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ENERGY DEMOCRACY, HUMAN RIGHTS, AND NATIONAL SECURITY: THE ROLE OF ENERGY COMMUNITIES IN UKRAINE'S DECENTRALISED ENERGY TRANSITION

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This article examines the concept of energy democracy through several interrelated analytical perspectives, including its relationship to human rights, national security, and energy communities. It draws on the work of Ukrainian and international scholars and pays particular attention to the role of energy communities based on an analysis of the relevant academic literature and the legal frameworks of Ukraine and the European Union. The study demonstrates the lack of a unified terminological and legal approach to energy democracy and related concepts. Based on this analysis, this article claims that the transition from a centralized to a decentralized energy system is timely and necessary. Decentralization democratizes energy by increasing competition and consumer participation. Energy communities allow local communities to become active participants in the energy market and protect a wide range of rights, including the right to access energy, the right to an adequate standard of living, and ultimately the right to life. In Ukraine, in times of crisis, the energy supply has become a fundamental component of national security. According to Ukraine's policy vector, in the current context, ensuring a secure and sustainable energy system is essential to strengthening the country's strategic resilience.

Because of the fundamental role of energy in our economy, energy democracy is closely linked to the struggle for social, racial, and economic justice. The practical realization of these justice demands therefore depends on empowering citizens to produce energy, influence decision-making, and access appropriate financial support. Energy communities should therefore be understood not merely as instruments of renewable-energy production, but as potential institutions of democratic governance and human-rights protection. Therefore, energy communities should be understood as renewable energy production entities and as potential elements of a system of democratic governance and human rights protection. Their broader significance lies in their ability to combine autonomy and local interests with collective responsibility and to involve citizens in active participation in the process of making some desitions that directly affects the living conditions of a given community.In the current realities of using attacks on energy as a means of pressure, as is happening in Ukraine, energy communities can contribute to creating a more sustainable, decentralized, and socially just energy system, in which the energy transition serves both environmental goals and the effective realization of human rights.

Key words: *energy democracy, energy communities, European Union law, energy law, human rights.*

Соловйова Аліна. Енергетична демократія, права людини та національна безпека: роль енергетичних спільнот у децентралізованому енергетичному переході України

У цій статті розглядається концепція енергетичної демократії через кілька взаємопов'язаних аналітичних точок зору, включаючи її зв'язок з правами людини, національною безпекою та енергетичними спільнотами. Вона спирається на праці українських та міжнародних науковців і приділяє особливу увагу ролі енергетичних спільнот на основі аналізу відповідної академічної літератури та правових баз України та Європейського Союзу. Дослідження демонструє відсутність єдиного термінологічного та правового підходу до енергетичної демократії

та пов'язаних з нею концепцій. На основі аналізу стверджується, що перехід від централізованої до децентралізованої енергетичної системи є своєчасним та необхідним. Децентралізація демократизує енергетику завдяки посиленню конкуренції та більшій участі споживачів. Енергетичні спільноти дозволяють місцевим громадам стати активними учасниками енергетичного ринку та захищати широкий спектр прав, включаючи право на доступ до енергії, право на достатній рівень життя та, зрештою, право на життя. Специфіка обставин України полягає в тому, що енергопостачання стало не просто економічним чи інфраструктурним питанням, а фундаментальним компонентом національної безпеки. У сучасних умовах забезпечення безпечної та сталої енергетичної системи є важливим для протидії енергетичному примусу, захисту критичної інфраструктури та зміцнення стратегічної стійкості країни. Через фундаментальну роль енергетики в нашій економіці, енергетична демократія тісно пов'язана з боротьбою за соціальну, расову та економічну справедливість. Практична реалізація цих вимог справедливості, отже, залежить від надання громадянам можливості виробляти енергію, впливати на прийняття рішень та отримувати доступ до відповідної фінансової підтримки. Тому енергетичні спільноти слід розуміти не лише як інструменти виробництва відновлюваної енергії, а й як потенційні інституції демократичного управління та захисту прав людини. Їхнє ширше значення полягає в їхній здатності поєднувати місцеву автономію з колективною відповідальністю та залучати громадян до активних дій у прийнятті рішень, які безпосередньо впливають на їхні умови життя. За підтримки інклюзивної правової бази та доступних фінансових механізмів, енергетичні спільноти можуть сприяти створенню більш стійкої, децентралізованої та соціально справедливої енергетичної системи, в якій енергетичний перехід служить як екологічним цілям, так і ефективній реалізації прав людини.

Ключові слова: *енергетична демократія, енергетичні спільноти, право Європейського Союзу, енергетичне право, права людини.*

Introduction. The growing scholarly and policy significance of energy democracy from a human rights perspective reflects the increasing urgency and far-reaching consequences of climate change. Whereas the right of peoples to self-determination was previously discussed mainly in the context of decolonization, the possible loss of territory as a result of climate change has now come to the fore. Some territories and even states may cease to exist because of rising sea levels, as illustrated by projections concerning the Maldives." Joseph P. Tomain reflects on natural disasters such as Hurricane Katrina and the typhoon that devastated Fukushima, focusing on the imperfections of the centralized energy system. And said that "one response to these risks is to restructure the electric system through greater diversity and decentralization. Decentralization, in turn, will democratize energy through increased competition and greater consumer participation" [1, p. 193]. Renewable energy communities could be one possible answer to these challenges. As a form of democratic participation, they allow local communities to become active participants in the energy market and defend a wide range of rights, including the right to access energy, the right to an adequate standard of living and, ultimately, the right to life.

The distinctive nature of Ukraine's circumstances lies in the fact that energy supply has become an economic or infrastructural issue and a fundamental component of national security. Icurrent context, ensuring a secure and resilient energy system is essential for resisting energy coercion, protecting critical infrastructure, and strengthening the country's strategic resilience. Because of the fundamental role of energy in our economy, energy democracy relates deeply to the struggle for social, racial, and economic justice. The practical realization of these justice claims therefore depends on expanding citizens' capacity to produce energy, influence decision-making, and access appropriate financial support.

A study conducted by the independent research and consultancy organisation CE Delft found that, by 2050, half of the EU population will be able to generate their own electricity and, as a result, contribute significantly to overall demand in the EU. This is only possible if citizens are empowered to lead the energy transition and have access to predictable and adequate financial instruments [2]. Therefore, the practical and academic importance of renewable energy communities is growing.

The methodological framework of this research combines general scientific and specialized legal methods to study the re-

lationship between energy democracy, human rights and energy communities. The system-structural method is used to analyze energy democracy as a multidimensional legal and political phenomenon located at the intersection of human rights law, energy law, environmental law, social policy, consumer protection and local self-government. It also allows us to assess energy communities as institutional mechanisms through which citizens can participate in energy production, management, ownership and distribution of benefits. The formal-legal method is applied to the analysis of Ukrainian and European Union legislation regulating energy communities, renewable energy, electricity markets, consumer rights, local self-government and access to basic energy services.

The comparative legal method is used to compare Ukrainian regulation with EU legislation and individual national approaches to energy communities and citizen participation in the energy transition. Together, these methods provide a comprehensive basis for assessing energy communities not only as market actors, but also as instruments of energy democracy and potential mechanisms for the protection of human rights.

What approaches could be beneficial in researching of energy democracy? The term of energy democracy has gained considerable popularity in international science over the past decade. The idea that 'energy' and 'democracy' belong together became noticeably more widespread in the 2010s, according K. Szulecki and I. Overland (2020) [3]. The concept of energy democracy has emerged relatively recently in Europe and in the United States. Early usages of the concept date back to the 2010s, when it was mostly used by NGOs and in various policy and non-scientific papers. In academic discourse, the first concrete references to the concept appeared in 2010 and 2011, particularly in German and Danish sources, but the origins of the concept reach back some 40 years [4, p. 3]. At the same time, in moden Ukrainian scientific literature, energy democracy is more often analyzed in connection with human rights, for instance, by E. Tarasova, Yu. Vashchenko, S. Zavgorodnya and others. [5, 6, 7].

Energy democracy and human rights. Energy democracy constitutes a fundamental component of the effective realization of human rights. Recent scholarly work on energy and human rights has focused on approaches to recognizing energy poverty as a human rights issue. Various approaches have been proposed, ranging from introducing a new fundamental human right to access energy to rethinking existing human rights to ensure environmental and energy justice.

Human right to access to the energy sources should be put to the centre at the policy of energy democracy. In this context, E. Tarasova [5] analyzed an energy democracy with greater focus on social inclusion. The study first argues that it is crucial to explicitly discuss what ideas of inclusion are embedded in conceptualizations of energy democracy. It then suggests that social inclusion can be operationalized as formal and internal inclusion in energy democracy research, following the theory of deliberative democracy developed by Iris Marion Young. "Democracy is hard to love...Citizens must often put in a great deal of time to gain a small reform. Because in a democracy nearly everything is revisable, and because unpredictable public opinion often counts for something, uncertainty shadows democracy" [8]. At the same time, Tarasova acknowledges that inclusion within energy democracy may also be conceptualized in other ways. The empowerment of users in smart grids is discussed as an example illustrating the usefulness of examining these two levels of inclusion in empirical research on energy democracy [5].

While Tarasova's analysis emphasizes participation and social inclusion, the human-rights dimension of energy democracy also concerns access to essential energy services. From this perspective, Yu. Vashchenko analysed the main stages of the formation of scientific thought on the understanding of the right to access to energy services as a human right. The author concludes that ensuring access to energy services is important in the context of ensuring sustainable development and poverty alleviation [6].

Building on this rights-based understanding of energy access, S. Zavgorodnya investigates the challenge of ensuring energy accessibility for the population. S. Zavgorodnya investigated the problems of ensuring

energy accessibility for the population as one of the relevant aspects of ensuring access to affordable, reliable, sustainable and modern energy sources for all as one of the Sustainable Development Goals of Ukraine for the period up to 2030. In this regard, the implementation of the accumulated international experience in solving this complex problem is an urgent task in combating energy poverty in Ukraine [7].

Traditionally, the field of human rights law has been concerned with the duties that states owe to individuals within their territory. While groups have some capacity to claim rights, international human rights treaties are typically structured around the obligations of the duty-bearer state to protect the rights of individuals within the state's territory. As a global issue with global actors, climate change poses unique challenges to the traditional human rights regime. It may be impossible to determine whether a state has breached its duty to respect, protect and fulfil the rights of individuals within its territory, and it is also impossible to use existing accountability mechanisms under international human rights treaties to hold third states accountable for violations. In addition, climate change litigation often faces challenges related to issues of admissibility and the right to participate, given the global nature of climate change. Despite this, Olivier de Schutter, the United Nations Special Rapporteur on the Right to Food, has stressed that there is: a huge opportunity for human rights courts and non-judicial human rights bodies to consider climate change as the immediate threat to human rights that it is. Such bodies could therefore criticize public policies when they are too short-sighted, too unambitious or too narrowly focused on their own constituents at the expense of others. Fossil fuel extraction, deforestation, the disruption of carbon sinks and ocean degradation are all events that can be blocked on human rights grounds. Human rights bodies can and should increasingly play this reactive role at the local level to prevent the many events that both violate human rights and exacerbate climate change [9].

Löfquist , exploring the relationship between access to electricity and human rights, comes to the well-founded conclusion that access to electricity is best understood as a derived human right, which is a necessary basis for the effective exercise of other fundamental human rights. Together, these approaches suggest that energy democracy goes beyond technological decentralization and encompasses democratic participation, human rights and community empowerment. In this context, energy communities emerge as practical mechanisms through which citizens collectively participate in the production, management and ownership of renewable energy, strengthening both energy sustainability and the protection of fundamental rights through local cooperation and shared responsibility [10].

Energy democracy and national security. The energy sector is one of the main elements of the national security of the state. The importance of this sector of the economy has been repeatedly emphasized by scientists. B. Ostudimov focuses on specifying the relationship between the energy independence of the state and energy security, energy sovereignty, energy sustainability, etc. In his opinion, the regulatory and legal framework for ensuring the energy independence of Ukraine appears to be quite contradictory and fragmentary, including a significant number of by-laws, requires adaptation to EU legislation, and the establishment of effective guarantees for ensuring the energy independence of the Ukrainian state, energy security, and energy sovereignty [11]. Yu. Vashchenko formulates the definition of the category "human energy security", which is understood as the state of protection of a person as a bearer of energy interests from the threats of shortages in meeting his energy needs by providing access to energy services of appropriate quality that are safe for life, health and the environment at economically justified and affordable prices under conditions of continuity, reliability, diversification of energy supply sources, efficiency and rationality, the maximum possible in view of technical, economic and other conditions of availability of energy resources from renewable energy sources, equal access for all categories of citizens [12, p. 7–8].

Energy democracy and energy communities. The issue of energy independence of local communities: international experience and development prospects in Ukraine is studied by N. Skorobahatova [13]. It is

especially valuable that the author conducts research comparing the issues of energy independence of local communities based on international experience and development prospects in Ukraine. This approach emphasizes the importance of Ukraine's experience in developing sustainable and decentralized energy systems for Europe and the world. This is noted by O. Sukhodolia, analyzing energy democracy in times of crisis. He argues that the development of a decentralized energy system by increasing the number of generating capacities while simultaneously reducing spatial disparities in their localization will contribute to increasing the overall reliability of energy systems and reducing their vulnerability to kinetic and cyber-attacks and creates a huge new market for investors, as it will require a deep reconstruction of significantly damaged energy systems throughout Ukraine [14]. Chomsky's analysis demonstrates that energy democracy relates deeply to the struggle for social, racial, and economic justice [15].

The Concept of Energy Democracy. Having identified three main approaches to the analysis of energy democracy, let us move on to the definition of energy democracy. To do this, firstly, it is necessary to distinguish the concept of energy democracy (sustainable energy democracy) from the concept of environmental democracy. Secondly, to establish a connection between energy democracy, energy sovereignty or energy justice.

The term "energy democracy" has gained considerable popularity in an european science over the past decade [3]. Energy democracy has been described as 'an emergent social movement advancing renewable energy transitions by resisting the fossil-fuel-dominant energy agenda while reclaiming and democratically restructuring energy regimes' [4, p. 4]. The term "sustainable energy democracy" has no clearly defined, let alone legally binding, definition, and is used in different contexts with different meanings. However, the idea encompasses two fundamental aspects: a clean, decentralized energy system (the "sustainability" aspect) and a fair distribution of the burdens and benefits of the energy sector (the "democracy" aspect). Energy democracy is a legal goal [4]. Energy democracy brings the issue of energy control to the forefront as it seeks to transfer power from large corporations and centralized institutions to citizens, energy communities, and local communities. Energy democracy views energy not simply as a commodity, but as a public good or shared resource.

The transition to renewable energy is not automatically democratic. The system can become low-carbon while remaining highly centralized, privately controlled, and socially unequal.

Ordinary citizens must participate as political actors, not just as consumers. Therefore, the transition must expand democratic citizenship, not simply create new market opportunities [16].

The energy democracy, energy sovereignty, or energy justice movement seeks to create alternatives while directly challenging the institutions that control our energy system and the regulatory apparatus that sustains it. Most energy democracy projects focus on the distribution of energy in the form of electricity rather than on extraction and production and its uses in other sectors. But the principles of popular democracy and transparency also shape movements in communities affected by extraction; they could be expanded to different economic sectors that use energy [15].

Environmental democracy has multiple origins, rationales, and theoretical foundations that should serve as the starting point for research. It may be understood as the practical expression of procedural environmental rights and as one of the most effective means of making substantive environmental rights meaningful and enforceable [17]. From a traditional logic perspective, the relationship between environmental democracy and energy democracy is best understood as a relationship of subordination between genus and species, rather than a literal whole-part relationship. Environmental democracy is a broader concept, as it encompasses democratic rights and procedures applicable to environmental governance in general, including access to information, public participation in decision-making, and access to justice. Energy democracy applies these principles to the more specific area of energy production, distribution, ownership, and consumption.

Energy democracy and global energy governance. Climate change has been identified as a human rights challenge of the twenty-first century. Loss and damage caused by climate change, in particular, pose a serious threat to the human rights of affected communities. However, the international response to climate change under the United Nations Framework Convention on Climate Change has so far not sufficiently taken human rights into account, contributing to inadequate policy outcomes for the protection of communities affected by loss and damage. Toussaint, P., & Martínez Blanco, A. (2020). propose adopting a human rights-based approach as a strategic tool for policymakers to strengthen the international response to loss and damage. This approach builds on Parties' existing obligations under international and regional human rights treaties and provides a method for systematically integrating human rights that goes beyond simply considering human rights [18].

T. Lahoida argue that the Paris climate agreement did not provide for a clear and specific mechanism for encouraging countries to make commitments and take measures to reduce emissions. All obligations of the parties were reduced to voluntarily assumed contributions and their independent determination and subsequent implementation in specific national legal instruments. In general, the analysis of the legal foundations of the international environmental policy on the prevention of climate change and the practice of their application shows that the achievements the desired results are possible only with the help of consolidation of world efforts and specific actions of states at the national level and clear reporting on them, combined with international control and influence measures. It is necessary to move away from declarativeness and imprecision and instead introduce directivity and clear reporting. And currently, one gets the impression that noble goals and a good strategy are very often devalued by the opportunism of their implementation. Therefore, the task of developing and taking radical measures for a global anti-carbon policy remains very urgent. The need for such measures is inevitable, because the threat of climate change remains the main challenge of civilization [19].

With Sustainable Development Goal 7, the United Nations has declared its ambition to ensure access to modern energy for all by 2030. Aside from broad appeals to differentiated responsibilities and 'greener' technologies, however, the goal leaves significant procedural questions unaddressed. This paper argues that the basic orientation of this approach is problematic, undermining possibilities for progress toward energy justice and equitable development [20]. However, at the international level, efforts to advance energy justice operate in a legal context in which it is difficult to attribute responsibility for climate damage to individual States.

The Court recalls that climate change is a highly complex and multifaceted phenomenon involving possible responsibilities for multiple States over long periods of time [21]. The International Court of Justice thus concluded that the failure of States to take appropriate measures to protect the climate system may constitute an internationally wrongful act.

N. Maciej acknowledges that state liability for damage caused by climate change remains one of the areas of international law that has not yet been comprehensively regulated. The application of customary international legal mechanisms of state responsibility to climate-related damage may present significant challenges. Both the nature of the damage itself and issues such as causation and the attribution of responsibility to a state pose considerable difficulties in the field of climate protection [22].

In theory, these obligations to protect, respect, and ensure human rights can and should be considered as instruments obliging States to pursue policies to mitigate and adapt to greenhouse gas emissions. However, certain obstacles to the implementation of State responsibility with respect to first – and second-generation fundamental rights arise due to subjective and objective issues, including the discretion in decision-making, the territorial scope of human rights obligations, and difficulties in establishing causation and compensating for damage. Despite the seriousness of these problems, some solutions can be proposed. In particular, the relatively small number of States that make up the international community, with a few countries responsible for most greenhouse

gas emissions, may make it possible to compensate for damage based on per capita emissions within the framework of proportional or joint liability. Furthermore, recognition of the human right to a sustainable environment would facilitate the establishment of causation by establishing a direct link between greenhouse gas emissions and fundamental rights and, at the very least, would reduce States' discretion with respect to greenhouse gas mitigation and adaptation policies [23, p. 38]. These difficulties in establishing state responsibility under human rights law also raise the question of whether other areas of law, in particular criminal law, can provide more effective mechanisms for liability for climate change-related harm.

Ḥassān Ibrāhīm examines one of the most pressing contemporary legal issues: the criminal liability of actors for damage related to climate change in the context of the global energy transition [24]. Against this background, energy communities offer a distinct but related perspective by shifting attention from punishment and responsibility to participation, ownership, and local control.

Energy Communities. Energy democracy has emerged in the context of the clean energy transition and decentralization as an element of that transition. The roots of the concept of sustainable energy democracy lie in activism and social movements that focus on the moral dimensions of the energy transition, bringing together ideals of social justice and economic equity with the clean energy transition [4, p. 3]. Among the various available options, local energy systems can support increasing penetration of renewable sources, as well as the promotion of their smart integration and coordination in the power system [25]. Different names are used to refer to one same phenomena of energy communities, according to different legislation act and scientific researches they are: renewable energy cooperatives, local energy communities, citizen energy communities etc. According to the 10th State of the Energy Union report, published in November 2025, more than 8 000 energy communities exist across the EU [26]. On the other hand, changes do happen, not only in the material structure and the economy, but also in competences of citizens, development of entrepreneurial spirit, and in the development of the ideas of pluralism and openness [27, p. 115].

Self-consumers are considered to act collectively when they establish a group of at least two self-consumers located in the same building or apartment building. At an operational level, self-consumers are also permitted, both individually and through aggregators, to produce renewable energy for their own consumption and to store or sell surplus renewable electricity through electricity suppliers, renewable electricity trading agreements, and peer-to-peer exchange agreements [28, p. 514].

In the Ukrainian context, the transformation of the concept of the "electricity consumer" through regulatory changes and technological development has significantly altered the meaning, role, and capabilities of this category within the energy system. Household consumers and small non-household consumers account for approximately 50% of total electricity consumption in Ukraine, which demonstrates their substantial influence on the operation of the energy system. Therefore, together with other non-household consumers, they should be involved in forecasting electricity demand and developing energy-efficient modes of system operation [29, p. 56].

According to Article 1 of the Law of Ukraine "On Alternative Energy Sources" energy produced from alternative sources is electrical, thermal and mechanical energy, which is produced at alternative energy facilities and can be a commodity intended for purchase and sale. Moreover, self-production mechanism is a scheme for supporting active consumers, intended for their own consumption of electricity, according to which the cost of the volume of electricity supplied to the electricity grid by the generating installations of such consumers and the cost of the volume of electricity taken by them from the electricity grid, taking into account the cost of services for the transmission and/or distribution of electricity, is mutually calculated.

The right of Ukrainian residents and associations of co-owners of apartment buildings to sell surplus self-generated electricity derives primarily from the Law of Ukraine "On the Electricity Market," [30] as amended by Law No. 3220-IX of 30 June 2023. Associations of co-owners of apartment buildings

(OSBBs) may acquire the status of active consumers and sell surplus electricity generated but not consumed under the self-generation mechanism. This right may be exercised by connecting generating installations or energy-storage facilities to the electrical networks of an apartment building, individual apartments, or non-residential premises and by concluding an electricity purchase agreement under the self-generation mechanism. Under paragraph 11.4 of the Rules of the Retail Electricity Market [31], such an agreement forms an annex to the consumer's electricity supply contract or to a universal-service electricity supply contract.

Where the generating or storage installations belong to owners of apartments or non-residential premises, those owners are treated as third parties in relation to the OSBB. The OSBB, acting as an active consumer, must purchase all electricity supplied by those installations to its internal network under a separate agreement with their owners. The aggregate capacity of third-party generating and storage installations may not exceed the OSBB's permitted contractual capacity.

The establishment of a binding Union renewable energy target for 2030 would continue to encourage the development of technologies which produce renewable energy and provide certainty for investors. A target defined at Union level would leave greater flexibility for Member States to meet their greenhouse gas reduction targets in the most cost-effective manner in accordance with their specific circumstances, energy mix and capacity to produce renewable energy [32].

N. Skorobagatova cites the feasibility of switching to renewable energy sources while simultaneously decentralizing the country's energy system. This approach reduces the risk of disruption to the community's energy supply in the event of damage to the network or centralized generation facilities, which is especially relevant in times of war in the country. At the same time, a gradual transition from fossil fuels to renewable sources will reduce the negative impact on the environment, which is consistent with the principles of the concept of sustainable development [17, p. 446].

According to O. Sukhodolia (2024), the development of a more decentralized, flexible, and technologically advanced energy system will reduce its vulnerability to kinetic and cyber attacks. The development of energy supply systems in accordance with these priorities will also create a significant new market for investors, as it will require large-scale reconstruction of severely damaged energy systems throughout Ukraine [19].

In the future, smart utility companies will use new technologies and changes in the energy market to manage modern electricity distribution networks. These networks can help make the most of investments in smart grids by combining the utility's own infrastructure with equipment owned by consumers, such as rooftop solar panels, home batteries, and electric vehicles [33]. The concept of bringing together multiple energy producers and consumers is simply an extension of the type of network actors now delivering a wide variety of shopping and telecommunication services. Actors such as Google, Amazon, and eBay, or even social sites such as Facebook, become the central nodes in a network that aggregates information about products and services and makes that information available to billions of customers. The future electric industry can adopt this type of platform. Most importantly, as the number of providers and services increases and as access to those providers and services is facilitated, competition and consumer choice expand [1, p. 207]. Thus, according to Joseph P. Tomain the future electricity supply system could function as an online marketplace.

M. Wewerinke-Singh explains how climate change threatens not only the physical survival of small island states but also their citizens' right to self-determination, legal status, and cultural identity [34, p. 98]. This is important in the light of the prominence of carbon trading and sequestration in the international climate change regime, which gives rise to an increasing number of agreements between States and foreign actors that affect the rights of indigenous peoples over their land. Equally important is the apparent duty of States to cooperate to guarantee the political dimension of the right of self-determination, which could involve a duty to make arrangements for safeguarding the political autonomy of peoples at risk of losing their territories [34, p. 104].

A. Cocco argues that energy communities benefit both individuals and local communities, while also helping to protect the environment. Renewable energy communities play a particularly important role in the energy transition, and their expansion in Europe could contribute to the gradual decommodification of energy. At the same time, she believes that such communities depend on digital technologies to function effectively. Self-consumption, energy sharing and the sale of surplus energy require smart grids, digital platforms, mobile applications and data exchange mechanisms. Blockchain and smart contracts can facilitate peer-to-peer energy trading, while digital platforms can help to monitor consumption, plan storage and reduce energy losses. However, the digitalisation of the energy sector poses risks to privacy and data protection. Consumption information can be used to profile users and reveal details of their private and family lives. Particular attention needs to be paid to the protection of household and minor data, as well as to clearly define the responsibilities of operators and third parties. In addition, mandatory use of smart devices can deepen the digital divide and energy poverty, and the participation of energy communities in electricity sales can affect competition. Therefore, the development of energy communities must combine technological innovation with proper protection of human rights. Only with such a balance can the energy transition be truly sustainable [28, p. 523–525]. One of its priority areas in the context of sustainable development of the state is ensuring energy efficiency and energy saving, in particular at the regional level. The relevance of this issue has increased significantly in the last three years, which is due to the consequences of the Russian Federation's military operations on the territory of our country, associated with the destruction of critical infrastructure, which includes the energy supply infrastructure (including the supply of thermal energy) [35]. Howerever, the long-term sustain-ability and scalability of community energy initiatives remain limited by structural prob-lems embedded in Ukraine's broader energy system [36].

Conclusions. Energy democracy creates a normative and institutional environment to transition from centralized energy systems to arrangements based on participation, decentralization, equity and public control. Moreover, access to affordable, reliable, sustainable and secure energy is closely linked to the effective provision of adequate housing, health, education, social inclusion and a decent standard of living. Energy policy should not be seen exclusively as a matter of market regulation or technological modernization. It is also about how power, resources, and risks are distributed in society. Energy communities play a central role in putting these principles into practice. By empowering citizens, local authorities and small and medium-sized enterprises to collectively produce, manage, distribute and consume renewable energy, energy communities can increase participation in the energy transition and reduce dependence on centralized energy providers.

No artificial intelligence tools were used in the writing of this article.

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