

Why Gender Mainstreaming Falls Short in Indonesia's Energy Transition Policies

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Abstract

This study examines gender mainstreaming in Indonesia's energy sector and evaluates gender poverty issues, specifically analyzing why current gender mainstreaming efforts fail to address structural gender inequalities. Using a qualitative policy analysis approach that utilizes document review and literature analysis, the theoretical framework draws from the politics of justice perspective, specifically three tenets of energy justice: distributional, recognition, and procedural justice. Despite its efforts toward gender mainstreaming initiatives, the findings show that Indonesia's current policies still lack these three tenets, from limited women representation in the energy sector, higher energy poverty prevalence among women, to patriarchy and surface-level empowerment programs. As this study focuses primarily on national-level policies, it may not fully represent regional variations in policy implementation across Indonesia's diverse provinces. However, it contributes to gender and energy studies by providing a critical analysis of Indonesia's energy transition policies from a gender justice perspective, particularly for policymakers, for a more inclusive energy transition in Southeast Asia. Nevertheless, by addressing these issues, the study's novelty lies in its ability to explain the stagnation of Indonesia's gender mainstreaming efforts in this sector, which further aligns with the implementation of SDG 5 and 7 to a greater extent.

Keywords: *Politics of Justice, Indonesia's Energy Transition, Gender-Energy Nexus, Women's Energy Poverty*

1. Introduction

The global energy transition projection is increasingly moving in a more diverse direction, including greater attention to inclusivity and justice. In general, at the global level, norms and institutions such as the Sustainable Development Goals (particularly, SDG 7), the Paris Agreement, and international pressure for decarbonization, encourage Indonesia to adopt principles of justice in the energy transition, including aspects of benefit distribution, public participation, and the recognition of vulnerable groups (Nugroho, 2025). This trend is also visible in the Global South, driven by the growing global urgency to transform energy systems to prevent climate change and global inequality (Apergi et al., 2024). Moreover, this trend relates not only to global inequality but also to other important aspects such as gender inclusivity, especially with the development of gender mainstreaming that has begun to be adopted by various countries since 2005 (Moser & Moser, 2005).

In short, gender mainstreaming is a mechanism or strategy for integrating gender perspectives into a country's policies. Although there has generally been little attention to the gendered dynamics of the energy transition, mirroring the broader lack of attention to the rights of women and girls within energy and energy-transition discourse (Götzman & Dicalou, 2025), the implementation of gender mainstreaming still represents an effort to incorporate gender principles, including for countries like Indonesia. This has also become one of the driving factors for Indonesia, as the country has adopted gender mainstreaming through the Presidential Instruction of the Republic of Indonesia No. 9 of 2000.

In terms of energy transition, Indonesia has committed to reducing its emissions since the 15th session of the Conference of the Parties (COP15) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2009 (Resosudarmo et al., 2023). Over the years, recognizing their vulnerability to the impacts of climate change and aligning with the global energy transition, Indonesia has constantly renewed its commitment to reducing emissions and energy transition, submitting its Nationally Determined Contribution (NDC) to the United Nations with a target to reduce its yearly emissions by 31.9% by 2030. Another ambitious target has been announced, with the government committing to achieving net-zero emissions (NZE) by 2060. To achieve this challenging target, the government has made various efforts, namely (1) investing in hydrogen, CCS, and energy efficiency in the industrial

sector; (2) providing incentives to electric vehicles with value-added tax (VAT) reduction and tax exemptions; and (3) targeting 1 million natural gas (*jargas*) connections and 700.000 electric cooking appliances by 2025 to replace the heavily used liquefied petroleum gas (LPG) (IESR, 2024).

However, progress in reality is not aligned with the aforementioned commitment. Instead of gearing advancement towards energy transition, the country's national policy direction strengthens its dependency on fossil fuels. A clear example of this can be seen in President Prabowo's speech at the G20 Forum in Brazil, in which he mentioned his government's commitment to stop fossil energy generators by 2040. However, the National Electricity Supply Business Plan (RUPTL) shows that an addition 16,6 gigawatt, consisting of fossil-based energy generators, have been added to the national capacity (Hana, 2025). In addition, women remain largely underrepresented in Indonesia's energy transition. In 2022, only 5% of decision-makers in the energy sector were women (Wikan, 2024). Additionally, it has also been revealed that sex-disaggregated data was not required for data collection for the development of the country's national energy plan, making the needs and challenges faced by women go unseen and unrepresented (Wikan, 2024).

Based on the background described above, this study explores the underlying reasons for the Indonesian government's failure to mainstream gender perspectives in the energy sector equitably and accelerated manner. It also offers critical recommendations on the steps the government must take to ensure that gender perspectives are addressed at the structural level, thereby supporting the long-term sustainability of a fair energy transition. This is crucial because, normatively, women are entitled to equal opportunities for active participation in all fields, including the energy transition. As Sambodo et al. (2025) note, integrating gender equality considerations creates opportunities to address gender-based structural problems within the energy transition. This is particularly important given that energy transition processes affect gender groups differently, with women often bearing disproportionate domestic and psychological burdens on women. The aspirations Indonesia seeks to achieve through its energy transition should align with the principle of "No One Left Behind." Without fulfilling the dimensions of justice, the energy transition risks deepening existing inequalities and creating new forms of injustice under the banner of sustainability (Becerra 2024).

By identifying the root causes of gender mainstreaming failures in the energy sector, the Indonesian government can take more progressive steps toward achieving both SDG 5 on "Gender Equality" and SDG 7 "Affordable and Clean Energy" by 2030. Under Goal 7, Indonesia has committed to ensuring universal access to affordable, reliable, and modern energy services and substantially increasing the share of renewable energy in the global energy mix (sdg2030Indonesia.org, n.d.). Women hold significant potential and play an important role in advancing these targets, as demonstrated by various grassroots and civil society initiatives related to energy (Fithria, 2025). However, women have long been positioned merely as energy consumers, with their knowledge and lived experiences neither fully recognized nor meaningfully accommodated in the literature.

2. Literature Review & Hypothesis

Several studies have examined the issue of a just energy transition in Indonesia. Elliot and Setyowati (2020), for example, highlighted the importance of social justice in the energy transition, noting that not only does the transition itself carry the risk of generating new forms of injustice, but existing societal inequalities may further intensify the government's challenges in advancing low-carbon development and a green economy. These concerns are reinforced by Loy et al. (2024), who argue that the absence of justice elements in energy policy has contributed to the slow shift from fossil fuels to renewable energy. Evidence of Indonesia's limited integration of justice principles is also apparent in Chotimah's (2024) analysis of the Just Energy Transition Partnership (JETP) financing scheme, which primarily involved political and economic elites while overlooking vulnerable groups affected by the transition. Furthermore, Sumarno et al. (2022) explicitly identified failures in Indonesia's energy transition policies—particularly energy subsidies—showing that 40% of subsidy allocations benefit upper-middle-class households rather than the poorer communities most impacted by the transition

In examining the relationship between gender justice and the energy transition, Sumarno et al. (2023) showed that significant gaps in women's leadership persist within the renewable energy sector across ASEAN and Group of Seven (G7) countries. This issue is reflected, for instance, in case studies from South Papua and Nusa Tenggara discussed by Antasya and Kesana (2023), who highlight cultural norms, social stigma, and unsupportive environments as key factors contributing to gender inequality, despite women's strong competencies, interests, and concerns about renewable energy. A similar pattern appears in the micro-hydro renewable energy project in Pekonina Village, West Sumatra, where women are excluded from active decision-making and are only invited to participate when their husbands are unable to attend (Aung 2020). Although these studies address gender issues within the energy transition, they do not explicitly examine the government's shortcomings in gender mainstreaming through an integrated lens of gender and energy justice, as this study proposes.

Moving to the aspect of gender mainstreaming, several previous studies have also discussed the implications of gender mainstreaming globally, and specifically in Indonesia as well. Briefly, this strategy has existed since 2005, particularly when the Beijing Declaration and Platform for Action emerged, during which countries began adopting this strategy and incorporating it into their respective domestic policies. So far, this has been one of the main strategies used globally, and when it was first introduced, many scholars were optimistic. However, to date, its implementation has not been fully successful (Caglar, 2013). According to Nugroho (2025), although gender mainstreaming varies across countries, it often remains shallow and technocratic within national contexts, failing to address systemic gender inequalities. He concluded that the concept itself is underdeveloped and needs to be reconceptualized to better link gender mainstreaming with broader societal change.

In Southeast Asia, particularly within ASEAN, the institution itself has formalized gender issues and produced and implemented extensive gender mainstreaming policies. However, constraints appear at every stage, mostly relating to the need to align gender equality agendas with organizational mandates, as well as the lack of supporting systems, such as data, human resources, and funding (Alami, 2017). As we live in an era of energy transition, where countries worldwide are making efforts to move away from fossil fuels towards a low-carbon economy, ASEAN also has initiatives to move forward with a gender perspective in this field. For example, through the ASEAN Climate Change and Energy Project (ACCEPT), the ASEAN Centre for Energy (ACE) aims to promote the importance of gender equality in the energy transition by gathering perspectives from women who are policymakers, academics, and leaders in state-owned and private companies. Nevertheless, women in ASEAN and G7 countries still face challenges in participating in the energy transition, such as low awareness, limited access to opportunities, cultural factors, psychological beliefs and physical considerations (Sumarno, 2024).

In Indonesia, gender mainstreaming has been integrated into numerous policy documents, including the Outlines of State Policy (1999-2004), National Development Program (2000-2004), and National Medium-Term Development Plans (2010-2014 to 2020-2024) (Nurhaeni & Putri, 2025). The continuity of these national plans suggests that gender mainstreaming is advancing in the country. However, a few studies have revealed that progress is stagnating as the government faces challenges in implementing plans. According to Nurhaeni and Putri (2025), the Indonesian government faces four challenges in implementing gender mainstreaming: (1) political commitment, (2) limited human resource capacity, (3) inadequate accountability organizational mechanisms, and (4) organizational culture. In sum, this means that the government itself lacked commitment and often implemented gender mainstreaming inadequately to fulfill its administrative duty. The lack of commitment created a chain reaction, leading to limited information and education for civil servants supposedly in charge of executing the plans. This resulted in state civil servants not understanding the importance of gender mainstreaming, and gender issues not being internalized into programs and budgeting plans (Nurdin, 2024).

The institutional problem hindering Indonesia's national gender mainstreaming progress also occurs in its energy sector. With a very small percentage of women occupying decision-makers' seats, the country's energy transition plans have not yet addressed the energy burden that women face. Various cases from other countries suggest that energy transitions progress faster when women are well-represented as decision-makers. In the United States of America (USA), this critical role can be seen

through two non-governmental organizations, namely Mothers Out Front and Grid Alternatives, which have accelerated the transition from fossil fuels to renewable energies, with a focus on gender diversity and social justice (Allen et al., 2019). In China, it has been proven that empowering women would result in accelerating the clean energy transition. As stated by Chen et al. (2024), households in which women are more educated and have greater bargaining power are more likely to use clean energy alternatives such as gas or electricity. These cases have shown that employing women at the forefront of energy transition planning would benefit the country and increase the chances of realizing Indonesia's ambitious commitment.

Based on the previous literature review and the theoretical framework in the next section, this study hypothesizes that the stagnation of gender mainstreaming in Indonesia's energy sector is caused by the absence of integration of the three tenets of energy justice—distributional, recognition, and procedural justice—within Indonesia's policies and initiatives related to the energy transition. The lack of integration and implementation of these principles explains why Indonesia has made efforts toward gender mainstreaming but has not fully addressed the various injustices that emerge throughout the energy transition process.

3. Methods & Theory

This study used a qualitative approach with data collected through a literature review. Based on Tenny et al. (2017), qualitative research is an approach used to explore and gain an in-depth understanding of real-world issues, which aims to help formulate hypotheses and provide a richer context for interpreting and expanding quantitative findings. Since this study broadly examines gender mainstreaming in Indonesia's energy sector, the nature of the research is explanatory, aiming to describe and analyze the reciprocal dynamics between gender and energy policy. Using a qualitative policy analysis approach through document review and literature analysis, the theoretical framework draws from the politics of justice perspective, particularly the three tenets of energy justice: distributional, recognition, and procedural. The data used in this study are predominantly secondary data, including scientific articles, reports, state data, and various other relevant sources. Using this data, this study seeks to identify causal factors and examine the implementation of gender policies in Indonesia's energy transition sector, including why these efforts have remained stagnant thus far.

3.1. Four Discourses of Gender and Energy Politics

Before coming to understand energy access for women in the social justice concept, discourses around gender and energy politics revolved around four views that further impacted how energy transition policies are made. In the first view, the energy sector is seen as neutral, as it is understood as being in the realms of technology and economy. Kaminara (2015) stated that policymakers in the energy sector tend to make decisions assuming that it will affect men and women equally. This way of thinking comes from the fact that men have dominated positions of power in the energy sector, leaving almost no room for women in decision-making. The gender agenda in countries' energy policies was also replaced with governments centering on the energy sector for national economic growth and private sector development (Standal et al., 2018). In this view of gender and energy politics, women's burden of being more affected by energy poverty goes unseen, and this perpetuates gender inequality.

In the second view, women's burden was increasingly seen as they carried the drudgery of performing their tasks in the household; to collect water, fetch firewood to cook, and perform various other domestic errands. This view is called the politics of victimization, where women whose burdens have been seen are then used to raise awareness for policymakers (Standal et al., 2018). A few studies have revealed that women's household drudgery tasks are harmful to their health, especially because of the heavy lifting of fuel and air pollution. With a focus on women's health, the proposed solution for this was clean cookstoves, because they can reduce cooking and eating. This has been criticized as it only frames women as victims by focusing on their health and using new technology as a solution for "quick-fixes" without thinking more deeply about gender norms, women's position in their households, cultural practices, and more (Standal et al., 2018).

With the critics taken from the previous view comes the third view that sees women as game changers. Women’s burden as victims of energy poverty is still being considered, but it now goes hand-in-hand with how they are being seen as change agents. Known as the empowerment approach, the strategy from this path is to empower poor women to be energy entrepreneurs, making them sell, maintain, and finance newer energy products instead of just being the user (Standal et al., 2018). Although this seems like a win-win solution, as it would simultaneously increase women’s involvement in the energy sector, economic growth, and transitions to clean energy, the problem comes from how this kind of solution would only result in short-term economic increase and fewer domestic errands for women (Winther et al., 2017). It does not address the deeper gendered energy poverty problem, where women need long-term access to the resources that they need.

The fourth approach, the politics of justice, sees women as rights holders. This approach views energy as a fundamental need to actualize more economic and social rights (Danielsen, 2012). Here, countries are positioned as the primary duty bearers, which means they have the duty to realize women’s right to energy as a fundamental need. The international community has resonated with this approach, with various commitments and regulations set in this direction, for example, Article 14 of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). However, despite these commitments and regulations, energy poverty remains a reality for many women today. This stems from a chain of reactions from the duty bearers failing to recognize the value of women’s work and reproductive roles, which then affects how women are unable to access land and property, and again, affects how women become under or misrepresented; leading to unbalanced access over control to provide energy services (Standal et al., 2018). This analysis indicates how state institutions and complex power relations in energy governance have continued to maintain gendered energy poverty.

3.2. Energy Justice Concept

Energy justice has increasingly emerged as a key focus within the energy discourse, prompted by the growing sustainability challenges in the sector. These challenges include the depletion of natural resources, air pollution, long- and short-term energy security concerns, and energy poverty. Such issues have fostered the recognition of the need to integrate the principles of social justice into energy studies, a perspective now known as energy justice (Jenkins et al., 2014). Energy justice is rooted in the environmental justice movement and shares its foundational philosophy of ensuring equal treatment and meaningful participation for all groups, regardless of background, in environmental and energy policymaking (Bullard, 2005; Jenkins et al., 2014). In the current global context, energy justice serves as a normative foundation for the pursuit of a just energy transition, which has become a global priority in achieving Sustainable Development Goals (SDGs).

| Tenets | Evaluative | Normative |
|----------------|---------------------------|---------------------------|
| Distributional | Where are the injustices? | How should we solve them? |
| Recognition | Who is ignored? | How should we recognise? |
| Procedural | Is there fair process? | Which new processes? |

Figure 1. The evaluative and normative contributions of energy justice
Source: Jenkins et al. (2016)

Referring to Jenkins et al. (2020), energy justice can be understood as ensuring equitable access to energy, a fair distribution of costs and benefits, and the right to participate in decisions regarding whether and how energy systems should be changed. Specifically, this study employs the three core tenets of energy justice proposed by Jenkins et al. (2016): distributional, recognitive, and procedural justice. These principles draw on earlier scholarship on justice and energy, including the works of Fuller and McCauley (2016), Rawls (1991) and Fraser (2014). Applied both normatively and evaluatively

within energy systems, the three principles serve to identify forms of injustice and guide approaches for addressing them.

The first tenet, distributional justice, centers on the question of where injustices in the energy sector emerge (Jenkins et al., 2016). Distributional justice recognizes the unequal allocation of environmental benefits and burdens arising from both energy production (e.g., infrastructure development) and energy consumption (e.g., access to energy). It further seeks to prevent certain groups from being disproportionately advantaged or disadvantaged by the energy transition policies. In this regard, the redistribution of benefits can strengthen the perception of fairness (Jenkins et al., 2016). Accordingly, every energy transition policy must ensure that all groups receive an equitable share of benefits and that no marginalized group is placed at a greater disadvantage as a result.

The next tenet, recognition justice, examines which social groups are affected but remain overlooked. As Schlosberg (2003) argues, recognition extends beyond mere tolerance; it requires that all individuals be fairly represented, free from physical harm, and granted full and equal political rights to do so. Recognition justice seeks to counter policies that disregard the needs and existence of particular groups. Failure to provide recognition not only produces injustice but also risks the loss of valuable knowledge, narratives, values, and perspectives held by marginalized communities (Jenkins et al., 2016). This tenet also highlights instances of misrecognition and the lack of respect for local perspectives, which persist despite nominal acknowledgment, often manifested through continued efforts to delegitimize or question the “truth” and “motives” of local communities who voice their concerns.

The final tenet, procedural justice, focuses on ensuring fair and non-discriminatory decision-making. Barriers to procedural justice are shaped by factors such as access to legal systems, cultural practices, norms, values, and social behavior within a given context (Hall, 2013). Jenkins et al. (2016) outline three inclusive mechanisms for advancing justice: (1) the mobilization of local knowledge, as decision-making that meaningfully incorporates diverse local insights can enhance the effectiveness of energy transition policies; (2) information disclosure, whereby communities have the right to clear, complete, and transparent information regarding any energy transition policy, with public consultation serving as a common strategy in this process; and (3) institutional representation, which is crucial because unequal representation among social groups can result in unjust outcomes.

The concept of energy justice continues to evolve, and the three tenets above must be examined through an intersectional lens that accounts for injustices related to gender, race, class, colonialism, and other dimensions of injustice. This is reflected in the work of Sovacool et al. (2023), who sought to pluralize energy justice by incorporating perspectives from gender studies, racial justice, Indigenous communities, and postcolonial analysis. This intersectional approach is essential for recognizing the complex power relations that shape efforts to achieve energy justice. This calls not only for attention to distribution or representation but also for confronting the underlying systems of domination—such as capitalism, patriarchy, racism, and colonialism—that produce and sustain inequities (Sovacool et al., 2023).

3.3. Energy Transition and Gender in an Intersectional View

Energy transitions are often associated with production and consumption activities that are closely linked to the economic and technological sectors (S&P Global, 2020). Nevertheless, the issue of energy transition naturally intersects with various equity-related issues, including equal access, employment opportunities, and the impacts generated by the energy sector. Gendered energy issues are well documented (Petrova & Simcock, 2019). The energy transition is not a gender-neutral issue, stemming from the inequalities experienced by women, who are generally more vulnerable to energy-related problems, such as energy poverty, particularly in rural areas.

In relation to women’s issues and the concept of intersectionality previously discussed, the correlation between gender and energy transition cannot be examined from a single perspective; women’s experiences are inherently shaped by multiple factors that constitute their identity. Usually, renewable energy projects alone do not automatically address structural inequalities; intersectional frameworks

are necessary to avoid reproducing existing power asymmetries related to gender, class, ethnicity, and other social factors in new energy regimes (Johnson et al. 2020). Therefore, this discourse is also connected to gender mainstreaming efforts within the industry, implying that relying solely on common approaches is insufficient to adequately address these issues.

Although gender mainstreaming has been incorporated as a core strategy in many countries, its interpretation does not necessarily address the full range of issues experienced by marginalized groups, particularly women. Moreover, a significant knowledge gap remains regarding the role of professional intermediaries and institutions in either reproducing or challenging gendered forms of energy exclusion, especially in the Global South (Alda-Vidal, 2023). This indicates that although efforts have been made, a deeper analysis and more comprehensive approach are required not only to create a gender-aware pathway toward energy transition but also to ensure the development of inclusive policies that safeguard the needs and well-being of all.

4. Results & Discussion

4.1. Distributional

The distribution tenet of energy justice recognizes the unbalanced distribution of energy access and environmental burdens across the world and aims to ensure equal access to clean and reliable energy for everyone, regardless of economic power, race, gender, or any other strata of society. Simultaneously, with the environmental burdens already spread unequally, this approach also emphasizes the need to mitigate where energy injustices emerge and how disproportionate exposures spread to the local community. Indonesia, especially with its decentralized government and several fossil fuel generators spread across the country, still faces the challenge of successfully incorporating this tenet into its energy transition programs.

Indonesia is still dependent on fossil fuels as its primary energy source, with coal dominating it. Moreover, the country is the biggest coal exporter in the world, with 80% of it being exported and 20% being used for the nation's energy needs (Wahyuni, 2022). The largest part of domestic coal usage is electricity production under Perusahaan Listrik Negara (PLN), a state-owned company responsible for energy production and distribution. With the rise in electricity demand, Indonesia, along with PLN, continues to focus on energy sources that are price affordable, leading them to favor coal, which receives notable subsidies from the government (Setyowati, 2021). The problem with coal does not only stop at the amount of greenhouse gases it produces, but also the health burdens it causes.

A report in 2022 mentioned that Indonesia has 86 coal-fired power plants (Cui et al. 2022). These plants have been proven to be a major source of air pollution and various cases of noncommunicable diseases in the country (Sanchez & Luan, 2018). In a few areas where coal-fired steam power plants are built in Indonesia, the health of the local community is threatened. In Banten, the poisonous emissions produced by the Suralaya steam power plant have resulted in approximately 1.470 premature deaths annually and caused a financial burden of as much as 14,2 trillion rupiahs each year because of the health impacts (Centre for Research on Energy and Clean Air, 2024). People living near coal-fired steam power plants have a higher risk of being exposed to bronchitis, asthma, and cardiovascular disorders. In Sawahlunto, West Sumatra, the local people are continuously affected by the Ombilin steam power plant, which causes them to have prolonged cough and sore eyes. An inspection of the students of the nearby elementary school, SDN 19 Sijantang, revealed that 76% of the students suffer from pulmonary disorders, including bronchitis and tuberculosis (Hana, 2025).

Even with the widespread disturbances to various local communities with coal-fired power plants operating near them, Indonesia's energy access is still not equally spread. Owing to the country's archipelagic geographical conditions, the state still struggles with high electricity generation costs in the more remote parts of the country. Compared to the cheap cost and stable access to electricity in Java, the electricity cost can be three times higher in the eastern part of the country (Wahyuni, 2022). This condition presents a potential opportunity for Indonesia to develop its renewable energy, as it still struggles to distribute energy access, especially electricity, to 25 million people in rural and remote areas. To this end, the government has implemented rural electrification projects, where grid extensions

have been used as the solution. The program is seen as one of Indonesia's ways to include a vision of energy justice, especially in the distributive tenet of their policy to alleviate energy poverty and provide accessible energy to everyone (Setyowati, 2021).

This has also been enacted in various policies, including the Energy Law number 30 of 2007 and Electricity Law number 30 of 2009. During Joko Widodo's presidency, this approach has been a policy priority. One of the programs that was operating with a focus on making energy accessible for everyone was the One Price Fossil Fuel policy (Setyowati, 2021). Although it sounds promising, this approach does not address the in-depth societal and gender problems that entail energy access. It has even been revealed that these projects have, in fact, perpetuated local distributive injustices in energy access, where the electricity generated from the wind farm supplies electricity only to households that have access to grid networks, usually in the city area. Villagers located near the electricity generator who do not have access to grid networks do not enjoy this electricity, and this, in turn, may perpetuate energy injustice and even create deeper social divisions. This occurred in the Sidenreng Rappang District in South Sulawesi and Kamanggih Village in East Sumba, where renewable energy projects are operating in both areas. A deeper look at this revealed that economic strata are still a significant contributor to renewable energy access, as villages with lower socioeconomic status are excluded, and urban areas can readily enjoy energy access (Fathoni et al., 2021). A villager from Kamanggih village mentioned, "We can only see electricity poles in those neighbourhoods, but we have no idea what it feels like to have lighting in our own home" (Fathoni et al., 2021).

This also occurred with the adoption of liquified petroleum gas (LPG). The Zero Kero programme, which also intended to make energy more accessible for everyone, had only a minimal effect on reducing inequality. Although it is widely used in the country as the main energy source for cooking in households, the program mostly benefited the more privileged, as 70% of the recipients were richer residents in urban areas, not the poorer households in rural areas (Kusumawardhani et al., 2017). This reality indicates Indonesia's failure to implement the distributive tenet of energy justice. The condition becomes even more complicated when we consider the factors of a decentralized governance system and resistance to preventing system changes. In West Sumatra, the transition to clean energy is hindered by revenue-sharing schemes. For oil and gas revenue, the central government receives a greater share, whereas the provincial governments would receive a greater share of revenue for coal (Stockholm Environment Institute, 2020).

As a result, there is resistance towards a transition to clean energy as the subnational governments want to keep their share, hindering the progress towards a system change. Women are almost non-existent in these policies, showing that the country's energy policy is gender-blind, or only frames women as victims at best. Patriarchal land management has confined women to their traditional roles. In Pekonina Village in West Sumatra, women felt the benefit of the micro-hydro plant as it allowed them to cook with electric rice cookers, but it only stopped there; they think the men are the ones responsible for handling decision-making, so that they can stay at home and take care of domestic errands (Stockholm Environment Institute, 2020). This resonates with the analysis of Standal et al. (2018), who found that energy poverty burdens women's work but still confines them to the domestic and reproductive sphere with technical. Here, the solutions implemented to address energy poverty are only "quick-fixes" in reducing women's health and do not consider the deeper social, gender, and women's position in household aspects. If the government truly wants to realize its ambitious commitment to energy transition, it must include not only economic growth and technical aspects in its energy policy, but also explicitly include social, justice, and gender considerations. As the former Irish president and United Nations human rights commissioner, Mary Robinson said, "climate change is a man-made problem and must have a feminist solution." (Tabary 2018).

4.2. Recognition

Within the framework of energy justice, recognition justice emphasizes the importance of acknowledging groups that have long been marginalized in the development of the energy sector, including the transition toward clean energy. This approach goes beyond distributive or procedural concerns; it highlights how the identities, experiences, and needs of certain groups, particularly women,

are often overlooked in both policymaking and implementation in the energy sector. In the Indonesian context, gender mainstreaming has long been adopted as a development principle; however, its application in the energy sector, especially in the energy transition process, still faces challenges, particularly concerning the tenet of recognition.

Numerous studies and initiatives have highlighted the position of women and people with disabilities as vulnerable groups requiring attention in Indonesia's energy transition efforts (LPEM FEB UI, 2024). Other vulnerable groups include Indigenous communities, the elderly, children, disaster survivors, and low-income households. Although the challenges faced by these groups vary widely, several common threads emerge: they are generally more prone to energy poverty, more likely to live in areas exposed to waste and pollution from transition-related projects, and experience other forms of disproportionate risk.

According to LPEM FEB UI et al. (2024), as Indonesia adopts more ambitious climate targets, such as achieving net-zero emissions (NZE) by 2050, 2060, and 2080, the diversity of electricity generation technologies increases, which is important for ensuring energy security. However, the implication is that the more ambitious Indonesia's climate targets become, the greater the inequality experienced by households headed by women and households with persons with disabilities (LPEM FEB UI et al., 2024). Moreover, the current energy transition continues to rely, in part, on conventional energy sources to support clean energy development, which has a direct impact on communities in the affected areas, most of which are rural (Publish What You Pay (PWYP) Indonesia, 2023).

In the gender context, women are the primary providers of household energy needs, and they search for alternative energy sources when shortages occur (Mongabay Indonesia, 2024). This aligns with the remarks of Mike Verawati, Coordinator of Public Policy Reform Workers and Secretary-General of the Indonesian Women's Coalition, in the event "Nasib Perempuan Dalam Bingkai Transisi Energi" ("The Fate of Women in the Frame of Energy Transition"):

"Energy is not regarded as knowledge, and therefore women are assumed not to understand or be capable of contributing ideas to energy governance." (Verawati, 2024).

The limited representation of women and persons with disabilities in energy-related policymaking is a root cause of persistent injustice. Representation here refers not only to women as decision-makers but also to their presence in scientific fields and participation in energy projects across Indonesia. A survey by the Purnomo Yusgiantoro Center (2025) conducted in five provinces with high renewable energy potential, three with low Gender Development Index (GDI) scores (East Kalimantan, North Sumatra, Papua), and two with high scores (North Sulawesi, Bali), revealed that women lag in three key areas: knowledge, leadership, and participation.

From the knowledge perspective, many women lack an understanding of renewable energy issues: 30% were unaware of the issue, and 48% did not understand their energy options. In leadership, household energy decisions remain male-dominated (42%), while women account for only 19%, reflecting limited involvement in decision making. Participation levels are even more concerning, with 90% of women outside Java never having been involved in renewable-energy-related activities due to limited information, resources, and the influence of gender stereotypes. These findings highlight the persistent gender disparities in energy transition, underscoring the need for inclusive policies, capacity building for women, and cross-sector collaboration to address these inequities.

Despite this, Indonesia claims to have "recognized" women as part of the energy transition agenda and positioned them as a priority group. National policies, such as the RPJMN 2020–2024, which includes gender mainstreaming in sustainable development (including energy), Presidential Regulation No. 11/2023 on the urgency of gender mainstreaming in national development, and the Long-Term Strategy for Low Carbon and Climate Resilience 2050, acknowledge the need for the inclusive engagement of all groups, including women and other vulnerable populations (Komnas Perempuan, 2025). Indonesia is also committed to SDG 5, which explicitly highlights women's inclusion, and ratified the CEDAW

on July 24, 1984. The adoption of gender mainstreaming is further reflected in Presidential Instruction No. 9 of 2000 (DJKN Kemenkeu, 2000).

This commitment is echoed in some state-owned enterprises. For example, PLN (Indonesia's State Electricity Company) publicly expressed its commitment to gender mainstreaming. In 2022, PLN introduced Statement of Corporate Intent No. 0014.P/DIR/2022, which aims to optimize the role and participation of women in the electricity sector and strengthen PLN's value among stakeholders, including through ESG ratings (PT PLN (Persero), 2023). Nevertheless, Indonesian women are still frequently regarded as "energy consumers" (Yudanti, 2025). For example, in STEM leadership and strategic corporate roles, women's participation remains limited: only 7.8% of corporate board seats are held by women, and women account for only 9.4% of inventors in Indonesia (Rubin & Utomo, 2023).

In the government sector, the number of female policymakers in energy remains low. This demonstrates that while Indonesia has formally and ideally provided "recognition" for women and other minority groups, many issues persist in practice. Indonesia's interpretation of gender mainstreaming in the energy sector has been highly general, lacking alignment with the cultural and contextual nuances necessary for meaningful inclusivity. Some policies are even misaligned, such as energy subsidy schemes that ultimately benefit affluent households more than persons with disabilities or low-income elderly individuals without access to subsidies (Gobel et al. 2024).

Thus, it can be said that Indonesia has not yet truly succeeded in incorporating the tenet of recognition into its gender mainstreaming policies in the energy sector. Consequently, the ongoing energy transition has not fully addressed the needs, experiences, and identities of groups that have long been marginalized. The absence of substantive recognition shows that gender mainstreaming in the energy sector remains largely symbolic, a "tick-box exercise" rather than a structural transformation. To genuinely internalize the recognition of justice, Indonesia must ensure that women, Indigenous peoples, persons with disabilities, the elderly, and other vulnerable groups are not only acknowledged but also positioned as key actors in the formulation, implementation, and evaluation of energy policies. Without a paradigm shift toward meaningful recognition, energy transition risks perpetuating old inequalities and creating new forms of exclusion, moving further away from the principles of a just and inclusive transition.

This can be pursued by developing more inclusive policies specifically targeting women, Indigenous communities, and other vulnerable groups, rather than applying a generic "one for all" gender mainstreaming approach. Given that every woman's experience is personal and subjective, a bottom-up approach, such as creating spaces for dialogue, enabling NGOs to act as intermediary agents (Schiffer et al., 2022), and encouraging structural reform of the energy sector toward greater equity (Allen et al., 2019) can play an essential role.

4.3. Procedural

Gender mainstreaming in the energy transition aims to ensure that every stage of policy planning, implementation, and further development is conducted from a gender-equality perspective. This objective aligns with the tenet of procedural justice, which emphasizes fairness throughout all processes and requires policy spaces that allow inclusive and non-discriminatory participation for all.

Unfortunately, women remain significantly underrepresented in leadership roles in Indonesia's energy sector. Globally, women comprise 32% of the workforce in the renewable energy sector; however, in Indonesia, the figure is only 11%, with fewer than 5% occupying decision-making positions (UNDP Indonesia, 2025). For example, women's leadership within the Ministry of Energy and Mineral Resources is estimated to be only around 10% (Mongabay Indonesia, 2024). This underrepresentation is not due to a lack of interest among women but rather stems from cultural norms, social stigma, and unsupportive environments that hinder their participation (Antasya and Kesana, 2023).

When procedural justice is not accommodated in Indonesia's energy decision-making processes, the specific vulnerabilities experienced by women during project implementation are overlooked. These vulnerabilities include physical, non-physical, sexual, and social violence, which women are more

likely to face in resource-related conflicts, particularly those associated with renewable energy projects (Komnas Perempuan, 2025). Such risks are even more pronounced for women with intersecting marginalized identities, including Indigenous women, women with disabilities, and women living in poverty.

The ongoing absence of a gender-just energy transition should catalyze the evaluation of the mechanisms and procedures of gender mainstreaming in Indonesia's energy sector. The first issue that the government must address is the lack of legal regulations that specifically outline strategies for gender mainstreaming in the energy sector. For example, Government Regulation No. 40 2025 on the National Energy Policy, which defines the strategies and policy directions for national energy development, does not mention the keywords gender or women. However, as highlighted in the tenets of recognition and distributive justice, women possess distinct needs and knowledge that must be acknowledged and accommodated. Grounding public policy in a gender perspective is essential to move beyond the so-called "universal perspective," which is often dominated by male viewpoints (Carroll, 2022).

More specific regulations would help operationalize existing general policies on gender mainstreaming, such as Presidential Instruction No. 9/2000 in National Development and Ministry of Home Affairs Regulation No. 15/2008 *juncto* No. 67/2011 on the General Guidelines for Implementing Gender Mainstreaming in Regional Development. With clearer regulatory frameworks, the positive initiatives already undertaken by the government could benefit from stronger implementation and funding mechanisms, thereby increasing their effectiveness. One example is the development of the Mata Redi Solar Power Plant (PLTS) project in East Nusa Tenggara, which was designed and implemented with explicit attention to gender and inclusivity (Indradjadja et al., 2023; Triwibowo, 2025).

Furthermore, a clearer regulatory framework would help address the fragmentation of energy policies and compartmentalized nature of energy planning in Indonesia (Yayasan Humanis, 2024). A more coherent and harmonized procedure for gender mainstreaming is essential to address the complex and structural dimensions of gender injustice in the energy sector. Projects that have so far appeared temporary, such as women's capacity-building initiatives, could then be evaluated regularly in accordance with established procedures, ensuring that they genuinely empower women and provide long-term solutions.

Clear regulations would also help prevent policies that contradict gender mainstreaming efforts. Unfortunately, such contradictions can already be observed in the government's budget efficiency measures under Prabowo's leadership. Presidential Instruction No. 1 of 2025 on Spending Efficiency in the Implementation of the 2025 National and Regional Budgets mandates adjustments to government spending for efficiency. As a result, the Ministry of Women's Empowerment and Child Protection (KemenPPPA) faced an almost 50% budget cut, from 300.65 billion rupiah to 153.76 billion rupiah (Rizky, 2025). This reduction has significant implications for the ministry's programs, including gender mainstreaming efforts in the energy sector.

Beyond regulatory measures, it is essential for the government to incorporate an intersectional perspective into gender-mainstreaming processes. For example, to strengthen women's participation in the energy transition sector, the government must first identify which groups of women have been most left behind in policymaking processes, ensuring that every group, including those most vulnerable, is provided with space to be heard. This aligns with the inclusion mechanisms outlined by Jenkins et al. (2016), which emphasize local knowledge mobilization, information disclosure, and adequate representation of those most affected.

However, given that the government has yet to fully integrate even basic gender identity considerations, intersectionality-based policymaking is clearly not a current priority. Consequently, certain groups of women, particularly rural and Indigenous women, whose territories serve as sites for energy-transition projects, tend to face disproportionate impacts. This is evident in the construction of the hydropower

plant (PLTA) in Sulawena Village, Central Sulawesi, which damaged local water sources, an impact that has fallen more heavily on rural women (Mongabay Indonesia 2025).

In practice, intersectionality requires situating each category of identity within its historical and geographical context, rather than treating categories such as “gender” or “race” as isolated, independent dimensions, since these identities are inherently interconnected (Broto, 2024). Decentralization constitutes a key pillar of feminist perspectives on sustainable energy transitions, alongside a pluralistic policy landscape (Broto, 2024). Decentralized policymaking allows for adaptation to local contexts, acknowledging that the energy needs of an Indigenous woman, a woman with disabilities living in an urban informal settlement, and a young female student in a remote area differ significantly and, therefore, require distinct solutions.

Since the reform era, Indonesia has adopted various forms of policy decentralization, including gender-related governance. However, as Hanani et al. (2025) found in a case study of Wonogiri, gender mainstreaming at the local level often falls short due to fragmented coordination, weak institutional alignment, and limited political traction for gender-related agendas. These challenges must become central considerations for the government to ensure that gender mainstreaming in the energy sector is specific, contextual, and intersectional, thereby enabling the realization of energy gender justice.

Finally, the meaningful engagement of diverse civil society elements is essential for advancing a gender-just energy transition. Grassroots women and NGOs working on gender and environmental issues can provide a wide range of rich and context-specific insights. They translate their knowledge into various forms of civic action, including protests, campaigns, public discussions, consultations, report writing and policy recommendations. In line with the participatory dimension of energy transition governance, the government should ideally provide adequate space for these voices and translate their inputs into concrete actions.

However, referring to data from the Wahana Lingkungan Hidup (Walhi, 2023) in Ridwansyah (2023), as many as 827 environmental activists have instead become victims of criminalization: six were killed, 145 were arrested, 28 were named suspects, nine were children, 19 were women, and 620 sustained injuries ranging from minor to severe due to state violence. This situation is deeply ironic because an energy transition expected to promote justice can itself become a new source of injustice. Therefore, it is imperative for the state to safeguard and uphold citizens’ freedom of expression, including the right to voice criticism, as guaranteed under Article 28E(3) of the 1945 Constitution.

5. Conclusion

5.1. Conclusion

In conclusion, this study shows that Indonesia’s stagnation in effectively integrating a gender mainstreaming strategy, especially within the energy transition sector, stems from the incomplete incorporation of the three core tenets of energy justice: distributive, recognition, and procedural justice. Although Indonesia has adopted gender mainstreaming norms through both national regulations and international commitments, implementation in the energy sector remains merely written and administrative, rather than genuinely integrated into existing problems.

First, from a distributive justice perspective, access to energy, environmental burdens, and socioeconomic benefits remain unevenly shared. For example, energy policies and programs are heavily concentrated on the island of Java, and this causes them to rarely consider gendered realities, leaving women, rural communities, and marginalized groups with disproportionate workloads, health risks, and limited economic opportunities in other regions.

In terms of recognition of justice, women and vulnerable groups are “acknowledged” but substantively excluded. This creates the impression that women’s inclusion is tokenistic. Women are still positioned primarily as consumers rather than as knowledge holders or decision-makers, and their underrepresentation in STEM fields, energy institutions, and policy arenas perpetuates their invisibility in energy transition planning processes.

Finally, regarding procedural justice, Indonesia's energy governance remains highly centralized and male-dominated. The absence of sector-specific gender regulations leads to decision-making processes that lack meaningful participation from women and marginalized communities, increasing the risk of exclusion, displacement, and gender-based vulnerabilities. Thus, because these three tenets of justice are not fully embedded, gender mainstreaming in Indonesia's energy sector remains stagnant and ineffective.

5.2. Limitation

The limitations of this study can be seen from two issues: data sources and generality. First, owing to limited budget and time constraints, the research was conducted based on information collected from secondary sources. The use of textual data can lead to subjectivity and bias in analyses. Another limitation arising from this issue is the scarcity of data on gender and energy politics in Indonesia. This has led the authors to include various case studies conducted in different parts of Indonesia. Readers may feel a little confused as the study does not focus on one specific case, but many cases at once, as examples of how Indonesia's national gender mainstreaming practice in energy transition remains failing or stagnant.

Related to this issue, the second limitation is the generality of the study. As this research's main focus is on Indonesia's national-level energy policies, the details of potential variations in policy implementation in different areas in Indonesia may go unnoticed. The presented study cases are used as examples of the failure of Indonesia's national gender mainstreaming practice but are not specifically explained in themselves. This has opened up opportunities for further studies to conduct case studies, specifically in areas where there are renewable energy plants, to examine the implementation of gender mainstreaming and how the generated renewable energy actually affects women.

5.3. Suggestion

This study contributes to a more critical examination of the underlying reasons, available evidence, and policy recommendations for the stagnation of gender mainstreaming in Indonesia's energy transition. In terms of policy implications, this study offers recommendations to ensure that the government meaningfully integrates the principles of distributive, recognitive, and procedural justice into all stages of planning, implementation, and evaluation of gender-related aspects in the energy transition. These three principles of justice are expected to be grounded in an intersectional perspective and supported by participatory processes, enabling each gender group to receive benefits that are responsive to their specific needs and vulnerabilities.

For future research, this study may serve as a general reference for examining gender mainstreaming within the energy transition, which can be further developed through more specific case studies in the future. Such case studies may be drawn from energy transition projects implemented across various sectors and regions in the country. By focusing on a single type of project, subsequent research is expected to yield more contextual and in-depth findings. This approach would also facilitate a clearer identification of intersectional dimensions, given that each sector and region reflects distinct characteristics of women's identities. In addition to varying case focuses, future research may also employ primary data collection methods, such as interviews, to strengthen the evidence base from the perspective of grassroots women's groups who are central to gender mainstreaming efforts in the energy transition.

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