy, & Industrial Strategy (n 17).

[22] Jinqi Liu, Jihong Wang and Joel Cardinal, 'Evolution and Reform of UK Electricity Market' (2022) 161 Renewable and Sustainable Energy Reviews <https://doi.org/10.1016/j.rser.2022.112317>.

This is particularly true because there have so far been many difficulties in formulating what balance and harmony in the energy sector actually mean. Technological progress and a dynamic energy environment require pragmatic actions, but the transition – as a fragile social issue – also reminds us that the law is not a technical instrument in the economic laboratory.

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