

# LEGAL COMMONING: LEGALLY MOBILIZING RESILIENT ENERGY COMMONS

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**Synopsis:** This article explores the potential of legal commoning as a transformative approach to overcoming barriers in the establishment and upscaling of renewable energy communities. By synthesizing Resilient Property Theory and the concept of mobile power, it proposes a novel framework for reimagining energy governance and property relations. The paper argues that current legal regimes, both private and public, often inhibit the growth of renewable energy communities while inadequately protecting or promoting commons-based approaches to energy production and consumption. Through an analysis of European Union policies and diverse national implementations, the study reveals the complexities and contradictions in existing regulatory landscapes. The proposed framework advocates for adaptive, context-sensitive legal structures that can accommodate the dynamic nature of energy commons while fostering their resilience and scalability. By reconceptualizing energy as a commons resource, the article suggests pathways for developing more democratic, sustainable, and just energy systems. It concludes that legal commoning can serve as a powerful tool for upskilling communities, fostering innovation, and addressing broader societal challenges related to energy transition and climate change. This approach offers valuable insights for policymakers, activists, and scholars seeking to cultivate more participatory and equitable energy futures in the face of ecological crisis.

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## I. INTRODUCTION

The global imperative to transition towards sustainable energy systems has never been more urgent. As the existential threat of climate change looms, policymakers, scholars, and activists are exploring diverse legal approaches and regulatory regimes to address this crisis and promote renewable energy adoption.

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These efforts range from carbon pricing mechanisms and renewable portfolio standards to green investment incentives and international climate agreements. However, despite the proliferation of such initiatives, the pace of transition remains insufficient to meet the scale and urgency of the challenge at hand. The complexity of the problem demands innovative solutions that go beyond traditional regulatory frameworks and market-based approaches.<sup>1</sup>

In this respect, a fundamental rethinking of energy governance is necessary – one that reconceptualizes energy not merely as a commodity subject to market forces or a public utility managed by centralized authorities but as a commons resource that can be collectively owned, produced, and managed communities. This shift in perspective opens up new possibilities for addressing not only environmental concerns but also wider issues of inequality, exclusion, and political alienation that often accompany conventional energy systems.<sup>2</sup> Such a reconceptualization challenges existing legal and regulatory paradigms, necessitating a reevaluation of how we structure and implement energy policies across local, national, and global scales. It also invites us to consider the role of communities in shaping and participating in energy systems, moving beyond the traditional dichotomy of state and market actors.

A deeper philosophical debate underpins this reconceptualization, questioning the fundamental nature of energy as a good. Is energy inherently a private good best regulated by market mechanisms or a public good requiring state intervention and management? Or does it possess characteristics that defy this binary classification, demanding novel governance approaches? This paper posits that energy, particularly in the context of renewable sources, exhibits many of the characteristics of a commons resource – a shared system whose sustainable management requires collective action and governance beyond traditional public-private dichotomies. This perspective challenges us to rethink not only our legal frameworks but also our societal understanding of energy production, distribution, and consumption.

The emergence of renewable energy communities across Europe and beyond provides a compelling example of this commons-based approach in action. These initiatives, which involve local citizens collectively investing in, producing, and consuming renewable energy, reveal the possibilities of new ownership models that blend elements of private initiative with public-minded goals and collective governance.<sup>3</sup> However, the success and scalability of renewable energy communities depend critically on the legal and regulatory environments in which they

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1. See ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990); James Meadowcroft, *Who Is in Charge Here? Governance for Sustainable Development in a Complex World*, in GOVERNANCE FOR SUSTAINABLE DEVELOPMENT: COPING WITH AMBIVALENCE, UNCERTAINTY AND DISTRIBUTED POWER 107 (Jens Newig, Jan-Peter Voß & Jochen Monstadt eds., 2008).

2. Jouni Paavola, *Climate Change: The Ultimate Tragedy of the Commons?*, in PROPERTY IN LAND AND OTHER RESOURCES 417 (Daniel H. Cole & Elinor Ostrom eds., 2012); Imre Szeman, *Energy Commons*, 93 MINN. REV. 94 (2019).

3. Cristina Acosta et al., *Facilitating Energy Transition Through Energy Commons: An Application of Socio-Ecological Systems Framework for Integrated Community Energy Systems*, 10 SUSTAINABILITY 366 (2018).

operate. The ways in which renewable energy communities interact with and navigate existing legal principles, particularly those associated with property law, demonstrate how regulations can adapt to support innovative models of energy ownership. The evolution of these legal structures to accommodate shared and decentralized governance models highlights the potential for property law to foster broader systemic change. Additionally, the experiences of these communities underscore the critical role of flexible, context-sensitive legal frameworks in enabling local engagement and collaboration, which are essential for advancing effective and equitable energy transitions.

Recent efforts to support renewable energy communities, particularly within the European Union, highlight both the potential and limitations of current legal frameworks in upscaling these initiatives. Notably, prevalent approaches tend to narrowly circumscribe renewable energy communities to local areas and private law arrangements, rather than situating them as part of an integrated transition of energy as a commonly produced, owned, and consumed resource.<sup>4</sup> This paper argues that realizing the full potential of energy as a commons requires a more comprehensive rethinking of both private and public law regimes. Such a rethinking must consider how legal structures can not only accommodate but actively promote and facilitate the development of commons-based energy systems across multiple scales. This involves reimagining property rights, regulatory frameworks, and governance structures in ways that support collective ownership and management of energy resources.

To address this challenge, we turn to two complementary theoretical perspectives: Resilient Property Theory and the concept of mobile power. Resilient Property Theory, as developed by scholars like Fox O'Mahony and Roark, highlights the dynamic, contextual, and relational nature of property rights and responsibilities.<sup>5</sup> It emphasizes the need for adaptive governance structures that can respond dynamically to the complex and evolving challenges of managing common resources like energy. Through fostering inclusive deliberation and conflict resolution processes, this theory suggests pathways for more effectively mobilizing commons-based energy initiatives across diverse contexts.<sup>6</sup> The resilient property perspective offers a framework for reconceptualizing energy systems in ways that prioritize flexibility, adaptability, and collective stewardship.

Additionally, the concept of "mobile power" highlights the importance of cultural adaptability in enabling commons governance models to effectively navigate and transform the diverse socio-political landscapes in which they operate.<sup>7</sup>

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4. Robert Pollin, *Public Policy, Community Ownership and Clean Energy*, 5 CAMBRIDGE J. REGIONS, ECON. & SOC'Y 339 (2012).

5. Lorna Fox O'Mahony & Marc L. Roark, *Property as an Asset of Resilience: Rethinking Ownership, Communities and Exclusion Through the Register of Resilience*, 36 INT'L J. SEMIOTICS L. 1477 (2023) [hereinafter Fox O'Mahony & Roark I]; Lorna Fox O'Mahony & Marc L. Roark, *Operationalising Progressive Ideas About Property: Resilient Property, Scale, and Systemic Compromise*, 10 TEX. A&M J. PROP. L. 38 (2024) [hereinafter Fox O'Mahony & Roark II].

6. Stefano Carattini et al., *Cooperation in the Climate Commons*, 13 REV. ENV'T ECON. & POL'Y 227 (2019).

7. PETER BLOOM ET AL., *GUERRILLA DEMOCRACY: MOBILE POWER AND REVOLUTION IN THE 21ST CENTURY* (2021).

It recognizes that the successful implementation of the energy commons depends not solely on technical or economic viability, but also on the ability to mobilize support attuned to local norms, practices, and power relations. This concept encourages us to consider how commons-based energy models can be effectively translated and adapted across different cultural and political contexts, while maintaining their core principles and benefits. Mobile power thus provides a lens through which to examine the scalability and transferability of successful commons-based energy initiatives.

Through bringing these two theoretical perspectives productively together, this paper develops a novel framework for understanding and promoting the worldwide emergence and upscaling of the energy commons. Central to this framework is the concept of “commoning” – representing the broader set of practices and strategies through which commons-based models are introduced, shaped, and sustained across multiple scales.<sup>8</sup> Commoning refers, in this respect, to the collective processes and practices through which communities establish, manage, and sustain shared resources. It involves creating inclusive governance structures, fostering collaboration, and negotiating shared responsibilities to ensure equitable access and sustainable use of these resources. Whereas traditionally the notion of “commoning” describes the active process of managing resources as a commons, in this article, it also encompasses the full scope of mobilization efforts required to translate the energy commons from theory into reality. By actively engaging in commoning, communities generate not only material benefits but also social bonds and a shared sense of purpose, reinforcing the resilience of the commons over time. This includes navigating complex socio-political contexts, reshaping legal and regulatory environments, and fostering new cross-scalar alliances and discourses.

The paper argues that legal commoning can only succeed if regulations are collaboratively transformed from fixed rules into flexible, democratic tools that empower communities to manage shared resources effectively and adapt to changing needs.<sup>9</sup> Rather than regulations acting as barriers, this perspective emphasizes the potential to iteratively restructure policies to enable the evolution of diverse energy commons models over time. Resilient Property Theory provides a basis for designing such inclusive, flexible property regimes attuned to the socio-ecological dynamics of managing energy as a shared resource. This approach to regulation and governance recognizes the need for ongoing adaptation and learning in response to changing environmental, technological, and social conditions.

Building on this theoretical foundation combining concepts of “mobile power” and Resilient Property Theory, this article contends that private and public law regimes should be created and implemented to best facilitate the transition of energy to a commonly owned resource, helping to produce and maintain resilient

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8. Aoife Brophy Haney & Michael G. Pollitt, *New Models of Public Ownership in Energy*, 27 INT’L REV. APPLIED ECON. 174 (2013).

9. Fabian David Musall & Onno Kuik, *Local Acceptance of Renewable Energy – A Case Study from Southeast Germany*, 39 ENERGY POL’Y 3252 (2011).

renewable energy communities. These legal arrangements should be context-dependent, recognizing the unique social, economic, and environmental conditions of different localities. However, they should also be designed with sufficient flexibility and adaptability to be mobilized across contexts, informing and supporting the spread of resilient renewable energy communities as part of integrated local, national, and global energy systems. This approach requires a delicate balance between providing a supportive legal framework and allowing for local innovation and adaptation.

The remainder of this paper explores these ideas in depth, beginning with an examination of the relationship between commons and the law, critically identifying how the law variously inhibits, protects, or promotes commons property. It then provides a comprehensive overview of how renewable energy communities are currently regulated within the European Union, before offering a theoretical discussion of how Resilient Property Theory and mobile power could combine to create an innovative and robust legal perspective on fostering resilient and scalable commons property arrangements. The paper then applies these insights to the specific context of the EU, exploring how existing legal frameworks could be leveraged and reformed to better support the development of commons-based energy systems. It concludes with a summary of key arguments and an outline of a future research agenda focused on the legal mobilization of commons-based approaches in the energy sector. Throughout, the paper aims to contribute not only to scholarly dialogues around commons governance and sustainable energy transitions but also to provide valuable insights for policymakers, activists, and practitioners seeking to cultivate more just, sustainable, and democratic energy futures in the face of ecological crisis.

## II. COMMONS LAW — INHIBIT, PROTECT, AND PROMOTE

The legal framework governing energy regulation is a key factor in determining the viability of commons-based approaches to energy production and consumption. Private and public law regimes can inhibit, protect, and promote commons ownership in the context of renewable energy communities in multifaceted ways. Understanding these legal dynamics is essential for developing effective strategies to support the growth and sustainability of energy commons initiatives. Legal frameworks can inadvertently or intentionally create barriers to the establishment and growth of energy commons. These inhibiting factors often stem from existing regulatory structures designed to support traditional, centralized energy systems, protect established market actors, or incentivize particular behavior. One significant barrier to commons ownership in the energy sector is the complexity of regulatory frameworks and administrative procedures.<sup>10</sup> Energy projects must navigate intricate rules surrounding land ownership, zoning, and permitting.

These regulations, often designed with large-scale, centralized energy production in mind, can create disproportionate burdens for community-led initiatives. The administrative complexity can overwhelm volunteer-led organizations, requiring significant time, expertise, and resources that many community groups

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10. BENJAMIN K. SOVACOO & CHRISTOPHER J. COOPER, *THE GOVERNANCE OF ENERGY MEGAPROJECTS: POLITICS, HUBRIS AND ENERGY SECURITY* (2013).

lack. For instance, in Germany, despite supportive policies for renewable energy, the regulatory environment remains challenging for small-scale producers. Frequent changes in the Renewable Energy Sources Act (EEG) have created uncertainty for community energy projects, particularly affecting their ability to secure financing and plan long-term investments.<sup>11</sup> The structure of energy markets, often designed to favor large-scale producers and incumbent utilities, can create significant barriers for community-owned energy initiatives. Competition law, while intended to promote market efficiency, can sometimes work against the interests of small-scale, cooperative energy producers. For example, antitrust laws, primarily focused on preventing market concentration and collusion among competitors, may not adequately account for the unique characteristics of community-owned energy projects.<sup>12</sup> These projects often require collaboration among multiple small producers, which has been potentially misconstrued as anti-competitive behavior under traditional antitrust frameworks.<sup>13</sup> Collaborative efforts by small energy producers, such as Germany's renewable energy cooperatives engaging in joint market access, Spain's community energy projects sharing production and distribution, or U.S. solar co-ops pooling resources for bulk equipment purchases, have at times faced scrutiny under antitrust laws, which can mistakenly treat these community-oriented initiatives as anti-competitive rather than supportive of public interest goals.<sup>14</sup>

Furthermore, existing property rights regimes and land use regulations can pose substantial challenges to the development of energy commons. The complexity of property rights, particularly in urban areas, can hinder the installation of community-owned renewable energy systems. Restrictive zoning laws, historic preservation regulations, and conflicting land use priorities can limit the available space for renewable energy infrastructure, disproportionately affecting community-led initiatives that lack the resources to navigate these complex legal environments.<sup>15</sup>

Financial regulations and tax structures also can inadvertently disadvantage community-owned energy projects. Current financial regulations often fail to account for the unique characteristics of energy cooperatives and other community-owned models. For example, securities laws designed to protect investors can create onerous compliance requirements for community energy projects seeking

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11. Özgür Yıldız et al., *Consumer (Co-) Ownership in Renewables in Germany*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 271 (Jens Lowitzsch ed., 2019).

12. William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSPS. 43, 46-47 (2000).

13. EUROPEAN PARLIAMENT, DIRECTORATE-GENERAL FOR INTERNAL POLICIES, POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY, PE 607.327, COMPETITION POLICY AND AN INTERNAL ENERGY MARKET (2017), [https://www.europarl.europa.eu/Reg-Data/etudes/STUD/2017/607327/IPOL\\_STU\(2017\)607327\\_EN.pdf](https://www.europarl.europa.eu/Reg-Data/etudes/STUD/2017/607327/IPOL_STU(2017)607327_EN.pdf).

14. Eckart Bueren & Jennifer Crowder, *Sustainability and Competition Law in Germany*, in SUSTAINABILITY OBJECTIVES IN COMPETITION AND INTELLECTUAL PROPERTY LAW 83 (Pranvera Këllezi et al. eds., 2024).

15. Edward B. Rock & Daniel L. Rubinfeld, *Common Ownership and Coordinated Effects*, 83 ANTITRUST L.J. 201 (2020); Xi Luo et al., *Distributed Peer-to-Peer Energy Trading Based on Game Theory in a Community Microgrid Considering Ownership Complexity of Distributed Energy Resources*, J. CLEANER PROD., Mar. 30, 2022.

to raise capital from their members. Alternatives to securities laws for community energy projects include tailored regulatory exemptions, such as simplified disclosure requirements or cooperative models where members participate as co-owners rather than investors, as well as crowdfunding platforms and government-backed funding mechanisms like grants or community bonds. These approaches balance investor protection with reduced compliance burdens, fostering accessible and equitable capital-raising for local energy initiatives. Moreover, tax incentives for renewable energy investments are often structured in ways that primarily benefit large corporations or high-income individuals, rather than community-owned projects. This can create an uneven playing field, making it more difficult for energy commons initiatives to compete financially with corporate-owned renewable energy projects. These financial barriers are particularly challenging for low-income households, who face additional obstacles in participating in and benefiting from community energy projects.<sup>16</sup>

While legal frameworks can create barriers, they also have the potential to protect and safeguard commons-based approaches to energy production and consumption. Effective legal protections can help ensure the longevity and resilience of energy commons initiatives. Legal recognition of community energy entities as distinct from traditional corporate structures is a crucial step in protecting commons ownership. The EU's Clean Energy Package (CEP) formally recognizes "renewable energy communities" and "citizen energy communities" (CECs) as distinct actors in the energy market. This recognition provides a legal basis for the unique characteristics of these entities, including their emphasis on community ownership, non-commercial purpose, and democratic governance. Such legal recognition can protect energy commons from being co-opted by private interests or misused by commercial actors.<sup>17</sup> The CEP's definitions of Renewable energy communities and CECs include specific criteria related to ownership structure and decision-making processes, helping to ensure that these entities remain true to their community-oriented mission.<sup>18</sup>

Legal frameworks can protect energy commons by establishing specific rights and ensuring fair treatment in the energy market. The CEP grants key rights to energy communities, including rights for citizens to participate in energy communities, rights to engage in various energy activities (production, consumption, storage, selling, and sharing) and rights to access all suitable energy markets. These legally enshrined rights provide a foundation for energy commons to operate and compete on a more level playing field with traditional energy companies. Competition law could, in this regard, play a role in protecting energy commons by preventing excessive market concentration that could squeeze out community-owned initiatives. Merger control regimes could, specifically, be adapted to address the potential anticompetitive effects of common ownership in the energy

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16. Jens Lowitzsch & Florian Hanke, *Consumer (Co-) Ownership in Renewables, Energy Efficiency and the Fight Against Energy Poverty – A Dilemma of Energy Transitions*, 9 RENEWABLE ENERGY L. & POL'Y REV. 5 (2019).

17. Joshua Roberts, *Power to the People? Implications of the Clean Energy Package for the Role of Community Ownership in Europe's Energy Transition*, 29 REV. EUR. COMP. & INT'L ENV'T L. 232 (2020).

18. Directive 2018/2001, of the European Parliament and of the Council of 11 December 2018 on the Promotion of Use of Energy from Renewable Sources, art. 2, 2018 O.J. (L 328) 82, 103.

sector.<sup>19</sup> While primarily focused on institutional investors, these principles could be extended to protect the diversity of ownership models, including community-owned energy projects.

The development of legal frameworks that facilitate collective ownership is crucial for protecting energy commons. German law already, for example, recognizes various legal structures for collective investments in the renewable energy sector, including civil law partnerships, limited partnerships, and energy cooperatives. These legal forms provide a basis for community members to collectively own and manage energy assets, with built-in protections for individual rights and democratic decision-making processes. Through offering a range of legal structures, this approach allows communities to choose the form that best suits their specific needs and circumstances, enhancing the resilience and adaptability of energy commons initiatives.

Beyond protection, legal frameworks can actively promote and facilitate the growth of energy commons. This involves creating enabling environments that incentivize community ownership and support the scaling up of these initiatives. Establishing comprehensive policy frameworks that explicitly back community energy initiatives is essential for advancing commons ownership. Such policies should address the specific needs of renewable energy communities by offering targeted financial incentives, simplifying administrative procedures, requiring utilities to collaborate with community projects, and embedding community energy goals within broader energy and climate strategies. A notable example is Scotland's Community and Renewable Energy Scheme (CARES), which delivers robust support for community energy efforts through funding, technical guidance, and capacity-building programs. By tailoring policies to the distinct characteristics of these initiatives, governments can foster their growth and integration into the wider energy transition.

Legal frameworks that support innovative financing mechanisms play a crucial role in promoting the growth of energy commons. Consumer Stock Ownership Plans (CSOPs) and other inclusive financing models address the capital challenges faced by many community energy initiatives. These mechanisms enable community members to invest in local energy projects with minimal upfront costs, often leveraging future energy savings to finance their participation. Legally sanctioning and providing guidelines for these financing models enhances their accessibility and reduces legal uncertainties for community organizers and participants. Establishing pathways for energy commons to participate fully in energy markets is essential for ensuring their long-term viability and expansion. Peer-to-peer and community-based energy markets empower community energy initiatives by creating opportunities for direct energy trading between members or across different energy communities, significantly improving the economic sustainability of such projects.

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19. Anna Tzanaki, *Varieties and Mechanisms of Common Ownership: A Calibration Exercise for Competition Policy*, 18 J. COMPETITION L. & ECON. 168 (2022).



Although not strictly a legal measure, government-mandated programs for capacity building and technical support play a crucial role in advancing energy commons. Energy education and skill development, particularly targeted toward low-income households, are essential for fostering broader participation in community energy initiatives. Legal frameworks that mandate and fund such programs ensure that communities gain the expertise necessary to successfully develop and manage energy projects. Strengthening energy commons efforts also benefits from incorporating supportive measures into broader environmental and social policies. Environmental corporate social responsibility (CSR) often focuses on institutional investors but can be adapted to emphasize the benefits of community ownership structures. Recognizing and rewarding the positive externalities of community-owned energy projects—such as lower emissions, greater energy security, and local economic development—creates further incentives to encourage their growth and sustainability.<sup>20</sup>

The complex interplay between inhibiting, protecting, and promoting factors underscores the need for a holistic legal approach to support energy commons. This approach should address not only the specific regulatory barriers and enablers but also the broader institutional and societal contexts in which these initiatives operate. Large institutional investors are leveraging their influence to push companies toward addressing climate change, highlighting how ownership structures can serve as powerful drivers of systemic change. While the context is different, this principle can be applied to energy commons, where community ownership can be leveraged to promote broader sustainability goals. A holistic legal approach should also consider the potential tensions between different policy objectives. Balancing the benefits of community ownership with the objectives of traditional competition policy may involve trade-offs, such as prioritizing local collaboration over market efficiency or competitive neutrality. Addressing these tensions demands thoughtfully crafted policies and a readiness to adapt existing legal frameworks to support both equity and innovation in community energy initiatives.<sup>21</sup> Furthermore, as energy systems become increasingly decentralized and digitalized, legal frameworks must evolve to address new challenges and opportunities. This includes developing regulations for emerging technologies like blockchain-based energy trading platforms, which could significantly enhance the capabilities of energy commons. This could be achieved by creating clear regulatory frameworks that address the unique characteristics of blockchain-based energy trading platforms, such as establishing standards for transparency, security, and interoperability. Policymakers could also pilot sandbox programs to test these technologies in controlled environments, enabling innovation while mitigating potential risks.

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20. Jens Lowitzsch, *Consumer Stock Ownership Plans (CSOPs)—The Prototype Business Model for Renewable Energy Communities*, ENERGIES, Dec. 25, 2019; Kosuke Hirose & Toshihiro Matsumura, *Common Ownership and Environmental Corporate Social Responsibility*, ENERGY ECON., Aug. 27, 2022.

21. Madison Condon, *Externalities and the Common Owner*, 95 WASH. L. REV. 1 (2020).

### III. LEGAL COMMONING

Building on the discussion in Section II about the multifaceted role of commons law in inhibiting, protecting, and promoting shared resource management, this section delves into the concept of legal commoning as a dynamic approach to fostering energy commons. By emphasizing decentralization, participatory governance, social justice, and ecological sustainability, it offers a framework that transcends rigid legal models and adapts to the unique needs of diverse communities. It positions law not merely as a tool of regulation but as a catalyst for empowering communities to actively shape and innovate their energy systems in alignment with shared principles and local contexts.

The idea of commoning has garnered progressively increasing attention in recent times as a vehicle for envisioning and actualizing alternative forms of social and economic organization that transcend the dichotomy of state and market.<sup>22</sup> Commoning practices, such as community land trusts, urban gardens, and open-source software, have been extolled as a means of withstanding neoliberal encroachment and engendering more equitable, sustainable, and democratic modes of resource management.<sup>23</sup> Nevertheless, extant theories of commoning have frequently been reproached for their propensity to idealize local, place-based struggles and to disregard the intricate power relations and social disparities that mold commoning practices.<sup>24</sup>

The law, in this regard, must be a force for mobilising resilient types of renewable energy commons, eschewing one-size fits all approaches and instead be facilitative for a wide-range of strategies and practices linked to a set of core “commons” principles. These include:

1. *Decentralization and localization*: The commonization of energy seeks to decentralize energy production and consumption, moving away from large-scale, centralized infrastructure towards more distributed and locally-controlled systems.<sup>25</sup> This not only reduces the environmental and social impacts of energy transport and distribution but also enables communities to have greater control over their energy futures and to benefit directly from the economic and social value created by renewable energy projects.

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22. COMMONS STRATEGIES GROUP, PATTERNS OF COMMONING (David Bollier & Silke Helfrich eds., 2015); Massimo De Angelis, *Reflections on Alternatives, Commons and Communities*, THE COMMONER, Winter 2003.

23. David Bollier, *Commoning as a Transformative Social Paradigm*, in THE NEW SYSTEMS READER: ALTERNATIVES TO A FAILED ECONOMY 348 (James Gustave Speth & Kathleen Courrier eds., 2021); Sheila R. Foster & Christian Iaione, *The City as a Commons*, 34 YALE L. & POL'Y REV. 281 (2016); James McCarthy, *Commons as Counterhegemonic Projects*, 16 CAPITALISM NATURE SOCIALISM 9 (2005).

24. Patrick Bresnihan, *The More-Than-Human Commons: From Commons to Commoning*, in SPACE, POWER AND THE COMMONS: THE STRUGGLE FOR ALTERNATIVE FUTURES 93 (Samuel Kirwan et al. eds., 2015); Andrea J. Nightingale, *Commoning for Inclusion? Political Communities, Commons, Exclusion, Property and Socio-Natural Becomings*, 13 INT'L J. COMMONS 16 (2019).

25. Deokhwa Hong, *Energy Commons for a Transition Strategy*, in COMMONS PERSPECTIVES IN SOUTH KOREA: CONTEXT, FIELDS, AND ALTERNATIVES 167 (Hyun Choe et al. eds., 2022); Hyejin Namgung et al., *Putting New Wine in Old Bottles: Merging the Logic of the Urban Commons with Seoul's Energy Transition Experiment*, J. CLEANER PROD., Jan. 6, 2022.

2. *Participatory governance and ownership*: The commonization of energy emphasizes the importance of participatory and inclusive forms of governance and ownership, in which citizens and communities have a meaningful say in the decisions that affect their energy systems.<sup>26</sup> This may involve the creation of new democratic institutions, such as community energy boards or citizen assemblies, as well as the development of innovative ownership models, such as consumer stock ownership plans or community land trusts, that enable broad-based participation and benefit-sharing.<sup>27</sup>

3. *Social and environmental justice*: The commonization of energy is grounded in a commitment to social and environmental justice, recognizing that the transition to renewable energy must address the historical and ongoing inequalities and injustices that have characterized the fossil fuel economy.<sup>28</sup> This involves prioritizing the needs and voices of marginalized and vulnerable communities, such as low-income households, communities of color, and indigenous peoples, who have often borne the brunt of the negative impacts of energy extraction and production, while also being excluded from the benefits of the clean energy transition.

4. *Ecological sustainability and regeneration*: The commonization of energy is fundamentally about the creation of a more sustainable and regenerative energy system, one that works in harmony with natural systems and respects the limits of the planet.<sup>29</sup> This involves not only the rapid deployment of renewable energy technologies but also the development of new forms of energy production and consumption that prioritize efficiency, conservation, and the circular use of resources.<sup>30</sup>

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26. Maria Valentina Di Nicoli, *Beyond the Build Environment: The Role of the Human Dimension Towards a Co-Ownership in a Sustainable Energy Community* (Sept. 2021) (Ph.D. dissertation, Polytechnic University of Turin); Franziska Mey & Mark Diesendorf, *Who Owns an Energy Transition? Strategic Action Fields and Community Wind Energy in Denmark*, 35 ENERGY RSCH. & SOC. SCI. 108 (2018).

27. Kathryn Milun et al., *Bringing New Light to One of the Oldest Forms of Property Ownership: An Innovative Solution for Benefitting Underserved Communities Using the Solar Commons Community Trust Model*, 47 VT. L. REV. 383 (2023).

28. Cecilia Martinez, *From Commodification to the Commons: Charting the Pathway for Energy Democracy*, in ENERGY DEMOCRACY: ADVANCING EQUITY IN CLEAN ENERGY SOLUTIONS 21 (Denise Fairchild & Al Weinrub eds., 2017); Adrian A. Smith & Dayna Nadine Scott, *Energy Without Injustice? Indigenous Participation in Renewable Energy Generation*, in THE CAMBRIDGE HANDBOOK ON ENVIRONMENTAL JUSTICE AND SUSTAINABLE DEVELOPMENT 383 (Sumudu A. Atapattu et al. eds., 2021).

29. B. V. Venkatarama Reddy & K. S. Jagadish, *Embodied Energy of Common and Alternative Building Materials and Technologies*, 35 ENERGY & BLDGS. 129 (2003); Robert Wade & Geraint Ellis, *Reclaiming the Windy Commons: Landownership, Wind Rights, and the Assetization of Renewable Resources*, ENERGIES, May 19, 2022.

30. Chris Giotitsas et al., *From Private to Public Governance: The Case for Reconfiguring Energy Systems as a Commons*, ENERGY RES. & SOC. SCI., Aug. 13, 2020; Katy Roelich & Christoph Knoeri, *Governing the Infrastructure Commons: Lessons for Community Energy from Common Pool Resource Management* (Sustainability Rsch. Inst., Paper No. 87, 2015), <https://sri-working-papers.leeds.ac.uk/wp-content/uploads/sites/67/2019/05/SRIPs-87.pdf>.

Legal commoning can, in this way, serve as a powerful tool for upskilling people as active participants in their communities. By engaging in the process of creating, managing, and evolving shared energy resources, individuals develop a range of valuable skills and knowledge. They learn about renewable energy technologies, governance structures, and democratic decision-making processes. As people collaborate to design local energy systems, they gain expertise in project planning, financial management, and community organizing. The hands-on nature of legal commoning fosters problem-solving abilities and encourages innovative thinking, as participants work together to overcome challenges unique to their local context. Moreover, this process cultivates a deeper understanding of environmental and social justice issues, promoting a more holistic view of sustainability. As commoners become more proficient in these areas, they not only contribute to the success of their local energy projects but also become empowered citizens capable of addressing other community needs. This skill development extends beyond the energy sector, creating a ripple effect of engaged, knowledgeable individuals who can contribute meaningfully to various aspects of community life and governance.

The concept of legal commoning also underscores the notion that commons are not merely given or inherited but actively produced through the collective labor and ingenuity of commoners.<sup>31</sup> This productive facet of commoning is often overlooked in conventional accounts that focus on the management or preservation of already-existing common resources, such as forests, fisheries, or grazing lands.<sup>32</sup> In contrast, the notion of commonization illuminates the generative potential of commoning practices to create new forms of value, meaning, and social relations beyond the confines of capitalist markets and state bureaucracies.<sup>33</sup>

For legal frameworks, thus, to truly facilitate the commonization of energy resources, they must be adaptable and responsive to the context-specific needs and aspirations of different communities. Rather than imposing rigid, prescriptive models, the law should serve as an enabling framework that empowers communities to shape energy systems according to their unique social, cultural, and ecological circumstances. A key aspect of this would be the adoption of a more flexible and decentralized approach to energy governance. Instead of centralized, top-down regulations, legal frameworks could establish guiding principles while allowing for significant local autonomy and experimentation. This could involve granting communities the authority to develop their own locally-tailored rules, by-

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31. Massimo De Angelis & David Harvie, *The Commons*, in *THE ROUTLEDGE COMPANION TO ALTERNATIVE ORGANIZATION* 280 (Martin Parker et al. eds., 2014).

32. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (1990); Elinor Ostrom, *Reformulating the Commons*, *AMBIENTE & SOCIEDADE*, Sept. 1, 2002.

33. Yochai Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies*, 80 *U. CHI. L. REV.* 1499 (2013); J. K. Gibson-Graham et al., *Commoning as a Postcapitalist Politics*, in *RELEASING THE COMMONS: RETHINKING THE FUTURES OF THE COMMONS* 192 (Ash Amin & Philip Howell eds., 2016).

laws, and governance structures for managing energy resources as commons. Furthermore, the law should recognize and support the dynamic and evolving nature of commoning processes. Rather than prescribing static models, legal frameworks should embrace the idea of commonization as an ongoing, iterative process of negotiation, adaptation, and transformation. This could involve mechanisms for periodic review and revision of governance arrangements, as well as provisions for conflict resolution and the peaceful resolution of competing claims over energy resources.

The theoretical framework of legal commoning presented here finds its practical expression in the complex landscape of European renewable energy communities, where the principles of decentralization, participatory governance, social justice, and ecological sustainability are tested against real-world institutional and regulatory challenges. As we will see in the following section, the implementation of these commons principles across EU member states reveals both the transformative potential and inherent tensions in translating commoning ideals into concrete legal frameworks. The varying success of different national approaches to renewable energy communities demonstrates how legal commoning must navigate existing power structures, market forces, and institutional path dependencies. This practical experience from the EU context provides valuable insights into how legal frameworks can either enable or constrain the development of energy commons, while highlighting the ongoing challenge of balancing standardized regulatory approaches with the need for flexible, context-sensitive solutions that emerge from local commoning practices.

#### IV. LEGALLY INHIBITING, PROTECTING, AND PROMOTING EUROPEAN RENEWABLE ENERGY COMMUNITIES

The legal framework governing renewable energy communities in the European Union (EU) presents a complex and often contradictory landscape that both enables and constrains the potential for upscaling community-based energy initiatives. This exemplifies the complex interplay between inhibiting, protecting, and promoting factors discussed in Section II. The EU's Clean Energy Package (CEP), particularly the recast Renewable Energy Directive (RED II), marks a significant shift in policy by formally recognizing and mandating support for renewable energy communities. However, this overarching directive has been unevenly implemented across member states, resulting in a patchwork of legal environments that variously facilitate or hinder the growth of energy commons. This heterogeneity reflects not only differing national priorities and existing energy market structures but also reveals the tensions between centralized policy-making and localized implementation in the EU's multilevel governance system. The disparate approaches across member states raise critical questions about the efficacy of EU-wide directives in fostering a cohesive environment for community energy initiatives and highlight the need for more nuanced, context-sensitive policy instruments.

The inhibiting factors for renewable energy communities often stem from regulatory structures that remain deeply entrenched in traditional, centralized energy paradigms. These barriers manifest in myriad forms, from complex administrative procedures to restrictive land use regulations and market structures that inherently favor large-scale producers. The case of Germany illustrates how even

well-intentioned legislation can inadvertently impede the upscaling of community energy initiatives. Despite a generally supportive policy environment, frequent changes in the renewable Energy Sources Act (EEG) have created a climate of uncertainty for community energy projects, undermining their ability to secure long-term financing and plan for future growth.<sup>34</sup> This regulatory instability not only hampers individual projects but also erodes investor confidence in the sector as a whole, potentially stifling innovation and expansion.<sup>35</sup> Regulatory instability significantly deters investment in renewable energy projects, particularly in contexts of asset specificity where firms face heightened risks, and broader research on G7 countries shows that economic policy uncertainty disrupts the macroeconomy and accelerates declines in renewable energy investments.

The German experience underscores the delicate balance policymakers must strike between adapting regulations to evolving market conditions and maintaining a stable, predictable environment for community-based initiatives to thrive. The situation in the Czech Republic and Spain further exemplifies the challenges posed by inadequate or restrictive legal frameworks. In the Czech Republic, the absence of explicit policy recognition for consumer ownership of renewable energy sources has created a vacuum in which community energy concepts struggle to gain traction.<sup>36</sup> This lack of formal acknowledgment not only limits the legal tools available to renewable energy communities but also signals a broader policy indifference that can discourage community engagement and investment in the sector. Spain's recent policy shift from restrictive net metering practices to more supportive self-consumption rules demonstrates the transformative potential of legal reforms.<sup>37</sup> However, it also highlights the opportunity costs associated with delayed policy action, as years of restrictive practices have likely stunted the growth and innovation of the community energy sector in the country.

Property rights regimes and land use regulations across the EU present another significant barrier to the upscaling of renewable energy communities, particularly in urban areas where the potential for distributed renewable energy generation is high. The legal ambiguities surrounding prosumers (reflecting individuals who are both consumers and producers of energy) in Italy, despite favorable government incentives for solar PV, create an uncertain environment for renewable energy communities looking to expand their operations.<sup>38</sup> This situation not only hampers the growth of existing projects but also deters new community initiatives, potentially limiting the sector's contribution to national renewable energy targets. Similarly, the Netherlands' limited legal operationalization of dis-

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34. Yildiz et al., *supra* note 11.

35. Kira R. Fabrizio, *The Effect of Regulatory Uncertainty on Investment: Evidence from Renewable Energy Generation*, 29 J.L. ECON. & ORG. 765 (2013); Kahlid Khan & Chi Wei Su, *Does Policy Uncertainty Threaten Renewable Energy? Evidence from G7 Countries*, 29 ENV'T SCI. & POLLUTION RSCH. 34813 (2022).

36. Vítězslav Malý et al., *Consumer (Co-) Ownership in Renewables in the Czech Republic*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 201 (Jens Lowitzsch ed., 2019).

37. Millán Diaz-Foncela & Ignacio Bretos, *Consumer (Co-) Ownership in Renewables in Spain*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 421 (Jens Lowitzsch ed., 2019).

38. Andrea Borroni & Felicia van Tulder, *Consumer (Co-) Ownership in Renewables in Italy*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 295 (Jens Lowitzsch ed., 2019).

tributed energy, save for a narrow experimental decree, reflects a broader hesitancy to fully embrace the potential of community-led energy transitions.<sup>39</sup> These cases illustrate how the lack of comprehensive legal frameworks can create a chilling effect on community energy initiatives, even in the presence of growing societal momentum for such projects.

Financial regulations and tax structures in many EU member states inadvertently disadvantage community-owned energy projects, hindering their growth and scalability. The imposition of stringent securities laws, while intended to protect investors, often results in onerous compliance requirements that disproportionately burden smaller, community-led initiatives. This regulatory approach fails to account for the unique characteristics and motivations of community energy projects, potentially stifling their ability to raise capital and expand operations. The case of Poland exemplifies how policy frameworks focused primarily on individual prosumers can inadvertently marginalize more collective, community-based approaches.<sup>40</sup> By prioritizing individual over collective action, such policies may limit the potential for renewable energy communities to achieve economies of scale and maximize their impact on the broader energy transition.

Despite these challenges, the legal landscape in the EU also offers mechanisms that protect and promote renewable energy communities, potentially facilitating their upscaling. The formal recognition of renewable energy communities and Citizen Energy Communities (CECs) as distinct actors in the energy market, as mandated by the CEP, provides a legal basis for their unique characteristics. However, the effectiveness of this recognition varies significantly across member states, reflecting differing levels of political will and institutional capacity to support community energy initiatives. France's inclusion of provisions favorable to community and participative projects in its 2015 Energy Transition Act signals a growing acknowledgment of the role of local actors in energy transitions.<sup>41</sup> Yet, the true test of such policies lies in their implementation and the extent to which they can overcome entrenched interests and institutional inertia in the energy sector.

The comprehensive policy frameworks developed by some EU member states to support community energy initiatives offer valuable lessons for upscaling strategies. Scotland's integration of community and local ownership of renewable energy into its climate change, energy, and rural development policies demonstrates the potential of a holistic, cross-sectoral approach.<sup>42</sup> By setting ambitious targets and providing supportive funding mechanisms, Scotland has created an enabling environment that actively promotes the growth and replication of successful

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39. Sanne Akerboom & Felicia van Tulder, *Consumer (Co-) Ownership in Renewables in the Netherlands*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 319 (Jens Lowitzsch ed., 2019).

40. Katarzyna Goebel, *Consumer (Co-) Ownership in Renewables in Poland*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 345 (Jens Lowitzsch ed., 2019).

41. Pierre Wokuri et al., *Consumer (Co-) Ownership in Renewables in France*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 245 (Jens Lowitzsch ed., 2019).

42. Maria Krug-Firstbrook et al., *Consumer (Co-) Ownership in Renewables in Scotland (UK)*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 395 (Jens Lowitzsch ed., 2019).

Renewable energy community models. However, the transferability of this approach to other EU contexts remains questionable, given varying political priorities, institutional structures, and cultural attitudes towards community ownership across member states.

Denmark's long-standing tradition of cooperative ownership in the energy sector, reinforced by legal provisions mandating local ownership shares in new wind energy projects, offers another model for facilitating the widespread development of community-owned renewable energy projects.<sup>43</sup> The significant penetration of community-based energy solutions in Danish households attests to the potential of supportive legal frameworks to drive large-scale adoption of distributed energy resources. However, replicating this success in countries without similar cooperative traditions or political consensus on energy decentralization presents considerable challenges, highlighting the need for tailored approaches that account for local institutional and cultural contexts.

Legal frameworks enabling innovative financing mechanisms have emerged as a crucial factor in promoting the growth and upscaling of renewable energy communities across the EU. Germany's recognition of various legal structures for collective investments in the renewable energy sector provides communities with the flexibility to choose models that best suit their specific circumstances and growth ambitions. Similarly, Switzerland's established tradition of cooperatives and direct ownership of renewable energy facilities offers multiple pathways for community participation in the energy transition.<sup>44</sup> However, the effectiveness of these financing models in driving large-scale uptake of community energy projects depends not only on their legal availability but also on broader economic factors, public awareness, and the capacity of communities to navigate complex financial and regulatory landscapes.

The development of legal pathways for renewable energy communities to participate fully in energy markets is essential for their long-term viability and potential for upscaling. The Netherlands' soft-legal instrument encouraging financial and non-financial participation of residents in onshore wind farms represents a step towards greater community involvement in larger-scale projects.<sup>45</sup> Switzerland's legal provision for self-consumption communities opens up new possibilities for community-based energy trading and sharing.<sup>46</sup> However, these

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43. Anita Rønne & Flemming Gerhardt Nielsen, *Consumer (Co-) Ownership in Renewables in Denmark*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 223 (Jens Lowitzsch ed., 2019).

44. Anna Ebers Broughel et al., *Consumer (Co-) Ownership in Renewables in Switzerland*, in ENERGY TRANSITION: FINANCING CONSUMER CO-OWNERSHIP IN RENEWABLES 345 (Jens Lowitzsch ed., 2019).

45. See Annemiek de Looze & Eefje Cuppen, *To Wind Up Changed: Assessing the Value of Social Conflict on Onshore Wind Energy in Transforming Institutions in the Netherlands*, ENERGY RSCH. & SOC. SCI., July 12, 2023; NEDZERO ET AL., GEDRAGSCODE: ACCEPTATIE & PARTICIPATIE WINDENERGIE OP LAND [CODE OF CONDUCT: ACCEPTANCE & PARTICIPATION OF ONSHORE WIND ENERGY] (Oct. 2020), <https://nedzero.nl/media/pages/footer/c36506083c-1713527577/20201103-gedragscode-wol-opgemaakt-final.pdf>.

46. See Liliane Ableitner et al., *Quartierstrom – Implementation of a Real-World Prosumer-Centric Local Energy Market in Walenstadt, Switzerland*, ARXIV, July 29, 2019; COUNCIL OF EUR. ENERGY REGULS. (CEER), REGULATORY ASPECTS OF SELF-CONSUMPTION AND ENERGY COMMUNITIES (June 25, 2019), [https://www.ceer.eu/wp-content/uploads/2024/04/C18-CRM9\\_DS7-05-03\\_Report-on-Regulatory-Aspects-of-Self-Consumption-and-Energy-Communities\\_final.pdf](https://www.ceer.eu/wp-content/uploads/2024/04/C18-CRM9_DS7-05-03_Report-on-Regulatory-Aspects-of-Self-Consumption-and-Energy-Communities_final.pdf).



innovations also raise critical questions about market integration, grid management, and the balance between decentralized community initiatives and broader system stability. As renewable energy communities scale up and seek to play a more significant role in national energy systems, policymakers must grapple with these complex technical and regulatory challenges.

The legal landscape for renewable energy communities in the EU presents a complex and often contradictory mix of inhibiting, protecting, and promoting factors that significantly influence their potential for upscaling. While innovative policies and legal frameworks in some member states offer promising models for supporting community energy initiatives, many challenges remain in various contexts. The uneven implementation of EU directives and the continued dominance of regulatory structures favoring centralized energy systems continue to limit the growth potential of renewable energy communities. Overcoming these challenges requires not only further policy innovation but also a fundamental rethinking of energy governance that can accommodate more decentralized, community-based approaches while ensuring system-wide stability and efficiency. The varying approaches across member states highlight the need for adaptive and context-sensitive legal strategies to support the commonization of energy resources. As the EU continues to pursue its clean energy transition, the evolution of legal frameworks for renewable energy communities will play a crucial role in determining the extent to which these initiatives can scale up and contribute meaningfully to a more democratic, sustainable energy future.

## V. CREATING LEGALLY RESILIENT AND MOBILE COMMONS

The preceding section of this paper illuminated the complex legal landscape surrounding renewable energy communities in the European Union, highlighting both the potential and limitations of current frameworks in enabling the upscaling of these initiatives. We have observed how the uneven implementation of the Clean Energy Package, for instance, across member states has resulted in a patchwork of legal environments that variously facilitate or hinder the growth of energy commons. The analysis has revealed persistent barriers stemming from regulatory structures entrenched in traditional, centralized energy paradigms, as well as challenges posed by existing property rights regimes, market structures, and financial regulations. These obstacles highlight the need for legal commoning, reflecting a more comprehensive and adaptive legal approach to support the development and scaling of community-based energy initiatives.

In response to these challenges, this section proposes an innovative theoretical framework that integrates Resilient Property Theory (RPT) and the concept of mobile power for practically driving forward processes of legal communing. This synthesis offers a promising foundation for developing adaptive legal structures that can address the identified gaps and limitations in current approaches. By combining these complementary perspectives, we can envision legal frameworks that are better equipped to promote commons-based approaches, protect community interests, and inhibit potentially exploitative capitalist practices in the energy sector. This integrated approach provides a pathway for reimagining energy governance in ways that can support the emergence of more democratic, sustainable, and just energy systems across diverse contexts.

RPT emerges as a particularly insightful framework for reorienting legal structures to create resilient alternative systems of property use. This perspective highlights the critical role of context, relationships, adaptability, and inclusivity in shaping property arrangements, laying the groundwork for legal structures that are more flexible and responsive to the requirements of managing shared resources effectively.<sup>47</sup> For example, this can be seen in community land trusts that adapt governance rules to reflect local cultural practices, renewable energy cooperatives that evolve ownership models to include low-income participants, and urban commons that adjust resource-sharing agreements to balance environmental sustainability with community needs.<sup>48</sup>

The link between resilience and sustainability in property theory is crucial for understanding how legal frameworks can protect and promote commons ownership. RPT offers a pathway to incorporate sustainability into the core of the legal system by fundamentally redefining ownership as a dynamic framework that inherently balances individual rights with responsibilities to maintain, protect, and preserve property for the benefit of future generations. This aligns with the concept of social obligation in property law, as developed in German constitutional law.<sup>49</sup> The integration of RPT, for instance, with the concept of a “single system analysis” derived from South African constitutional law offers a powerful methodology for developing property law that includes positive obligations for property rights holders. This approach views all law as part of one system guided by constitutional principles, allowing for both top-down and bottom-up property initiatives as long as they align with the guiding principles of the system. Such an approach can accommodate diverse forms of property governance, including heat network cooperatives and community land trusts, which demonstrate how property arrangements can include both rights and responsibilities for community members, going beyond traditional property entitlements.<sup>50</sup> More generally, by framing property rights as having both entitlements and obligations, RPT provides a theoretical justification for incorporating positive proprietary obligations of sustainability into property rights. This approach aims to balance individual autonomy with community needs and ecological imperatives, potentially addressing crises of inequality, financial instability, and climate change that have resulted from traditional property law approaches based on utilitarian and neoliberal economic foundations.<sup>51</sup>

While the emphasis on commons resilience in legal theory is a significant step forward, there remains a need to better understand how these alternative property systems based on shared ownership and management can be effectively

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47. Thomas Bauwens et al., *The Energy Commons: A Systematic Review, Paradoxes, and Ways Forward*, ENERGY RSCH. & SOC. SCI., Oct. 7, 2024.

48. Fox O’Mahony & Roark I, *supra* note 5; Fox O’Mahony & Roark II, *supra* note 5

49. Bram Akkermans, *Sustainable Property Law?*, 7 EUR. PROP. L.J. 1 (2018).

50. Bram Akkermans, *Obligations in Resilient Property Theory: Using Single System Analysis to Construe Positive Obligations*, in RESILIENT PROPERTY THEORY AND HOUSING (Lorna Fox O’Mahony, Marc L. Roark, Sue-Mari Viljoen & Ting Xu eds., forthcoming 2025).

51. BRAM AKKERMANS, SUSTAINABLE PROPERTY LAW: RECKONING, RESILIENCE, AND REFORM (2022); Bram Akkermans, *In Search for Sustainable Property Relations*, in PROPERTY LAW REFORM, SUSTAINABILITY AND THE COMMONS 89 (Vincent Sagaert et al. eds., 2024).

spread and scaled. The concept of mobile power offers valuable insights into how legal frameworks can be mobilized for both upscaling energy commons. Mobile power theory, with its focus on fluidity, decentralization, and adaptability, provides a lens for examining how commons-based legal structures can be flexibly applied and replicated across different contexts. Bloom, Jones, and Woodcock, in *Guerrilla Democracy: Mobile Power and Revolution in the 21st Century* (2021), redefine power as a fluid, decentralized, and adaptable force that thrives by evolving in response to diverse social, economic, political, and cultural conditions. Unlike traditional power structures, which rely on fixed hierarchies and centralized authority, mobile power gains strength through its flexibility and ability to reshape itself to fit varied contexts.

A central premise of mobile power is that its effectiveness lies in its adaptability. By dynamically adjusting strategies and forms, mobile power can navigate different socio-political landscapes, responding to the unique demands and challenges of each environment. This capacity to adapt enables it to build relational networks and mobilize resources effectively, whether in grassroots movements, decentralized governance systems, or transnational activism. Another critical feature of mobile power is its viral nature. It spreads by embedding itself in local contexts, drawing on existing norms, practices, and relationships, while simultaneously transforming them to align with broader goals. This viral spread relies on its capacity to resonate with diverse stakeholders, fostering a sense of shared purpose and collective action. It leverages decentralization and interconnectedness to replicate and expand across boundaries, creating a cumulative and self-reinforcing momentum.<sup>52</sup>

The integration of RPT and mobile power theory thus offers a potentially novel perspective for developing legal structures that can enhance both the resilience and scalability of energy commons. This synthesis provides a foundation for reframing property rights, governance mechanisms, and market structures in ways that promote commons-based approaches while protecting community interests. It aligns with emerging work on “commons-based property rights” that seeks to protect the core principles of commons ownership while enabling dynamic expansion. This could involve establishing “expansive commons easements” that automatically extend collective rights and responsibilities as energy initiatives incorporate new resources or expand into new geographical areas.<sup>53</sup>

The integration of RPT and mobile power theory provides a powerful framework for developing adaptable legal approaches to energy commons. By combining RPT’s emphasis on flexible, context-sensitive property arrangements with mobile power theory’s focus on redistributing power relations, we can envision legal templates that both protect community ownership and enable dynamic responses to changing conditions. This theoretical synthesis manifests in practical mechanisms like preferential grid access and community-specific tariff structures, which create resilient pathways for community energy projects to thrive within existing

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52. Bloom et al., *supra* note 7.

53. Tomaso Ferrando & José Luis Vivero-Pol, *Commons and ‘Commoning’: A ‘New’ Old Narrative to Enrich the Food Sovereignty and Right to Food Claims*, in *THE WORLD FOOD CRISIS: THE WAY OUT* 50 (2017), [https://www.sdgfund.org/sites/default/files/\\_right\\_to\\_food\\_and\\_nutrition\\_watch\\_2017.pdf](https://www.sdgfund.org/sites/default/files/_right_to_food_and_nutrition_watch_2017.pdf).

power structures. Similarly, innovations like community energy credits and collaborative power purchase agreements (PPAs) demonstrate how this combined framework can support adaptive governance models that strengthen community agency while maintaining system stability.

This approach aligns naturally with the concept of “societal constitutionalism of the commons,” which envisions a hybrid legal architecture combining state-level constitutional principles with community-level self-regulation.<sup>54</sup> Such a framework enables the development of a broader “law of the commons” that can institutionalize alternative forms of ownership and governance while remaining responsive to local contexts. By codifying successful commons practices into law while maintaining flexibility for local adaptation, this approach creates legal structures that can both protect community interests and adapt to varying political, cultural, and economic landscapes.

The synthesis of RPT and mobile power theory thus offers more than theoretical insights – it provides practical pathways for transforming energy governance through legal commoning. By creating resilient legal frameworks that can adapt to local conditions while maintaining core principles of community ownership and democratic participation, this approach helps bridge the gap between commons theory and practice. The resulting legal structures not only protect community energy initiatives but actively promote their growth and evolution, suggesting a way forward for scaling up energy commons while preserving their essential character as vehicles for local empowerment and sustainable development.

## VI. LEGALLY MOBILIZING RESILIENT RENEWABLE ENERGY COMMUNITIES

The application of this integrated approach to energy commons also raises important questions about the relationship between property rights, environmental protection, and the public interest. As some scholars have noted, there is a “privatization paradox” where it is easy to convert public natural resources into private property but difficult to reverse this process due to constitutional protections for private property.<sup>55</sup> This highlights the need for legal frameworks that can better balance public and private interests in natural resource commons, potentially through modifications to regulatory takings doctrine or the development of new legal concepts that explicitly recognize the public’s rights and interests in common resources.

Energy commons provide a foundational perspective for comprehending renewable energy communities as social institutions embedded in specific cultural and political milieus, transcending their portrayal as mere technical or economic entities. This framing acknowledges renewable energy sources as shared resources amenable to collective management for communal and ecological benefit, diverging from their conventional treatment as commodities or capital assets.<sup>56</sup>

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54. Antonios Broumas, *Movements, Constitutability, Commons: Towards a Ius Communis*, 26 L. & CRITIQUE 11 (2015).

55. Erin Ryan, *Privatization, Public Commons, and the Takingsification of Environmental Law*, 171 U. PA. L. REV. 617 (2023).

56. Matthew J. Burke, *Energy Commons and Alternatives to Enclosures of Sunshine and Wind*, in ROUTLEDGE HANDBOOK OF ENERGY DEMOCRACY 200 (Andrea M. Feldpausch-Parker et al. eds., 2021).

This perspective resonates with RPT principles, which underscore the contextual, relational, and adaptive nature of property rights.

The formulation of malleable and adaptive legal templates accommodating the multifarious forms of renewable energy communities is, therefore, paramount for enhancing their resilience. Hoops' (2023) investigation of German energy cooperatives illuminates the diversity of extant models, spanning from small, localized, highly democratic organizations to larger, investment-oriented entities.<sup>57</sup> This diversity is exemplified in the varying share prices, processing fees, and governance structures observed across different cooperatives. For instance, some cooperatives maintain high minimum investments, potentially excluding economically vulnerable individuals, while others adopt more inclusive financial models.<sup>58</sup>

Legal frameworks inspired by RPT could furnish a spectrum of options for community energy projects, enabling them to select structures congruent with their specific circumstances and objectives. This might entail the genesis of novel legal entities amalgamating characteristics of trusts, cooperatives, and networked organizations, empowering renewable energy communities to modulate their structure as they scale or diversify. For example, "adaptive community energy trusts" could be established, capable of evolving their governance structures and ownership models in response to changing local needs and broader energy transitions.

The contextuality principle inherent in RPT holds particular relevance in addressing the challenges posed by the inconsistent implementation of energy policies across jurisdictions. In the European Union, the Clean Energy Package has been applied heterogeneously across member states, engendering a mosaic of legal environments that both enable and constrain community energy initiatives. This heterogeneity is evident in the varying definitions and regulatory treatments of renewable energy communities across different countries. For instance, while some nations have embraced comprehensive support mechanisms for community energy, others lag in providing clear legal recognition or supportive frameworks.<sup>59</sup>

A context-sensitive approach could engender the development of legal instruments that accommodate varying political, cultural, and economic landscapes while preserving core principles of community ownership and democratic governance. This might encompass the establishment of "regulatory sandboxes" or experimental legal zones where innovative models of community energy ownership and governance can be trialed and refined prior to broader implementation.<sup>60</sup> Such approaches have been successful in fostering innovation in other sectors and could be particularly beneficial for renewable energy communities given their diverse and evolving nature.

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57. Björn Hoops, *Embrace the Diversity of the Energy Commons!* (Univ. of Groningen Faculty of Law Research Paper Series No. 17/2023), <https://ssrn.com/abstract=4679127>.

58. Björn Hoops, *Property Meeting the Challenge of the Commons in The Netherlands*, in *PROPERTY MEETING THE CHALLENGE OF THE COMMONS* 223 (Ugo Mattei et al. eds., 2023).

59. Björn Hoops, *EU Directives on the Internal Governance of Energy Communities and Their Exclusionary Effects*, 17 J. WORLD ENERGY L. & BUS. 147 (2024).

60. Björn Hoops, *Property and the Energy Transition*, in *A RESEARCH AGENDA FOR PROPERTY LAW* 145 (Bram Akkermans ed., 2024); Björn Hoops, *Property Law and (More Than One Notion of) Sustainability: A New Field*, in *ROUTLEDGE HANDBOOK OF PRIVATE LAW AND SUSTAINABILITY* 259 (Marta Santos Silva et al. eds., 2024).

The relational aspect of RPT, when integrated with insights from mobile power theory, can guide the creation of legal frameworks that reflect the interconnected nature of energy systems and the multiplicity of stakeholders involved. This approach recognizes that energy commons are embedded in broader social and ecological networks. Legal structures could be engineered to facilitate collaborative and inclusive forms of ownership and management, potentially through the development of novel constructs such as “energy commons easements” or “community energy trusts” that provide a stable foundation for shared governance while allowing for flexible participation and benefit-sharing arrangements.

The networked perspective derived from mobile power theory could shape the design of legal mechanisms supporting inter-community collaboration and resource sharing. This could enable smaller community initiatives to achieve economies of scale and compete more effectively with large-scale energy producers. Legal frameworks could facilitate the formation of “energy commons federations” that allow multiple renewable energy communities to pool resources, share risks, and collectively engage with larger energy systems and markets. Such federations could be structured with nested governance arrangements, drawing on polycentric governance principles, to maintain local autonomy while enabling coordination and scaling at higher levels.<sup>61</sup>

The adaptability emphasized by both RPT and mobile power theory, furthermore, is essential for addressing the regulatory instability that has impeded the growth of renewable energy communities in many contexts. Hoops’ analysis of EU directives on the internal governance of energy communities highlights the potential for exclusionary effects arising from rigid regulatory requirements.<sup>62</sup> To mitigate these risks, legal frameworks could be designed with greater flexibility in interpreting and implementing governance requirements. Rather than imposing strict limitations on membership or decision-making structures, regulations could focus on ensuring core principles of community benefit and democratic control are upheld while allowing for diverse organizational forms.

For instance, the requirement for renewable energy communities to have environmental, economic, or social community benefits as their primary purpose could be interpreted more leniently, recognizing that financial sustainability and moderate returns for members may be necessary to ensure the long-term viability of these projects. Similarly, restrictions on the involvement of traditional energy companies or large enterprises in renewable energy communities could be relaxed to allow for beneficial collaborations and knowledge exchange, provided safeguards are in place to prevent domination by these entities.

The notion of “adaptive commons regulations” could be developed, including built-in review and adjustment mechanisms to ensure that legal frameworks remain aligned with the dynamic nature of commons ownership and the evolving

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61. Barbara Cosens & Lance Gunderson, *Adaptive Governance in North American Water Systems: A Legal Perspective on Resilience and Reconciliation*, in *WATER RESILIENCE: MANAGEMENT AND GOVERNANCE IN TIMES OF CHANGE* 171 (Julia Baird & Ryan Plummer eds., 2021).

62. Björn Hoops, *The Clash of the Energy Commons*, 33 *EUR. ENERGY & ENV'T L. REV.* 115 (2024).

needs of energy communities.<sup>63</sup> This approach could help address the challenges posed by rapidly changing technological, social, and environmental conditions in the energy sector. The principle of mobile power can enlighten strategies for enhancing the ability of renewable energy communities to navigate and reshape legal and regulatory environments. The emphasis on fluidity and adaptability suggests that legal frameworks for commons governance should be designed to facilitate rapid learning, experimentation, and scaling of successful models across different contexts. This could involve creating legal structures that support knowledge sharing and resource mobilization among different commons initiatives, potentially transcending traditional jurisdictional boundaries.

Transnational legal and institutional frameworks for governing energy commons could, moreover, be developed, promoting cross-border knowledge-sharing and collaboration among energy communities.<sup>64</sup> Such frameworks could build upon existing initiatives like the European Federation of Citizen Energy Cooperatives (REScoop.eu), providing a more robust legal foundation for international cooperation and knowledge exchange among renewable energy communities. The “Rights of Nature” and environmental personhood, as explored in recent legal scholarship, offer an intriguing avenue for reconceptualizing the legal status of energy commons.<sup>65</sup> While current applications of this idea have focused primarily on natural entities like forests or rivers, extending similar principles to renewable energy resources could provide novel protections for community-managed energy systems. This might involve granting legal personhood to community-owned renewable energy installations, potentially offering stronger safeguards against encroachment by private or state interests.

In particular, they help to reconceptualize energy commons, shifting their legal status from mere assets to entities with rights and protections. Traditionally, the framework of environmental personhood has been applied to natural entities like rivers, forests, and ecosystems, recognizing their intrinsic value and granting them legal standing to safeguard their preservation and function. Extending this principle to community-managed renewable energy installations could provide a robust legal shield against exploitation by private or state interests. Granting legal personhood to energy commons, such as wind farms, solar cooperatives, or community microgrids, would enable these entities to hold rights analogous to those of natural ecosystems.<sup>66</sup> For instance, a legally recognized solar cooperative could claim the right to continued operation without undue interference, protection from

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63. Alicia Mas-Tur et al., *Successful Entrepreneurial Learning: Success Factors of Adaptive Governance of the Commons*, 19 KNOWLEDGE MGMT. RSCH. & PRAC. 291 (2021).

64. Phillip Paiement, *Urgent Agenda: How Climate Litigation Builds Transnational Narratives*, in TRANSNATIONAL ENVIRONMENTAL LAW IN THE ANTHROPOCENE: REFLECTIONS ON THE ROLE OF LAW IN TIMES OF PLANETARY CHANGE 121 (Emily Webster & Laura Mai eds., 2021).

65. Björn Hoops, *The Final Search for the Common Core of Acquisitions of Immovables through Long-Term Use*, in THE ACQUISITION OF IMMOVABLES THROUGH LONG-TERM USE 677 (Björn Hoops & Ernst J. Mairais eds., 2022).

66. Clara Esteve-Jordà & Marcos de Armenteras Cabot, *Energy Communities: Why (Sometimes) the Commons Need the State*, in LEGAL CHALLENGES AT THE END OF THE FOSSIL FUEL ERA: SHARING A JUST AND CLEAN ENERGY TRANSITION 73 (Daniel Iglesias Márquez et al. eds., 2024).

harmful encroachment, and access to the resources needed to sustain its energy generation. These rights would not only protect the infrastructure itself but also ensure that its benefits—such as affordable renewable energy and local empowerment—remain accessible to the community. Moreover, legal personhood could empower energy commons to litigate in defense of their interests, acting as plaintiffs in cases of harm or encroachment. This could be particularly important in disputes over land use, regulatory changes, or attempts by large utilities to undermine or co-opt community projects. Additionally, embedding environmental personhood in energy commons aligns with broader sustainability goals, as it inherently ties the success of these initiatives to their responsible and equitable management, fostering long-term environmental and social resilience.

Hoops' analysis of the potential application of environmental personhood to the Black Forest in Germany, for instance, provides valuable insights that could be adapted to the context of renewable energy communities.<sup>67</sup> For instance, granting legal personhood to community-owned renewable energy installations could confer standing to bring legal challenges up to the Constitutional Court, require justification for any limitation of their property rights, and necessitate additional legislative authorization for activities that might harm or exploit the energy commons. "Commons-based energy markets" offer another promising approach for creating economic structures that prioritize community needs and environmental sustainability over pure profit maximization. These markets could be legally structured to prioritize community-owned energy sources, potentially through mechanisms such as preferential grid access or community-specific tariff structures. By incorporating principles from both RPT and mobile power theory, these market structures could be designed to be more resilient to economic shocks and more responsive to changing societal values and environmental constraints. Legal frameworks could be designed to support and scale these types of initiatives, potentially creating a more decentralized and democratically controlled energy market system.

A more nuanced understanding of the diverse motivations and goals that drive community energy initiatives is essential. While EU directives emphasize environmental, economic, or social benefits as the primary purpose of energy communities, the evidence from existing cooperatives suggests a more complex reality. Legal frameworks should be flexible enough to accommodate this diversity, recognizing that financial sustainability and moderate returns for members may be necessary to ensure the long-term viability of these projects. This could involve developing more flexible criteria for assessing the "primary purpose" of energy communities, allowing for a balance between community benefit and financial sustainability. For instance, rather than imposing strict limitations on profit distribution, regulations could focus on ensuring that a significant portion of the benefits generated by renewable energy communities are reinvested in the community or used to support environmental and social objectives.

Mobile power can illuminate, consequently, strategies for enhancing the political influence and advocacy capacity of renewable energy communities. By

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67. Björn Hoops, *What if the Black Forest Owned Itself? A Constitutional Property Law Perspective on Rights of Nature*, 11 *TRANSNAT'L ENV'T L.* 475 (2022).



conceptualizing these initiatives as part of broader social movements for energy democracy and climate justice, legal and institutional frameworks can be developed that support their ability to challenge dominant power structures and advocate for supportive policies. This might involve creating legal mechanisms for renewable energy communities to participate in energy policy-making processes at local, national, and international levels, or establishing protected spaces for civic engagement and deliberation around energy issues. The concept of “energy democracy” provides a useful framework for understanding and promoting the political dimension of renewable energy communities. Baker argues that reframing energy as an abundant, accessible resource rather than a commodity can support the development of more democratic and just energy systems.<sup>68</sup> Legal frameworks could be designed to support this reframing, potentially through the creation of new legal categories that recognize the unique characteristics of community-managed energy resources.

The integration of RPT and mobile power principles also offers insights into how to address potential conflicts between different rights and interests in the energy transition. Returning again to the insights of Hoops’ analysis of the use of vacant buildings to house refugees in Germany provides an interesting parallel for considering how the rights of property owners might be balanced against the broader social and environmental benefits of renewable energy communities.<sup>69</sup> Similar principles of proportionality and compensation could be applied in cases where the development of community energy projects conflicts with existing property rights or land use regulations. The concept of “expropriation without compensation” explored by Hoops in the context of South African land reform could offer provocative insights for considering more radical approaches to energy system transformation.<sup>70</sup> While direct application of this concept to renewable energy communities would likely be controversial and face significant legal challenges in most contexts, it highlights the need for creative thinking about how to balance individual property rights with broader societal needs in the face of urgent environmental and social challenges.

The development of more resilient and mobilized renewable energy communities also requires addressing the property law challenges associated with new energy technologies and infrastructure. Current analysis of property issues related to the energy transition highlights several key areas that require legal innovation, including:

1. The state’s power to compel property owners to make energy efficiency upgrades

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68. Shalanda H. Baker, *Unlocking the Energy Commons: Expanding Community Energy Generation*, in *LAW AND POLICY FOR A NEW ECONOMY: SUSTAINABLE, JUST, AND DEMOCRATIC* 211 (Melissa K. Scanlan ed., 2017).

69. Björn Hoops, *Taking Possession of Vacant Buildings to House Refugees in Germany: Is the Constitutional Property Clause an Insurmountable Hurdle?*, 5 *EUR. PROP. L.J.* 26 (2016).

70. Björn Hoops, *Expropriation Without Compensation: A Yawning Gap in the Justification of Expropriation?*, 136 *S. AFR. L.J.* 261 (2019).

2. New fragmentation of property interests related to renewable energy installations
3. Legal issues around tubes and cables for energy infrastructure
4. Emergence of energy communities sharing renewable resources
5. New dependencies created by decentralized energy systems
6. Legal uncertainties around offshore wind farms

Addressing these challenges will require a comprehensive rethinking of property law in relation to energy systems. For instance, new legal frameworks could be developed to facilitate the installation of renewable energy infrastructure on existing buildings, potentially through the creation of new types of easements or shared ownership arrangements. Similarly, innovative legal structures could be designed to manage the complex property relationships involved in community-owned microgrids or energy storage systems.

The integration of Resilient Property Theory and mobile power principles offers a comprehensive framework for developing more resilient and mobilized renewable Energy Communities. This approach provides a pathway for reimagining energy governance structures in ways that can promote commons-based approaches, protect community interests, and challenge the dominance of centralized, profit-driven energy systems. By embracing flexibility, adaptability, and networked forms of organization, this integrated theoretical perspective offers valuable insights for designing legal and regulatory frameworks that can foster thriving energy commons across diverse contexts.

## VII. CONCLUSION

The theory of legal commoning, introduced in this paper, can help to overcome the current barriers imposed on the resilience and upscaling of renewable energy communities by existing private law perspectives and regimes. It points to the need for a paradigm shift from a compliance-based approach to a more agile, open, and participatory framework focused on enhancing the overall resilience of these communities and potential to be upscaled. In doing so, it acknowledges the deep complexity and heterogeneity, as well as idiosyncratic and local context particularities of energy systems, and the need for law and organisation to remain open and supportive to local forms of knowledge, practice, and innovation.

Critically, this approach emphasizes the need for property systems to be adaptive, flexible, and responsive to changing social, economic, and ecological conditions, rather than rigid, hierarchical, and exclusionary. This combined theoretical perspective recognizes that the resilience and sustainability of property systems depends not only on their internal design principles and governance structures but also on their legal capacity to engage with and navigate the wider social-ecological systems in which they are embedded. Specifically, regarding energy systems, it highlights that energy property relations imply more and often competing values and interests than the market value of the energy resource heritage alone.<sup>71</sup> This includes the social and ecological values associated with energy

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71. Eric T. Freyfogle, *Property and Liberty*, 34 HARV. ENV'T L. REV. 75 (2010)

commons, such as community empowerment or energy democracy, as well as the cultural or spiritual values attached to certain energy landscapes or resources.<sup>72</sup>

They also show that energy systems can prioritize a property relations strategy that promotes resilience and agility in energy systems, thereby ensuring their stability across a changing and uncertain climate. This means promoting diverse forms of ownership and governance of energy assets, including individual and privately held assets as well as collective and common-held assets.<sup>73</sup> It also means promoting the coexistence of, and complementarity between, different types of energy technologies and sources, including distributed renewable energy systems in combination with centralised grid infrastructure.<sup>74</sup>

Within the EU, operationalizing the distributed energy vision will necessitate amending patchworks of private law across Member States. Countries must align cooperative laws, contractual defaults, grid access and interconnection regulations, and energy rights to facilitate the scalable growth of cross-border renewable energy communities.<sup>75</sup> Broader conceptual alignment on the civic/social dimensions of energy provisioning versus purely economic activity is imperative.<sup>76</sup> Vitrally, any private law reform agenda must confront the politically contentious question of entrenched incumbent rights. Does advancing community energy interests require diluting or even abrogating vested utility property claims and commercial energy contracts?<sup>77</sup> To what extent should optimizing systemic goals like sustainability override insular individual property protections?<sup>78</sup> Powerful interests will wield private law absolutism around inviolable property/contracts to resist transitions threatening investments and profits.<sup>79</sup>

A radical perspective might be to reconceptualize energy itself as a public trust resource outside traditional private law enclosures and commercialization.

72. Andrea Capaccioli, *Participatory Design for Community Energy-Designing the Renewable Energy Commons* (2018) (Ph.D. dissertation, University of Trento); Lene Gjortler Elkjær et al., *Different Pasts, Contested Presents and Desired Futures: Local Narratives and Identities in the Co-Production of a Shared Wind Energy Ownership Model*, 28 *LOC. ENV'T* 1515 (2023).

73. Marie Claire Brisbois, *Powershifts: A Framework for Assessing the Growing Impact of Decentralized Ownership of Energy Transitions on Political Decision-Making*, 50 *ENERGY RSCH. & SOC. SCI.* 151 (2019); Marie Claire Brisbois, *Decentralizing Energy Systems: Political Power and Shifting Power Relations in Energy Ownership*, in *ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES* 83 (Majja Nadesan et al. eds., 2023); Conrad Kunze & Sören Becker, *Collective Ownership in Renewable Energy and Opportunities for Sustainable Degrowth*, 10 *SUSTAINABILITY SCI.* 425 (2015).

74. Tineke van der Schoor & Bert Scholtens, *Power to the People: Local Community Initiatives and the Transition to Sustainable Energy*, 43 *RENEWABLE & SUSTAINABLE ENERGY REVS.* 666 (2015).

75. Dorian Frieden et al., *Are We on the Right Track? Collective Self-Consumption and Energy Communities in the European Union*, *SUSTAINABILITY*, Nov. 12, 2021.

76. Michiel A. Heldeweg & Séverine Saintier, *Renewable Energy Communities as 'Socio-Legal Institutions': A Normative Frame for Energy Decentralization?*, *RENEWABLE & SUSTAINABLE ENERGY REV.*, Nov. 9, 2019; Michiel A. Heldeweg et al., *Public-Private or Private-Private Energy Partnerships? Toward Good Energy Governance in Regional and Local Green Gas Projects*, *Energy, Sustainability & Soc'y*, Mar. 24, 2015.

77. Simon Pirani, *Roads to an Energy Commons*, *PEOPLE & NATURE* (Nov. 18, 2021), <https://peopleandnature.wordpress.com/2021/11/18/roads-to-an-energy-commons/>.

78. Tomasz Bojar-Fijalkowski, *Reflections on Crossing the Boundaries Between Public and Private Law in Implementing the "European Green Deal"*, 2 *ADMIN. & ENV'T L. REV.* 97 (2021).

79. Larry Lohmann, *Toward a Political Economy of Neoliberal Climate Science*, in *THE ROUTLEDGE HANDBOOK OF THE POLITICAL ECONOMY OF SCIENCE* 305 (David Tyfield et al. eds., 2017).

Indeed, notions of atmospheric dominium and climate property rights suggest an expansive, holistic re-theorization of energy-as-commons beyond private/public bifurcations.<sup>80</sup> This resonates with philosophical traditions of energy democracy and recognizing energy provision as an indispensable civic function. Alternatively, more reformist approaches could retain core private law while realigning defaults and market mechanisms. This might entail private/public hybrid organizational models, cooperative licenses for utility infrastructure, restricting corporate rights claims hindering renewable energy communities, or formalizing communal forms of energy tenures.<sup>81</sup> Here, private law retains vitality for bottom-up institutional pluralism if suitably retooled.

Ultimately, the path forward hinges on multi-scalar normative assessments. Do energy systems call for retaining exclusionary private rights coupled with collective action workarounds?<sup>82</sup> Or do shared, inclusive, multi-constituent arrangements become the aspirational socio-legal institution? Is the regulatory challenge merely eliminating private law distortions? Or should private law dialectically evolve to reflect new energy ontologies?

Hence, while current private and public law perspectives and regimes are pivotal for moulding and upscaling renewable energy communities, this process irrevocably unspools deeper quandaries around foundational legal-economic axioms. The energy commons precipitates a reckoning for private law's role, perhaps even its identity, within broader systemic transformations for decarbonization and sustainability imperatives. Transcending this conceptual impasse requires not mere tinkering through legislative piecemeals but engaged normative theorizing on energy governance and the future of collective resource management.

In conclusion, Resilient Property Theory and mobile power offer a compelling and complementary theoretical framework for overcoming the legal barriers to the establishment and upscaling of renewable energy communities. By reconceptualizing property relations as dynamic, adaptive, and open and by recognizing the transformative potential of social movements embodying mobile power, these theories provide a foundation for developing legal structures that can support the energy transition and address the climate crisis. However, this process also necessitates a deeper reckoning with foundational legal-economic axioms and a willingness to engage in normative theorizing on energy governance and the future of collective resource management.

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80. Erin Ryan, *From Mono Lake to the Atmo: spheric Trust: Navigating the Public and Private Interests in Public Trust Resource Commons*, 10 GEO. WASH. J. ENERGY & ENV'T L. 39 (2019).

81. Avri Eitan et al., *Community-Private Sector Partnerships in Renewable Energy*, 105 RENEWABLE & SUSTAINABLE ENERGY REVS. 95 (2019).

82. Elinor Ostrom & Charlotte Hess, *Private and Common Property Rights*, in 5 ENCYCLOPEDIA OF LAW AND ECONOMICS: PROPERTY LAW AND ECONOMICS 53 (Boudewijn Bouckaert ed., 2nd ed. 2010); Elinor Ostrom et al., *Revisiting the Commons: Local Lessons, Global Challenges*, 284 SCIENCE 278 (1999).