The rapprochement and subsequent integration of Central and Eastern European (CEE) countries into the European Union (EU) has led to the acceptance of their legal and institutional frameworks and, consequently, their various policies, including energy policy (Schimmelfennig and Sedelmeier 2005). The transition to a market economy in these countries has been economically and socially traumatic (Staehr 2013; Reichard 2011), although politically praised in Western Europe, with its ideas of democracy, rule of law, and human rights (Black et al. 2010; Szondi 2007). Technically, this option resulted from the weighted analysis of the incentives and disincentives inherent in the political, economic, social, and legal factors (contextual factors or institutions) present at a given historical moment in the region. The opportunity
cost and cost–benefit of the situation within a specific legal framework has been taken into account (Tchalakov and Mitev 2019; Zhelyazkova et al. 2019). It is up to the so-called Economic Analysis of Law to apply this type of economic rationing to the rule or legal framework to forecast the subject’s (in this case, the state’s) behaviour according to a set of contextual factors permeated by a given rule or legal framework (Hacker et al. 2020). That is what will be done in this research in relation to the energy and energy transition regulations of the EU (Treaty on the Functioning of the European Union, relevant regulations and directives), coupled with its broader conception of environmental policy (Waisman et al. 2019).

After a methodological part (Sect. 2) and a discussion on the general framework (Sect. 3) the fourth section focuses on the behavioural stimuli derived from these rules in order to clarify whether or not they promote the cohesion of member states towards the stated objectives. Initially, the content of the basic provisions on energy will be taken into account and then the type of regulations adopted by the EU to carry out its energy transition policy will be examined. Section 5 provides an analysis of the CEE region in relation to its own internal factors, both general and specific (energy efficiency of buildings, renewable energy, and mobility).

2 Methodology

In law, contrary to other fields of social sciences, methodology, when present, is essentially reduced to the interpretation of the legal norm (its structure and formal logic). Due to its enormous complexity and laboriousness, the application of the Economic Analysis of Law (commonly linked to domestic law and the individual: civil liability, contracts, and property) is avoided in international matters (two of its rare exceptions being van Aaken and Broude 2016; Alvares Garcia Júnior 2017). The historical origin of this way of evaluating the “efficiency of the norm” (Miceli 2017, p. 3), on the basis of costs (prices, disincentives, or discouragement) and benefits (incentives or encouragement) which can be both economic (or patrimonial) and social, political, geopolitical, etc. (extra patrimonial, to use the generic term by Bullard 2018) is controversial.
Its base could be the works of Jeremy Bentham in the eighteenth and nineteenth centuries, or some studies of Adam Smith, or even, in much more recent times (from 1946), to settle in certain investigations carried out in the School of Law of the University of Chicago (Priest 2020). Its central idea—which will be applied within this text—is to understand what motivates a state to behave in one way or another, which, in this case, refers particularly to more or less quickly adopting EU rules on energy transition.

3 Framework and Political Basis of the Regulations Analysed

The European energy field consists of several measures aimed at achieving an integrated energy market, sustainability of the energy sector, and the security of energy supply. The regulatory framework that informs the European Union’s energy policy has its fundamental legal basis in the Treaty on the Functioning of the European Union (Article 194), its specific provisions (Articles 122, 170, 171, and 172) and other provisions affecting energy policy (Articles 114, 216, 217, and 218). We have to, however, consider also the following documents and decisions as the political basis for the regulations under analysis: Green Paper A framework for climate and energy policies in 2030 published by the European Commission (2013); A policy framework for climate and energy in the period from 2020 to 2030 (European Commission 2014) that proposed not to renew binding national targets for renewable energy after 2020 (a binding target is envisaged only at Union level: 27% of energy consumption must come from renewable sources); or European Council’s (2014a) proposal to establish the Energy Union which, inter alia, provides for the generation of more green energy and the continued fight against climate change.

Important is also the European Council’s (2014b) insistence on the Energy Union’s creation and recommendation of additional measures to reduce energy dependence and increase the security of electricity and gas supply within the EU. In the framework for action on climate and energy
for 2030, European Union leaders endorsed four objectives: the reduction of greenhouse gas (GHG) emissions by 40% by 2030 compared to 1990, an increase of renewable energy sources (RES) share to at least 27% by 2030, an increase in energy efficiency by 27% (with a view to reaching 30%) by 2030, and finalization of the internal energy market by increasing interconnections between member states to the level of 15% at least (ibid.). The Council revised these targets in 2018 (Council of the EU 2018a) after agreement was reached with the European Parliament on 14 June: for example, the share of RES was increased to 32% by 2030. Two days later the permanent representatives to the EU confirmed the provisional agreement reached on 19 and 20 June 2018 on the regulation on the governance of the Energy Union that is supposed to ensure achievement of the climate and energy goals by 2030.

The Council of the EU (2018b) adopted the Regulation on the governance of the Energy Union and climate action, and thus completed the final phase of the legislative procedure for three dossiers that are part of the Clean Energy for All package (all dated 21 November 2018): the revised directive on energy efficiency (at least 32.5% by 2030); the revised directive on renewable energy (32% by 2030), and the Regulation on the governance of cooperation between member states with each other and with the European Commission to achieve the objectives of the Energy Union (Regulation 2018/1999). The Regulations (2018) requires all member states to submit Integrated National Energy and Climate Plans (NECPs), containing national targets, contributions, policies, and measures for each of the five dimensions of the Energy Union: decarbonization, energy efficiency, energy security, the internal energy market, and research, innovation, and competitiveness. As far as renewable energy is concerned, the Union has adopted in its Energy Roadmap to 2050 (European Commission 2011), proposals for 30% decarbonization by 2030. The document seems to indicate that growth in RES will slow down from 2020 onwards unless action is taken to prevent it. To date the last crucial European Council decision was the one adopted in June 2019 (European Council 2019) on the future of the energy systems of the Energy Union, which define the priorities and principles for the development of future policies to ensure the energy transition towards an affordable, safe, competitive, reliable, and sustainable energy system and
builds on the previous Council’s decisions from 2018 and 2019. From this political process, legal norms emerge, whose structure and type of regulation condition the conduct of the CEE countries in the energy field.

4 Energy Regulation: Presentation and Economic Analysis of the Law

The energy transition can generate both benefits (improvement in collective health, technological innovation, etc.) and costs (unemployment, technological dependence, etc.). Although the rules that embody this EU policy cannot be rejected by member states, their degree of involvement will vary according to the political, economic, and social stimuli and “destimuli” perceived. If the benefits outweigh the costs, states would more quickly adopt the political and legislative measures needed to implement change, and if the costs outweigh the benefits, even if the rules cannot be rejected, the adoption of those measures would be slowed down. Detailing the legal framework, we have that the basic energy policy is found in the Treaty on the Functioning of the European Union (Article 194, par. 2, part 2) which confers, without sanction, the right of member states to choose between different energy sources and to determine the general structure of their energy supply.

The fundamental provision, which prevails over the so-called “specific provisions” and “other provisions affecting energy policy” (Friede 2006, p. 53), does not provide an incentive to change the energy model. In any case, neither do (neither incentive nor sanction) the specific provisions (solidarity between states in the event of difficulties or serious risks of serious difficulties affecting the energy supply, Article 122; development of trans-European networks in the transport, telecommunications and energy infrastructure sectors, Article 170; adoption of measures by the European Union—guidelines, actions, support for projects—in order to achieve the objectives mentioned in the previous point, Article 171; guidelines for the measures referred to in the previous point by the European Parliament and the Council, after consulting the Economic and Social Committee and the Committee of the Regions, Article 172), nor
the “other provisions” (maintenance of national provisions, as long as they do not affect the functioning of the internal market and are justified on grounds of public policy, public morality, public security, the protection of health and life of humans, animals or plants, the protection of national treasures possessing artistic, historic or archaeological value, the protection of industrial and commercial property or the protection of the environment, Article 114[4]; adoption of new national provisions based on new scientific evidence relating to the protection of the environment and justified by a problem specific to that State, Article 114[5]; and procedures and conclusion of international agreements by the Union, Articles 216, 217, and 218).

Energy transition regulations take two specific forms: directives and regulations. These are not original or primary legislation (founding treaties, reforms of the founding treaties and Acts of Accession), but derived or secondary legislation (directives, regulations, decisions, recommendations, opinions, and atypical acts whose legal basis is normally scattered throughout the articles of the international treaties concluded by the EU). Although the legal system of the EU is directly applicable (with the publication in the Official Journal of the European Union), has direct effect declared by the Court of Justice of the European Union in relation to a specific rule (Davies 2019) and prevails over national legal systems (principle of primacy, enshrined by the Court of Justice of the European Communities in 1964 with the Costa vs. Enel case), regulations and directives generate very different incentives or stimuli for states.

In fact, their characteristics are different. According to the Treaty on the Functioning of the European Union (Article 288), regulations have: general scope (all member states are the addressees), are binding in their entirety, are directly applicable in each member state of the EU without need for transposition into national law, have direct effect on states, and have immediate legal effect/legal link, which arises from publication in the Official Journal of the European Union (in force after twenty days if no other time limit is set). CEE countries cannot invoke any factor or domestic law to delay the implementation of these legal instruments. The EU’s expectation is that compliance by member states is immediate. Directives (originally used to harmonize the various national legal
systems of the member states, their exclusive addressees) are addressed to one or more member states (not general in scope), are binding only to the extent that they achieve a specific result (the state must provide adequate national resources to implement them fully throughout its territory), are applicable only if the member states have adopted the necessary legislation, their effect depends on specific pronouncement (case by case and even disposition at disposal) of the Court of Justice of the European Union, except for specific cases indicated in the jurisprudence of the European Union (expired transposition period, clarity, precision and unconditionality of the provisions, and grants of rights to the citizens exclusively according to vertical effect), and their effectiveness depends on notification to the states (they enter into force on the same day of the notification) or on publication in the Official Journal of the European Union (if it is addressed to all the states).

From the Economic Analysis of Law perspective, this greater regulatory flexibility of the directives would allow the CEE countries to delay the adoption of measures or to adopt them formally, but in a deficient or incomplete manner, depending on the analysis (cost–benefit) of the political, economic, and social incentives and disincentives (national, regional, and even international) that they have at a given historical moment. Moreover, the expectation of compliance is more lax, depending on the time needed to adapt to national circumstances and to transpose the legal rule into their internal legal systems, which means that the “price” of institutional monitoring, detection, and possible sanctioning is reduced in relation to regulations whose cost is previously assumed by the member states.

In other words, directives do not, in themselves, encourage rapid action by states with regard to the energy transition, whose policy (including the Clean Energy for All Europeans package) is based on regulations and directives: Regulation 2019/943 (design of the electricity market, to allow better integration of national markets and greater capacity for cross-border trade, aiming at lower prices), Directive 2019/944 on common rules for the internal market in electricity, Regulation 2019/1941 on risk preparedness in the electricity sector (prevention, preparation, management, and adoption of national plans to deal with electricity crises), Regulation 2019/942 on the Agency
for the Cooperation of Energy Regulators (coordination, advice, monitoring, cross-border cooperation, and supervision of future regional entities), revised Directive on the promotion of the use of energy from renewables (2018/2001; binding target of at least 32% by 2030, with a review for increase in 2023, by means of a Commission proposal), revised Directive on energy efficiency 2018/2002 (target of 32.5% by 2030, with a possible upward revision in 2023), and Regulation 2018/1999 on the governance of the Energy Union and Climate Action (drawing up NECPs for the period 2021–2030). By granting this “power” to the states, the EU ends up relaxing the “peremptory nature” of their immediate implementation by depending on multiple governmental acts individually considered, which may be delayed or delivered less completely or precisely than expected depending on the local political, economic, and social costs. The package also included revised Directive 2018/844 on the energy performance of buildings. By 2023, states should transpose the new directives into their national legislation, however, there is no guarantee that there will be no delays, depending on the weighting of the stimuli and disincentives generated by the contextual factors identified in the fifth section of this chapter.

For the two basic assumptions of the Economic Analysis of Law (the first is the Pareto criterion and the second is the Pareto optimum, as proposed by the Italian economist, sociologist, and philosopher Wilfredo Federico Pareto), a situation (or legal rule) would be efficient when, considering all possible alternatives (including the past ones) and without making anyone worse off, it generates more benefits than costs for at least one of the parties (Taha and Rodríguez-Vega 2020). However, because of the flexibility of the directives and the difference between political, social, and economic factors (including those related to available resources), it is impossible to ensure that all CEE countries improve at the same time or that they do not have negative consequences in the energy transition process. In turn, a situation (or legal standard) would be “optimal” in terms of efficiency if, given the available resources allocated, it is not possible for other states to improve without others worsening (Kovalenko et al. 2019). Let us suppose that the EU shuffles the budget “X” for the energy transition. In order for it to be configured in Paretian models, the allocation of economic/financial resources should be identical for each of
its member states. Nevertheless, the size and needs of these states differ from each other. For some of them, theoretically, the allocation would be sufficient to undertake the necessary changes for the energy transition. For others, the allocation would be insufficient.

In any case, the allocation, although considered politically, socially, and economically “adequate”, does not automatically lead to immediate improvement, since there are other factors (such as corruption, embezzlement, ineptitude of state organization, etc.) that obstruct it or make it worse. In the same vein, an inefficient allocation could be aimed at states that manage to get more or less out of their share. According to Pareto’s criterion, an exchange or swap would allow states to move towards a better situation, that is, more efficient than the previous one, as long as all the beneficiaries of the resources involved (subjects of international law) receive the good they consider the most valuable and no one is harmed (all the others are equal). Considering that the exchange is not possible at the level of the EU, since nobody can exchange the compliance with a regulation or the obligation to transpose a directive into the national legal system, the “Pareto criterion” would not be verified.

Even if exchange between two states was hypothetically possible, the Pareto optimum would not be observed either, because those states that consider the EU’s institutional allocations and aid insufficient or inappropriate would not be able to exchange them with the states that consider them appropriate. In order for the Pareto optimum to take shape, hypothetically all the member states should be able to carry out these exchanges, which is not possible. Furthermore, if this was to happen and it was assumed that all the existing resources in a given society were those deriving directly or indirectly from the EU for the purposes of the regulatory and administrative implementation of its energy transition policy, there would be no possibility of better distributing the resources because the number of states that have resources that are useful to them is the maximum possible given the EU’s budgetary limitations. It is assumed that the maximum possible efficiency given the existing resources would configure the Pareto optimum. Any change in the situation would necessarily imply a worsening of the situation.
If that possibility does not exist in regulatory terms, then it would have to be moved to the stage of negotiations, where the best solution for all member states would presumably be sought. Here, however, the Economic Analysis of the Law in accordance with the basic energy regulations can no longer be carried out simply because the hypothetical negotiation between the EU member states is not confused with secondary law institutionally. The same line of rationing can be perfectly applied in the variation of the Pareto concepts according to the criterion known as “Kaldor–Hicks”. According to this criterion, a subsequent situation is better than the previous one not only when someone improves and nobody gets worse, but also when someone improves, another gets worse, but the one who improves gets better than the one who gets worse. Considering that regulations are of general application and that directives must be transposed by the member state into their respective legal systems, this possibility disappears from the regulatory plan as well, but it could hypothetically arise during the stage of negotiating aid to member states (Heath 2019). In any case, if during the negotiation process the aid of one decreases and that of the other increases, the application of the “Kaldor–Hicks” criterion would be configured if the state that needs the aid more than the other state needs it to make the negotiations less beneficial. The difference would be justifiable because the needs are different.

For both criteria, efficiency is directly connected to the objective of generating greater aggregate well-being, with the legal norm permeating a situation that drives subjects of law towards the Paretoian optimum (maximization of social utility) as a function of available resources and, naturally, of the weighting of incentives and disincentives of the other contextual factors (political, economic, and social), which are variable among countries. The exploration of energy resources, specifically, can oscillate both by the concept of sovereign exclusivity, typical of international economic law (Laviec 2015) and by market supply conditions (e.g. import of foreign or more polluting energy like liquefied gas originating in the United States, that is a consequence of the Joint United States–European Union Declaration of July 2018 (European Commission 2018) and the 2020 oil war between Saudi Arabia and Russia, respectively).
State behaviour varies according to the stimuli, but for the resulting legal norm to be efficient, the benefits must outweigh the costs of the contextual factors among all the possible alternatives (Hylton 2019; Zerbe 2019). In the case of energy transition regulations, even this binomial solution could be coupled with the effectiveness and magnitude of possible sanctions, discounting the possibility of detecting the national transgression of the legal regulatory framework (Chalmers et al. 2019; Hylton 2019). Thus, for example, if the EU detects only one in ten national transgressions to its energy transition regulations, the real cost would be X/10 (Bullard 2018). The capacity to identify and sanction the offending state and the ability of the state to evade possible detections and sanctions are grouped in the case of directives, where the vigilance of European authorities is inferior to that of the regulation and countries can procrastinate the adoption of political, legislative, and administrative measures depending on the weighting of existing stimuli in the contextual factors.

Finally, it should be noted that the idea of partially supporting the energy transition policy in directives is understandable (because of the diversity of national circumstances) but problematic, because it leads to different speeds in the process based on the stimuli of contextual factors. The World Economic Forum’s Energy Transition Index reveals the disparity—and even stagnation—that is currently occurring in the process of transitioning to a sustainable model for reasons that, among others, relate to the social need for energy to be truly “affordable, sustainable and secure”, as advocated by Sustainable Development Goal number 7 which, in turn, finds support in the 2015 Paris Agreement by establishing a general obligation of behaviour that is embodied in multiple national commitments to quantify and mitigate emissions (encouragement of singular behaviour and multipolarity; Alvares Garcia Júnior 2018). This social factor (energy price) is particularly important for CEE countries (such as Poland), as examined below. Apart from directives, regulations can also have a low “price” depending on the perception of the risk of penalty (even emulation of behaviours of surrounding countries can enhance this perception). This essentially economic behaviour adopted on the basis of the political approach, or its institutional sanctioning responses, is tangible and real (Dowding and Taylor 2020).
5 Aggregate Analysis of Incentives and Disincentives in Central and Eastern European Countries

CEE countries that are traditionally influenced by Russian energy policy (e.g. import and distribution of fossil fuels), will be considered aggregate within this chapter. The number and variety of disincentives in this region makes it very difficult to adopt national measures consistent with the energy transition directives quickly (although, if properly managed, these would allow the exploitation and promotion of business opportunities, the generation of more skilled jobs, economic growth, and improvement in the quality of life of their populations). For reasons of limited available space, all previously evaluated and refined information has been systematized in a very concise manner. Initially, several general points will be presented and then the three essential points of the energy transition regulations will be broken down: energy efficiency in buildings, renewable energy, and mobility.

5.1 General Remarks

The transposition of the energy transition directives is faced with differing, unstable, and unreliable national legal frameworks (Kök et al. 2020) causing the renewables investments to be diverted to more favourable ones. Socially inclusive and environmentally friendly economic planning should be the trend in the coming years across Europe, so stimulating the proactivity of the local private sector in developing clean and profitable energy solutions is important. However, this is counterbalanced by general and specific disincentives, the scarce means made available to the business and industrial sector, the management of financial services for new products and services, and the substantive coupling of mitigation targets (greenhouse gas emissions) to the national authority. These, however, end up generating deviations and, in the medium-long term, setbacks in the collective goal (Alvares Garcia Júnior 2018). The inclusion and development of innovative and clean technological products and solutions depend on both
corporate commitment and business profitability, which could involve EU funding, together with countries’ limited material, human, and economic resources. Historically, national responsiveness to EU energy and climate change policy has been low among CEE countries (Robl 2018). It can be exemplified by Poland and its widespread use of coal, and old and much more polluting furnaces in single-family housing.

Social pressure on governments focuses more on reducing the prices of energy households consume (E3G 2020) than on protecting or improving the environment or supporting the Union’s policy on energy transition. Essentially, if the final price of clean energy is higher for citizens and companies, their most likely economic option will be to consume more polluting and cheaper energy from traditional matrices (Mickovic and Wouters 2020), whose interests are preserved by the power and political discourse of the region based on the security and affordability of its supply (Przychodzen and Przychodzen 2020). Securing energy supply requires large energy reserves, excess energy capacity, and/or friendly relations with Russia (the region’s historic energy supplier). Betting on the energy transition could thus lead to a greater distance from the Russian Federation. This political price (with economic and social repercussions), according to the Economic Analysis of Law, would explain the maintenance of comparatively low targets (in relation to Western European countries and the economic potential provided by the available technologies) with regard to renewable energies and energy efficiency (ND-GAIN 2020).

Although climate change and its effects are important, national institutions and populations of CEE countries tend to focus their attention on air quality and its consequences on health (EEA 2020). This lack of ambition in more general climate terms (compared to Western European countries) discourages the rapid adoption of directives. Demographics within the CEE region is characterized by low life expectancy, low fertility rates, and high levels of emigration increasing the already high aggregate dependency ratio (old age, disability, widowhood, retirement, etc.), which is taken into consideration in political decisions regarding resource allocation (Reeger 2018; De Sena and Scribano 2020; see also Gal’s chapter in this volume). In addition, part of the CEE states’ social
protection is based on the low price of energy. Moreover, CEE countries are considered “late receptors” and “policy adapters” in relation to Western European states. Therefore, their views have less real weight compared to countries such as Germany or France (considered “standardizers”). Energy potential in the CEE region is under-exploited as energy production depends largely on more advanced, innovative and profitable technological means. The possibility of accessing means developed and already used in Western Europe could avoid allocating resources to projects with uncertain results but would increase the region’s technological dependence. Moreover, developing these means at the local level would face major challenges: management problems, regulatory volatility, and scarcity of skilled labour in this field.

5.2 Energy Efficiency of Buildings

Low rates of energy renovation of old multi-unit residential buildings are caused by limited resources of the governments as well as a variety of problems in privately owned buildings including lack of consensus among the owners, lack of initial funds from residents, or difficult and scarce financing (for example, lack of opening of advantageous credit lines). Moreover, many buildings do not comply with the Union’s technical regulations on energy transition and their onerous nature hinders the process. The application of standardized technical solutions (thermal insulation, windows, heating, and hot water systems refurbishment) often depend, at least in part, on some form of subsidy. This is the case in Slovakia, which has refurbished more than half of apartment buildings and almost half of single-family dwellings in the last fifteen years, while employing even stricter technical standards than those adopted by the EU (Robl 2018). The capacity of countries to provide subsidies varies and there is no guarantee that it will expand in the coming years without further bureaucracy (Vivian 2020).

Self-performance of building renovation works (as well as black market recruitment) reduces the rate of recruitment of professional firms and thus the adoption of national regulatory or technical standards. Moreover, high VAT on renovation and energy improvement works
(e.g. 20% or more in Hungary, Croatia, Lithuania, Latvia, Bulgaria, Estonia, and Slovakia; Avalara 2020) supports both the promotion of self-implementation (or informal labour recruitment) and competition between professional companies, whose insufficient demand drives them to make decisions on strictly financial criteria, which in turn implies a decrease in their own investments in energy efficiency. The limited application of technical standards and the migration of labour to Western European countries (e.g. from Romania, Bulgaria, or the Baltic States) has reduced the technical solutions for renovation in line with the new parameters stipulated by European standards. These issues are interwoven with a high rate of private ownership by population segments with low purchasing power. With the economic transition, rental housing on former state property virtually disappeared and ownership of such property has been transferred to its former tenants for derisory values (Hegedüs 2013; Tsenkova and Nedovic-Budic 2006). The priority concern of these often poor owners is the low price and regularity of energy supply for heating, not its type of source or climate change. The political choice for the security and price of energy supply from the more traditional and polluting sources (e.g., coal in Poland) is well established. Moreover, the scarcity of resources of these owners makes it difficult to disseminate and implement technical solutions in line with the purpose of energy transition.

Housing in CEE countries is also characterized by higher number of inhabitants per household. This is caused by difficulties of young people to become economically emancipated, the reduction of the aggregate rate of social housing rentals, and deficient and anachronistic regulation of private rents. These (parents’) homes often do not meet energy efficiency standards, there is a shortage of public housing, and a government lack of economic resources for renovation, while buildings with private rents lack economic resources and tenants are not legally able to carry out renovation work. This leads to another obstacle: an even more intense increase in already quite high and problematic dependence on government subsidies. There is a higher rate of renovation in public and office buildings compared to residential buildings. This not only affects the financing of the EU (in the 2014–2020 budget period, the funds allocated to improvements in public sector buildings exceeded the amount
allocated to the residential sector in many CEE countries including Slovenia, Slovakia, Romania, and Poland; Kalinka 2018) but also prioritizes the renovation of lighting, ventilation, and air conditioning systems and the replacement of components and electronic systems in various appliances (BPIE 2016). Since it does not affect heating systems, it tends to strengthen traditional energy matrices. System for the renovation of residential buildings depends on EU funding (Filipiak and Wyszkowska 2020) which creates planning difficulties for households, such as a presumed reduction in the amount of funds available due to the United Kingdom’s exit from the EU, a shift in perceptions from Western European countries to the relative underdeveloped CEE countries, the possibility of grants being replaced by loans, and difficult bureaucracy connected to the EU funds. Moreover, there is an issue with the reduction of the effectiveness of grant programmes in terms of both their volatility and uncertainty. Therefore, this chapter argues that there are significant political, economic, and social disincentives for CEE countries to promptly adopt and implement measures and legislative reforms consistent with the energy efficiency of the buildings directive.

5.3 Renewable Energy

The renewable energy potential is variable and under-explored within the CEE region with solar (Bulgaria, Romania, and Hungary), wind (Poland, Lithuania, the Czech Republic, and the mountain areas of Romania and Bulgaria), geothermal (Hungary), tidal (Poland, Baltic States) having the main potential in the region. The development in these areas is often counterbalanced by the need for profound changes in both the structure and operations of electricity transmission and distribution networks, which requires complex political and administrative processes of decentralization of the electricity grid and development of micro-grids, digitalization, smart systems, and storage of the generated energy (Jones et al. 2019; Richter 2018). Investments into RES are limited due to questionable profitability of the private investor, issues connected to availability of public funds, national energy policies aiming
to ensure a low price of energy for the vulnerable population, actual scarcity of available local capital, or under-utilization and limited access to newer, cheaper, efficient, and previously tested technologies (Perpiña-Castillo et al. 2016). The spread of RES is also influenced by historical dependence on fossil fuels for electricity generation and unstable or unfavourable policy and regulatory frameworks (including, paradoxically, environmental conservation legislation that prevents the construction of hydroelectric dams).

Examples include the reduction of comprehensive support programmes for RES (in Bulgaria, Romania, and Poland) or regulatory restrictions on the installation of wind turbines in certain areas (Hungary). On the other hand, Estonia has encouraged the innovation and development of smart grids, through the exchange of data from the Estfeed system (Jones et al. 2019). Deployment of renewables is also influenced by the gradual replacement of direct power generation by purchase of power produced in local plants (based on the Power Purchase Agreements) and their dependence on public expenditures (Scholten et al. 2020). In addition, the economic consequences of the Covid-19 pandemic may reduce the availability of and interest in such specific spending.

When it comes to ecological awareness of public and social demand for RES, disincentives are associated with higher final energy prices, necessary public expenditure on infrastructure, local promotion of less polluting energy sources, and dependence on jobs linked to the coal industries in countries such as Poland, the Czech Republic, Romania, and Bulgaria (with possible worsening in the coming years due to the closure of mines; Burchard-Dziubińska and Jakubiec 2020). NECPs and the long-term national plan that are also envisioned by the Governance of the EU regulations varies according to national commitments and the political manoeuvrability of individual countries. For example, in the case of the Baltic States, the high costs of their energy system’s desynchronization from the Russian energy network (planned for 2025) and its synchronization with the continental European grid play an important role. In addition, support for renewable energy has decreased
over the years while the discussion on cogeneration and electricity self-sufficiency (including for commercial customers) has remained prominent (IRENA 2018).

The expansion of intelligent electricity systems (subsidized in Hungary, Poland, and Estonia) is constrained by economic and political structures that restrict investment. On the other hand, the existing electricity network infrastructure is ageing and difficult to adapt to new (RES) power plants in terms of transmission, losses, costs, interconnection with other networks, and storage capacity. In view of the national difficulties, the high costs of adaptation will be borne mostly by the EU, which has limitations and by private initiatives, which, however, already faces restrictions of their legal-political framework and a general unfavourable situation in these countries for multi-million investments. This section thus concludes that the obstacles encountered in the development of renewable energy in the CEE countries are great and discourage political leaders, at this time, from quickly adopting the necessary political and legislative measures in the renewables area.

### 5.4 Mobility

Most CEE citizens do not have the purchasing power to buy newer, less polluting vehicles (plug-in electric vehicles constitute only 0.02% of the fleet within the region) or a second, electric, vehicle. In addition, there is a strong economic dependence on the conventional car industry. There is also the risk of an increase in the influx of older, more polluting (e.g. diesel) used vehicles into the region, due to increasingly strict emissions regulations in Western European countries and cities (Globsec 2020). Possible restrictions on the sale of vehicles with internal combustion engines could make the situation even more precarious in the CEE region. Passenger and freight transport is an energy-intensive activity and emits about one third of primary greenhouse gas emissions. Over the last thirty years, its growth within the CEE regions has been steady and far higher than that of Western European countries for various reasons including a gradual increase in aggregate purchasing power, a change in lifestyle as private car ownership and use has become a social
status symbol, improvements in transport connections, increase in international travel, further urban expansion fuelled by the weakening of central planning, an increase in freight volumes driven by the intensification of trade both within and outside the EU (EEA 2020), or the gradual replacement of rail transport by road transport following the collapse of socialist heavy industry.

In general terms, there is greater potential for novel mobility services within the CEE region. The development of intelligent infrastructures on which these services depend, is closely connected to both the level of technological preparation and the ability to adopt appropriate public policies. Given the scarcity of available public resources, the importance of the private sector is crucial, but is reduced by unstable and unattractive legal frameworks. The business model based on shared mobility presents an interesting growth potential, but the legal frameworks and the political environment are very different (e.g. clearer and more flexible in Croatia and the Czech Republic than in Hungary and Romania). In addition, the market tends to be limited by size as shared mobility solutions are more attractive in large cities, of which the CEE region has only a handful.

Investments by the automotive industry in autonomous vehicles is also on the rise in the CEE region. Although areas for testing automotive products are gradually being developed (e.g., Zalaegerszeg in Hungary or the autonomous minibus service in Estonia), there is limited incentive in countries dependent on the conventional automotive industry to develop alternative mobility. In addition, progress is being focused on specific industry segments (e.g. new batteries). This section thus argues that there are important obstacles for the CEE countries to adopt and promptly implement measures and legislative reforms consistent with the energy transition policy in the area of mobility.

6 Conclusions

The European Union’s basic energy regulations encourage the adoption of national energy sources, while the regulations on energy transition, based on regulations and directives, enable the CEE countries to make
certain fields of action more flexible, depending on the weighting of political, economic, and social stimuli and disincentives (contextual factors) and the perception of the risk of detecting and sanctioning possible national transgressions of their provisions. The first part of this analysis identified EU energy transition legal norms, their typologies, and their openings towards national flexibilities. The chapter used the Economic Analysis of Law as a basis for understanding the probable behaviour of member states. Once the possibility of flexibility has been identified, the chapter engaged in analysis on general factors and specific factors of the three essential points of the European regulations on energy transition: the energy efficiency of buildings, renewable energy, and mobility. In this section of the analysis, a huge set of disincentives has been identified which make it difficult for CEE countries to quickly adopt the political measures and legislative reforms relating to energy transition regulations. Therefore, the chapter concludes, there is a strong risk that the CEE region will be left behind in the energy transition process led by Western European countries.

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