

Governance Reform for Geothermal Power Expansion in the Context of a Just Energy Transition Framework

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ARTICLE INFO	ABSTRACT
Article History Received: November 18, 2025 Revised: January 26, 2026 Accepted: June 16, 2026 Keywords Agrarian Conflict; Geothermal Exploitation Law; Just Energy Transition; Ulumbu Geothermal Power Plant.	The Ulumbu Geothermal Power Plant (GPP) expansion project in Poco Leok is sparking resistance from indigenous communities, reflecting the broader agrarian conflict in Indonesian energy transition landscape. This tension exposes a significant gap between clean energy ambitions and the protection of local community rights. Purpose: This study aims to analyze the inconsistencies of the agrarian regulatory framework in geothermal energy development against the principles of a just energy transition. Methods: In order to achieve the stated objective, a juridical-normative method was adopted, drawing on legislative and conceptual approaches. Accordingly, relevant regulations were examined through three dimensions of justice, namely recognition justice, procedural justice, and distributive justice. Results: The analysis uncovers three fundamental weaknesses. First, existing regulations do not guarantee certainty regarding the subjects and objects of customary land prior to land acquisition, constituting a recognition crisis. Second, there are no explicit regulations governing the implementation of Free, Prior, and Informed Consent (FPIC) and transparency standards, reflecting a procedural crisis. Third, weak oversight triggers an unequal distribution of ecological risks for communities, amounting to a distributive crisis. The analysis also showed that current renewable energy acceleration policies tend to focus on facilitating permits rather than strengthening local partnerships. Conclusion: The current renewable energy regulatory framework has the potential to reproduce extractive development patterns that deepen agrarian and social inequalities in the region. Suggestion: Governance reform is needed through mandatory pre-licensing customary land identification, normative codification of FPIC, and the strengthening of geothermal sector regulatory institutions. Contribution: This study enriches energy and agrarian law scholarship by integrating a just transition perspective as an evaluative framework for regulations in Indonesia.



Introduction

The energy transition to renewable resources is an inevitable global agenda in response to the climate crisis. According to the 2022 Enhanced National Development Planning (NDC), electrification through geothermal energy is among Indonesian primary efforts to reduce emissions¹. Deregulation efforts and licensing simplification have succeeded in doubling the installed capacity of geothermal energy, from 1,403 MW in 2014 to 2,638 MW in 2024². However, this expansion is not without problems arising at the field level. CELIOS stated that the growth of Geothermal Power Plant (PLTP) coincided with increasing conflict in

¹ Ferdyson Ferdyson and Jaka Windarta, “Overview Pemanfaatan Dan Perkembangan Sumber Daya Energi Surya Sebagai Energi Terbarukan Di Indonesia,” *JEBT: Jurnal Energi Baru & Terbarukan* 4, no. 1 (2023): 1–6.
² Ministry of Energy and Mineral Resources of the Republic of Indonesia, *Handbook of Energy & Economic Statistics of Indonesia 2024* (Jakarta: Ministry of Energy and Mineral Resources of the Republic of Indonesia, 2024).

development areas, reflecting how geothermal, as an extractive industry, was not immune to land requirements and ecological risks³.

The agrarian conflict surrounding the construction of PLTP in Poco Leok area, Manggarai Regency, East Nusa Tenggara, is a compelling example of the complexity of the energy transition. Based on the Decree of the Regent of Manggarai No. HK/417/2022, Poco Leok area was designated as the location for the expansion of Ulumbu PLTP Units 5 and 6. This project faced rejection from Indigenous Peoples in 10 Gendang (traditional villages) of Poco Leok and triggered repressive actions from the authorities⁴. The case is categorized as an agrarian conflict because it fulfills the elements of Article 1, paragraph (3) of the Regulation of the Minister of ATR/BPN No. 21 of 2020 concerning the Handling and Settlement of Land Cases, namely the existence of a land dispute between community groups, Manggarai Regency Government, PLN, and the Ministry of ATR/BPN, a dispute with the potential for broad social impact.

Some residents of Poco Leok rejected the construction of PLTP on the grounds that drilling at approximately 60 points is feared to cause landslides⁵. The construction of Mataloko PLTP, also located in NTT Province, is similarly considered a cause of crop failure, clean water scarcity, and respiratory problems⁶. Rejection of Ulumbu PLTP in Poco Leok was further voiced through the Lenten Pastoral Letter from the Bishop of the Ecclesiastical Province of Ende⁷. However, it is worth stating that Poco Leok consists of 14 traditional villages with diverse views, making the agrarian conflict both vertical, between residents and the state, and horizontal, between residents themselves. Responding to community rejection, the Regent of Manggarai, Herybertus G. L. Nabit, on March 26, 2025, reaffirmed his commitment to continue the construction of PLTP, arguing that the future of Manggarai cannot depend on the agricultural sector but must be directed toward industrialization⁸.

The expansion of Ulumbu PLTP is currently caught in a tug-of-war among three main national development agendas drawn from the 2024–2029 RPJMN, namely food, energy, and water self-sufficiency. As a result, Poco Leok case presents a compelling subject for study in the discourse of sustainable development. Previous studies have examined the conformity of Indonesian regulations with just energy transition standards. Indonesian Center for Law and Policy Studies (PSHK) and Indonesia CeraH Foundation examined the employment sector, the Institute for Transportation and Development Policy (ITDP) explored the transportation sector, and Handayani investigated the environmental sector⁹. All three studies share a common limitation in that they are sectoral and have not addressed the agrarian or land

³ Atinna Rizqiana, Wishnu Try Utomo, and Fiorentina Refani, *Petaka Berkedok Potensi: Bahaya Dan Illusi Kesejahteraan Proyek Panas Bumi* (Jakarta: CELIOS, 2024).

⁴ Mimin Dwi Hartono et al., *Dampak Proyek Strategis Nasional Terhadap Hak Asasi Manusia* (Jakarta: Komisi Nasional Hak Asasi Manusia RI, 2024).

⁵ Wildan Ulul Albab, "Kajian Terhadap Pembangunan Geothermal Di Pulau Flores Berdasarkan Prespektif Teori Keadilan (John Rawls)," *Deposisi: Jurnal Publikasi Ilmu Hukum* 1, no. 4 (2023): 286–302.

⁶ Alfian Tanggang and Theodor Advent Primus Bala Lajar, *Bumi Sebagai 'Rumah': Kritikan Terhadap Proyek Geothermal Poco Leok Dan Mataloko Dalam Perspektif Ensiklik Laudato Si*, 2024.

⁷ Silfanus Jemadin, "Dilemma of Geothermal Development in Flores Manggarai: Blessing or Curse?," *Jurnal Ilmu Sosial, Politik, dan Humaniora* 7, no. 2 (2024): 34–45.

⁸ Herybertus Geradus Laju Nabit, *Musrenbangkab RKPD Dan Rembuk Stunting Tahun 2025, Diskominfo Kabupaten Manggarai NTT* (Kupang, 2025).

⁹ I. Gusti Ayu Ketut Rachmi Handayani, Cindy Yosiana, and Sutasinee Kongrawd, "Reform of Environmental Approval Policy for Renewable Energy in Indonesia," *Journal of Sustainable Development and Regulatory Issues* 3, no. 2 (2025): 286–323.

sector. This gap is particularly significant, particularly considering the fact that agrarian conflict represents the most chronic and pervasive form of social conflict in Indonesia¹⁰.

Building on the stated gap, this study aims to examine the inconsistencies in land acquisition regulations and policies for geothermal energy projects when measured against the principles of a just energy transition. To address this, the analysis was conducted through three dimensions of justice, namely recognition justice, procedural justice, and distributive justice, all of which form the evaluative basis for the discussion in this study. Recognition justice requires the acknowledgment of rights, respect for diverse cultural identities, and protection from physical threats. Procedural justice requires that communities have a meaningful voice in policy design and implementation. Meanwhile, distributive justice, by comparison, places emphasis on the equitable distribution of environmental benefits and burdens¹¹.

The three outlined principles of justice were selected because they have been widely referenced in global literature addressing energy justice, as seen in a study on the impact of energy transition policies in China from 2010 to 2021¹². The European Environment Agency further applied this framework in its analysis of the energy transition across the European Union¹³. Acknowledging scholarly criticism that the three-principle justice approach carries normative uncertainty in various prior explorations, this study adopts a case study model centered on the agrarian conflict of Ulumbu PLTP in Poco Leok. The justice standards assumed in this context draw from energy transition principles formulated by international organizations of which Indonesia is a member, namely the Group of Twenty (G20) and ASEAN Energy Center (ACE)¹⁴. These standards are further reinforced by the agrarian reform principles set out in the Decree of the Minister of Finance No. IX/MPR/2001. Accordingly, this study not only replicates existing frameworks but also offers a more contextual reading of agrarian conflict in Indonesian energy transition.

Research Methods

This present study was conducted using a qualitative normative juridical approach, examining library materials in the form of secondary data obtained through books, study results from legal circles, and laws and regulations¹⁵. This investigation adopts an analytical descriptive specification, conducting an inventory of positive law and analyzing it to achieve a complete and comprehensive understanding of the norms governing land acquisition in

¹⁰ Wandu Adiansah, Soni Akhmad Nulhaqim, and Gigin Ginanjar Kamil Basyar, "Resolusi Konflik Berbasis Komunitas Melalui Pengembangan Masyarakat Sebagai Upaya Alternatif Resolusi Konflik Agraria," *Share : Social Work Journal* 10, no. 2 (2020): 16174.

¹¹ Katinka Wijsman and Marta Berbés-Blázquez, "What Do We Mean by Justice in Sustainability Pathways? Commitments, Dilemmas, and Translations from Theory to Practice in Nature-Based Solutions.," *Environmental Science and Policy* 136, no. June (2022): 377–386.

¹² Siqing Shan et al., "Quantifying Social Justice in Energy Transition: A Policy-Driven Assessment Framework for China," *Systems* 13, no. 3 (2025): 1–37.

¹³ European Environment Agency, *Delivering Justice in Sustainability Transitions*, 2023, <https://www.eea.europa.eu/publications/delivering-justice-in-sustainability-transitions>.

¹⁴ Dharendra Wardhana, "Uncertain Endgame: Prospects and Challenges of China's Green Energy Investment in ASEAN," in *Proceedings of the International Conference on Sustainable Energy: Toward Energy Transition and Net-Zero Emission (ICOSE 2025)* (Atlantis Press International BV, 2025), 33–68, http://dx.doi.org/10.2991/978-94-6463-944-5_5.

¹⁵ Agung Laksono, Abdul Aziz Nasihuddin, and Siti Kunarti, "Notary Authority in Making Auction Minutes as Authentic Deed in the Implementation of Voluntary Auctions," *Journal of Law, Politic and Humanities* 5, no. 4 (2025): 2381–2392.

agrarian conflicts in Poco Leok. The data used are secondary in nature, comprising primary and secondary legal materials obtained through library studies. The scope of this investigation is specifically limited to the analysis of regulations governing the transition to geothermal-based energy, with Poco Leok indigenous community as its subject.

Results and Discussion

1. Regulatory Inconsistencies in Accommodating Recognitive Justice

A just energy transition requires respect for the rights of indigenous peoples (MHA), ensuring that no one is left behind in this agenda¹⁶. Indonesia, through Article 18B paragraph (2) of the 1945 Constitution and Article 3 of the UUPA, has provided recognition and respect for the unity of MHA and their traditional rights, as long as those rights remain active and consistent with the principles of the Unitary State of Indonesia¹⁷. This recognition is further emphasized in Article 5, letter j of MPR Decree No. IX/MPR/2001 as a foundational principle of agrarian reform and natural resource management. Through this formulation, customary rights have been recognized declaratively and remain valid even where they have not been registered administratively¹⁸. However, formal confirmation of both the subject (MHA) and the object (customary land) is an essential process when addressing legal actions such as land acquisition. This essentiality is clearly seen in the provisions of Article 23, paragraph (2) of Government Regulation Number 19 of 2021 concerning the Implementation of Land Acquisition for Public Interest Development, where the Ministry of Home Affairs is entitled to compensation, and its existence is reinforced in accordance with legal and regulatory provisions. The regulations in question govern the ratification of the Ministry of Home Affairs through a decision of the Regional Head (Table 1). Land acquisition regulations in this context are directly related to Ulumbu PLTP project in Poco Leok, as the project falls in the public interest category based on Article 10 letter e of Law Number 2 of 2012 concerning Land Acquisition for Public Interest (Law 2/2012), as amended by the Job Creation Law.

Table 1. Regulations on the Recognition of MHA and Customary Rights

Legal basis	MHA Recognition Form
Minister of Home Affairs Regulation No. 52 of 2014 concerning Guidelines for the Recognition and Protection of Indigenous Peoples.	The determination of MHA is carried out through a Decree of the Regional Head (Article 6).
Minister of Agrarian Affairs and Spatial Planning/National Land Agency Regulation No. 14 of 2024 concerning the Implementation of Land Administration and Registration of Indigenous Peoples' Customary Land Rights.	The administration of customary land does not require a determination of MHA by the regional government, unless it is intended to proceed with a management rights application (CHAPTER IV).

Source: processed by myself

¹⁶ Aji Baskoro, "Energy Transition and Green Welfare State: Reimagining Energy Legal Politics within the Framework of Welfare and Sustainability," *Staatsrecht: Jurnal Hukum Kenegaraan dan Politik Islam* 2, no. 1 (2022): 164-193.

¹⁷ Ditto Nathaniel, "Urgency of Recognizing Dayak Customary Communities and Land Rights in Central Kalimantan," *Estudiante Law Journal* 7, no. 3 (2025): 678-693, <https://doi.org/10.33756/eslaj.v7i3.32774>.

¹⁸ Ronald Saija et al., "Status Kepemilikan Hak Atas Tanah Adat Marga Dalam Kebijakan Penataan Aset Reforma Agraria Di Kabupaten Maluku Tenggara," *sasi* 26, no. 28 (2020): 99-110.

Recognition justice places emphasis on the importance of identifying vulnerable groups affected by energy production and consumption¹⁹. Identification is a foundational process because recognition cannot be extended to unrecognized subjects. The formulation of Article 15 paragraph (1) letter e of Law 2/2012, as amended by the Job Creation Law, has opened space for identification by the Ministry of Home Affairs by requiring agencies seeking land to prepare a Land Acquisition Planning Document (DPPT) containing a general description of the status of the land. However, this provision is not accompanied by any follow-up mechanism for situations where customary land has not been formally determined.

During the land acquisition process for Ulumbu PLTP Units 5 and 6, PLN and ATR/BPN stated that the land in question was private land and not communal property²⁰. Poco Leok community, which opposed the expansion of Ulumbu PLTP, maintained that land distributed to individual members remained part of the customary land and could not be transferred without the approval of the Tu'a Teno (customary elders responsible for managing the distribution of *lingko*) through deliberation²¹. The absence of customary land administration by government from the outset resulted in the lack of an objective and verifiable reference point whenever legal claims and customary claims overlapped.

Among the responses given by PLN was the organization of a traditional *Tabé Gendang* (traditional house permit) event as a form of apology for project activities carried out without permission on customary land, although this did not resolve the underlying legitimacy issue²². To date, no indigenous community has been legally recognized as MHA through a legal umbrella in Manggarai Regency. The absence of clear and documented recognition frequently leads to conflicting claims and legal uncertainty during development processes. A progressive step toward addressing this gap is Ministerial Regulation No. 14 of 2024, stipulating that customary land administration can be conducted independently of MHA designation.

2. Regulatory Inconsistencies in Accommodating Procedural Justice

A just energy transition requires the application of transparency and participation principles in project implementation procedures²³. Transparency means that policymaking is conducted through readily accessible and objective information. Participation, by contrast, is defined as the meaningful influence of affected groups on decision-making through substantive dialogue²⁴. Furthermore, when handling development projects in indigenous peoples' territories such as Poco Leok, it is necessary to accommodate the requirements of Free, Prior and Informed Consent (FPIC) as stipulated in Article 10 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), to which Indonesia has been a signatory since 2007. The importance of FPIC implementation was further affirmed in the

¹⁹ Muahmmad Andry, "Menafsir Ulang Keadilan: Epistemologi Emansipatif, Rekognisi Kontekstual, Dan Kapabilitas Relasional," *Jurnal Filsafat Indonesia* 8, no. 2 (2025): 302–315.

²⁰ Raden Ariyo Wicaksono, "Poco Leok Kembali Panas Karena PLN Datang Lagi," *Betahita*.

²¹ Domi Darus, "Mengapa Jual Beli Tanah Ulayat Di Manggarai Butuh Persetujuan Tua Adat?," *Floresa*, n.d.

²² Florentino Gonzagius Guo Rande, "Gagalnya Kolaborasi Governance (Studi Kasus Penolakan Masyarakat Adat Poco Leok Terhadap Proyek Pembangkit Listrik Tenaga Panas Bumi Di Kabupaten Manggarai Flores NTT)" (Wijaya Kusuma University, 2024).

²³ Jörg Radtke, "Understanding the Complexity of Governing Energy Transitions: Introducing an Integrated Approach of Policy and Transition Perspectives," *Environmental Policy and Governance* 35, no. 4 (2025): 595–614.

²⁴ Sheila Jasanoff, "Just Transitions: A Humble Approach to Global Energy Futures," *Energy Research and Social Science* 35, no. December 2017 (2018): 11–14.

findings of Indonesian Committee on Economic, Social and Cultural Rights in 2024²⁵. Drawing from this context, the following is a review of regulations on land acquisition procedures for the construction of PLTP, evaluated against the principles of transparency and participation as grounded in FPIC requirement.

1. Transparency Principle

Based on Food and Agriculture Organization (FAO) guidelines, the “informed” aspect of FPIC emphasizes that information must be conveyed clearly, completely, and objectively, using local languages and in a format appropriate to the community culture²⁶. In Indonesia, this obligation can be traced in Law 2/2012 (Table 2).

Table 2. Identify Transparency Provisions at Each Stage of Land Acquisition

No.	Stage	Public Transparency based on Law 2/2012
1	Planning (Agencies Requiring Land)	There is not any
2	Preparation (Governor/Regent/Mayor)	A. Notification of development plans to the public, both directly and indirectly (Articles 16 and 17). B. Public consultation with authorized parties (Article 19). C. Creating development locations for the Public Interest (Article 26).
3	Implementation (ATR/BPN and Related Agencies)	Inventory and identification of control, ownership, use, and utilization of land should be announced at the village/sub-district office, the sub-district office, and the place where Land Acquisition is carried out (Article 29).
4	Submission of Results (ATR/BPN)	There is not any.

Source: processed by myself

When compared with India through a doctrinal (normative) comparative law approach, Indonesian regulations are relatively behind in ensuring the openness of information that is easily accessible through appropriate media and language for indigenous communitiesrizkiant²⁷. Based on Article 9, paragraph (2) of Law No. 2 of 2012, agencies requiring land are mandated to establish a Land Acquisition Planning Document (DPPT). This provision is comparable to Chapter II of India's 2013 LARR (Land Acquisition, Rehabilitation and Resettlement) Act, which requires a Social Impact Assessment (SIA). India, through Article 5, paragraph (2) of LARR Act, goes further by requiring SIA document to be provided in regional languages, published in the affected areas, and uploaded to the official government website. A comparison of these norms makes clear that information accessibility remains a weak point in Indonesian regulatory framework.

²⁵ Siti Khoiriah, Rudy Rudy, and Candra Perbawati, “Constitutional Recognition of Indigenous Peoples and Investment Policy in Indonesia : From Normative Ideals to Legal Realities,” *Social Science and Humanities Journal* 10, no. 05 (2026): 10051–10064.

²⁶ Samuel Saut Martua Samosir and Toetik Rahayuningsih, “Legal Construction of FPIC to Protect Ulayat Right,” *Arena Hukum* 17, no. 2 (2024): 384–401.

²⁷ Wardani Rizkianti, “A Comparative Study: Land Acquisition for The Public Interest in Indonesia and India,” *International Journal of Social Science And Human Research* 06, no. 04 (2023): 2060–2065.

Considering the case of Ulumbu PLTP, Manggarai Regency issued Announcement No. 188/500.10.16/IX/2024 on the Regency Government's official website, but coverage was limited to wellpad areas H, I, and J. The locations of other wells were not made available. A further issue was the absence of objective information regarding the risk of negative impacts on the community. Company surveys conducted in 2019–2020 received no objections. The situation shifted in 2021, following the circulation of information regarding geothermal drilling in various locations across Indonesia and abroad.²⁸ Based on the agrarian conflict in Poco Leok, it is apparent that Law 2/2012 on land acquisition remains limited to regulating "what" information is disclosed, without addressing obligations regarding "how" and "to whom" the information must be conveyed.

b) Principle of Participation

FPIC contains the terms "free" and "consent," meaning that indigenous peoples have the right to give consent, either conditionally or not at all, in accordance with applicable customary procedures²⁹. As emphasized by Maria Sumardjono, the explanation of UUPA clarifies that the state's right to control is not absolute but is bounded by the existence of customary rights³⁰. Article 6 of the Basic Agrarian Law also stipulates that land has a social function, and accordingly, Law 2/2012 opens opportunities for land acquisition on customary lands. The existence of customary rights is not an obstacle but rather a requirement that the approach adopted must be grounded in consent. The experience of land acquisition for Ulumbu PLTP development project in Poco Leok reflects the tension between land's social function and the requirement for Free, Prior, and Informed Consent (FPIC).

Referring to Article 42, paragraph (4) of Law 21/2014, as amended by the Job Creation Law, Ulumbu PLTP, being developed by PLN as part of National Strategic Project (PSN), is subject to Law 2/2012. The land acquisition mechanism for public interest does not require a deliberative agreement but operates through a consignment system³¹. There is, in fact, an objection mechanism provided under Articles 23 and 38 of Law No. 2 of 2012. According to the law, communities that disagree with a location determination may file a lawsuit with the State Administrative Court, while objections regarding the form or amount of compensation are filed with the District Court. In practice, however, public objections have difficulty reaching the substantive decision-making stage, particularly for projects carrying National Strategic Project (PSN) status.

Units 5 and 6 of Ulumbu PLTP are covered under Presidential Decree No. 3 of 2016 concerning the Acceleration of the Implementation of National Strategic Projects, as well as Ministerial Decree No. 188.K/TL.03/MEM.L/2025 concerning the Ratification of the 2025–2034 RUPTL. The designation of a project as a National Strategic Project through Presidential and Ministerial Decrees is characterized by the dominance of executive power, marking a serious shift away from a deliberative approach³². This condition deviates from Article 5 letter (e) of MPR Decree No. IX/MPR/2001, which upholds the principles of democracy,

²⁸ Rande, "Gagalnya Kolaborasi Governance," 4.

²⁹ Retno Kusniati, "Free, Prior, and Informed Consent Principles as Indigenous Peoples' Right: Soft Law or Hard Law?," *Jambe Law Journal* 7, no. 1 (2024): 169–193.

³⁰ Ni Ketut Suartining and Benny Djaja, "Land Rights in the Land Law System in Indonesia According to the Basic Agrarian Law Number 5 of 1960," *Journal of Social Research* 2, no. 6 (2023): 1775–1785.

³¹ Heriyanto Heriyanto and Ainun Najib, "Analisa Yuridis Kepastian Hukum Bagi Masyarakat Yang Menolak Pembebasan Tanah Untuk Kepentingan Umum," *HUKMY: Jurnal Hukum* 2, no. 1 (2022): 83–100.

³² Megawati Megawati and Absori Absori, "The Deliberation of Pancasila Democracy Perspective in the Indonesian Constitutional System," *Journal of Hunan University (Natural Sciences)* 48, no. 3 (2021): 64–71.

transparency, and the optimization of public participation in agrarian reform and natural resource management.

In Poco Leok, the Regent of Manggarai responded to the demands of residents who had lost their agricultural land by stating that plenty of other land remained available and that technology had sufficiently advanced. Comments from Catholic bishops were subsequently met with a statement that religious and state interests should not be "conflicting," as the state regulates existing religions.³³ This statement reflects the dominance of state authorities in reducing public objections to mere technical obstacles. It is important to recognize that scientific observations offer only options and do not constitute a mandate to make decisions on behalf of the public³⁴. Confronting this complexity, the role of local governments as the actors closest to the community is, under Presidential Decree 112/2022, limited to ensuring land availability for renewable energy projects rather than participating in the planning process. This undermines the substance of decentralization and entrenches a top-down development logic. Consequently, the land acquisition process in Poco Leok has the potential to become a new form of legalized land grabbing, commonly referred to as green land grabbing, carried out through extra-economic mechanisms facilitated by the state through legal provisions and regulations³⁵.

Despite being recognized in international instruments, FPIC has not been operationally articulated in Indonesian regulatory system. In 2025, PLN (State Electricity Company) progressively developed an "Indigenous People Management Guideline" document to direct land acquisition for power plants. This document can serve as a reference for government in developing operational regulations, ensuring that all renewable energy projects on customary land adhere to uniform, measurable procedures.

3. Regulatory Inconsistencies in Accommodating Distributive Justice

A just energy transition requires a balanced distribution of the costs and benefits of renewable energy projects across all groups in society, specifically local communities directly affected³⁶. In Indonesia, the current distribution of burdens and benefits from land acquisition frequently reduces to compensation alone, an approach consistent with what Karl Polanyi described as an economy detached from social and ecological norms³⁷. Polanyi characterized land as a fictitious commodity because, fundamentally, it is not produced for sale but is rather an integral part of the social fabric. Separating land from its social context generates social upheaval that, over time, can destroy the foundations of community sustainability.

A study by Florentino G. found that since the construction of Ulumbu PLTP in Poco Leok, social divisions have occurred, including the erosion of Lonto Leok culture, which is the tradition of sitting together to collect tribute for the future of children.³⁸ The experience of

³³ Nabit, "Musrenbangkab RKPd," 16:00-22:00.

³⁴ Rebecca Willis, Nicole Curato, and Graham Smith, "Deliberative Democracy and the Climate Crisis," *Wiley Interdisciplinary Reviews: Climate Change* 13, no. 2 (2022): 1-14.

³⁵ Clemens Greiner, Britta Klagge, and Evelyn Atieno Owino, "The Political Ecology of Geothermal Development: Green Sacrifice Zones or Energy Landscapes of Value?," *Energy Research and Social Science* 99, no. November 2022 (2023): 103063, <https://doi.org/10.1016/j.erss.2023.103063>.

³⁶ Eko Sulistyio et al., "Trade Unions' Collective Power In Decarbonization For Ensuring A Just Energy Transition Systematic Review," *Journal of Social Politics and Governance (JSPG)* 7, no. 2 (2025): 398-415.

³⁷ Samuel Knafo, "Polanyi's Double Movement and the Politics of Capitalism," *Globalizations* 7731 (2026): 1-19, <https://doi.org/10.1080/14747731.2026.2675147>.

³⁸ Rande, "Gagalnya Kolaborasi Governance," 14.

agrarian conflict in Ulumbu PLTP project in Poco Leok makes clear that a compensation-only approach is insufficient to address the complexities of distributive justice. Some Poco Leok indigenous communities resist land transfers not only because of compensation value but for two primary reasons.

a. Ecological Impact Risk

Despite claims of being environmentally friendly, PLTP is not entirely free from the risk of ecological impacts³⁹. A study examining 102 energy conflict cases in the Global Atlas of Environmental Justice shows that many renewable energy developments carry disproportionate environmental impacts on local communities, including those associated with geothermal energy⁴⁰. These issues frequently trigger resistance grounded in collective experience with similar projects elsewhere, a pattern clearly evident in the resistance of Poco Leok community. In Mataloko, bordering Ulumbu PLTP releases hot mud that floods rice fields, pollutes water sources, rusts zinc roofs, and causes skin diseases, adding considerably to the financial burden on residents⁴¹. The collective memory of this damage has become a reference point for Poco Leok community in rejecting similar scenarios.⁴²

This situation reflects the importance of applying the precautionary principle, as outlined in OECD publication *Understanding and Applying the Precautionary Principle in the Energy Transition*. Risk-based and risk-informed regulatory approaches become particularly relevant when the impacts of renewable energy development are not fully understood, making adequate oversight a pressing concern⁴³. Based on regulatory analysis by the Expert Body of Indonesian House of Representatives, a key weakness in environmental protection in geothermal sector lies in the supervisory dimension⁴⁴. Several regencies and cities lack dedicated energy departments and are often affiliated with other agencies. At the central government level, the Ministry of Energy and Mineral Resources, through Geothermal Directorate, bears responsibility for oversight, covering occupational safety and environmental pollution control. Some observers consider this institutional arrangement ineffective, prompting a proposal for SKK Migas to assume responsibility for geothermal oversight.

b. Sustainable Benefits

The development of PLTP will certainly generate benefits in the form of investment, electricity supply for industry, and emission reduction. However, it is important to acknowledge the differences in benefits experienced at the international, national, and local levels. In opposing the expansion of Ulumbu PLTP in Poco Leok, several residents have drawn attention to the limited tangible benefits received by the local community from previously constructed geothermal projects. According to the Wewo Village Head for the 2016–2022

³⁹ Mukhtar A. Kassem, Andrea Moscariello, and Pierre Hollmuller, "Navigating Risk in Geothermal Energy Projects: A Systematic Literature Review," *Energy Reports* 13, no. December 2024 (2025): 696–712, <https://doi.org/10.1016/j.egyr.2024.12.052>.

⁴⁰ Chinedu C. Nsude et al., "Renewables but Unjust? Critical Restoration Geography as a Framework for Addressing Global Renewable Energy Injustice," *Energy Research and Social Science* 114, no. May (2024): 103609, <https://doi.org/10.1016/j.erss.2024.103609>.

⁴¹ Maria Elisabeth Bupu, Syahrin B. Kamahi, and Yonatan H.L.Lopo, "Dimensi Politik Lingkungan Dalam Pembangunan Pembangkit Listrik Tenaga Panas Bumi (PLTPB) Daratei Desa Ulubelu Kecamatan Golewa Kabupaten Ngada," *Demokrasi: Jurnal Riset Ilmu Hukum, Sosial dan Politik* 1, no. 4 (2024): 289–302.

⁴² Rande, "Gagalnya Kolaborasi Governance," 34.

⁴³ Yu Yang et al., "Energy Transition: Connotations, Mechanisms and Effects," *Energy Strategy Reviews* 52, no. February (2024): 101320, <https://doi.org/10.1016/j.esr.2024.101320>.

⁴⁴ Tanti Sumartini, *Analisis Dan Evaluasi Pemantauan Pelaksanaan Undang-Undang Nomor 2 Tahun 2004 Tentang Penyelesaian Perselisihan Hubungan Industrial*, 2020, 2004.

period, both the provision of scholarships and the absorption of local workers at the operating Ulumbu PLTP fell short of initial promises⁴⁵. In its study, CELIOS projects that the construction of PLTP in NTT has the potential to reduce farmers' incomes and threaten food security.⁴⁶ This situation is traceable to a government policy direction that has tended to prioritize licensing and land acquisition reforms to ease conditions for entrepreneurs, without accompanying efforts to promote meaningful collaboration.

From the standpoint of distributive justice, this development pattern warrants criticism because it tends to concentrate capital, including land and natural resources, in the hands of large companies under the assumption of a trickle-down effect⁴⁷. This practice runs contrary to the people's economic democracy adopted by Indonesia⁴⁸. A study conducted by Didonè shows that equitable benefit sharing with indigenous communities through ownership and management of shares has produced positive results⁴⁹. For instance, in Tauhara Maori Trust in Canada, for instance, indigenous communities own 35% of PLTP project and operate through a land lease system rather than a land relinquishment system. In Indonesia, a comparable model could potentially be implemented by granting management rights over customary land, as stipulated in Minister of ATR/BPN Regulation No. 14 of 2024 concerning the Implementation of Land Administration and Registration of Customary Land Rights of Indigenous Communities. This regulation is consistent with Land Law, which stipulates that customary rights can be exercised by parties outside the indigenous community based on the agreement of the indigenous community through an authentic deed⁵⁰. Where such a mechanism is made available, it can serve as an alternative solution through which the use of customary land benefits both MHA and the broader public.

Conclusion

In conclusion, the case study of the expansion of Ulumbu PLTP in Poco Leok uncovered significant gaps in land acquisition regulations in accommodating recognition justice, procedural justice, and distributive justice, all of which contributed to agrarian conflict. In the aspect of recognition justice, institutional weaknesses at the local government level in implementing the mandate to protect and recognize Poco Leok indigenous community resulted in reciprocal claims regarding the legality of land acquisition methods. This regulatory gap was clearly visible in Law 2/2012 and Minister of Home Affairs Regulation 52/2014, both of which did not require certainty regarding the subject and object of customary land before implementing land acquisition for renewable energy projects. In the aspect of procedural justice, a regulatory gap was identified in the form of the absence of explicit and binding norms guaranteeing the application of FPIC principle as a standard for the development of renewable energy projects in customary areas. Furthermore, Law 2/2012 did not provide guidelines for transparency procedures covering media, language, and

⁴⁵ Herry Kabut and Mikael Jonaldi, "Hadiri Sosialisasi Perluasan Proyek Geotermal, Warga Lingkar PLTP Ulumbu Bongkar Sejumlah Janji PT PLN Yang Realisasinya 'Nol,'" *Floresa*, 2024.

⁴⁶ Rizqiana, Wishnu, and Refani, *Petaka Berkedok Potensi*, 18-19.

⁴⁷ Francesco Laruffa, "Neoliberalism, Economization and the Paradox of the New Welfare State," *Archives Europeennes de Sociologie* 63, no. 1 (2022): 131-163.

⁴⁸ Sri Edi Swasono, *Demokrasi Ekonomi: Mempertegas Sistem Ekonomi Imperatif Konstitusional* (Bogor: IPB Press, 2020).

⁴⁹ A Miller and J R Parkins, "Contending With Equity Ownership In Indigenous Renewable Energy Projects In Alberta, Canada," *Journal of Rural and Community Development* 18, no. 2 (2023): 44-64.

⁵⁰ Ida Nurlinda, "Telaah Atas Materi Muatan Rancangan Undang-Undang Pertanahan," *Jurnal Bina Mulia Hukum* 1, no. 1 (2016): 1-13.

substance, nor did it support participation through a deliberative model. In terms of distributive justice, weak oversight by the central government, through Geothermal Directorate of the Ministry of Energy and Mineral Resources, led to an unfair distribution of ecological risk burdens on local communities. Compounding this, regulations designed to accelerate renewable energy development, such as Presidential Regulation 112/2022, tended to prioritize large-scale investment over local cooperation.

Suggestion

This study confirms that, as a democratic country under the rule of law, Indonesia cannot justify the doctrine of the ends justifying the means. No matter how noble the goal of renewable energy development, the process cannot be justified when it disregards human rights, as doing so fundamentally contradicts the very goal of the energy transition. Therefore, policy breakthroughs are needed to support renewable energy development in Indonesia. These measures include, first, requiring the completion of the identification of customary land subjects and objects before the licensing process; second, integrating FPIC into land acquisition procedures; third, prioritizing deliberative processes in project planning; fourth, strengthening the position of geothermal sector supervisory institutions; and fifth, utilizing provisions on customary land management rights in the land acquisition process.

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