



## **Redesigning Indonesia's Energy Governance: A Progressive Asymmetric Decentralization Framework for an Accelerated Energy Transition**

**Alfin Dwi Novemyanto**

Faculty of Law, Universitas Gadjah Mada  
Email: [alfindwinovemyanto@mmail.ugm.ac.id](mailto:alfindwinovemyanto@mmail.ugm.ac.id)

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### **Abstract**

*The urgency of accelerating energy transition in Indonesia arises from its commitment to the Paris Agreement and the national target of achieving Net Zero Emissions by 2060. However, the current legal framework remains highly centralized, limiting the autonomy of local governments and constraining innovation in renewable energy development. This study aims to propose a progressive legal framework through an asymmetric decentralization model that provides differentiated authority for regions based on their renewable energy potential and climate risk exposure. The research employs normative legal methods with a statute approach, conceptual analysis based on the welfare state theory and subsidiarity principle, and a comparative study with India and South Africa, which have implemented more decentralized models of energy governance. Findings show that Indonesia's legal system suffers from normative deficits, particularly in integrating justice, participation, and flexibility into energy governance. The proposed asymmetric decentralization model emphasizes granting special authority to regions with strategic roles in the energy transition, supported by a green fiscal transfer mechanism and multilevel governance structures. This model strengthens Indonesia's ability to bridge international climate commitments with local socio-ecological realities. The study concludes that reconstructing Indonesia's energy law through asymmetric decentralization offers both academic novelty and practical relevance, providing a path toward more equitable, participatory, and adaptive energy governance. The contribution of this research lies in its formulation of a context-sensitive legal model that advances interdisciplinary debates on law, energy transition, and sustainable development in the Global South.*

**Keywords:** Asymmetric Decentralization, Energy Law, Renewable Energy, Subsidiarity, Energy Transition.

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### **1. INTRODUCTION**

The climate crisis is an increasingly real global threat that demands transformative legal and policy responses. The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report 2023 confirms that the earth's temperature has risen by approximately 1.1°C since the pre-industrial era, with impacts including an increased frequency of hydrometeorological disasters, sea level rise, and biodiversity loss (Calvin et al., 2023). Indonesia, as an archipelagic nation with more than 17,000 islands, is highly vulnerable to the risks of climate change, particularly in the coastal, fisheries, and agricultural sectors

(Fardhal Virgiawan Ramadhan & Ade Chaerul, 2023). The global commitment through the 2015 Paris Agreement requires every country to hold global temperature rise below 2°C, and Indonesia has set a Net Zero Emission target by 2060 or sooner (Nasir & Bengi, 2024). This target is outlined in the Nationally Determined Contribution (NDC) document, which lists the energy sector as the largest contributor to emissions, accounting for approximately 43% of total national emissions (Elzen et al., 2021). This positions the energy transition based on new, renewable energy (EBT) as a fundamental necessity, not simply a policy option. However, Indonesia's still centralized legal framework poses serious obstacles to regional participation in the national decarbonization agenda. This situation underscores the urgency of regulatory reform to make the energy transition more inclusive, equitable, and effective.

Indonesia has abundant renewable energy potential, including approximately 24 GW of geothermal energy, 75 GW of hydropower, 207 GW of solar energy, 60 GW of wind energy, and approximately 32 GW of biomass (Pambudi et al., 2023). However, the realization of this potential remains low, with renewable energy contributing only around 13% of the energy mix in 2023, far behind the target of 23% by 2025 (Syabriyana, 2024). This situation is exacerbated by the dominance of coal, which still supplies more than 60% of national electricity demand, creating a carbon lock-in that complicates the transition to green energy (Kharisma et al., 2024). Structural barriers are further exacerbated by Law Number 23 of 2014 concerning Regional Government, which shifted energy management authority to the central government, thereby depriving regions of space for policy innovation (Barraq Suwartono, 2023). As a result, renewable energy-rich regions, such as Nusa Tenggara with its solar energy resources or Sulawesi with its geothermal potential, remain dependent on central regulations (Paundra & Nurdin, 2022). This situation creates spatial disparities in the energy transition, fueling climate inequality between regions. The contradiction between abundant local potential and the rigidity of central law demonstrates the weakness of Indonesia's energy regulatory architecture. Therefore, a successful energy transition requires a legal restructuring capable of bridging local potential with national policies.

Legal issues are increasingly prominent because existing regulations do not provide certainty regarding the role of regions in the energy transition. Law Number 30 of 2007 concerning Energy and Presidential Regulation Number 22 of 2017 concerning the National Energy General Plan (RUEN) still position regions as mere executors of national policies without room for autonomous strategy formulation (Muhayatul & Umar, 2025). Regional fiscal limitations further exacerbate the situation, as there are no budget redistribution instruments to support the financing of large-scale clean energy projects (Rais et al., 2025). Presidential Regulation Number 112 of 2022 does regulate the acceleration of renewable energy development, but its focus is more on investment schemes and electricity prices, without addressing regional empowerment as legal actors (Wibowo, 2023). ESDM Ministerial Regulation No. 26 of 2021, which regulates rooftop solar power plants, is technical in nature and does not provide political legitimacy for local governments to formulate independent policies (Maheralia, 2025). This weakness results in the just transition principle not being adequately accommodated, as local communities remain passive in the face of structural energy changes. This normative gap emphasizes that national laws have the potential to hinder the decarbonization process if not promptly reformed. Therefore, updating energy



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regulations is not merely a policy option but a necessity to ensure a just and sustainable energy transition.

This research's theoretical framework utilizes the Welfare State Theory of Law, which positions the state as the guarantor of people's welfare through the fulfillment of the right to a healthy environment (Afgha Okza Eiranda et al., 2024). The principle of subsidiarity inherent in this theory emphasizes that authority should be delegated to the level of government closest to the people, provided it is more effective in its implementation. Applying the principle of subsidiarity to the energy transition means that regions require legal legitimacy to determine energy strategies aligned with their local potential (Latifah, 2025). The state cannot simply focus on centralized regulation; it must also develop legal instruments capable of encouraging a proportional distribution of authority. This framework also strengthens intergenerational equity by enabling sustainable energy development that benefits future generations (Muhammad Rizqi Afandi et al., 2025). Thus, asymmetric decentralization is not merely an administrative technique but also a moral and constitutional mandate (Tupan & Setiorini, 2022). Reformulating energy law based on the welfare state theory and subsidiarity provides normative legitimacy for this urgent need. This position provides a strong theoretical basis for restructuring Indonesian energy law to be more adaptive to climate challenges.

Several previous studies have demonstrated the limitations of the literature in providing progressive normative responses to the energy transition issues in Indonesia. First, the study titled "Energy Decentralization: A Legal Review of Regional Government Authority" only highlights the weak role of regions without offering a concrete alternative legal model (Dhafin Faza Irianto, 2023). Second, the study titled "The Intersection of State Control and Decentralization" examines the tension between the principle of state control and the spirit of decentralization, but stops at structural criticism without operational solutions (Failaq & Nusantara, 2024). This condition indicates a conceptual gap because the existing literature has not formulated a new legal framework that adapts to the complexity of the energy transition. Furthermore, there is a theoretical gap because the legal theory used in previous studies has not been directed to support a progressive legal model based on the principles of the welfare state and subsidiarity. Furthermore, previous studies also leave a practical-knowledge gap because they do not provide applicable legal drafts as policy guidelines. This study offers novelty through an asymmetric decentralization model that can bridge global commitments with local diversity, while simultaneously strengthening constitutional legitimacy. Thus, the novelty of this study lies in the integration of the principles of the welfare state and subsidiarity into the draft of Indonesia's energy law that is more just, participatory, and progressive.

## **2. RESEARCH METHOD**

This study uses a normative legal research method that focuses on the analysis of regulations and legal doctrines relevant to the governance of the energy transition in Indonesia. The main objective of the study is to evaluate the prevailing positive legal norms and assess their relevance to the need for legal reform to support an ecologically just energy transition. The

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approach used includes a statute approach by analyzing Law Number 30 of 2007 concerning Energy, Law Number 23 of 2014 concerning Regional Government, Presidential Regulation Number 112 of 2022, as well as the RUEN documents and the Regional Energy General Plan (RUED). In addition, this study also adopts a conceptual approach by utilizing the welfare state theory of law and the principle of subsidiarity as a conceptual basis in formulating an asymmetric decentralization model. To enrich the analysis, the study applies a comparative approach through studies of energy governance in India based on state autonomy and South Africa with a just energy transition framework. The subject of the research focuses on legal norms governing the distribution of authority between the central and regional governments, while the object of the research is the effectiveness of these legal instruments in supporting a sustainable energy transition (Deassy J. A. Hehanussa et al., 2023). The research was conducted throughout 2025 through a literature review centered on national legal databases, international journals, and official documents from governments and international organizations.

Data collection was conducted through library research using three types of legal materials: primary, secondary, and tertiary legal materials. Primary legal materials included national laws and regulations related to energy, regional governance, and energy transition policies. Secondary legal materials consisted of academic literature, journal articles on energy law and policy, and previous research on decentralization and decarbonization. Tertiary legal materials included legal dictionaries, encyclopedias, and legal indexes, which served as supporting references to clarify concepts. Data were analyzed using a descriptive-analytical method, describing, interpreting, and evaluating the content of legal regulations and academic literature to generate a comprehensive understanding (Jonaedi Efendi & Prasetijo Rijadi, 2023). The analysis was conducted deductively, drawing conclusions from general principles, particularly the welfare state and subsidiarity, toward normative recommendations for establishing an asymmetric decentralization framework in energy law. To ensure validity, legal source triangulation techniques were used, comparing the analysis results with regulations, doctrines, and academic studies from various sources. This systematic analysis procedure ensures that the research findings have a valid theoretical basis as well as practical relevance in supporting the energy transition in Indonesia.

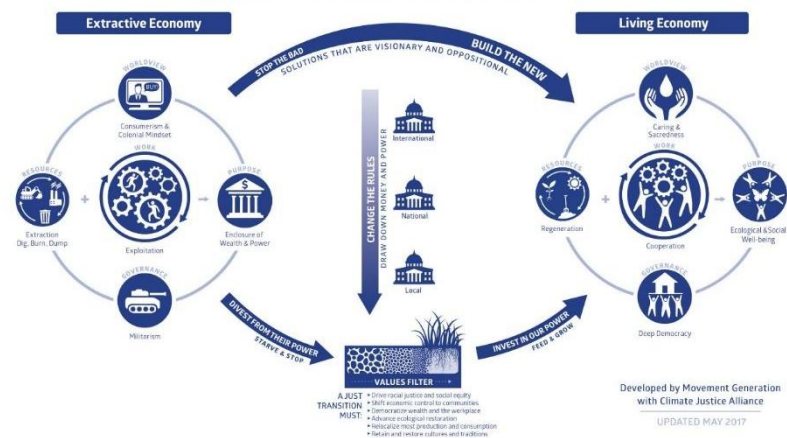
### **3. RESULTS AND DISCUSSION**

#### **a. Problematization of Centralized Energy Transition Governance in Indonesia**

Indonesia's commitment to the 2015 Paris Agreement and the 2060 Net Zero Emissions target has normatively placed the energy transition on the strategic legal and policy agenda (Rizky et al., 2024). However, the existing legal framework still exhibits a centralistic character, as evident in Presidential Regulation No. 22 of 2017 concerning the RUEN (Regional Energy Management Plan) (Solikah & Bramastia, 2024). This legal instrument affirms the central government's dominance in determining the direction of energy policy, while provinces are only mandated to develop derivative RUEDs. From a legal perspective, regions lack substantive autonomy in energy governance, thus contradicting the principle of decentralization recognized in Article 18 of the 1945

Constitution (Patrícia Pereira dos Santos, 2021). Conceptually, this situation demonstrates a gap between global demands for participatory justice and homogenous national law. The failure to provide flexibility for regions makes the energy transition more like an administrative instruction than a democratic process. Thus, this normative problem hinders the achievement of sustainable development goals.

Law No. 23 of 2014 concerning Regional Government further reinforces the centralization of energy authority, categorizing it as a concurrent government affair with central dominance (Utami, 2023). As a result, regions function solely as administrative executors without the authority to formulate independent energy policies. From a legal perspective, this regulation contradicts the principle of regional autonomy guaranteed by the constitution. Consequently, the abundant renewable energy potential in various regions cannot be optimized through local policies (Ikhbar & Rusmina, 2024). Conceptual analysis shows that the state has negated the principle of subsidiarity, even though this principle requires authority to be delegated to the government units closest to the community. The lack of space for innovation for regions precludes the possibility of developing policies that adapt to local needs. Thus, national regulations fail to address the complexity of regional diversity.



**Figure 1.** A Strategy Framework for Just Transition  
 Source: (Justice and Ecology Project, 2024)

The legal implication of devolving energy authority to the central government is the limited legal basis for regions to develop independent regulatory instruments (Nasution & Harris, 2025). Regional governments lose their normative legitimacy to regulate energy strategies that align with local needs. Conceptually, this hinders the development of policy innovations based on local wisdom, which should be a key

driver of decarbonization. Moreover, coal-producing regions facing economic pressures due to the energy transition lack a legal framework to manage the just transition process (Pahlevi et al., 2024). This creates disparities in justice between regions, as even regions rich in renewable energy cannot play an optimal role. In other words, the current legal structure reinforces regional dependence on the central government. This situation limits energy transformation as a collective national agenda. Therefore, the centralization of authority creates a serious legal deficit.

Beyond authority, regional fiscal limitations compound the complexity of energy transition barriers. Legally, there is no legal instrument governing fiscal redistribution to finance clean energy projects in the regions (Konorop, 2024). Regional governments are unable to undertake large-scale investments without central support. Consequently, regions are merely spectators in the decarbonization process (Kusbandini et al., 2023). Conceptually, this situation demonstrates that the principle of distributive justice, a pillar of the welfare state, is not being implemented in energy governance. The concentration of expertise and research at the central level also widens the capacity gap. This creates structural dependency that undermines the legitimacy of energy decentralization. Thus, fiscal and technical capacity limitations further reinforce legal centralism.

From the perspective of the welfare state theory of law, the failure to provide space for regions means the state is ignoring its constitutional obligation to ensure the welfare of the people through access to sustainable energy (Solikhudin & Zainullah, 2022). Article 28H paragraph (1) of the 1945 Constitution guarantees the right to a good and healthy environment, which in practice can only be achieved if the energy transition is effective (Solahudin, 2025). However, the centralization of policy actually reduces the space for regional participation in determining energy development strategies (Suriadi et al., 2024). Conceptually, the disregard for the principle of subsidiarity makes national energy policy homogeneous and non-adaptive. This implies the state's failure to carry out its welfare state function. In other words, the existing normative deficit is not only a technical issue but also a constitutional one. Therefore, the energy transition requires a new legal design that aligns with the principles of the welfare state.

This regulatory misalignment is also evident in Presidential Regulation Number 112 of 2022, which focuses solely on tariff and investment schemes. This legal instrument does not legally regulate the empowerment of regions as actors in the energy transition (Haptari, 2023). Ministerial Regulation Number 26 of 2021 concerning Rooftop Solar Power Plants also emphasizes technical aspects rather than providing institutional legitimacy to regions (Muhammad Rausyan Fikry & Irwan Triadi, 2024). Conceptually, this confirms the technocratic orientation of energy law, which neglects participatory justice. In fact, the principle of just transition demands the active involvement of local communities to ensure that the energy transition does not lead to marginalization. The absence of legal instruments emphasizing social aspects weakens the basis of intergenerational justice. This situation indicates that national energy regulations remain narrowly focused from an ecological justice perspective. Therefore, legal

reforms must be directed towards explicitly incorporating the principle of energy justice.

**Table 1.** Comparative Governance Models of Energy Transition

Country	Energy Governance Model	Legal Framework	Strengths	Weaknesses
Indonesia	Centralized governance with strong dominance of the national government; regions act only as implementers of RUEN and central regulations.	Law No. 30/2007 on Energy; Law No. 23/2014 on Local Government; Presidential Regulation No. 22/2017 (RUEN); Presidential Regulation No. 112/2022.	Regulatory uniformity; stable national policy direction; centralized control ensures easier coordination.	Regions lose policy innovation space; fiscal and technical limitations; interregional climate injustice.
India	Decentralized system granting state governments authority to design renewable energy policies.	Electricity Act 2003; State-level renewable energy policies; Renewable Energy Portfolio Standards.	Policy flexibility; local innovation; accelerates renewable energy penetration according to regional potential.	Differences among states may cause policy inconsistency and investment uncertainty.
South Africa	Just Energy Transition Framework emphasizing local community involvement in policy-making.	Integrated Resource Plan (IRP) 2019; Just Energy Transition Framework 2020.	Social justice orientation; strong community participation; international support for transition financing.	Reliance on donor support; limited local technical capacity; transition process can be slow.

Source: data that has been processed by the author (2025)

From a comparative perspective, countries such as India and South Africa have demonstrated more adaptive energy governance practices. India legally grants substantial authority to states through energy portfolio standards (Dubey et al., 2023). South Africa has even adopted a just energy transition framework that places local communities as the primary legal subjects (Field, 2021). This conceptualization demonstrates that energy decentralization can strengthen social justice while accelerating decarbonization. In comparison, Indonesia remains trapped in a centralized model that lags behind global practices. The absence of subsidiarity-based authority distribution demonstrates a national legal deficit in responding to international dynamics. This weakens Indonesia's position in global energy diplomacy. Therefore, learning from this comparison is crucial for strengthening the legitimacy of energy law reform. Overall, the centralization of energy law demonstrates numerous normative contradictions with constitutional principles and international demands (Oetomo, 2025a). Existing regulations do not provide substantive authority for regions to play an active role in the energy transition. Fiscal constraints and technical capacity exacerbate the situation due to the lack of a fair legal redistribution framework. Conceptually, the disregard for the principles of subsidiarity and distributive justice makes energy law homogeneous and non-adaptive (Rossy Lambelanova et al., 2022). In other words, the centralized model creates a disparity between local energy potential and central policy. This paradox demonstrates a serious normative deficit in Indonesian energy law. Therefore, the urgency of legal reform is not merely technical but also fundamental. This agenda demands a more equitable restructuring of the distribution of energy authority.

One conceptual alternative that can be proposed is the application of asymmetric decentralization to energy governance. From a legal perspective, Article 18B of the 1945 Constitution provides the basis for recognizing regional uniqueness (Thoriq & Hakim, 2024). This model allows regions with significant energy potential to obtain special authority to accelerate decarbonization. Conversely, coal-producing regions can obtain special legal instruments to manage socio-economic risks in the just transition. Conceptually, asymmetric decentralization reflects the proportional application of the principle of subsidiarity. This model also strengthens ecological justice by taking into account the diversity of regional capacities. Thus, asymmetric decentralization can provide a middle ground between legal centralism and the need for autonomy. This solution can strengthen the integration between national goals and local needs.

The welfare state theory strengthens the legitimacy of asymmetric decentralization as a progressive legal solution. The state is obliged to ensure the welfare of the people by fulfilling the right to a healthy environment. From a legal perspective, integrating the principle of subsidiarity into energy law will address the normative deficit in the national regulatory framework. This conceptualization makes energy law more responsive to local diversity while being consistent with global standards. Welfare state-based reforms also ensure intergenerational equity by enabling a sustainable



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energy transition (Halomoan Hutajulu et al., 2024). Therefore, Indonesian energy law is not only constitutionally valid but also practically relevant. The proposed asymmetric decentralization model addresses the weaknesses of centralized law. Therefore, this solution has both academic and practical basis.

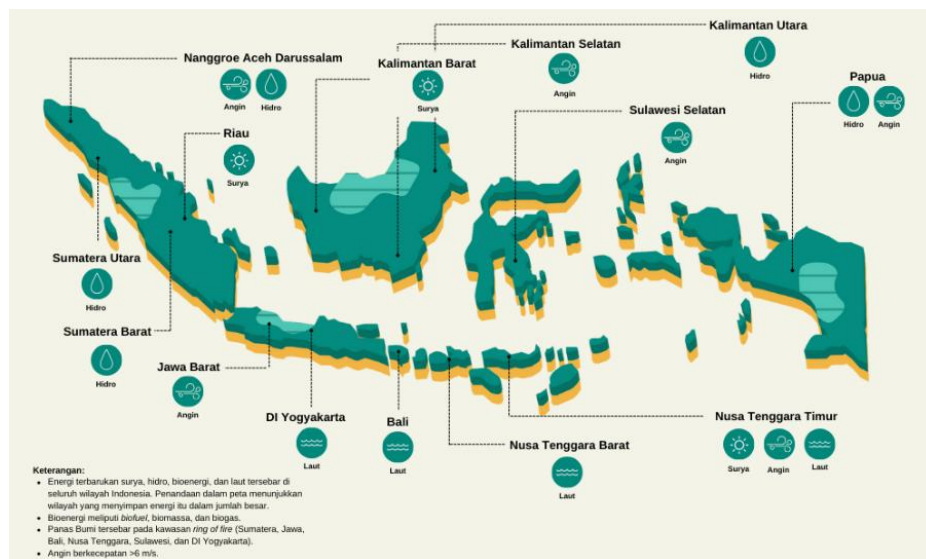
**b. Asymmetric Decentralization Model as an Offering of a Progressive Legal Framework**

The concept of asymmetric decentralization is a strategy for distributing authority that allocates different portions to each region based on its characteristics, capacity, and needs (Firdaus Arifin, 2024). Within the framework of the energy transition, this model implies a differentiation of authority between regions with significant renewable energy potential and regions vulnerable to the impacts of climate change (Abisono, 2024). With this approach, the law is not uniform but responsive to the diverse socio-ecological conditions in Indonesia. The legal basis for this concept can be cited in Article 18B paragraph (1) of the 1945 Constitution, which recognizes regional specificities within the governance system. This provision opens up opportunities for legal engineering so that the distribution of energy authority is not merely formal but also substantive. From a sustainable development perspective, the asymmetric concept is relevant because it emphasizes the fair distribution of the benefits of the energy transition (Hamka, 2025). This flexibility allows regions to innovate in energy policies according to their capacity. Thus, a progressive legal framework can be built through adaptive and differentiated decentralization mechanisms.

The principle of subsidiarity serves as a theoretical foundation that strengthens the legitimacy of the idea of asymmetric decentralization in energy governance (Imron, 2022). This principle asserts that public authority should be delegated to government units closest to the community to the extent that they are capable of exercising it. In welfare state theory, the implementation of subsidiarity ensures that citizens' rights, including the right to energy and a healthy environment, are guaranteed through participatory governance (Bello, 2022). This delegation of authority does not weaken the central government's role, but rather balances coordination with local needs. The central government remains vital in providing fiscal support, general regulations, and technical standards. However, without the principle of subsidiarity, the energy transition will be trapped in a rigid, centralistic pattern that is slow to respond to regional diversity. Legally, subsidiarity can be positioned as a progressive interpretation of Article 33 of the 1945 Constitution concerning state control over natural resources (Elvis et al., 2023). In this way, energy law can move towards a more democratic and community-oriented approach.

International comparative experience shows that energy decentralization has been proven to accelerate the transformation of the energy sector towards sustainability. India, for example, implements state autonomy in formulating renewable energy policies through an energy portfolio policy (Vakulchuk et al., 2023). Each state has different targets according to local energy potential and community needs. This mechanism has been proven to encourage healthy competition between regions while increasing policy innovation. South Africa developed the Just Energy Transition

Framework, which places local communities as key actors in energy decision-making (Taliep, 2022). This approach emphasizes social justice by ensuring that communities affected by the transition are not marginalized. Both practices demonstrate that the success of the energy transition is determined by legal flexibility and recognition of local diversity. This comparison indicates the need for Indonesia to move away from centralism and toward asymmetric decentralization.



**Figure 2.** Map of Renewable Energy Distribution in Indonesia  
 Source: (Lenny Triana, 2024)

A legal model of asymmetric decentralization for Indonesia can be realized by granting specific authority, or asymmetric authority, to certain regions. Coal-producing regions, for example, require a legal basis to manage the socio-economic impacts of declining fossil fuel use through a just transition strategy (Herdanawari, 2024). Regions with significant renewable energy potential, such as South Sulawesi for wind energy or West Nusa Tenggara for sea energy, must be granted regulatory flexibility to attract investment (Saleh et al., 2023). Similarly, regions with high climate risks require legal authority to develop clean energy that adapts to disasters. This differentiation of authority will create legal flexibility that is more responsive to regional needs. The legal basis can be established through organic regulations that define the criteria and mechanisms for granting asymmetric authority. Applying this concept will ensure that the law not only regulates uniformly but also considers ecological justice. In this way, energy law can function as an instrument of transformation, not simply an administrative one.



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Asymmetric authority does not mean separation of sovereignty, but rather the differentiation of authority within the framework of the Unitary State of the Republic of Indonesia (Sugita, 2024). Article 18B paragraph (1) of the 1945 Constitution provides constitutional legitimacy for the recognition of regional specialization. Based on this principle, coal-producing regions have the right to regulate just transition policies to maintain social and economic stability (Azmi Fendri, 2023). Disaster-prone regions are authorized to establish specific standards for energy development that adapt to climate vulnerability. Regions with significant energy potential are given legal space to formulate regional regulations that directly regulate the governance of clean energy investments. This differentiation must remain limited to avoid creating legal uncertainty (Yulianti et al., 2025). Therefore, it is necessary to create clear, organic instruments to determine the criteria for regions receiving special authority. In this way, asymmetric decentralization will maintain national legal unity while recognizing local diversity.

In addition to asymmetric authority, supporting instruments in the form of green fiscal transfers need to be designed to strengthen regional fiscal capacity (Putra et al., 2025). This mechanism allows the allocation of central funds to be calculated based on regional achievements in reducing emissions, increasing renewable energy, or implementing green energy policies. This instrument serves as both an incentive and an obligation for the state within the welfare state framework to support regions. With fiscal transfers, regions are not only granted authority but also the resources to implement it (Badiul Hadi, 2024). This scheme can strengthen regional motivation to achieve national energy transition targets. Without a green fiscal instrument, the granting of asymmetric authority has the potential to be illusory due to limited financial capital (Vico & Sianipar, 2024). Legally, this mechanism can be incorporated into the revised Law on Central and Regional Fiscal Balance. This way, green fiscal transfers become an integral part of the design of sustainable energy decentralization.

Green fiscal transfers must be positioned as a binding legal instrument, not simply an administrative policy. The central government is obliged to allocate funds in a measurable manner with clear indicators, such as the renewable energy mix and the achievement of the RUED (Hafizd et al., 2024). This mechanism can create fiscal accountability because fund distribution is based on regional performance. Thus, regions that are proactive in the energy transition receive support proportional to their contributions. This instrument can also reduce fiscal inequality between regions through a more equitable distribution scheme. Conceptually, green fiscal transfers demonstrate the integration of the principle of distributive justice into energy law (Rasidah Novita Sari, 2025). Its regulation requires a legal basis in the form of legislation to ensure sustainability. Therefore, this mechanism is crucial for strengthening the legal legitimacy of the asymmetric decentralization model.

In addition to fiscal support, a progressive legal model requires the application of multi-level governance principles involving various actors. The central government serves as a standard-setter and controller of national policy direction. Regional governments are tasked with adapting policies to regional conditions, with regulatory flexibility. The

private sector can be a driving force for investment and a technological innovator in the energy transition (Mozin et al., 2025). Civil society plays a crucial role as a monitor and communicator of public aspirations, ensuring more participatory policies. This multi-actor integration prevents the policy fragmentation that often occurs under centralized patterns (Vinanda et al., 2025). With multi-level governance, decisions are made through a deliberative process, enhancing legal legitimacy. Thus, the asymmetrical decentralized framework is strengthened by fair and accountable cross-level collaboration.

The multi-level governance principle not only regulates formal relations between the central government and regional governments but also emphasizes the importance of deliberative forums that bring together all stakeholders. In these forums, the public, academics, and business actors are directly involved in the formulation and evaluation of energy policies (Haq et al., 2025). The existence of these deliberative forums encourages information transparency and accountability in the decision-making process. From a legal perspective, this forum can be institutionalized through organic regulations requiring public consultation on every strategic energy policy. This mechanism aligns with the principle of transparency as stipulated in Law Number 12 of 2011 concerning the Formation of Legislation. By adopting multilevel governance, energy law is no longer top-down but rather more participatory. This also strengthens legal legitimacy because decisions emerge from a collective process (Margaretha, 2025). This model ensures a connection between national, regional, and community interests. Therefore, implementing multilevel governance is key to avoiding a centralized bias in energy law.

Asymmetric decentralization in the energy transition has significant implications for the relationship between national law and international commitments. Indonesia, as a party to the Paris Agreement, is obligated to reduce emissions in accordance with its Nationally Determined Contribution (NDC) (Wawan Masudi, 2023). With special authority, regions can contribute directly to achieving this target through innovative local energy policies. This demonstrates that Indonesia's success in the global arena is largely determined by the effectiveness of energy law at the regional level. From a legal perspective, regional contributions can be integrated into national reports as a form of international accountability. This framework demonstrates how national law acts as a bridge between global commitments and local implementation. Asymmetric decentralization also enhances Indonesia's credibility in international energy diplomacy (Pinori et al., 2024). Thus, regional contributions become a crucial instrument in strengthening Indonesia's position on the global stage. The implementation of this model makes energy law more responsive to developments in international law.

Furthermore, the asymmetric decentralization model opens up opportunities for strengthening inter-regional and cross-border cooperation. Regions with similar energy potential can establish regional consortia to share technology, expertise, and resources (Ni'matul Huda, 2021). For example, provinces with solar energy potential can form coordinated investment cooperation networks. At the global level, regions

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can also become subjects of international cooperation in energy transition projects. Legally, this mechanism can be facilitated by central regulations that regulate regional scope for foreign cooperation while maintaining the integrity of the Unitary State of the Republic of Indonesia (NKRI). In this way, regions retain legal flexibility while being constitutionally controlled. This innovation reflects the recognition that the energy transition is cross-border and requires global collaboration. With regional involvement, Indonesia's energy diplomacy will be more based on local strengths. Therefore, asymmetric decentralization expands the scope for regional participation in the global energy governance architecture.

The asymmetric decentralization model is also relevant to the concept of energy justice, which demands equitable distribution of access to clean energy. Currently, communities in remote areas still experience limited access to adequate electricity. By granting special authority, remote regions can develop renewable energy sources based on local potential, such as micro-hydro or biomass (Jati, 2024). This will narrow the energy gap between the central and regional governments. From a legal perspective, this authority can be incorporated into regional regulations that are recognized and constitutionally protected. The principle of energy justice emphasizes that the energy transition must not deepen social inequality. Therefore, recognizing asymmetric regional authority is a normative step to ensure equal access to energy. This concept also emphasizes that energy law is not only an economic instrument but also an instrument of social justice. This way, the energy transition can be more inclusive and sustainable.

Asymmetric decentralization will also impact the reformulation of Indonesia's energy regulatory structure. Current regulations tend to be uniform and do not take into account differences in regional capacity (Oetomo, 2025b). With an asymmetric model, new organic regulations are needed that detail the criteria for regions receiving special authority, the scope of authority, and oversight mechanisms. This is crucial to maintain legal certainty and avoid regulatory overlap. Regulatory reformulation must also emphasize coordination between the central and regional governments to ensure energy policies remain aligned with national commitments. Conceptually, this change marks a paradigm shift from administrative law to transformative law. Energy law is no longer simply an instrument of control, but rather an instrument of social engineering to achieve sustainability goals. Therefore, regulatory reform is a key prerequisite for the success of the asymmetric decentralization model (Hakim et al., 2022). With a clear legal framework, the energy transition will be more effective and equitable.

Energy law reform based on asymmetric decentralization must also address accountability. The special authority granted to regions must be accompanied by transparent accountability obligations. Regulatory and fiscal audit mechanisms need to be strengthened to prevent abuse of authority. This accountability can be implemented through independent oversight bodies and civil society participation. From a constitutional law perspective, checks and balances are necessary to prevent local elite domination of energy policy. Data transparency and open planning

processes will be key instruments of accountability. With these mechanisms, asymmetric decentralization remains within democratic legal channels. Ultimately, accountability strengthens the legitimacy of the proposed progressive legal model. Thus, energy law reform emphasizes not only authority but also regional responsibility.

The overall analysis shows that the asymmetric decentralization model is a response to the normative deficit in energy governance in Indonesia. This model integrates the principle of subsidiarity, green fiscal transfer mechanisms, and multilevel governance into a single progressive legal framework. From a legal perspective, asymmetric regulation aligns with the mandate of the 1945 Constitution, which recognizes regional specificities and guarantees social justice. Conceptually, this model aligns with the welfare state theory, which positions law as an instrument for protecting citizens' rights. Implementing this model will strengthen Indonesia's international standing while addressing local needs. This will enable national energy law to function more responsively, inclusively, and sustainably. Asymmetric decentralization also ensures a fair energy transition for all levels of society. Therefore, implementing this model is a strategic step in building globally competitive energy governance. Ultimately, energy law will no longer be merely an administrative tool but rather an instrument of transformation toward ecological justice.

### **c. Legal Challenges and Strategies for Implementing Asymmetric Decentralization for a Just Energy Transition**

The implementation of asymmetric decentralization for the energy transition faces significant legal challenges due to the complexity of national regulations. Disharmony between the Energy Law, the Regional Government Law, and their derivative regulations creates legal uncertainty for local governments. This situation often leads to overlapping energy policies between the central and regional governments, hampering the effective implementation of the energy transition (Lubis et al., 2025). The principle of legal certainty guaranteed by Article 28D paragraph (1) of the 1945 Constitution appears to be diminished when existing regulations are not synchronized. Without regulatory harmonization, the asymmetric decentralization model risks remaining merely a normative idea without implementable power. Differences in interpretation between agencies also create potential authority disputes that slow down the clean energy agenda. Therefore, revising sectoral regulations is a prerequisite for creating clarity of authority. Energy decentralization can only be successful if there is regulatory consistency that provides certainty for all stakeholders.

Institutional challenges also arise from the uneven capacity of regional institutions in managing the energy transition. Many regional governments still lack human resources, particularly legal and technical expertise in the energy sector. This situation makes it difficult for regions to initiate innovative regulations, even though they possess significant renewable energy potential. Dependence on the central government reinforces administrative hierarchies and weakens regional legal independence.

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Consequently, the principle of subsidiarity, which should be the foundation of energy decentralization, is not functioning optimally. The disparity in institutional capacity between developed and underdeveloped regions further widens the energy transition gap (Sansuadi, 2025). Without institutional strengthening, asymmetrical delegation of authority can create new inequities between regions. Therefore, strategies to increase institutional capacity need to be prioritized through national programs. This effort will strengthen the legal and technical foundations for implementing energy decentralization.

The fiscal aspect presents another challenge, as most regional governments lack sufficient financial capacity to finance clean energy projects. The energy transition requires significant investments in infrastructure, research, and technology, which are often beyond the reach of regional budgets (Tabun & Machdar, 2025). Without equitable fiscal support from the central government, asymmetric decentralization will only widen the gap in inequality between regions. Therefore, the concept of green fiscal transfers is a key instrument that must be regulated in positive law. This principle emphasizes that the state is obliged to allocate funds based on regional achievements in the energy transition. Without clear fiscal instruments, regions will struggle to implement green energy policies, even if they have regulatory authority. A performance-based fund transfer scheme will create accountability and legal incentives for regions. Thus, the fiscal aspect is an integral foundation of the asymmetric decentralization implementation strategy.

In addition to fiscal factors, limited regional human resources in the legal and energy sectors are also a major obstacle. Many regions lack experts capable of drafting comprehensive energy sectoral regulations. This prevents the authority granted to them from being utilized optimally. Regulations drafted without expertise have the potential to create legal loopholes that undermine investment certainty (Rismanto, 2024). The success of energy decentralization is crucially determined by the quality of local human resources who understand legal, technical, and ecological aspects. The state is obligated to provide energy law training to regions through capacity building mechanisms. Without strengthening human resources, granting authority will only create an additional administrative burden for regions. Therefore, legal strategies must integrate human resource capacity building with the development of a new regulatory framework. Both complement each other in supporting the effectiveness of the asymmetric decentralization model.

Community participation is a crucial element in the implementation of energy decentralization, yet it is often inadequately accommodated. Centralized legal models tend to position communities as policy objects, rather than subjects with the right to determine the direction of the energy transition (Wibawa & Hermawan, 2024). However, energy justice demands active community involvement in the formulation and oversight of regional energy policies. The granting of asymmetric authority must be accompanied by formal participation mechanisms, such as public consultation forums and regional energy deliberations. Without clearly regulated participation mechanisms, energy policy is vulnerable to being dominated by the interests of local

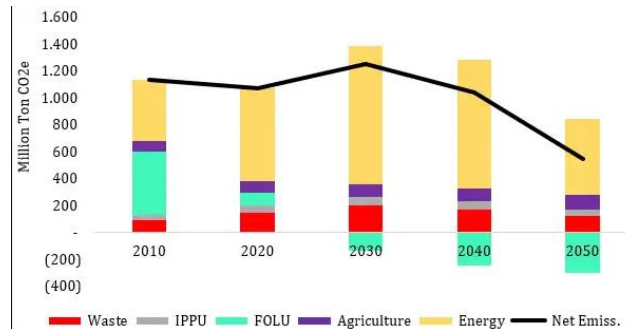
elites or large investors. The principle of participatory democracy, as affirmed in Article 1 paragraph (2) of the 1945 Constitution, needs to be the foundation for designing regional energy regulations. This will strengthen legal legitimacy and increase the effectiveness of energy transition policies (Artha Debora Silalahi, 2023). Public participation will also serve as a check on abuse of authority in the regions. Thus, energy justice can only be achieved if the public is positioned as an active legal subject.

The potential for conflicts of interest between the central government, regional governments, and investors also poses a challenge to the implementation of asymmetric decentralization. Central economic interests are often oriented toward national energy stability, while regions seek to maximize local potential. Investors prioritize profit security, which sometimes conflicts with the principle of social justice. This situation has the potential to create conflicts of interest that could undermine the goal of a sustainable energy transition. To prevent conflict, regulations are needed that clearly divide authority and responsibility among actors. The development of organic regulations that define the criteria for regions receiving asymmetric authority will provide an important legal basis. Furthermore, a dispute resolution mechanism needs to be established to ensure that conflicts of interest can be resolved fairly. A clear legal framework will ensure more stability and equity in energy decentralization. Without it, potential conflicts could actually hinder the energy transition agenda.

Harmonizing the law with the constitution is essential for implementing asymmetric decentralization. Article 18B of the 1945 Constitution explicitly recognizes the uniqueness and diversity of regions, thus granting the asymmetric model constitutional legitimacy. However, this recognition must be operationalized through sectoral laws that provide clear boundaries of authority. Without a strong legal basis, asymmetric authority is vulnerable to constitutional challenges. Therefore, the creation of a specific law on energy decentralization could be a normative solution. This law would integrate the principles of the welfare state, subsidiarity, and energy justice into the national legal system. With a strong constitutional basis, energy decentralization would no longer be subject to administrative discretion. This would strengthen legal stability and prevent the delegitimization of regional authority. Therefore, harmonization with the constitution is key to the sustainability of the asymmetric legal model.

Connecting with global commitments is also a crucial aspect of the energy decentralization implementation strategy. Indonesia has committed to the Paris Agreement through the establishment of its National Development Planning (NDC) and the 2060 Net Zero Emissions target. However, achieving this global commitment depends heavily on the ability of regions to implement green energy policies. Asymmetric decentralization will enable regions to contribute directly to global targets through local energy policies (Pratama et al., 2024). This contribution needs to be formally recognized in national reporting mechanisms to international bodies. Therefore, national law must facilitate synergy between regional policies and global obligations. Otherwise, Indonesia will face difficulties in meeting international targets due to weak regional implementation. This integration will also strengthen Indonesia's

position in global energy diplomacy. Therefore, the legal strategy for the energy transition must consistently link the national and global dimensions.



**Figure 3.** Map of Renewable Energy Distribution in Indonesia  
 Source: (Tungkot Sipayung, 2023)

Investment certainty is a crucial issue that needs to be addressed in the implementation of energy decentralization. Investors tend to be reluctant to invest if regional regulations lack strong legitimacy. This uncertainty can reduce Indonesia's attractiveness compared to other countries with decentralized energy legal systems (Anis Retno Triana et al., 2024). Therefore, regulations regarding asymmetric authority must be designed with legal certainty in mind to ensure a stable investment climate. Regional governments need to be provided with a clear legal framework to issue nationally recognized sectoral regulations. This way, investors have legal assurance that regional policies will not conflict with central law. This regulation will increase business confidence in the stability of Indonesia's energy laws. Clear regulations will also accelerate capital inflows for clean energy projects. Therefore, investment stability can only be achieved through synchronization of central and regional laws.

From a supervisory perspective, the implementation of energy decentralization requires strong legal instruments to prevent abuse of authority in the regions. Without a clear oversight system, asymmetric authority risks being exploited by local elites for personal or group interests (Ashari et al., 2024). Therefore, regulations must establish a check and balance mechanism between the central and regional governments. One option is to establish an independent supervisory body with the authority to periodically evaluate regional energy policies. This body can ensure that regional policies remain aligned with national targets while being responsive to local needs. A transparent oversight mechanism will also enhance the legal legitimacy of energy decentralization. Furthermore, the involvement of civil society as an informal monitor will strengthen policy accountability. With multi-level oversight, abuse of authority can be minimized. Therefore, the oversight aspect is an integral component of the energy transition legal strategy.

Another equally important issue is the integration of social justice aspects into energy transition law. The centralization of energy policy has often neglected the social impacts on vulnerable groups, particularly communities in fossil fuel-producing regions. Granting asymmetric authority provides an opportunity for regions to design just transition policies that protect the social rights of affected communities. These policies can include labor protection, local economic diversification, and clean energy-based social protection programs. The legal basis must explicitly regulate regional obligations to safeguard social rights to ensure they are not neglected. This aligns with the welfare state principle, which positions the state as the guarantor of people's welfare. By integrating social justice, energy decentralization becomes not only a technical instrument but also a mechanism for protecting human rights (Rommy Patra, 2022). The success of the energy transition is ultimately determined by the extent to which the law is able to guarantee social justice. Therefore, this aspect must be a key element in the design of energy law.

The final challenge is the need for harmonization between national law, regional law, and international legal practice. The energy transition is a global agenda determined not only by domestic policy but also by international legal standards. Indonesia, as a party to the Paris Agreement, is obligated to transparently report on its emission reduction achievements. The implementation of asymmetric decentralization will be effective if national law recognizes regional contributions in official reports to international institutions. This requires a legal mechanism that links regional energy policies to global commitments. Without such harmonization, regional contributions will not be recorded in Indonesia's energy diplomacy. Therefore, national regulations must regulate reporting procedures that integrate regional policies into the international framework. In this way, Indonesian energy law can serve as both a national and a global instrument. This harmonization will strengthen Indonesia's position as a country committed to global energy justice.

#### **4. CONCLUSION**

This study demonstrates that Indonesia's current energy governance, which is still centralized, creates significant normative and institutional barriers to achieving an equitable energy transition. By analyzing statutory frameworks, doctrinal perspectives, and comparative experiences, the research highlights that asymmetric decentralization offers a progressive legal pathway to reconcile national commitments with local needs. The principle of subsidiarity and the welfare state mandate provide a strong theoretical foundation for redistributing authority to local governments with high renewable energy potential or specific vulnerability to climate risks. Asymmetric authority, supported by green fiscal transfers and multilevel governance, can enhance local innovation, participation, and accountability in energy policy. Comparative insights from India and South Africa reaffirm that differentiated authority combined with community empowerment leads to more adaptive and socially just transitions. Therefore, Indonesia needs a legal reconstruction that not only ensures coherence with constitutional provisions but also aligns with international climate obligations. This model would strengthen Indonesia's role in global



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climate diplomacy while ensuring fair access to clean energy for all citizens. Ultimately, the proposed framework contributes both theoretically and practically by offering a normative solution to the legal gaps that hinder sustainable and inclusive energy transition in Indonesia.

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