

Legal Perspectives on Clean Energy Development for Sustainable Development

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Abstract. This study explores the legal perspective on clean energy development as an effort to realize sustainable development. Clean energy plays a vital role in reducing carbon emissions and protecting the environment from further degradation, which are key elements in achieving the Sustainable Development Goals (SDGs). However, the transition to clean energy faces various legal challenges, including suboptimal regulations, overlapping policies, and investment constraints. Through a legal analysis of regulations and policies related to clean energy at the national and international levels, this study highlights the role of law as a driving instrument that can support or hinder clean energy development. The results of this study indicate that a strong, consistent, and integrated legal framework is essential to support a sustainable energy transition. This study recommends policy reforms that prioritize incentives for clean energy, better environmental protection, and increased access to and investment in sustainable energy. This study is expected to contribute to the development of policies and regulations that support clean energy in order to achieve sustainable development

Keywords: Legal Perspectives, Clean Energy Development, Sustainable Development.

1 Introduction

Clean energy development is a key element in achieving sustainable development goals, especially in the context of reducing carbon emissions and mitigating climate change in the 21st century[1],[5],[11]. This article examines the role and challenges of law in supporting the energy transition towards more environmentally friendly sources, such as renewable energy[2],[7]. Regulations governing clean energy have a strategic function in ensuring the achievement of a balance between economic growth, environmental sustainability, and social welfare[3],[14]. Using a normative analysis approach, this article identifies relevant national and international legal frameworks, and evaluates the effectiveness of clean energy policies in encouraging investment, innovation, and sustainable energy distribution[4],[8],[15]. Legal challenges in clean energy development, such as legal certainty, financing, and institutional strengthening,

are also discussed to understand the obstacles faced by the government and other stakeholders[8],[10]. This article argues that adaptive and sustainability-oriented energy policy reforms are urgently needed so that clean energy development can provide long-term benefits for society and the environment[9],[14]. Finally, policy and regulatory recommendations are presented that are expected to strengthen the role of law in supporting sustainable development driven by clean energy[6],[13].

2 Problem Formulation

How is Legal Perspectives on Clean Energy Development for Sustainable Development?

3 Result and Discussion

This study reveals that legal aspects play a crucial role in encouraging or inhibiting the development of sustainable clean energy[2],[7]. Based on the analysis of various regulations and policies, it was found that several countries have adopted comprehensive clean energy laws. However, their implementation still faces challenges, such as policy misalignment between the energy and environmental sectors, lack of incentives for investors, and bureaucratic obstacles that slow down the energy transition[4],[8],[10]. At the international level, there are several legal instruments that attempt to facilitate the development of clean energy, such as the Paris Agreement which encourages countries to reduce carbon emissions. However, compliance with this agreement varies among countries, often influenced by local political, economic, and natural resource conditions[5],[11]. Countries that rely on fossil fuels, for example, face difficulties in meeting strict carbon emission commitments[1],[11]. In addition, this study found that successful clean energy laws and policies generally have certain characteristics, namely: strong fiscal incentives for renewable energy, transparency in the management of energy resources, and cross-sector collaboration supported by clear and firm regulations[3],[14],[15]. In developed countries, this success is largely driven by government support in the form of subsidies, tax credits, and investment in research and development of clean energy technologies[5],[8]. The study also highlights the importance of involving multiple stakeholders, including civil society, the private sector, and international institutions, in clean energy decision-making[6],[13]. Public participation in the legislative process, for example, can increase accountability and build trust in clean energy policies[9],[14]. In addition, regulations that involve the private sector in the energy transition process can accelerate the development and adoption of greener technologies[10],[15].

4 Conclusion

The study confirms that an adaptive, coherent, and supportive legal framework for investment and innovation is a key factor in the successful development of clean energy for sustainable development[2],[7],[8]. Recommendations include regulatory

reforms that focus on incentives for renewable energy, harmonization of policies at the national and international levels, and increased cross-sector collaboration [3], [13], [14]. The study proposes that these steps can maximize the potential of clean energy to achieve sustainable development goals[1], [5], [11].

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