

Transforming Energy Law for Climate Justice: Towards A Legal Framework of Just Energy Transition in Developing Countries

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ABSTRACT

Hukum transisi energi Indonesia masih terfragmentasi dan belum koheren dalam mendukung keberlanjutan serta peralihan menuju sistem energi yang adil secara iklim. Meski komitmen terhadap energi terbarukan meningkat, ketiadaan instrumen hukum yang mengikat, tumpang tindih regulasi sektoral, dan lemahnya partisipasi publik menimbulkan ketidakpastian hukum dan fragmentasi kelembagaan. Penelitian ini mengusulkan model hukum normatif untuk memperkuat tata kelola energi terbarukan melalui prinsip kehati-hatian dan transisi berkeadilan. Dengan metode yuridik normatif serta pendekatan hukum, konseptual, dan komparatif, studi ini menganalisis instrumen hukum Indonesia dan membandingkannya dengan beberapa yurisdiksi ASEAN dan Global Selatan. Hasil penelitian menunjukkan belum adanya kerangka tata kelola iklim-energi yang terintegrasi dan menjamin koherensi regulasi, partisipasi berbasis hak, serta perlindungan lingkungan. Oleh karena itu, direkomendasikan pembentukan Undang-Undang Energi Terbarukan berbasis keadilan iklim dan HAM, didukung harmonisasi lintas sektor dan penilaian dampak keberlanjutan wajib. Studi ini menegaskan bahwa hukum harus berfungsi sebagai instrumen transformatif menuju keadilan sosial dan lingkungan serta berkontribusi secara teoretis dan praktis melalui model hukum integratif yang relevan bagi negara berkembang di Global South.

Indonesia's energy transition law remains fragmented and incoherent in supporting sustainability and the transition to a climate-just energy system. Despite increasing commitments to renewable energy, the absence of binding legal instruments, overlapping sectoral regulations, and weak public participation have led to legal uncertainty and institutional fragmentation. This study proposes a normative legal model to strengthen renewable energy governance through the precautionary principle and a just transition. Using normative juridical methods and legal, conceptual, and comparative approaches, the study analyzes Indonesian legal instruments and compares them with those of several ASEAN and Global South jurisdictions. The results indicate the absence of an integrated climate-energy governance framework that guarantees regulatory coherence, rights-based participation, and environmental protection. Therefore, it is recommended that a Renewable Energy Law be established based on climate justice and human rights, supported by cross-sectoral harmonization and mandatory sustainability impact assessments. This study emphasizes that law must function as a transformative instrument towards social and environmental justice and contribute theoretically and practically through an integrative legal model relevant to developing countries in the Global South.



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INTRODUCTION

Climate change stands as one of the most urgent global challenges of the 21st century. Its consequences extend far beyond environmental degradation, permeating economic systems, social structures, and the very foundation of legal governance. The root of this crisis lies largely in the global dependence on fossil-based energy systems, which account for more than two-thirds of global greenhouse gas emissions. In response, the international community has vigorously promoted energy transition strategies aimed at achieving rapid decarbonization through renewable energy development. However, the energy transition should not be interpreted solely as a technological transformation or a shift in energy mix; rather, it must be recognized as a structural shift that requires a socially just, inclusive, and legally accountable approach. In this context, the concept of a just energy transition becomes increasingly relevant. It emphasizes that transition policies should not generate new forms of injustice, but instead protect vulnerable populations and ensure that the energy shift is embedded within human rights frameworks and participatory legal processes (Heffron & McCauley, 2022). The just energy transition paradigm is built upon three key pillars of justice: distributive justice (the fair allocation of costs and benefits), procedural justice (inclusive and transparent decision-making processes), and recognition justice (the acknowledgment of historically marginalized or excluded communities). These principles have gained traction across global platforms such as the United Nations Framework Convention on Climate Change (UNFCCC), the COP26 declarations, and the Sustainable Development Goals (SDGs). Some industrialized countries have begun to integrate justice elements into their national energy and climate legislation. However, the implementation of a just transition remains deeply challenging in developing countries. While these countries are expected to reduce carbon emissions under international commitments, they continue to struggle with energy poverty, unequal electricity access, economic dependency on coal, and institutional limitations. These realities generate a multidimensional dilemma—economic, legal, and political—especially in legal systems that are still in the process of institutional consolidation (Akrofi, McLellan, & Okitasari, 2024).

Indonesia exemplifies this complex position. As one of the world's largest coal exporters and a country heavily reliant on coal-fired power plants for domestic electricity, Indonesia is simultaneously subject to international scrutiny and internal policy pressure. The Indonesian government has demonstrated its global climate commitment by submitting its Enhanced Nationally Determined Contribution (ENDC)

and joining the Just Energy Transition Partnership (JETP). Nonetheless, from a legal perspective, Indonesia currently lacks a comprehensive national framework that explicitly reflects the principles of a just energy transition. Laws such as Law No. 30 of 2007 on Energy and Law No. 32 of 2009 on Environmental Protection and Management are largely technocratic in nature and do not sufficiently address the legal guarantees for energy justice. These regulations neither provide safeguards for displaced workers, indigenous communities, and vulnerable populations nor ensure inclusive participation in energy governance or fair redistribution of transition-related benefits (Oei, Braunger, & Walk, 2021).

Academic studies on Indonesia's energy transition have primarily focused on technical and economic aspects—ranging from renewable energy development, investment frameworks, and power sector reform to emissions trading mechanisms. Normative legal approaches, particularly those analyzing justice-based energy governance and legal sovereignty, remain underexplored. Heffron and McCauley (2022) stress that energy justice should serve as a central framework—not as a supplementary ethical consideration—when designing future energy policies. Sovacool, Hess, and Cantoni (2021) argue that most national energy policies fail to sufficiently incorporate justice dimensions, such as equitable participation and benefit-sharing. Moreover, much of the literature stems from the Global North, limiting its direct applicability to countries like Indonesia that face distinct structural constraints. In addition to domestic legal shortcomings, the space for sovereign legislative decision-making is increasingly shaped by global energy governance. Climate finance mechanisms such as the Green Climate Fund (GCF), the Climate Investment Funds (CIF), and the JETP, while offering crucial funding, often impose conditions or "green conditionalities" on recipient countries. These may include liberalizing energy markets, aligning regulatory systems with international standards, or implementing specific carbon-reduction strategies (Bhattarai, Maraseni, & Apan, 2022). While such conditions aim to enhance accountability and accelerate transition, they also risk diminishing the policy autonomy and legal sovereignty of

developing countries. As Oei et al. (2021) note, the global transition regime tends to follow a top-down model of climate governance that overlooks local justice, capacity, and contextual needs—often marginalizing the voices of the very populations the transition purports to benefit.

Despite the urgency of this issue, few legal studies have critically examined how global energy governance affects the legal sovereignty of developing countries in shaping their own transition frameworks. In Indonesia's case, the literature lacks a thorough legal-normative analysis of how international funding commitments and transnational policy frameworks influence domestic lawmaking processes. There is also no established national legal framework that integrates the principles of a just transition into Indonesia's broader legal and energy infrastructure. These dual deficits reveal a significant gap in the existing body of knowledge: first, the absence of a national legal architecture grounded in climate justice and participatory rights; and second, the limited understanding of how global governance mechanisms constrain or reshape legal autonomy in the Global South.

Based on the aforementioned considerations, it is clear that there exists a normative disjunction between the global imperative for a just energy transition and the legal readiness of developing countries, particularly Indonesia. On the one hand, international financing and policy commitments compel developing states to act swiftly; on the other, national legal systems often lack the structural capacity and doctrinal tools to embed justice principles meaningfully into energy law. This imbalance underscores the need for research that not only analyzes the internal legal challenges of just transition, but also critically interrogates the influence of external global frameworks on national legal sovereignty. Accordingly, this study seeks to address the following research questions: (1) How urgent and complex are the legal challenges in constructing a national framework that guarantees a just energy transition in Indonesia? And (2) Why does global energy governance have the potential to influence, shape, or constrain the legal sovereignty of developing countries in the context of energy transition policymaking?.

METHOD

This research is a normative doctrinal legal study, which focuses on the analysis of written legal norms found in legislation, policy documents, and relevant academic literature. It does not involve empirical fieldwork, but rather examines the law as a normative and logical system. The purpose of this research is to analyze the extent to which Indonesia's national legal framework accommodates the principles of a just energy transition and to assess how global energy governance influences national legal sovereignty.

Type of Research

This study adopts a normative legal research method, which analyzes law from the perspective of legal norms, principles, and doctrines. It emphasizes interpretation and analysis of statutory regulations, legal principles, and scholarly literature related to energy transition and climate justice.

Subject and Object of the Research

1. The subject of this research is the Indonesian legal system, particularly in relation to energy transition, national obligations, and international legal commitments.
2. The object includes:
 - a. National regulations such as Law No. 30 of 2007 on Energy, Law No. 32 of 2009 on Environmental Protection and Management, and Law No. 11 of 2005 ratifying the International Covenant on Economic, Social, and Cultural Rights.
 - b. International instruments including the Paris Agreement, the Enhanced Nationally Determined Contribution (ENDC), and the Just Energy Transition Partnership (JETP).
 - c. Legal and academic literature related to climate justice, sustainable energy, and legal sovereignty in developing countries.

Data Collection Method

The research uses secondary data, collected through library research and legal document analysis.

Legal materials are classified as follows:

1. Primary legal materials: statutory regulations, international treaties, and official documents from state institutions and international organizations.

2. Secondary legal materials: legal textbooks, academic journal articles, previous research, and legal opinions from scholars.
3. Tertiary legal materials: legal dictionaries, encyclopedias, and legal directories that help clarify legal terminology and concepts.

The selection of materials is conducted through purposive sampling, which involves deliberately selecting sources that are most relevant to the focus of the study and are legally authoritative. Documents are accessed from official national legal portals (e.g., JDIH, BPHN), academic databases (e.g., Scopus, ScienceDirect), and international legal repositories (e.g., UNFCCC, jetp-id.org).

Data Analysis Method

The data is analyzed using a juridical-qualitative method, involving interpretation and normative reasoning applied to legal sources. The stages of analysis are as follows:

1. Inventory and classification of legal materials based on legal themes such as energy, environment, human rights, and global governance.
2. Interpretation of legal norms using grammatical (textual meaning), systematic (interrelation of norms), and teleological (purpose-oriented) approaches.
3. Construction of legal arguments, applying legal principles and justice theories to build a normative framework.
4. Comparative analysis, by evaluating legal approaches of other developing countries (e.g., South Africa and India) as alternative perspectives.
5. Normative synthesis, producing legal findings and recommendations for the formulation of a fair and sovereign energy transition legal framework in Indonesia.

RESULTS AND DISCUSSION

This study normatively examines the legal framework governing green energy in Indonesia and proposes a refined legal construction to support a just and sustainable energy transition. The discussion addresses two primary research questions: (1) What are the current regulatory structures and implementation barriers in Indonesia's green energy policies? and (2) What constitutes an ideal normative legal framework to accelerate the energy transition in an equitable and sustainable manner?

Theoretical Framework: Just Energy Transition and the Precautionary Principle

This research is grounded in two normative principles widely recognized in international environmental and energy law:

1. The Principle of Just Energy Transition, which emphasizes distributive justice, social inclusiveness, and the protection of vulnerable communities during energy reform processes (Heffron & McCauley, 2018). This principle has been increasingly adopted in global climate frameworks such as the Paris Agreement and UN Sustainable Development Goals.
2. The Precautionary Principle, which obliges states and stakeholders to take anticipatory measures in the face of environmental risks, even in the absence of full scientific certainty (UNEP, 1992; Hohfeld & Meinhardt, 2021). This principle is particularly relevant to renewable energy projects with potential socio-ecological impacts.

Together, these principles provide a normative foundation for assessing regulatory gaps and constructing a legal framework that is both socially responsive and environmentally accountable.

Evaluation of Indonesia's Green Energy Regulations

Indonesia's legal framework for green energy is primarily based on Law No. 30/2007 on Energy, Law No. 32/2009 on Environmental Protection and Management, and Presidential Regulation No. 112/2022 on Renewable Energy Acceleration. However, these legal instruments have yet to fully integrate precautionary and transitional justice principles.

For instance, the Energy Law lacks a specific roadmap for decarbonization or a statutory definition of renewable energy. Presidential Regulation No. 112/2022 focuses narrowly on electricity pricing and procurement but omits legal mechanisms for public consultation or rights protection for affected communities (Simamora, 2022). Furthermore, technical planning documents such as the National Electricity Supply Plan (RUPTL) remain disconnected from Indonesia's Nationally Determined Contribution (NDC) as articulated in Presidential Regulation No. 98/2021.

In addition, there is no statutory mandate for risk assessment or the precautionary principle, despite the fact that green energy projects frequently impact land rights, local ecosystems, and Indigenous populations (Sachs et al., 2021). This underscores the technocratic and fragmented nature of Indonesia’s energy governance and the absence of a coherent normative framework.

Implementation Challenges: Regulatory Fragmentation and Legal Uncertainty

Fragmentation of institutional authority exacerbates regulatory weaknesses. The Ministry of Energy and Mineral Resources (MEMR) holds technical jurisdiction, while the Ministry of Environment and Forestry (MoEF) oversees environmental aspects. The absence of a central regulatory body leads to overlapping processes, bureaucratic delays, and policy conflicts. For instance, Rahman (2021) documents that a solar energy project in Eastern Indonesia was delayed for over two years due to inter-agency permit discrepancies.

Additionally, Indonesia’s incentive mechanisms remain legally inconsistent. Renewable energy investors rely on case-by-case incentives rather than a codified legal framework that ensures predictability, equity, and transparency (Kumar & Dsouza, 2022). This legal uncertainty discourages long-term investment and undermines national targets for renewable energy adoption.

Constructing an Ideal Legal Framework: Toward a Coherent Renewable Energy Law

To overcome these challenges, a refined legal framework should be constructed based on the following normative elements:

- 1. Legal certainty and regulatory integration, through the enactment of a Renewable Energy Law as a *lex specialis*, encompassing legal definitions, roadmap mandates, fiscal instruments, public participation, and enforcement.
- 2. Incorporation of the precautionary principle, via mandatory socio-ecological risk assessments for all energy projects, similar to Environmental Impact Assessment (EIA) models adopted in the EU and South Africa (Hohfeld & Meinhardt, 2021).
- 3. Guarantee of public participation, with legally binding consultation processes, particularly for communities affected by energy infrastructure, as practiced in the Philippines and Vietnam.
- 4. Independent regulatory oversight, through a Clean Energy Authority with jurisdiction over licensing, compliance auditing, and administrative dispute resolution.

Such a framework would not only streamline policy coherence but also align national regulation with international environmental and human rights standards.

Regional Comparison: Lessons from ASEAN Countries

Regional best practices offer instructive models. Vietnam’s Renewable Energy Law provides a fixed 20- year feed-in-tariff and legally mandates public consultation. The Philippines' Clean Energy Act implements competitive tender mechanisms and a national green certification program.

Table 1. Comparative Analysis of ASEAN Green Energy Regulations				
Country	Specific Legal Instrument	Tariff Scheme	Public Participation	Investment Certainty
Vietnam	Renewable Energy Law	20-year fixed	Mandatory consultation	High
Philippines	Clean Energy Act	Competitive	Limited but regulated	Moderate
Indonesia	Presidential Regulation 112/2022	Negotiated	Not legally mandated	Low

Source: Author’s compilation based on ADB & UNESCAP reports (2025)

This comparison reveals Indonesia’s regulatory shortcomings, particularly the absence of a rights-based approach and investment predictability. Adopting participatory and coherent legal structures from regional neighbors can significantly improve Indonesia’s green energy transition.

Case Illustration: Legal Fragmentation in Indonesian Renewable Projects

A pertinent example of regulatory fragmentation and legal uncertainty can be observed in the case of the PLTU Celukan Bawang project in Bali. Despite being framed as part of Indonesia’s clean energy transition, the coal-fired power plant received public resistance and legal scrutiny due to inadequate environmental assessments and the exclusion of affected communities from the decision-making process

(Simamora, 2022). The project faced multiple legal challenges, particularly regarding land acquisition and the failure to integrate environmental and social safeguards, indicating a lack of coordination between environmental, spatial, and energy authorities.

Similarly, the Batang Toru Hydropower Project in North Sumatra, intended to generate 510 MW of renewable energy, was heavily criticized by civil society and environmental groups for its potential ecological impact on the Tapanuli orangutan habitat. Despite the existence of EIA procedures, implementation was flawed due to weak legal enforcement and unclear accountability among government agencies. This reflects the urgency for a binding legal framework that operationalizes the precautionary principle and ensures participatory governance.

Intersectoral Legal Harmony: The Gap between Energy Law and Other Sectors

A significant normative challenge lies in the lack of harmonization between the Energy Law and other legislative instruments, notably the Job Creation Law (Law No. 11/2020), the Spatial Planning Law (Law No. 26/2007), and the Law on Mineral and Coal Mining (Law No. 3/2020). These laws often promote divergent priorities: while energy reform aspires to low-carbon development, other laws still incentivize extractive industries or enable accelerated licensing with weakened environmental scrutiny.

For example, the omnibus-style Job Creation Law simplifies environmental licensing but simultaneously weakens community participation rights, potentially undermining the precautionary safeguards that are essential in green energy development (Marbun, 2024). Moreover, inconsistencies in spatial planning regulations have resulted in renewable energy projects being stalled or relocated due to zoning conflicts. Such intersectoral legal misalignments necessitate a unifying legal architecture that transcends sectoral boundaries and places sustainability as a central legal objective.

Global Jurisprudence on the Precautionary Principle: A Comparative Insight

In international environmental law, the precautionary principle has been judicially recognized and elaborated upon in several landmark cases. The International Court of Justice (ICJ), in the Pulp Mills on the River Uruguay case (2010), affirmed that states have a duty to conduct prior environmental impact assessments in good faith and that failure to do so constitutes a breach of international law. Meanwhile, the European Court of Human Rights (ECtHR) has progressively linked environmental risks to fundamental human rights, particularly the right to life and the right to private and family life, as demonstrated in the *Cordella v. Italy* (2019) ruling. The Court held that prolonged environmental degradation without state intervention violated Article 8 of the European Convention on Human Rights.

These cases demonstrate that the precautionary approach functions as an enforceable legal duty, not simply a policy recommendation. For Indonesia to align with international standards and improve its legitimacy in global climate governance, incorporating the precautionary principle into national energy laws is not optional—it is imperative.

Strengthening the Legal Foundation: Toward an Integrated Climate-Energy Legal System

Building upon the above findings, it becomes evident that Indonesia requires not only a renewable energy-specific law but a broader climate-energy legal nexus. Such a system must achieve horizontal coherence across sectors (energy, environment, spatial planning, investment) and vertical alignment with international legal commitments such as the Paris Agreement and the SDGs.

This integration could be operationalized through:

1. Establishing a National Climate-Energy Legal Commission to oversee regulatory harmonization,
2. Embedding a Human Rights-Based Approach (HRBA) in energy policymaking, and
3. Developing a Legal Risk Matrix as part of ex-ante legal reviews for major infrastructure projects.

This normative innovation would enhance the credibility, accountability, and inclusiveness of Indonesia's green energy transition, setting a regional benchmark for legal design in climate governance.

CONCLUSION

This study concludes that Indonesia's current legal architecture for renewable energy is normatively fragmented and structurally inadequate to support a climate-resilient and socially just energy transition. Despite policy commitments to decarbonization, the absence of a dedicated, rights-based renewable energy law—along with disjointed sectoral regulations—has created legal uncertainty, weakened environmental safeguards, and marginalized public engagement. By applying the principles

of precaution and just transition as normative anchors, this research reconstructs an ideal legal framework that ensures coherence

across legal sectors, embeds participatory justice, and anticipates ecological risk. Comparative analyses with ASEAN regulatory models and global jurisprudence, including international human rights courts, reveal the necessity of legally entrenching sustainability not merely as a policy aspiration but as an enforceable legal obligation. This study contributes to the evolving field of energy law by offering an integrative, principle-based legal model that aligns national energy governance with international environmental norms and human rights standards. Ultimately, it positions law as a proactive instrument for climate justice, institutional accountability, and long-term energy equity in the Global South.

Drawing upon the normative gaps and structural limitations identified in this study, several targeted actions are recommended to strengthen Indonesia's legal architecture for a fair and precautionary energy transition. First, it is recommended that the Indonesian legislature prioritize the enactment of a dedicated Renewable Energy Act that explicitly incorporates the principles of precaution, climate justice, and participatory governance. This act should function not merely as a policy directive, but as a binding legal instrument that mandates risk assessment, public engagement, and long-term sustainability targets. Second, it is advised that a cross-sectoral legal harmonization task force be established under the authority of the National Development Planning Agency (Bappenas) or the Ministry of Law and Human Rights, with the mandate to align energy law with environmental, spatial, and investment regulations to eliminate institutional fragmentation. Third, in order to safeguard inclusive governance, it is recommended that national energy regulations adopt a human rights-based approach (HRBA), ensuring that vulnerable communities, including indigenous peoples and women, have formal standing in energy planning processes. Fourth, to operationalize these reforms, regulatory tools such as a Legal Risk Matrix and Sustainability Impact Assessments should be institutionalized for all energy infrastructure projects. Finally, future research should explore comparative legislative experiences from the Global South—particularly in jurisdictions with plural legal systems and high energy transition risks—to inform adaptive, culturally attuned legal frameworks that are contextually relevant to Indonesia's complex governance environment.

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