

Energy Security of the Republic of Poland In The Context of Introducing Legislative Changes*

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Abstract

This article presents the way in which the legislator operates in terms of its legislative policy. By presenting in quantitative terms the number of pages of enacted acts, an attempt was made to assess the activity of the Polish state in the context of ensuring legal security. The considerations undertaken in the article were made on the basis of an analysis of the manner of enacting amendments to the energy law in the Republic of Poland in 2024.

Keywords: energy security, legal stability, energy law

Introduction

Ensuring the safety of citizens is one of the fundamental principles of every state. Although this statement seems obvious, explaining it may prove difficult. This is due to the difficulty in defining the term 'safety'. Security is an ambiguous concept and its interpretation is constantly being revisited in various fields and scientific disciplines. The interdisciplinary nature of this concept means that security is not a homogeneous category, which in turn makes it impossible to establish a single position on the subject [1, 2]. It is generally accepted that the importance of internal security in social life and state activities is increasing in the present day. Almost all public administration, social and economic policy bodies are interested in these issues. It is also the main area of interest for government and local government bodies. Events of recent years, such as the emergence of the Covid-19 pandemic and the outbreak of war in Ukraine on 24 February 2022, mean that citizens themselves are also increasingly concerned with security issues. Issues related to the need to ensure health, social and energy security have become an integral part of contemporary public discourse. Changes in health, social and energy policy are mainly determined by external factors (Wiśniewski, 2013). However, internal factors such as the content, number and manner of enacting individual legal acts undoubtedly influence the perception of a given type of security. It is worth considering whether the mere fact of the coronavirus pandemic or the subsequent legal restrictions (e.g. restrictions on business activity, movement, etc.) had a greater impact on citizens' perceptions. The situation is similar in the case of the economic crisis, for which the conflict in Ukraine should be identified as a key factor (e.g. regulating maximum electricity prices or granting social benefits).

This article attempts to consider the very idea of energy security and to determine how the content and procedure of enacted legal acts affect the perception of this security. Ensuring energy security can be considered a fundamental activity of the state, which is an indicator of its economic development. Energy security is a complex phenomenon influenced by a wide range of factors [4, 5]. The considerations are based on an analysis of the number and manner of enacting legal acts in Poland, with particular emphasis on matters relating to energy law. (In)stability of the legal system in Poland

Figure 1 shows the number of pages of legal acts passed in Poland between 2008 and 2024, including regulations concerning energy.

Since the beginning of the political transformation in Poland, the process of ‘producing’ law has been gradually but systematically increasing. Between 1989 and 2016, the number of pages of newly enacted law (acts, regulations and international agreements) increased practically every year. The largest increase occurred in 2016, when over 35,000 pages of new law were enacted. The scale of the increase in regulations was so large that it became one of the systemic barriers to economic development [6, 7]. Between 2017 and 2020, the production of laws in Poland slowed down significantly (in the pandemic year of 2020, it reached ‘only’ 14,900 pages), but then accelerated again and reached 34,400 in 2023. In 2024, the number of pages of new legislation passed fell to 14,200 (Grant Thornton, 2024). The dynamics of the adoption of new legislation in Poland in individual years is illustrated in the figure below.

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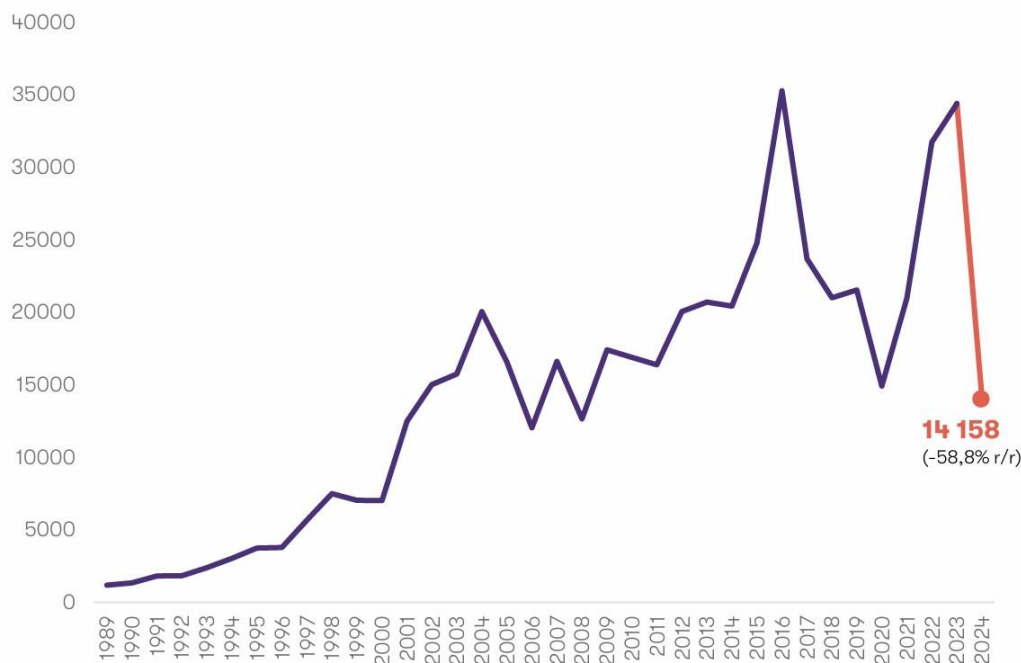


Figure 1. Number of pages of legal acts adopted in Poland between 1989 and 2024

Source: own study based on data from Grant Thornton

As shown in the figure above, the number of new pages of legal acts fell by 34,400 to ‘only’

14,200, i.e. by 58.8%. The last time such a level was recorded was in 2008. As Grant Thornton (Grant Thornton, 2024) points out, despite the significant decline, the scale of new law production is still very large, and physically tracking all newly enacted regulations seems almost impossible. If someone wanted to read all the new regulations passed in 2024, they would have to spend 94 minutes on it every working day (assuming that it takes 2 minutes

to read one page of a legal act). Simply analysing the amendments is not enough to fully grasp their normative significance, as the essential part of the legislative process boils down to interfering with existing regulations. To a large extent, changes in the law do not consist in the creation of uniform, specific legal acts, but in sets of individual changes – added articles or provisions with modified wording – which, when considered in isolation from the original text, lose their clarity and the possibility of correct interpretation. In order to understand the meaning of the adopted regulations, the addressees of the law – both economic entities and citizens – should, in theory, also analyse the consolidated texts of individual acts in parallel. However, this procedure would require a considerable amount of time, potentially amounting to many hours each day. Taking into account other sources of law and instruments for their interpretation, such as directly applicable EU regulations, legal explanations, resolutions, tax interpretations and court rulings, it must be concluded that it is practically impossible to constantly monitor all changes in the legal system.

When considering the volatility of legal regulations in Poland from the perspective of energy law, it should be noted that in 2024, a total of 102 pages of new energy-related legal acts were adopted. When comparing this number to the total amount of legislation adopted in 2024, this result does not seem significant. However, it is worth noting that the changes in question were introduced in 14 different normative acts (3 laws and 11 regulations). Thus, changes in Polish energy law occurred more than once a month.

Changes in legislation and energy stability in Poland

The energy transition in Poland, as in many other countries, is a key element of the strategy for sustainable development and combating climate change. However, changes in legislation can have a significant impact on the pace and direction of this transition. In recent years, Poland has introduced a number of regulations that have had both positive and negative effects on the development of the energy sector.

One of the key areas in which legal changes have affected the energy transition is the regulation of renewable energy sources. The introduction of the RES Act in 2015 (Act on Renewable Energy Sources, 2015) was intended to support the development of renewable energy through an auction system. However, amendments to this Act introduced in subsequent years introduced certain restrictions that slowed down the development of this sector. An example of this is the so-called ‘distance law’ of 2016 (Act on Investments in Wind Power Plants, 2016), which introduced restrictive regulations on the location of wind farms, significantly limiting the possibilities for their construction.

According to a report by Forum Energii (Forum Energii, 2024), in 2023, for the first time in history, the share of coal in electricity production in Poland fell to 60.5 per cent, a significant drop of almost 10 percentage points compared to the previous year. This was due to renewable sources replacing coal-based energy production. At the same time, however, energy generated from gas fuels increased by as much as 41 per cent. What changes and effects can we expect in the near future as part of the green transition? What is currently blocking decarbonisation and will the legal regulations expected by the industry accelerate this process?

Replacing coal with renewable energy sources is a very desirable trend, but part of the energy mix comes from other fossil fuels, such as gas. In addition, the share of gas energy is growing at an alarming rate, which means that we are not eliminating fossil fuels quickly enough, but are simply replacing some with others. The development of renewable energy is definitely too slow, according to the expert, who cites the large number of connection refusals and cyclical shutdowns of energy consumption from renewable sources to maintain the smooth flow of energy from coal as examples of the insufficient pace of change, the lack of appropriate conditions and the capacity of transmission networks.

At the time of writing, almost 10 different ministries are involved in the energy transition in Poland, whereas what is needed is a single coordination point, e.g. a government representative with the rank of deputy prime minister. What our transition lacks, therefore, is adequate coordination of activities at various levels.

The reasons why Poland absolutely must transform its energy sector are:

- Energy security. Already today, a quarter of the network's resources are outdated, and over the next 10 years, old coal-fired power plants will have to be replaced with new ones, preferably zero-emission ones.
- Diversification of energy sources – becoming independent of existing resources and fossil fuels. After the outbreak of war in Ukraine and the introduction of sanctions against Russia,

Poland felt the pain of its dependence on Russian gas very acutely.

- Climate responsibility.

In Poland, some renewable sources, such as biogas and biomethane, which could support weather-dependent sources such as solar and wind energy, are at a relatively low level. Another element of the energy transition that needs to be taken into account in our climate conditions is energy storage facilities, where we can accumulate and store energy for use on windless days and during months with limited sunshine.

It is also necessary to build energy self-governance, energy democracy, cooperatives and clusters, i.e. to approach the transition in a very broad and cross-cutting manner, taking into account the circular economy, investments in renewable energy sources, energy efficiency and the decarbonisation of transport.

Coordination of activities and impetus from governments play a significant role in the longterm, sustainable development of companies. Meanwhile, every few years we have a completely new team, which for the most part does not continue what was done before, and what is more, has nothing to continue. Poland is the only country in the European Union that has not presented a long-term strategy for 2050, which we were required to do by 1 January 2020.

It is important to have a clear direction that we will consistently follow, not at the level of declarations, but of real actions; all market participants will know what to do, rather than just hearing declarations every few years about moving away from coal, but without any specifics as to when this will happen. Stability in pursuing a specific goal facilitates the making and implementation of investment decisions.

Thus, three elements will determine the future of the transition:

- regulations,
- good use of money,
- balance in the functioning of the European Union.

Changes in legislation, legal regulations, and climate targets set and imposed on companies have been instrumental in motivating companies to take action. However, some of the regulations in the Fit for 55 package are too narrow in terms of the permissible tools that are left at the disposal of businesses. An example is the Red III directive, which clearly states that hydrogen must come from electrolysis, thus closing the door to, for example, biohydrogen from waste gasification. Another drawback of the regulations is the speed of implementation of national legislation in relation to EU directives, as well as local regulations related to permits, which slow down the pace of decision-making and the start of investments. In order to implement decarbonisation projects, investors need predictability, dialogue and the government to keep pace with the changing reality. Changes in the law are often insufficient and delayed. However, the energy transition is not only a matter for business or the state, but also for all citizens, their choices, how we live and consume. Action must be taken to achieve independence, security and responsibility for new generations, also for the sake of the wallets of ordinary citizens and the Polish economy.

The future of energy in Poland

Photovoltaics and energy storage are technologies that are becoming cheaper all the time. The direction of their development is definitely towards increasing energy efficiency. Despite this, discussions about nuclear power plants are still ongoing in Poland. According to some experts, it is not worth investing in nuclear and other expensive installations because technology changes every dozen or so years. That is exactly how long it takes to build a nuclear power plant.

Offshore wind energy involves large-scale investments that significantly exceed onshore installations in terms of capacity. The wind in the Baltic Sea blows steadily, and wind technologies are now mature enough that we know how efficiently they will operate, but all this requires grid adaptation. Fortunately, the nearest investments planned for the Baltic Sea already have connection agreements, and operators are aware of the increase in energy capacity in these areas. However, the further development of wind energy from the Baltic Sea will require the expansion of the energy grid in the north of the country and the proper distribution of energy to other regions. What needs to be taken into account in this regard is the fact that the model of transferring energy to the grid will change from one based on evenly produced power from fossil fuels to one in which the amount of energy will depend on the weather. The most important needs related to the aforementioned development of wind energy are:

- a flexible market with a system of incentives for consumers in this industry to use energy when it is produced and refrain from using it at other times,
- effective energy storage,
- expansion of the heating network.

Managing energy flow and the entire network is a huge area for innovation, not only in terms of equipment but also software. Technological breakthroughs in this regard could push the sector towards decarbonisation faster than we are seeing today.

The energy transition is one of the biggest challenges facing Polish entrepreneurs. With new European Union regulations, such as the CSRD directive and the CBAM system, countries and their economies will have to adapt their activities to the growing requirements related to sustainable development, ESG reporting and carbon circulation. Polish companies will also face the need to meet the same standards.

The CSRD (European Union, 2022) introduces new ESG reporting obligations for large companies from 2025. When assessing their environmental impact, these companies will start to require their suppliers and smaller partners, including Polish SMEs, to implement sustainable practices. This means that in order to retain or gain new customers, Polish companies will have to meet increasingly stringent environmental standards.

The second reading of the Polish Economy Decarbonisation Index confirms a significant increase in the business community's expectations regarding the acceleration of decarbonisation and environmental protection. The new requirements mean that SMEs should not wait idly either. A survey by the Ministry of Development and Technology showed that only 6% of small and medium-sized enterprises have knowledge of ESG, and as many as 80.7% of respondents do not measure their carbon footprint.

ESG reporting – new obligations for companies in Poland from 2025:

- CSRD, or The Corporate Sustainability Reporting Directive, is an EU directive that significantly expands non-financial reporting requirements. Its aim is to increase the transparency of companies' activities in the area of sustainable development and to provide investors with more reliable information about the impact of economic activity on the natural and social environment.

CBAM (European Union, 2023), on the other hand, is a new mechanism designed to prevent the transfer of CO₂ emissions to countries with less restrictive environmental regulations. It involves imposing duties on certain imported products, such as steel, cement, aluminium, fertilisers and electricity, if the country of origin does not have appropriate CO₂ emission prices in place. CBAM may provide an incentive to invest in low-carbon technologies that will reduce carbon dioxide emissions and avoid additional costs.

From 2025, non-financial reporting requirements will apply to a much larger number of companies than before. The new regulations entail additional costs, but the CSRD may open up opportunities for small and medium-sized enterprises that want to build their reputation as socially and environmentally responsible companies.

One of the key aspects of ESG-compliant development is strategic investment planning. Companies' projects must be assessed not only in terms of financial return and compliance with applicable regulations, but also in terms of their impact on the environment and the community. This primarily involves specific solutions that lead to a reduction in resource consumption, CO₂ emissions and plastic use. A good example is investment in renewable energy sources, such as solar energy, which can also help to reduce operating costs.

Green energy as a way to reduce costs. New regulations most often require large corporations to take action first. However, by implementing new standards, they affect the entire value chain, including their suppliers and subcontractors. This means that the possibility of concluding a contract is increasingly dependent on, among other things, the implementation of sustainable development measures by the company. Small and medium-sized enterprises with good ESG practices gain a competitive advantage in the market. What is more, today's customers increasingly expect businesses to be socially responsible.

- CSRD – although aimed at large companies – has an indirect impact on SMEs. Preparing for these changes is a challenge, but at the same time an opportunity for growth and increased competitiveness. Therefore, it is not worth delaying decisions to invest in green energy. According to data from the Institute for Renewable Energy, the installed capacity of photovoltaics in Poland at the end of 2023 will exceed 17 GW. This represents an increase of as much as 4.6 GW compared to 2022.
- CBAM system: How will the carbon tax affect the prices of imported products? CBAM, or Carbon Border Adjustment Mechanism, is a new instrument introduced by the European Union to reduce greenhouse gas emissions and ensure fair competition for European producers. CBAM means that goods imported into the EU whose production involves high CO₂ emissions will be subject to an additional tax. This applies to

products such as aluminium, cement and steel. The aim is to level the playing field between products manufactured in the EU, where high emission standards apply, and products imported from countries where these standards are less stringent.

As a result, non-EU manufacturers will have an incentive to reduce carbon dioxide emissions in their production processes in order to avoid high fees. CBAM is intended to protect European industry from unfair competition from manufacturers in countries with lower environmental standards. For Polish companies that manufacture their products within the EU, CBAM may bring several benefits:

- increased competitiveness vis-à-vis non-EU suppliers,
- an incentive to implement innovations and develop new products and services,
- an incentive for non-EU organisations to invest locally and seek domestic partners. The RED III and ETS2 directives are also very important – these are EU regulations aimed at accelerating the energy transition and reducing greenhouse gas emissions. Their goal is to increase the share of renewable energy sources in final energy consumption and reduce CO2 emissions in sectors that were not covered by the first ETS system.

Decarbonisation in transport

Transport is an area of the economy where emissions continue to pose a huge challenge: compared to 1990, emissions from transport have more than doubled. The following measures are essential to decarbonise transport:

- Infrastructure for alternative fuels. As long as this is lacking, we cannot expect the popularity of such fuels to increase.
- Technological and economic availability of zero-emission drives. This applies to both passenger and freight transport. If the technology is not available and affordable, its use will remain niche.
- Diversification of the alternative fuel portfolio, allowing traditional drives to be replaced with zero-emission ones. Transition from petrol or diesel to hydrogen, electromobility and synthetic fuels.

In 2025, the Polish legislator adopted an amendment to the Act on Electromobility and Alternative Fuels. According to this amendment, cities with more than 100,000 inhabitants will be obliged to purchase only zero-emission buses and introduce Clean Transport Zones if they exceed nitrogen dioxide emission levels.

In accordance with the amendment to the act, from 2026, cities with more than 100,000 inhabitants will be subject to Clean Transport Zones if they exceed the permissible level of nitrogen dioxide in the air. Exceedances of the annual average level of this pollutant have so far been recorded in four zones: Warsaw, Krakow, Wrocław and Katowice, but Clean Transport

Zones could potentially be established in 37 cities. For now, such a zone exists only in Warsaw. The amendment to the act also stipulates that from 2026, cities with more than 100,000 inhabitants will be obliged to purchase only zero-emission buses. At the same time, local governments with a population of over 50,000, which currently have to perform this public task using zero- and low-emission vehicles, will not be subject to these regulations. The armed forces are also exempt from the obligation to ensure an adequate share of electric vehicles in transport as specified by the Act.

Local government units, with the exception of municipalities and counties with a population of less than 50,000, are to ensure that the share of electric vehicles in the fleet of motor vehicles used by the offices serving them is at least 22% - this will also apply to central and central government offices.

The Association of Polish Cities pointed out that 37 cities in Poland with more than 100,000 inhabitants would have to purchase 7,363 zero-emission buses to meet the requirements of the act. In June this year, nine of these 37 cities did not have a single zero-emission bus. It also calculated that a zero-emission bus is 290% more expensive than a diesel bus, 130% more expensive than a gas bus and 76% more expensive than a hybrid bus. The Association of Polish Cities also appealed for support for local governments for the purchase and operation of such buses. This is because replacing all buses with zero-emission ones will cost PLN 25.7 billion. The level of support should not be lower than 85%, as local governments will only be able to contribute 15% from their own pockets. PLN 3

billion has been allocated from the National Reconstruction Plan (KPO) to local governments for this purpose, and if there are insufficient funds, money can be obtained from the Modernisation Fund.

Investors' interest in the construction of incineration plants remains strong. In the second call for proposals for the support programme covering the energy recovery of municipal waste, 21 investments with a total value of nearly PLN 10 billion were submitted. The requested funding exceeds the available pool of funds by nearly three times. So far, incineration plants are the biggest 'hit' of the Modernisation Fund, which supports such installations as part of the 'Rational Waste Management' programme – its third part, covering the use of alternative fuels for energy purposes.

In the future, an important factor for ITPOs may be their inclusion in the EU CO₂ emissions trading system. According to the amendment to the EU ETS directive, from 1 January 2024, they will have to verify and report greenhouse gas emissions. By 31 July 2026, the European Commission is to prepare a report assessing the validity of including ITPOs in the emissions trading system from 2028, with a possible derogation until 31 December 2030. The largest companies are already preparing for this prospect. Fortum assumes that one of the next steps in the development of incineration plants will be CO₂ capture, which can then be used together with green hydrogen to produce plastics.

In Poland, Krakowski Holding Komunalny has so far taken a keen interest in CO₂ capture, storage and utilisation (CCS/CCU) technologies. As part of a project carried out in cooperation with CO₂ Management from Norway, a study is being prepared on the use of these technologies in the incineration plant in Krakow. Financed by the Norwegian Funds, the work began in June last year and is expected to last until May 2024.

Eksperti zgodnie podkreślają, że ostatnie lata w Polsce to zahamowanie transformacji energetycznej, do czego doprowadziły zmiany wcześniejszych kierunków działań, czy wręcz brak jakiegokolwiek działalności ustawodawczej czy regulacyjnej państwa. Nie dziwi w tym kontekście głosy, domagające się skupienia wszystkich spraw i kompetencji, związanych z transformacją, w rękach jednego urzędu – koordynatora, który zająłby się także sprawną implementacją prawa unijnego. Według ekspertów powinno to zapewnić wszystkim zainteresowanym tak potrzebną w tej dziedzinie ciągłość działań i przewidywalność wprowadzanych rozwiązań.

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