

GREEN POWER IN MARKET CHAINS: RESHAPING COMPETITION LAW IN THE AGE OF RENEWABLE ENERGY

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ABSTRACT

The global transition toward renewable energy raises critical questions about the adequacy of existing competition law frameworks in preventing market concentration and ensuring fair access. In Indonesia, the development of renewable energy remains challenged by oligopolistic tendencies, limited regulatory responsiveness, and unequal market entry opportunities. This paper adopts a normative and conceptual approach to critically examine whether the current Indonesian competition law paradigm sufficiently addresses the complexities of the renewable energy sector. Drawing on theoretical literature and national regulatory discourse, the study argues the objectives of competition law beyond economic efficiency, emphasizing sustainability and equity. The analysis concludes that conventional antitrust approaches must be recalibrated to support an inclusive and environmentally sound energy transition in Indonesia. It recommends a value-oriented reform of competition law aligned with the Sustainable Development Goals (SDGs), particularly in advancing climate justice and equitable energy access.

Keywords : competition law; renewable energi; sustainability; energy transition; market chains.

A. Introduction

The global imperative to transition towards a low-carbon economy has undeniably propelled renewable energy to the forefront of international energy agendas.¹ As the urgency to mitigate climate change intensifies, nations worldwide are making substantial investments in clean energy alternatives, particularly focusing on solar, wind, and other sustainable sources.² However, this profound transformation of energy systems extends beyond mere technical or financial considerations; it is fundamentally a legal and institutional undertaking, necessitating profound reforms in both market design and regulatory architecture.³ As renewable energy markets grow, competition law plays an increasingly important role in

1 Qusay Hassan et al., “The Renewable Energy Role in the Global Energy Transformations,” *Renewable Energy Focus* 48 (March 2024): 100545, <https://doi.org/10.1016/j.ref.2024.100545>.

2 Odunayo Adewunmi Adelekan et al., “ENERGY TRANSITION POLICIES: A GLOBAL REVIEW OF SHIFTS TOWARDS RENEWABLE SOURCES,” *Engineering Science & Technology Journal* 5, no. 2 (2024): 272–87, <https://doi.org/10.51594/estj.v5i2.752>.

3 Yashwant Singh Bisht et al., “Legal Framework for Energy Transition: Balancing Innovation and Regulation,” *E3S Web of Conferences* 540 (2024): 13015, <https://doi.org/10.1051/e3sconf/202454013015>.

regulating access to grids, ensuring fair investment opportunities, and preventing market dominance. This paper examines the legal dimension of the energy transition by analyzing the interplay between competition law and renewable energy markets, with a specific focus on Indonesia.

Climate change represents an unprecedented global crisis demanding coordinated and accelerated action from all stakeholders.⁴ As articulated within the Sustainable Development Goals (SDGs), notably Goal 7 (Affordable and Clean Energy) and Goal 13 (Climate Action), a robust energy transition is paramount for reducing carbon emissions and ensuring long-term environmental sustainability.⁵ In response, numerous countries are actively reorienting their energy policies towards fostering more inclusive, clean, and resilient systems.⁶ This significant global shift compels a rigorous examination of whether existing legal frameworks, including the very principles of competition law, are adequately equipped to facilitate equitable access and foster fair competition within the burgeoning renewable energy sector.⁷

Despite these aspirations, the practical implementation of power sector reforms, especially in developing nations, has diverged significantly from the idealized "textbook" models that gained prominence in the 1990s. As highlighted in the World Bank's seminal book, "Rethinking Power Sector Reform in the Developing World," contextual variables have profoundly influenced the trajectories of these reforms.⁸ While member countries of the Organisation for Economic Co-operation and Development (OECD) have, on average, adopted approximately 80 percent of the proposed reform elements, developing countries, particularly those characterized by smaller power systems or lower income levels, have implemented less than 40 percent. Furthermore, the momentum of reform adoption experienced a considerable slowdown between 2005 and 2015, suggesting the presence of deep-seated structural and institutional constraints that transcend purely economic rationality.⁹ These compelling findings raise critical questions regarding the institutional capacity and inherent legal adaptability of emerging economies as they navigate the

4 Renhe Zhang et al., "From Concept to Action: A United, Holistic and One Health Approach to Respond to the Climate Change Crisis," *Infectious Diseases of Poverty* 11, no. 1 (2022), <https://doi.org/10.1186/s40249-022-00941-9>.

5 "Sustainable Development Goal 7 and Sustainable Development Goal 13: Possible Ways of Interactions," in *Industry 4.0*, by Alexander M. Solntsev and Roza D. Akshalova (Springer International Publishing, 2021), https://doi.org/10.1007/978-3-030-75405-1_3.

6 Precious Oluwaseun Okedele et al., "Global Legal Frameworks for an Equitable Energy Transition: Balancing Growth and Justice in Developing Economies," *International Journal of Applied Research in Social Sciences* 6, no. 12 (2024): 2878-91, <https://doi.org/10.51594/ijarss.v6i12.1765>.

7 Raphael J. Heffron, "Applying Energy Justice into the Energy Transition," *Renewable and Sustainable Energy Reviews* 156 (March 2022): 111936, <https://doi.org/10.1016/j.rser.2021.111936>.

8 Vivien Foster and Anshul Rana, *Rethinking Power Sector Reform in the Developing World* (Washington, DC: World Bank, 2020), <https://doi.org/10.1596/978-1-4648-1442-6>.

9 *Ibid.*

multifaceted challenges associated with energy transitions.¹⁰ The formulation of the Regulatory Indicators for Sustainable Energy (RISE) 2016 score involved an assessment of a country's performance in three key areas: energy access, renewable energy, and energy efficiency. This evaluation was based on a comprehensive set of 27 indicators and 85 sub-indicators, where each indicator was assigned a score on a 0–100 scale. With all indicators being equally weighted, the final scores for each pillar and the country were determined by aggregating these individual indicator scores. The uneven spread of power sector reform across the developing world is visually represented in Figure 1.

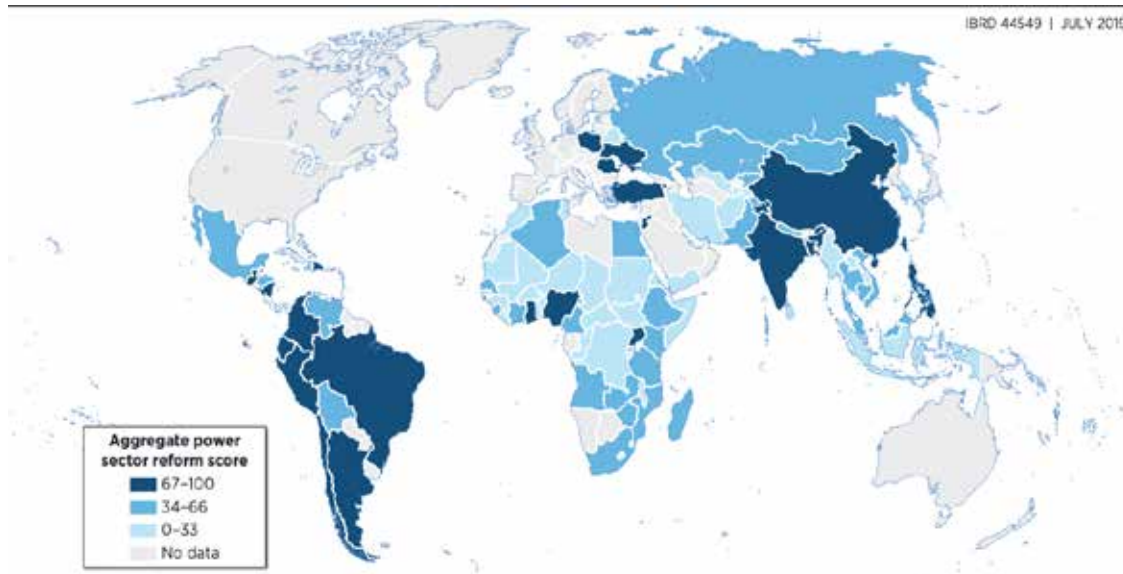


Figure. Divergent Patterns of Power Sector Reform Adoption in Developing Countries.

Source: Vivien Foster and Anshul Rana, 2019.

The Indonesian context notably reflects many of the intricate complexities underscored by the World Bank's analysis. Although renewable energy has been strategically positioned as a pivotal driver for sustainable development, the actual implementation of supportive legal and institutional frameworks remains conspicuously uneven. Indonesia's power sector, predominantly characterized by the dominance of state-owned enterprises and a highly centralized structure, faces unique challenges in fundamentally reforming its market architecture to effectively accommodate new, increasingly decentralized, and competitive actors.¹¹ This inherent complexity is further compounded by legacy regulations that are frequently ill-equipped to effectively manage the distributed nature inherent in modern renewable energy systems.¹²

¹⁰ *Ibid.*

¹¹ Indri Dwi Apriliyanti et al., "To Reform or Not Reform? Competing Energy Transition Perspectives on Indonesia's Monopoly Electricity Supplier Perusahaan Listrik Negara (PLN)," *Energy Research & Social Science* 118 (December 2024): 103797, <https://doi.org/10.1016/j.erss.2024.103797>.

¹² Dimitar Anguelov, "State-Owned Enterprises and the Politics of Financializing Infrastructure Development

When properly integrated, renewable energy possesses the dual potential to serve as both a powerful engine for sustainable development and a significant catalyst for inclusive market growth.¹³ However, without the presence of robust and adequate legal safeguards, the nascent renewable energy sector faces a substantial risk of being captured by monopolistic interests or entrenched large incumbents.¹⁴ Consequently, ensuring a truly level playing field within the renewable energy market necessitates a fundamental reevaluation of how competition law operates, specifically in its capacity to promote innovation, effectively deter the abuse of dominant positions, and proactively facilitate market entry for new players.

In Indonesia, the evolving direction of energy policy and the dynamic shifts within the electricity market reveal a confluence of both promising opportunities and inherent tensions.¹⁵ On one hand, recent regulatory initiatives, such as the National Energy Policy (KEN) as outlined in Government Regulation No. 79/2014, Presidential Regulation No. 112/2022 on renewable electricity tariffs, Law No. 30/2007 on Energy, and Law No. 30/2009 on Electricity, demonstrably indicate a growing commitment to the energy transition agenda.¹⁶ On the other hand, persistent structural barriers, including but not limited to limited grid access for independent power producers, opaque procurement processes, and insufficient enforcement of existing competition rules, collectively undermine the potential for cultivating a genuinely competitive renewable energy market.

Recent scholarly discussions have increasingly explored the complex interplay among competition law, sustainability principles, and the dynamic market forces shaping the global renewable energy transition. Schinkel and Treuren (2020) present a compelling argument that any relaxation of antitrust rules in the name of sustainability initiatives would ultimately prove counterproductive, underscoring instead that robust competition serves as a vital catalyst for innovation in green technologies.¹⁷ In a similar vein, Mondliwa et al. (2020) offer an insightful investigation into how deeply entrenched legacy regulations and the prevailing bargaining power within developing economies fundamentally mold energy value chains, thereby highlighting the indispensable need for competition authorities to assume active and

in Indonesia: De-Risking at the Limit?," *Development and Change* 55, no. 3 (2024): 493–529, <https://doi.org/10.1111/dech.12828>.

- 13 Chien-Heng Chou et al., "Renewable Energy Integration for Sustainable Economic Growth: Insights and Challenges via Bibliometric Analysis," *Sustainability* 15, no. 20 (2023): 15030, <https://doi.org/10.3390/su152015030>.
- 14 Lucy Baker et al., "Power Struggles: Governing Renewable Electricity in a Time of Technological Disruption," *Geoforum* 118 (January 2021): 93–105, <https://doi.org/10.1016/j.geoforum.2020.12.006>.
- 15 Abidah B. Setyowati and Jaco Quist, "Contested Transition? Exploring the Politics and Process of Regional Energy Planning in Indonesia," *Energy Policy* 165 (June 2022): 112980, <https://doi.org/10.1016/j.enpol.2022.112980>.
- 16 Rahmantara Trichandi, "A Brief Review on Indonesia's National Energy Policy," *Purnomo Yusgiantoro Center*, 2018, <https://purnomoyusgiantorocenter.org/opinion/a-brief-review-on-indonesias-national-energy-policy/>.
- 17 Maarten Pieter Schinkel and Leonard Treuren, "Green Antitrust: Friendly Fire in the Fight against Climate Change," *SSRN Electronic Journal*, ahead of print, Elsevier BV, 2020, <https://doi.org/10.2139/ssrn.3749147>.

decisive roles.¹⁸ Further contributing to this discourse, Beneke Avila (2025) emphasizes Latin America's significant clean energy potential while simultaneously advocating for proactive antitrust interventions specifically designed to mitigate undue market concentration in critical renewable energy industries.¹⁹ Concluding this body of work, Holmes and Meagher (2022) strongly advocate for the strategic utilization of established competition instruments, such as Article 102 TFEU and robust merger control mechanisms, as essential tools to effectively counteract monopolistic abuses that demonstrably threaten the achievement of broader sustainability goals.²⁰ Collectively, these various academic works comprehensively illuminate the multifaceted challenges and the inherent opportunities involved in effectively aligning the principles of competition law with the urgent imperatives of climate action and the accelerated development of renewable energy infrastructure.

While the scholarly studies undoubtedly provide valuable theoretical foundations and pertinent policy insights, their primary geographical focus is predominantly situated within the Global North or the specific contexts of Latin American nations. This concentrated focus leaves a discernible and significant research gap concerning the unique challenges and opportunities present in Southeast Asian countries, particularly Indonesia. Furthermore, it is observed that most of the existing scholarship does not adequately address the critical question of how competition law frameworks can be strategically realigned to ensure the simultaneous achievement of both market efficiency and energy justice during the ongoing transition to renewable energy sources. This paper endeavors to precisely fill that identified gap by meticulously examining the specific structural and legal challenges inherent in Indonesia's evolving energy market and by exploring the potential reorientation of its competition law regime. The distinctive novelty of this study resides in its integrative approach, a methodology that meticulously links the intricacies of competition regulation with the broader, overarching agenda of sustainable development and the fundamental principle of equitable energy access. In doing so, this research contributes a perspective that is both regionally grounded in the Indonesian context and yet globally relevant to the ongoing international debate surrounding energy transitions and competition policy.

This paper is systematically guided by two intrinsically interrelated research questions. Firstly, to what extent can Indonesia's current competition law effectively ensure the establishment and maintenance of a healthy market structure within its burgeoning renewable energy sector? Secondly, how can the existing framework of competition law be strategically reoriented to actively support a just and truly sustainable energy transition within the Indonesian context? In meticulously addressing these pivotal questions, the study

18 Pamela Mondliwa et al., "Competition and Power in Global Value Chains," *Competition & Change* 25, nos. 3–4 (2021): 328–49, <https://doi.org/10.1177/1024529420975154>.

19 Francisco E. Beneke Avila, "Competition Law in Latin America and Global Greenhouse Gas Emissions: The Way Forward," *World Competition* 48, no. Issue 1 (2025): 125–52, <https://doi.org/10.54648/woco2025014>.

20 Simon Holmes and Michelle Meagher, "A Sustainable Future: How Can Control of Monopoly Power Play a Part?," *SSRN Electronic Journal*, ahead of print, Elsevier BV, 2022, <https://doi.org/10.2139/ssrn.4099796>.

aims to critically reexamine the prevailing dominant paradigm of competition law as it is currently applied within Indonesia's energy governance landscape. It proposes an innovative alternative legal approach, one that comprehensively embeds the crucial principles of sustainability and energy justice directly within both the enforcement mechanisms and the fundamental design of competition policy. Through this rigorous inquiry, the paper also seeks to systematically unpack the inherent normative and institutional tensions that frequently arise between the objectives of market liberalization and the overarching goal of environmental stewardship. Ultimately, this research aspires to contribute significantly towards the development of more inclusive and adaptive legal frameworks that are directly aligned with the global sustainability agenda.

Academically, this paper significantly advances the ongoing discourse on competition law by proposing a novel, sustainability-oriented reconceptualization that is firmly grounded in the specific context of a developing country undergoing a critical energy transition. It further extends the normative debates surrounding market regulation by thoughtfully incorporating crucial considerations of climate equity and the imperative of long-term ecological viability. From a practical standpoint, the findings presented herein offer timely and highly relevant input for Indonesian policymakers, aiding them in the crucial task of designing energy and legal reforms that are not only responsive to economic imperatives but also deeply cognizant of environmental exigencies. The urgency of this study is particularly pronounced as Indonesia actively seeks to balance its international commitments to the Sustainable Development Goals (SDGs) with the complex realities of its rapidly evolving domestic energy market structure. By contributing valuable insights to both legal theory and practical policymaking, this paper strategically positions itself at a crucial intersection of law, governance, and the broader pursuit of sustainable development.

B. Research Method

This study adopts a normative-legal research methodology, strategically chosen for its inherent capacity to critically evaluate the intricate legal frameworks, foundational principles, and governing norms that shape competition law within Indonesia's dynamic energy sector. This approach facilitates a rigorous and in-depth exploration of the substantive content embedded in relevant statutes, established legal scholarship, and the core conceptual underpinnings of both competition and energy jurisprudence. The research design is inherently multifaceted, integrating both descriptive-analytical and conceptual qualities. It is descriptive-analytical in its careful delineation and detailed scrutiny of existing regulations and the practical dimensions of competitive dynamics within the Indonesian renewable energy domain. Concurrently, its conceptual orientation drives the development and subsequent proposition of a novel theoretical framework for competition law, thoughtfully engineered to incorporate the critical elements of sustainability and justice.

This research draws primarily on Indonesian statutory regulations and primary legal documents, including Law No. 5 of 1999 on the Prohibition of Monopolistic Practices and Unfair Business Competition, Law No. 30 of 2007 on Energy, Law No. 30 of 2009 on Electricity, Government Regulation No. 79 of 2014 on the National Energy Policy (KEN), and Presidential Regulation No. 112 of 2022 on the Acceleration of Rooftop Solar Power Plant Development, supplemented by relevant rulings and regulations issued by the Ministry of Energy and Mineral Resources (ESDM), the Business Competition Supervisory Commission (KPPU), and other competent authorities. Secondary sources encompass scholarly works, peer-reviewed articles, policy reports from national and international institutions, and contemporary media analyses that illuminate the challenges and opportunities of Indonesia's renewable energy sector. The study employs a qualitative normative methodology comprising legal interpretation, conceptual comparison, and argument synthesis, combined with critical analysis to identify gaps and inconsistencies within the existing competition law framework. This is complemented by a reconstructive analysis that advances proposals for reshaping competition law to better integrate sustainability, equity, and inclusivity, thereby aligning it with the demands of a just and effective energy transition in Indonesia.

C. Discussions

1. The Indonesian Competition Law Framework and Its Relevance to the Renewable Energy Sector

Indonesia's primary competition statute, Law No. 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition, serves as the cornerstone of the nation's antitrust regime.²¹ Its foundational objectives are explicitly articulated as fostering a conducive business climate, ensuring fair competition, promoting economic efficiency, and ultimately enhancing consumer welfare.²² While these objectives are broadly beneficial for any market, their interaction with the energy sector, particularly the nascent and rapidly evolving renewable energy domain, warrants meticulous analysis.²³ The law provides the KPPU with a suite of instruments to achieve these aims, including prohibitions against restrictive agreements (such as cartels, price-fixing, and market division), prohibitions against anti-competitive activities (like tying arrangements and exclusive dealing),

21 Dennis Wye Keen Khon et al., "Two Decades of Business Competition Law: How Has Indonesian Competition Law Transformed?," *Journal of Private and Commercial Law* 7, no. 1 (2023): 45–68, <https://doi.org/10.15294/jpcl.v7i1.44355>.

22 Rizky Arjuna T Girsang, "Peranan Hukum Dalam Pembangunan Ekonomi Di Indonesia Berkaitan Dengan Pembentukan Undang-Undang Nomor 5 Tahun 1999 Tentang Larangan Praktek Monopoli Dan Persaingan Usaha Tidak Sehat," *Logika : Journal of Multidisciplinary Studies* 12, no. 01 (2021): 1–8, <https://doi.org/10.25134/logika.v12i01.3753>.

23 Aripin Ahmad, "Two Decades of Indonesian Business Competition Law: Implementation, Enforcement and Contribution to the Economy," *Journal of Research on the Lepidoptera* 51, no. 2 (2020): 277–92, <https://doi.org/10.36872/lepi/v51i2/301096>.

regulations concerning the abuse of dominant positions, and mechanisms for merger and acquisition control.²⁴

In the context of the renewable energy market, these instruments theoretically equip the KPPU to address various forms of anti-competitive behavior. For instance, prohibitions against restrictive agreements could target collusion among independent power producers (IPPs) or equipment suppliers that inflate prices or restrict market entry.²⁵ The provisions concerning the abuse of dominant positions could be invoked against a vertically integrated incumbent or a large player seeking to stifle competition from smaller renewable energy developers by denying essential facilities or imposing discriminatory terms.²⁶ Furthermore, merger control mechanisms are designed to prevent excessive market concentration that could arise from the consolidation of major players in the renewable energy generation, transmission, or distribution segments. Thus, on paper, Law No. 5 of 1999 appears to offer a robust set of tools for market oversight.²⁷

Providing a broader context to the efficacy and impact of this legal framework, recent assessments indicate a dynamic competitive landscape in Indonesia. The Center for Economics and Development Studies (CEDS) of the Faculty of Economics and Business (FEB) at Padjadjaran University (UNPAD) concluded that the national competition index increased to 4.87 in 2022 from 4.81 in the preceding year.²⁸ This upward trend suggests a "slightly high level of business competition" across the country, reflecting an improving economic climate in the post-COVID-19 pandemic era which has stimulated a more competitive national environment. The CEDS UNPAD study, based on a national business competition index aggregated from various economic sectors across 34 provinces, revealed that nearly all dimensional components contributing to the index showed an increase.²⁹ However, it is noteworthy that the dimensions of industrial performance and regulation recorded a decrease in their respective values.³⁰ This particular finding signals potential

24 Rahayu Hartini et al., "Implementation of Business Competition Compliance Program to Prevent Unfair Business Competition Practices Against Business Enterprises," *Audito Comparative Law Journal (ACLJ)* 5, no. 1 (2024): 42–55, <https://doi.org/10.22219/aclj.v5i1.29780>.

25 Rika Azizah et al., "Fungsi Dan Peran Lembaga KPPU Dalam Praktek Persaingan Usaha," *Karimah Tauhid* 2, no. 3 (2023): 697–707, <https://doi.org/10.30997/karimahtauhid.v2i3.8789>.

26 Rahmadani Rahmadani, "PENGUASAAN PASAR OLEH DISTRIBUTOR LAMPU HANNOCHS DI KOTA PEKANBARU BERDASARKAN UNDANG-UNDANG NOMOR 5 TAHUN 1999 TENTANG LARANGAN PRAKTIK MONOPOLI DAN PERSAINGAN USAHA TIDAK SEHAT," *SEIKAT: Jurnal Ilmu Sosial, Politik Dan Hukum* 1, no. 2 (2022): 43–50, <https://doi.org/10.55681/seikat.v1i2.154>.

27 Huta Disyon and Elisatris Gultom, "Critical Review of the Implementation of the Making of SOE as a Holding from Anti-Monopoly and Unfair Business Competition Perspective," *Jurnal Penelitian Hukum De Jure* 22, no. 2 (2022): 191, <https://doi.org/10.30641/dejure.2022.v22.191-204>.

28 Fitri Novia Heriani, "Indeks Persaingan Usaha Naik, Sektor Pertambangan dan Konstruksi Paling Rendah," *hukumonline.com*, 2025, <https://www.hukumonline.com/berita/a/indeks-persaingan-usaha-naik-sektor-pertambangan-dan-konstruksi-paling-rendah-lt677e0159c5537/>.

29 asean-competition.org, "CEDS FEB UNPAD CONCLUDES THAT THE 2022 COMPETITION INDEX GOES UP ASEAN Competition," 2023, <https://asean-competition.org/read-news-ceds-feb-unpad-concludes-that-the-2022-competition-index-goes-up>.

30 *IBID.*

areas of concern where the current regulatory framework or industry structures might be less effective in fostering competition, a detail particularly relevant when considering the complexities of the renewable energy sector's development.

Historically, the conventional application of competition law in Indonesia's energy sector has largely focused on preventing traditional cartel behavior, regulating state-owned enterprises (SOEs) where they operate commercially, and scrutinizing mergers that could lead to dominant market positions.³¹ The KPPU has issued various decisions and interpretations concerning conventional energy markets, particularly in oil and gas distribution, coal supply, and general electricity infrastructure.³² While these precedents provide a basis for understanding the KPPU's analytical framework, their direct relevance to the renewable energy sector, with its distinct characteristics, remains limited.³³

The renewable energy market presents a unique set of characteristics that often challenge the straightforward application of conventional competition principles.³⁴ Firstly, the sector is highly capital-intensive, requiring substantial upfront investment, which can inherently limit the number of viable market entrants.³⁵ Secondly, the intermittency of certain renewable sources (e.g., solar, wind) necessitates robust grid infrastructure and often sophisticated energy storage solutions, creating dependencies on existing grid operators.³⁶ Thirdly, and most critically in Indonesia, the market structure is heavily influenced by the presence of a single state-owned off-taker, Perusahaan Listrik Negara (PLN), which holds a near-monopoly on electricity transmission and distribution and acts as the primary buyer for most IPPs.³⁷ This monopsony power fundamentally shapes market dynamics, potentially distorting price signals and creating significant bargaining power imbalances. These unique attributes suggest that a direct, unnuanced application of conventional competition law principles might not adequately capture or address the specific competitive challenges prevalent in the renewable energy landscape.

Despite its seemingly comprehensive toolkit, the conventional paradigm of competition law, with its singular focus on economic efficiency and consumer welfare through lower

31 Rafi Oktario Mahdi Alkari and Dwi Desi Yayi Tarina, *State-Owned Enterprises Restructuring and Its Challenges in Business Competition from the Perspective of Antitrust and Competition Law in Indonesia*, December 16, 2024, <https://doi.org/10.29303/ulrev.v8i2.381>.

32 Amanda et al., *Analysis of Competition Law on Alleged Monopolistic Practices in The Sale of Fuel Oil (BBM) by PT Pertamina (Persero) in Indonesia*, June 2, 2025, <https://lamlaj.ulm.ac.id/index.php/abc/article/view/208>.

33 Iman Prihandono and Ekawestri Prajwalita Widiati, "Regulatory Capture in Energy Sector: Evidence from Indonesia," *The Theory and Practice of Legislation* 11, no. 3 (2023): 207–31, <https://doi.org/10.1080/20508840.2023.2248837>.

34 Daniel Scholten et al., "The Geopolitics of Renewables: New Board, New Game," *Energy Policy* 138 (March 2020): 111059, <https://doi.org/10.1016/j.enpol.2019.111059>.

35 Madjid Soltani and Artie Ng, eds., *Financial and Technological Innovation for Sustainability: Environmental, Social and Governance Performance*, Routledge International Studies in Money and Banking (Routledge, 2024).

36 Muhammed Y. Worku, "Recent Advances in Energy Storage Systems for Renewable Source Grid Integration: A Comprehensive Review," *Sustainability* 14, no. 10 (2022): 5985, <https://doi.org/10.3390/su14105985>.

37 Apriliyanti et al., "To Reform or Not Reform?"

prices, may prove insufficient to fully achieve the broader objectives of Indonesia's energy transition.³⁸ The transition to a low-carbon economy is not merely about fostering economic efficiency; it encompasses multifaceted goals such as environmental sustainability, climate justice, energy security, and universal energy access.³⁹ A competition law framework that prioritizes only static and dynamic efficiency might inadvertently overlook or even impede policy objectives related to de-carbonization, technological innovation for sustainability, and ensuring equitable participation in the green economy.⁴⁰

This narrow focus risks perpetuating what can be termed as “market failures” or “regulatory failures” that traditional antitrust approaches are not fully equipped to resolve. For instance, if market concentration, even if deemed “efficient” by conventional metrics, stifles the growth of decentralized renewable energy systems or disproportionately impacts vulnerable communities' access to clean energy, the conventional framework may not offer adequate remedies. Furthermore, promoting collaboration among companies for research and development of green technologies, or for establishing sustainable supply chains, might paradoxically face antitrust scrutiny if the law strictly adheres to an anti-collusion stance without sufficiently accounting for the collective benefits to sustainability.⁴¹ Therefore, a critical re-evaluation is necessary to determine whether the existing legal and conceptual foundations of Indonesian competition law are truly fit for purpose in navigating the complexities of a just and sustainable energy transition.

2. Reconceptualizing Competition Law: Towards a Just and Sustainable Energy Transition

The traditional paradigm of competition law predominantly centers on achieving economic efficiency (both allocative and dynamic) and maximizing consumer welfare, typically through lower prices and increased output.⁴² However, the pressing global challenges of climate change and the imperative of a just energy transition necessitate a critical re-evaluation of these singular objectives. The theoretical argument for expanding the scope of competition law stems from the recognition that markets, left unregulated solely by efficiency concerns, often fail to adequately account for environmental externalities and social inequities.⁴³ Climate change, for instance, represents the quintessential market

38 Laely Nurhidayah et al., “Indonesia’s Just Energy Transition: The Societal Implications of Policy and Legislation on Renewable Energy,” *Climate Law* 14, no. 1 (2024): 36–66.

39 Giuseppina Siciliano et al., “Low-carbon Energy, Sustainable Development, and Justice: Towards a Just Energy Transition for the Society and the Environment,” *Sustainable Development* 29, no. 6 (2021): 1049–61, <https://doi.org/10.1002/sd.2193>.

40 Amogh Ravishankara, “Institutional Analysis of Direct Air Capture in the Context of Aviation Sustainability” (PhD Thesis, Delft University of Technology, 2023).

41 Ramsi Woodcock, *The Contrasting Approaches to Power of the Modern State and the Antitrust Laws: Lessons for Platform Regulation* (SSRN, 2020).

42 Ioannis Lianos, “Competition Law as a Form of Social Regulation,” *The Antitrust Bulletin* 65, no. 1 (2020): 3–86, <https://doi.org/10.1177/0003603X19898626>.

43 *Ibid.*

failure where the true cost of carbon emissions is not fully internalized, leading to sub-optimal outcomes for the planet and future generations.⁴⁴

Therefore, the objectives of competition law must be broadened to explicitly incorporate environmental sustainability and social justice considerations.⁴⁵ This includes, but is not limited to, fostering climate justice (ensuring that the burdens and benefits of climate action are distributed equitably) and promoting universal energy access (guaranteeing affordable, reliable, and sustainable energy for all). Such a conceptual expansion recognizes that true long-term welfare extends beyond immediate economic gains to encompass ecological integrity and societal well-being. From a comparative perspective, this debate has gained significant traction in jurisdictions like the European Union, where the concept of “Green Antitrust” or “Sustainability-Oriented Competition Law” is actively being explored and debated.⁴⁶ Scholars and policymakers are increasingly arguing that competition authorities should facilitate, rather than hinder, collaborations that lead to environmentally beneficial outcomes, even if they entail minor restrictions on competition, provided the net societal benefit, including environmental gains, outweighs the competitive harm. This emerging perspective provides a robust theoretical foundation for re-imagining Indonesia’s competition law to serve a more holistic public interest in the context of its energy transition.

The practical integration of sustainability and justice considerations into competition law enforcement requires a deliberate shift in the analytical framework employed by bodies like the KPPU. Rather than merely assessing competitive effects in terms of price, output, and market shares, the KPPU could adopt a more nuanced approach that incorporates environmental and social impacts⁴⁷. For instance, in defining relevant markets within the renewable energy sector, the KPPU could consider not just direct substitutes but also the environmental footprint of different energy sources, acknowledging that cleaner energy might operate in a distinct “sustainability market.”

In merger control assessments, beyond evaluating traditional efficiency gains or potential market power, the KPPU could explicitly factor in the sustainability impacts of a proposed merger.⁴⁸ This would involve assessing whether a merger would accelerate or impede the adoption of renewable energy technologies, enhance or diminish grid stability for intermittent renewables, or contribute positively to emission reductions. Similarly, in evaluating abuse of dominant position cases, the KPPU could analyze whether certain

44 Christian Stoll and Michael A. Mehling, “Climate Change and Carbon Pricing: Overcoming Three Dimensions of Failure,” *Energy Research & Social Science* 77 (July 2021): 102062, <https://doi.org/10.1016/j.erss.2021.102062>.

45 Lianos, “Competition Law as a Form of Social Regulation.”

46 Edith Loozen, “EU Antitrust in Support of the Green Deal. Why Better Is Not Good Enough,” *Journal of Antitrust Enforcement* 12, no. 1 (2024): 75–97, <https://doi.org/10.1093/jaenfo/jnad005>.

47 Ahmad, “Two Decades of Indonesian Business Competition Law.”

48 Dian Parluhutan, “Analisis Hukum Kompetisi Terhadap ‘Big Data’ Dan Doktrin ‘Essential Facility’ Dalam Transaksi Merger Di Indonesia,” *Jurnal Persaingan Usaha* 1, no. 1 (2021): 83–96, <https://doi.org/10.55869/kppu.v1i1.14>.

behaviors by dominant incumbents not only harm competition but also obstruct the energy transition or disadvantage smaller, greener players.⁴⁹ For example, discriminatory grid access policies by a dominant utility could be scrutinized not just for competitive harm but also for their negative impact on renewable energy development and equitable access.

Furthermore, a reoriented competition law can proactively support pro-environment collaborations among businesses without violating core competition principles. Traditional antitrust concerns often view horizontal agreements with suspicion. However, specific guidelines or block exemptions could be developed for collaborations aimed at achieving demonstrable sustainability benefits, such as joint research and development of low-carbon technologies, collective efforts to establish sustainable supply chains, or pooling resources for large-scale renewable energy infrastructure development.⁵⁰ Such collaborations would need careful scrutiny to ensure they do not become disguised cartels, but a “green antitrust” framework would provide a legal safe harbor for genuinely sustainability-driven initiatives, recognizing that collective action is often necessary to address complex environmental challenges.

A thoughtfully reoriented competition law can serve as a powerful catalyst for both innovation in renewable energy technologies and the development of more inclusive business models.⁵¹ By ensuring a genuinely level playing field and preventing monopolistic capture of nascent green markets, competition law incentivizes firms to invest in research and development, constantly seeking more efficient, affordable, and accessible renewable energy solutions. This dynamic competition drives down costs, improves performance, and accelerates the diffusion of clean energy technologies, which are all vital for a rapid and effective energy transition. Preventing the abuse of dominance by large, established players, for instance, protects the innovative potential of start-ups and smaller firms that often introduce disruptive green technologies.⁵²

Beyond innovation, competition law plays a crucial role in fostering inclusivity within the renewable energy value chain. By actively ensuring equal opportunities for all market participants, including Small and Medium-sized Enterprises (SMEs) and local communities, it can democratize access to the burgeoning green economy. This involves addressing barriers to entry for smaller players, such as complex regulatory hurdles, discriminatory procurement processes, or limited access to financing. A competition authority with a sustainability mandate could advocate for policies that promote community-owned

49 Silvia Rahmawati et al., “Urgensi Pemberlakuan Kewajiban Pre-Merger Notification Oleh Komisi Pengawasan Persaingan Usaha,” *JURNAL ACITYA ARDANA* 3, no. 2 (2023): 74–84, <https://doi.org/10.31092/jaa.v3i2.2560>.

50 Muhammad Pravest Hamidi et al., “Tinjauan Green Economy Dalam Hukum Persaingan Usaha Di Indonesia,” *Jurnal Persaingan Usaha* 2, no. 1 (2022): 5–19, <https://doi.org/10.55869/kppu.v3i-.48>.

51 Bukran Bukran and Rizal Ramdani, “PENGARUH KEBIJAKAN EKONOMI HIJAU TERHADAP INOVASI BISNIS BERKELANJUTAN DI SEKTOR MANUFAKTUR,” *ECONOMIST: Jurnal Ekonomi Dan Bisnis* 1, no. 3 (2024): 35–42, <https://doi.org/10.63545/economist.v1i3.58>.

52 Hamidi et al., “Tinjauan Green Economy Dalam Hukum Persaingan Usaha Di Indonesia.”

renewable energy projects, facilitate the participation of local businesses in renewable energy supply chains, or ensure fair competition in the provision of distributed energy resources. By fostering genuine competition, competition law can empower a broader range of actors to participate in and benefit from the energy transition, thereby contributing to its social justice dimension and ensuring that the green transformation is not merely an economic shift but a truly equitable one.

Table. Green Antitrust Framework and Its Strategic Impacts

Aspect	Description
Framework Focus	Conditional approval of environmentally beneficial collaborations
Main Instruments	<ul style="list-style-type: none"> · Joint Research and Development (R&D) · Investment in Clean Infrastructure · Development of Green Supply Chains
Regulatory Objective	To ensure that antitrust enforcement aligns with environmental and climate goals
Strategic Impacts	<ul style="list-style-type: none"> · Open Innovation. Encouraging cooperative innovation to address climate challenges · Inclusive Markets. Enabling access for small and medium enterprises in green industries · Acceleration of Renewable Energy. Facilitating rapid deployment of clean energy technologies · Just Transition. Ensuring social equity in the shift towards a sustainable economy

3. Strategies for Reorientation and Policy Recommendations for Indonesia

a. Legislative and Regulatory Reforms

To effectively embed sustainability and justice into Indonesia's competition law, specific legislative and regulatory reforms are imperative. Firstly, it is highly recommended to consider specific amendments to Law No. 5 of 1999, or to enact new implementing regulations, that explicitly incorporate sustainability and social justice as legitimate objectives of competition policy, particularly within the context of the renewable energy sector. This could involve adding clauses that allow for sustainability benefits to be considered in competitive assessments, similar to provisions emerging in other jurisdictions. For instance, the law could permit certain pro-environmental collaborations that might otherwise be deemed anti-competitive, provided their net positive impact on sustainability demonstrably outweighs any minor restrictive effects on competition.⁵³

Secondly, beyond the primary statute, there is a clear need for the development of specific guidelines or dedicated handbooks by the KPPU for the enforcement of competition law in the renewable energy sector. These guidelines would provide clarity on how existing

⁵³ Kurnia Toha, "URGENSI AMANDEMEN UU TENTANG PERSAINGAN USAHA DI INDONESIA: PROBLEM DAN TANTANGAN," *Jurnal Hukum & Pembangunan* 49, no. 1 (2019): 76, <https://doi.org/10.21143/jhp.vol49.no1.1911>.

competition principles apply to unique characteristics of renewable energy markets, such as power purchase agreements with single off-takers, grid access issues, and the treatment of joint ventures for large-scale renewable projects. Such guidelines would offer much-needed predictability for market participants and equip the KPPU with a tailored framework to address emerging anti-competitive practices that could impede the energy transition. These specific guidelines should also elaborate on how sustainability considerations are to be weighed in merger reviews, dominant position analyses, and cartel investigations within this crucial sector.

b. Strengthening the Role of the KPPU

One of the key challenges is the limited scope of the KPPU authority in addressing sustainability-related issues. Although KPPU holds a strong mandate to oversee monopolistic practices and review mergers and acquisitions, its jurisdiction has not fully expanded to consider environmental externalities, renewable energy access, or pro-competitive green collaborations. For instance, merger assessments remain narrowly focused on price and efficiency, while exemptions or conditional approvals have yet to extend to joint initiatives in clean technology and renewable infrastructure. The effectiveness of any reorientation strategy heavily depends on strengthening the capacity and mandate of the KPPU. It is strongly advocated that the KPPU should significantly enhance its capacity and expertise in understanding the intricate dynamics of the renewable energy market and deeply engaging with sustainability issues. This involves specialized training for its commissioners and investigators on energy economics, renewable energy technologies, environmental law, and the multi-dimensional aspects of sustainable development. A more profound understanding would enable the KPPU to conduct more nuanced market analyses, identify truly anti-competitive behaviors versus legitimate business practices in a complex and evolving sector, and evaluate the broader societal impact of its decisions.⁵⁴

Furthermore, the KPPU should adopt a more proactive and preventive enforcement approach to preempt unhealthy market concentration within the renewable energy sector. This could include conducting regular market studies specifically targeting the renewable energy value chain to identify potential bottlenecks, emerging monopolies, or practices that disproportionately disadvantage new entrants and smaller players⁵⁵. Early intervention, through advisory opinions or non-binding recommendations, could prevent the crystallization of anti-competitive structures before they become entrenched. The KPPU should also actively monitor procurement processes for large-scale renewable energy projects to

54 A. Asmah, "Penguatan Kewenangan Komisi Pengawas Persaingan Usaha Lewat Putusan Mahkamah Konstitusi (Putusan Mk No.85/Puu-Xiv/2016)," *KERTHA WICAKSANA* 15, no. 1 (2021): 11–17, <https://doi.org/10.22225/kw.15.1.2808.11-17>.

55 Nova Angelina Silalahi, "Pembentukan Perangkat Kepatuhan Persaingan Usaha Sebagai Strategi Untuk Meningkatkan Kepatuhan Persaingan Usaha," *Jurnal Persaingan Usaha* 2, no. 1 (2022): 30–42, <https://doi.org/10.55869/kppu.v3i-.50>.

ensure fairness and transparency, thereby mitigating the risks of collusion or discriminatory practices that could hinder genuine competition and project development.

c. Enhancing Inter-Agency Coordination

Effective reorientation of competition law requires a robust and synergistic approach involving multiple government agencies. It is critical to recommend the establishment of stronger coordination and synergy mechanisms between the KPPU, the Ministry of Energy and Mineral Resources (ESDM), the Ministry of Environment and Forestry (KLHK), and other relevant regulatory bodies. This intensified inter-agency collaboration is essential to ensure that policies related to energy, environment, and competition are coherent, mutually reinforcing, and do not create unintended conflicts that could undermine the energy transition. For instance, energy policies designed to accelerate renewable energy deployment should be vetted for potential anti-competitive impacts, and competition enforcement should consider the broader energy and climate goals.⁵⁶

A key aspect of this enhanced coordination involves the importance of inter-agency data and information exchange for more comprehensive market analysis. By sharing data on energy production, consumption, project development, market players, and environmental indicators, agencies can develop a more holistic understanding of the energy market's structure and behavior. This shared intelligence would enable more informed decision-making, allowing regulators to identify systemic issues, anticipate market distortions, and formulate targeted interventions that promote both competition and sustainability. Regular joint meetings, working groups, and even shared databases could facilitate this crucial exchange.⁵⁷

d. Promoting Inclusive Participation and Market Access

Finally, a fundamental aspect of reorienting competition law towards justice and sustainability involves actively promoting inclusive participation and ensuring equitable market access within the renewable energy sector. This entails proposing affirmative policies or incentives, which are supported by competition law principles, to encourage the participation of new entrants and Small and Medium-sized Enterprises (SMEs) in the EBT sector. Such measures could include favorable financing schemes, streamlined permitting processes for smaller-scale projects, or specific set-asides in tenders for local developers and community-based initiatives, all designed to counteract inherent market barriers. Competition law, while ensuring these incentives do not lead to undue market distortions, can safeguard that these opportunities genuinely foster new competition rather than merely creating new forms of capture.⁵⁸

56 Mukti Wibowo et al., "Pengawasan Persaingan Usaha Dan Kepastian Hukum: Tantangan Dan Solusi," *Journal of Knowledge and Collaboration* 1, no. 3 (2024): 116–22, <https://doi.org/10.59613/p95e8z22>.

57 *Ibid.*

58 Athariq Wibawa and Sapto Hermawan, "KRITIK ATAS RANCANGAN UNDANG -UNDANG ENERGI BARU

Concurrently, it is crucial to recommend improvements in grid access policies and procurement processes to ensure fairness and transparency. Discriminatory or opaque grid connection rules can be significant barriers for independent power producers, particularly those focused on renewables. Reforming these policies to ensure non-discriminatory access and clear, merit-based interconnection procedures is vital. Similarly, procurement processes for renewable energy projects, including Power Purchase Agreements (PPAs) with PLN, must be made transparent, competitive, and predictable. This ensures that the most efficient and innovative projects, regardless of the size or incumbency of their developers, are selected, thereby fostering genuine competition and accelerating the deployment of renewable energy in an equitable manner.⁵⁹

D. Closing

This study conclusively asserts that Indonesia's current competition law, primarily embodied in Law No. 5 of 1999, is insufficient to fully ensure the establishment and maintenance of a healthy and equitable market structure within its burgeoning renewable energy sector. While the existing framework conceptually provides foundational tools for market oversight and aims to prevent basic anti-competitive practices, its conventional focus on narrow economic efficiency and consumer welfare, predominantly assessed through price and output mechanisms, critically overlooks the unique and complex structural characteristics of the renewable energy market. These include the pervasive role of State Electricity Company or PLN as a near-monopsony off-taker, the sector's inherent capital intensity, and the intermittency challenges of renewable generation. This historically constrained paradigm proves demonstrably inadequate in addressing deep-seated structural barriers, mitigating emerging oligopolistic tendencies, and rectifying discriminatory practices that systematically impede new entrants and hinder genuinely inclusive participation. Ultimately, this prevents the sector from realizing its full competitive potential and navigating the intricate interplay between traditional economic imperatives and the crucial, multi-dimensional goals of sustainability and energy justice.

Therefore, to proactively support a truly just and sustainable energy transition within the Indonesian context, the existing framework of competition law must be strategically reoriented. This essential reorientation necessitates a fundamental paradigm shift that explicitly expands the normative objectives of competition law beyond mere economic efficiency to comprehensively embrace environmental sustainability and social justice as integral and equally weighted goals. By deliberately integrating these broader societal and ecological considerations into its analytical and enforcement framework, the KPPU can

TERBARUKAN DI INDONESIA DALAM KERANGKA DESAIN PENYUSUNAN LEGISLASI EFEKTIF," *Bina Hukum Lingkungan* 8, no. 3 (2024): 159–90, <https://doi.org/10.24970/bhl.v8i3.140>.

59 Izzy Al Kautsar, "Memaknai Persaingan Usaha Yang Berkeadilan Dan Menyejahterakan Dalam Perspektif Keadilan Sosial," *Yurispruden: Jurnal Fakultas Hukum Universitas Islam Malang* 7, no. 1 (2023): 59–79, <https://doi.org/10.33474/yur.v7i1.19983>.

more effectively assess market behaviors and structures specific to the renewable energy sector. This refined approach allows for the proactive facilitation of collaborations that yield significant environmental benefits while simultaneously preventing anti-competitive abuses that undermine sustainable development and equitable access. Ultimately, such a transformative reorientation positions competition law not merely as a traditional economic regulator, but as a powerful and indispensable catalyst for driving green innovation, fostering inclusive market growth, and ensuring that Indonesia's ambitious energy transition contributes genuinely to its broader Sustainable Development Goals.

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