STRENGTHENING THE ROLE OF INDONESIAN STAKEHOLDERS IN ENERGY INCENTIVE: A COMPARATIVE STUDY WITH UK LAW

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Abstract

The recent geopolitical tensions in the Middle East have created negative sentiment on oil prices. Indonesia has also been affected as a country that is still quite dependent on oil imports. Although several types of incentives in the RE sector have been implemented in Indonesia over the past few decades their implementation is still not optimal. This paper aims to examine the roles and responsibilities of Indonesian government stakeholders in the formulation, implementation, and oversight of energy-incentive regulations, and to identify UK regulatory best practices that can be adapted to strengthen stakeholder capacity, coordination, and accountability in Indonesia. This research uses normative legal methods with Indonesian and UK legislation as primary sources, supported by journals, reports, and government publications to compare stakeholder involvement in optimizing energy incentives. The best aspect that could be adopted by Indonesia from UK is the establishment of an independent energy regulator. This body is expected to streamline incentive schemes, reduce bureaucratic barriers, and foster investor confidence by integrating consultation, coordination, oversight, and digital transparency.

A. Introduction

The recent geopolitical tensions in the Middle East have created negative sentiment on oil prices.[1] Indonesia has also been affected as a country that is still quite dependent on oil imports.[2] If the conflict becomes more significant, an increase in oil prices could shake Indonesia's budget and state budgets.[3] According to data from the Central Statistics Agency, as

[1] Agustinus Yoga Primantoro *et al.*, "What Is the Impact of the Iran-Israel War on the Indonesian Economy?", June 18, 2025, https://www.kompas.id/artikel/en-apa-dampak-perang-iran-israel-terhadap-perekonomian-indonesia. *See also,* detikkalimantan, "World Oil Prices Rise 4% on Israel-Iran War", June 18, 2025, https://www.detik.com/kalimantan/bisnis/d-7970020/harga-minyak-dunia-naik-4-imbas-perang-israel-iran.

[2] Angelina Tiara Puspitalova, "7 Reasons Why Indonesia Still Reliant on Oil Imports", *Tempo English*, January 14, 2025, https://en.tempo.co/read/1963732/7-reasons-why-indonesia-still-reliant-on-oil-imports. *See also,* Bambang Ismoyo, "Energy Minister Bahlil Alleges Sabotage Behind Indonesia's Oil Import Dependence", Jakarta Globe, May 26, 2025, https://jakartaglobe.id/news/energy-minister-bahlil-alleges-sabotage-behind-indonesias-oil-import-dependence. *See also,* Renold Rinaldi, "Indonesia Still Dependent on Fuel Imports from Singapore: Bahlil", Indonesia Business Post, January 30, 2025, https://indonesiabusinesspost.com/3785/national-resilience/indonesia-still-dependent-on-fuel-imports-from-singapore-bahlil.

[3] Nandito Putra, "Aspebindo: Increase in Oil Prices Can Have an Impact on the State Budget", *Tempo,* June 17, 2025, https://en.tempo.co/read/2018362/rising-oil-prices-from-iran-israel-conflict-highlight-indonesias-energy-vulnerability-warns-aspebindo.

of 2024, Indonesia imported a total of 16,856.2 tons of crude oil and 36,888.7 tons of petroleum products. This figure continues to increase annually; for comparison, in 2023, Indonesia's imports of petroleum products stood at 34,308.6 tons.[4] This upward trend demonstrates Indonesia's persistent reliance on non-renewable energy sources. Consequently, with such significant demand, a price increase of over 4% resulting from the conflict in the Middle East poses a considerable problem for Indonesia.[5]

Accelerating the energy transition by achieving energy security has then become a necessity for Indonesia. Numerous studies have certainly about this problem. Kirana and Triantama (2024) emphasized that the energy independence is crucial for Indonesia.[6] The impact of fuel energy dominance, limited reserves, and climate change significantly impact the global geopolitical order. Accelerating Indonesia's energy transition is a crucial geopolitical factor. Therefore, Indonesia has a high urgency to accelerate its energy transition.[7] Ardiansyah *et al.* (2024) in their research also explained that Indonesia must improve its energy policies by increasing investment in renewable energy ("RE") and developing policies that support the transition to a low-carbon economy.[8] Furthermore, Suraharta *et al*. (2022) also emphasized a similar point. Indonesia's energy security is crucial for the region to achieve, given its increasing energy use despite dwindling reserves.[9]

Despite Indonesia's commitment to reduce emissions nearly a decade ago through the Paris Agreement, it has not yet achieved its emissions reduction targets. In fact, current policies tend to deviate from Indonesia's initial commitments. For example, the share of RE in primary energy supply in 2025 was set at 23 percent.[10] However, the 2030 target has actually dropped to 19-21 percent.[11] This is primarily due to the accumulation of relatively slow development of RE, reaching only 13 percent in 2023.[12] Meanwhile, through Government Regulation No. 79/2014 concerning National Energy Policy ("Law 79/2014"), Indonesia committed to achieve

[4] *Ibid.*
[5] detikkalimantan, *Loc.Cit.*
[6] Dhea Nur Kirana and Febry Triantama, "Beyond Environmentalism: The Geopolitical Chess Game behind Indonesia's Mineral Export Bans and Renewable Energy Transition", *Masyarakat, Kebudayaan dan Politik* 37, no. 1 (2024): 30–45, https://doi.org/10.20473/mkp.v37i12024.30-45.
[7] *Ibid.*
[8] Harun Ardiansyah, *et al.*, "Bridging the Gap between Policy and Net-Zero Realization in Indonesia: An Outlook of Available Approaches", *Journal of Physics: Conference Series* 2828, no. 1 (2024): 1–11, https://doi.org/10.1088/1742-6596/2828/1/012003.
[9] I Made Suraharta, *et al.*, "Electric Vehicle Policy: The Main Pillar of Indonesia's Future Energy Security", *International Journal of Science and Society* 4, no. 4 (2022): 142–156, https://doi.org/10.54783/ijsoc.v4i4.561.
[10] *See* Attachment I of Presidential Regulation 22/2017 concerning the National Energy General Plan.
[11] Institute for Essential Services Reform (IESR), "Indonesia Energy Transition Outlook," *Essential Concepts of Global Environmental Governance*, Vol. 3, (2023): 86–88, https://iesr.or.id/wp-content/uploads/2024/03/Indonesia-Energy-Transition-Outlook-2023.pdf.
[12] *Ibid.*

a target of New and RE ("NRE") sharing of at least 23 percent by 2030 and 31 percent by 2050 (as long as it is economically viable).[13] Unfortunately, this target is also far from being realized. Based on data from the Directorate General of New, RE and Energy Conservation, Ministry of Energy and Mineral Resources of Indonesia ("MEMR"), the realization of the target was only 14.68 percent (2024 target: 19.5 percent).[14]

Although several types of incentives in the RE sector have been implemented in Indonesia over the past few decades (*e.g.*, tax exemptions, tax breaks, duty exemptions, *etc.*), their implementation is still not optimal.[15] Various factors such as information gaps, complex regulations and operations, funding, and suboptimal infrastructure, are currently the obstacles Indonesia faces.[16]

Several developed countries have successfully implemented RE, one of which is the United Kingdom ("UK"). The UK is targeting net-zero emissions by 2050,[17] ten years ahead of Indonesia. This target seems highly optimistic. As of April 2025, the UK's RE mix had reached 41 percent,[18] compared to 14.2 percent in 2015,[19] a significant increase of nearly 190 percent in ten years. Meanwhile, the UK aims for 100 percent zero-carbon generation for all electricity by 2035.[20] This target also seems achievable, as by 2024, RE in the UK had reached 50.8 percent,[21] up from 19.1 percent in 2015.[22] This represents an increase of approximately 166 percent in ten years. Such achievements are inseparable from the UK's robust governance, which ensures that energy incentives mechanisms implemented transparently and consistently in line with market realities.[23]

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[13] *See* article 9 of Law 79/2014.
[14] Directorate General of New, Renewable Energy and Energy Conservation, Laporan Kinerja Ditjen EBTKE, 2020.
[15] Tri Winarsih, *et al.*, "Redesign of Electricity Sector Tax Incentives Based on SDGs and Green Energy", *Jurnal Akademi Akuntansi* 8, no. 1 (2025): 149–158, https://doi.org/10.22219/jaa.v8i1.37529. *See also,* Milou Derks and Henny Romijn, "Sustainable Performance Challenges of Rural Microgrids", *Energy for Sustainable Development* 53 (2019): 57–70, https://doi.org/10.1016/j.esd.2019.08.003.
[16] Tri Winarsih, *et al., Loc.Cit.*
[17] House of Commons Library, The UK's Plans and Progress to Reach Net Zero, 2050.
[18] Cladco, "Renewable Energy Percentage UK", January 20, 2025, https://www.cladco.co.uk/blog/post/renewable-energy-percentage-uk.
[19] *Ibid*.
[20] National Grid, "How Much of the UK's Energy Is Renewable?", January, 17, 2024, https://www.nationalgrid.com/stories/energy-explained/how-much-uks-energy-renewable.
[21] RenewableUK, "RenewableUK Press Release: Official Stats Show Renewables Generated over Half UK's Electricity for the First Time in 2024", March 27, 2025, https://www.renewableuk.com/news-and-resources/press-releases/official-stats-show-renewables-generated-over-half-uk-s-electricity-for-the-first-time-in-2024/.
[22] Office for National Statistics, UK Environmental Accounts: UK Onshore Wind Sector 2014, 2016.
[23] Emmanuelle Mathieu and Jose Maria Valenzuela, "The Governance of Renewable Energy Auctions", *Journal of Comparative Policy Analysis* 27, no. 1 (2024): 39–61, https://doi.org/10.1080/13876988.2024.2405589. *See also,* Institute of Sustainability and Environmental Professionals, "Devolved Powers Reveal Low-CO2 Energy Plans", September 4, 2025, https://www.isepglobal.org/articles/devolved-powers-reveal-low-co2-energy-plans/.

In comparison, while the UK has a coherent regulatory design model, Indonesia features a number of significant challenges. A study from Eko Supriyanto *et al*. (2022) examined the energy incentive framework in Indonesia and found a lack of coordination across government agencies.[24] Research by Sambodo *et al*. (2022) also found that one of the obstacles to RE development in Indonesia is a lack of incentives and poor coordination between the central and regional governments.[25] This study emphasizes strengthening governance and stakeholder collaboration in energy policy implementation.[26] Meanwhile, a study by Halimanjaya (2019) examined the principal-agent relationship between the State Electricity Company ("SEC") and various ministries, including the Ministry of Finance ("MoF"), the MEMR, the Ministry of State-Owned Enterprises ("SOE"), and the Ministry of Industry.[27] Incentive policies, such as the Feed-in Tariffs ("FiTs"), were inconsistently regulated, and other incentives were suboptimal. However, these studies did not explain the reasons behind this lack of coordination, the missing procedures, or the counterproductive nature of specific policies.[28]

Several studies have examined the role of government policies and incentives in promoting the transition toward sustainable energy in Indonesia. Nasution and Azmi (2024)[29] analyze the policy aimed at accelerating the adoption of Battery Electric Vehicles (BEVs) through the provision of fiscal and non-fiscal incentives. The policy seeks to reduce greenhouse gas emissions and encourage the public to shift toward electric vehicles as part of Indonesia's broader energy transition strategy. However, the study indicates that the implementation of these incentives still faces several challenges, particularly in relation to regulatory oversight and the potential risk of greenwashing if the policy is not supported by a genuinely sustainable energy system. The authors therefore emphasize the importance of strengthening policy

See also, West Midlands Combined Authority, "Devolution of Powers on Energy", September 4, 2025, https://www.wmca.org.uk/what-we-do/environment-energy/energy-capital/devolution-of-powers-on-energy/.
See also, Şebnem Yılmaz Balaman, *et al.*, "Incentivising Bioenergy Production: Economic and Environmental Insights from a Regional Optimization Methodology", *Renewable Energy* 130 (2019): 101975, https://doi.org/10.1016/j.tre.2020.101975.
[24] Eko Supriyanto, *et al.*, "Policy and Strategies of Tariff Incentives Related to Renewable Energy", *Sustainability* 14, no. 20 (2022): 13442, https://doi.org/10.3390/su142013442.
[25] Maxensius Tri Sambodo, *et al*., "Breaking Barriers to Low-Carbon Development in Indonesia", *Heliyon* 8, no. 4 (2022): e09304, https://doi.org/10.1016/j.heliyon.2022.e09304.
[26] *Ibid.*
[27] Aidy Halimanjaya, "The Political Economy of Indonesia's Renewable Energy Sector and Its Fiscal Policy Gap", *International Journal of Economics, Finance and Management Sciences* 7, no. 2 (2019): 45–64, https://doi.org/10.11648/j.ijefm.20190702.12.
[28] *Ibid,*
[29] Amiradiaty Nasution and Hauna Tsabitul Azmi, "Tinjauan Yuridis Pemberian Insentif dalam Rangka Mendorong Percepatan Battery Electric Vehicle (BEV): Potensi Dukungan pada Greenwashing dibalik Solusi Persoalan Lingkungan", *Presidensial: Jurnal Hukum, Administrasi Negara, dan Kebijakan Publik* 1, no. 3 (2024): 57–70, https://doi.org/10.62383/presidensial.v1i3.76.

oversight, improving coordination among government institutions, and integrating transportation and energy policies in a more comprehensive manner.

Furthermore, Firdaus (2022)[30] highlights the importance of policy and regulatory support in developing a research ecosystem for renewable energy in Indonesia. The study finds that the development of renewable energy has been positioned as a priority within the national development agenda in order to reduce greenhouse gas emissions while ensuring national energy security. Various regulations have been introduced to support the renewable energy research ecosystem, covering aspects such as research planning. institutional governance, human resource development, and research funding mechanisms. Nevertheless, the study also notes that renewable energy research activities have not yet reached their full potential due to weak coordination and the ineffective management of the research ecosystem. Consequently, stronger commitment from stakeholders is required to consistently and effectively implement the existing regulatory framework.

In addition, Winarsih *et al*. (2024)[31] examine the effectiveness of tax incentives in the electricity sector as a policy instrument to promote green energy development and support the achievement of the Sustainable Development Goals (SDGs). The study finds that the Indonesian government has introduced several fiscal incentives, such as tax holidays, tax allowances, and import duty exemptions, to stimulate investment in the renewable energy sector. However, the implementation of these incentives has not yet been fully successful in significantly increasing investment due to the presence of various regulatory and institutional barriers. The study therefore recommends a redesign of tax incentive policies to better align with sustainable development objectives, as well as stronger collaboration between the public and private sectors.

Based on these studies, it can be concluded that although Indonesia has developed various policies and incentives to support the energy transition and the development of renewable energy, their effectiveness remains constrained by several challenges, particularly in relation to institutional coordination, regulatory oversight, and the consistency of policy implementation. However, these studies largely focus on domestic policy analysis and do not comprehensively examine the roles and responsibilities of government stakeholders in the

[30] Insan Firdaus, "Dukungan Kebijakan dan Peraturan Perundang-Undangan untuk Mengakselerasi Aktivitas Riset Energi Baru Terbarukan di Indonesia", *Jurnal RechtsVinding* 11, no. 3 (2022): 411–434, http://dx.doi.org/10.33331/rechtsvinding.v11i3.986.
[31] Tri Winarsih, *et al.*, *Loc.Cit.*

formulation, implementation, and oversight of energy incentive policies through a comparative legal approach.

Based on the background presented, this paper addresses two research questions, (1) what are the roles of government stakeholders in formulating and implementing energy incentive regulations in Indonesia; and (2) what best practice from the UK's regulatory framework for energy incentives can be adapted to strengthen the Indonesian stakeholders.

B. Method

This research employs a normative legal research method. The primary legal sources consist of legislation from Indonesia and the UK. In addition, this research draws on secondary sources such as journal articles, official reports, and publications from government bodies. This research applies a regulatory analysis to examine the legal framework of Indonesian and the UK. A comparative assessment is then conducted to identify lessons from UK that can be adopted by Indonesia, regarding stakeholder involvement in optimizing energy incentives and accelerating the national energy transition.

The primary legal sources analyzed in Indonesia includes Law No. 30/2007 on Energy, Law No. 30/2009 on Electricity, Law No. 6/2023 on the enactment of Government Regulation in place of Law No. 2/2022 on Job Creatio, as well as several Governmental, Presidential, and Ministerial (or Agency) Regulations as follows:

1. Government Regulation No. 79/2014 concerning National Energy Policy;
2. Government Regulation No. 78/2019 concerning Income Tax Facilities for Investment in Certain Business Fields and/or in Certain Regions;
3. Government Regulation No. 33/2023 on Energy Conservation;
4. Government Regulation No. 28/2025 concerning the Implementation Risk-Based Business Licensing;
5. Presidential Regulation No. 112/2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply;
6. Presidential Regulation No. 79/2023 which amends Presidential Regulation No. 55/2019 on the Acceleration Program for Battery Electric Vehicles;
7. Minister of Energy and Mineral Resources Regulation No. 16/2015 concerning Criteria and/or Requirements in the Utilization of Income Tax Facilities for Investment in Certain Business Fields and/or in Certain Regions in the Energy and Mineral Resources Sector;

8. Minister of Finance Regulation No. 153/2020 concerning the Provision of Gross Income Reductions for Certain Research and Development Activities in Indonesia;
9. Minister of Finance Regulation No. 69/2024 which amends Minister of Finance Regulation No. 130/2020 concerning the Provision of Corporate Income Tax Reduction Facilities;
10. Minister of Energy and Mineral Resources Regulation No. 10/2025 concerning Roadmap for the Energy Transition in the Electricity Sector;
11. Financial Services Authority Regulation No. 51/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies;
12. Financial Services Authority Regulation No. 60/2017 concerning the Issuance and Requirements for Environmentally Aware Debt Securities (Green Bonds); and
13. Investment Coordinating Board Regulation No. 6/2023 concerning Guidelines and Governance for the Provision of Import Incentives and/or Delivery of Four-Wheeled Battery-Based Electric Motor Vehicles in the Context of Accelerating Investment.

These regulations will be compared and contrasted with several English laws, such as the Energy Act 2008, Finance Act 2000, and Smart Export Guarantee Order 2019. This analysis is also supported by official documents from several government and related agencies, including the Department for Energy Security & Net Zero, The Office of Gas and Electricity Markets, His Majesty's Treasury, and the UK's devolved governments of Scotland, Wales, and Northern Ireland.

C. Analysis and Discussion

1. Indonesian Regulatory Framework on Energy Incentives

Indonesia has demonstrated a strong commitment to develop RE while simultaneously promoting the transition towards environmental friendly transportation through a series of interrelated regulations and comprehensive incentives. This legal framework covers various aspects, ranging from RE-based power generation, energy conservation, the development of electric vehicles ("EVs"), to green financing instruments. The primary objectives are to accelerate the adoption of clean technologies, reduce dependence on fossil fuels, and to ensure the sustainability of national energy development.[32]

[32] *See* Article 3 Law of Energy Law.

The fundamental foundation of National Energy Policy is laid out in Energy Law, particularly in Article 20 paragraph (5), which stipulates that the utilization of NRE may be granted facilities and/or incentives from both the central and regional governments.[33] This provision not only underscores the priority status of NRE but also provides an explicit legal basis for fiscal and non-fiscal incentive policies, especially for NRE entrepreneurs, as well as for business schemes in the development of NRE technologies.[34] As a follow-up, the government issued Law 79/2014, in which Article 22 reinforces the commitment to providing fiscal and non-fiscal incentives to encourage energy source diversification and the development of NRE.[35] The National Energy Policy further emphasizes that such incentives should prioritize small-scale projects and remote areas until the cost of NRE becomes competitive with fossil energy, thereby ensuring more equitable access to energy. One of the mechanism employed includes applying a fossil energy depletion premium, the revenue of which is directed towards oil and gas exploration activities, the development of NRE sources, human resource capacity building, research and development, and the construction of supporting infrastructure.[36]

Beyond general regulations, the government has also specifically addressed the environmental friendly transportation sector. A major milestone was the issuance of Presidential Regulation No. 79/2023 which amends Presidential Regulation No. 55/2019 on the Acceleration Program for Battery Electric Vehicles. This regulation introduces a wide range of fiscal and non-fiscal incentives across the entire EV value chain, covering industrial companies engaged in research, industries that comply with the Domestic Component Level, component and battery manufacturers, as well as battery swap service providers.[37] The incentives include 14 fiscal incentives and three non-fiscal incentives.

These incentives include super deductions for research, tax holidays, exemptions from luxury goods tax, reductions in motor vehicle tax and vehicle acquisition duty, as well as Value-Added Tax subsidy assistance for the purchase of BEVs. For two-wheeled BEVs, there is a price discount compensation of IDR 7,000,000 per unit in 2023 and 2024. Meanwhile, for four-wheeled BEVs and buses, the government covers ten percent of the PPN rate at the

[33] *See* Article 20(5) *Ibid*.
[34] Savira Ayu Arsita, *et al.*, "Perkembangan Kebijakan Energi Nasional dan Energi Baru Terbarukan Indonesia", *Jurnal Syntax Transformation* 2, no. 12 (2021): 1779–1788, https://doi.org/10.46799/jst.v2i12.473.
[35] *See* Article 22 of Law 79/2014.
[36] Insan Firdaus, *Loc.Cit.*
[37] *See* Article 17 Presidential Regulation No. 79 of 2023

time of delivery to consumers.[38] This approach reflects the government's holistic strategy in building a national EV ecosystem and signifies its strong commitment to reducing dependence on fossil fuels in the transportation sector by increasing the use of battery-based EVs.[39]

In the electricity sector, Law 112/2022 introduces a new incentive mechanism. Article 5, paragraph (5) of this regulation stipulates that the purchase price of electricity from RE power plants is determined by the MEMR, while paragraph (4) asserts that SEC is obliged to purchase renewable electricity at the price set either through a FiTs or a negotiated mechanism.[40] Several key points emerge from Law 112/2022. First, the government prioritizes a direct selection process in the procurement of RE projects. This policy also establishes price caps for renewable electricity based on technology type, location factors, and pricing methodology. Second, the regulation supports the early retirement of coal-fired power plants (CFPP) and prohibits the construction of new coal-fired power plants except under certain conditions, thereby providing a legal foundation for halting coal-based power generation. Finally, the regulation mandates government bodies, including ministries and regional governments, to coordinate and support RE projects.[41] Furthermore, the annex of Law 112/2022 provides detailed benchmark prices for electricity purchases from various RE sources, thereby offering transparency and certainty for investors.[42]

As such, this regulation marks a critical milestone in the reform of FiTs policy in Indonesia, as it moves beyond merely cost-based pricing to establish prices that are more competitive, bankable, and aligned with the principles of accelerating the energy transition. Article 24 stipulates compensation to SEC for any additional costs arising from the purchase of renewable electricity if it increases the total cost of supply. This serves as an indirect incentive to safeguard SEC's economic viability while ensuring market certainty for RE producers.[43] Additionally, Article 25 requires ministries, agencies, and regional governments

[38] *See* Article 19 Presidential Regulation No. 79 of 2023. *See also,* I. Putu Hendy Bimantara Dinata et al., "Akselerasi Transisi Energi di Sektor Ketenagalistrikan Melalui Redesain Insentif Perpajakan," *JUARA: Jurnal Riset Akuntansi*, Vol. 13, No. 2, 2023, 278.
[39] Amiradiaty Nasution and Hauna Tsabitul Azmi, *Loc.Cit.*
[40] *See,* Article 5 of Law 112/2022.
[41] Naufal Luthfi Hafizh, *et al.*, "Kebijakan Harga Pembelian Tenaga Listrik sebagai Hambatan dalam Akselerasi Proyek Pembangkit Listrik Tenaga Panas Bumi untuk Mendukung Ketahanan Energi Nasional", *Journal Discretie* 4, no. 3 (2023): 296–297, https://dx.doi.org/10.20961/jd.v4i3.84762.
[42] *See,* Annex of Law 112/2022.
[43] *See,* Article 24 *Ibid.*

to establish new fiscal and non-fiscal incentives no later than one year after the regulation takes effect, underscoring the urgency of rapid implementation.[44]

On the fiscal incentive side, a number of tax instruments have been introduced to ease the burden on taxpayers in the energy sector through income tax facilities in the form of tax allowances and tax holidays. This framework can be seen in the application of several income tax facilities for businesses and investors as regulated under Government Regulation No. 78 of 2019 concerning Income Tax Facilities for Investment in Certain Business Fields and/or in Certain Regions conjunction with Minister of Energy and Mineral Resources Regulation No. 16/2015 concerning Criteria and/or Requirements in the Utilization of Income Tax Facilities for Investment in Certain Business Fields and/or in Certain Regions in the Energy and Mineral Resources Sector.[45] Further, a more investor-attractive scheme has been designed in the form of income tax allowances and income tax holidays for pioneer industries supporting environmentally friendly technologies in the energy sector, as set out under Law 130/2020. These tax holidays are often utilized by energy infrastructure projects and RE supply chains.

Beyond industrial incentives, a super tax deduction scheme has also been introduced, granting up to 300 percent deduction of gross income for research and development activities in energy-related fields such as renewable power generation, waste-to-energy, battery technology, electrical equipment, and enhanced oil recovery (EOR), pursuant to Minister of Finance Regulation No. 153/2020 concerning the Provision of Gross Income Reductions for Certain Research and Development Activities in Indonesia.[46] These fiscal policies operate in tandem with incentive provisions under Law 112/2022, ensuring that RE projects can access income tax facilities, import duty exemptions (through applicable customs rules), as well as financing and guarantees provided by SOE designated by the government.

The government's commitment also covers the field of energy conservation, as stated in Article 50 of Government Regulation No. 33/2023 concerning Energy Conservation, which explicitly regulates the incentive scheme. Fiscal incentives are granted in accordance with tax provisions, while non-fiscal incentives include energy conservation training, energy-saving certification, energy audits, and certificates of recognition for producers.[47] Importantly, the

[44] *Ibid*.
[45] Richard Jatimulya and Alam Wibowo, "Kebijakan Hukum Insentif Perpajakan pada Sektor Energi dan Transportasi untuk Mendukung Net Zero Emission Tahun 2060", *Jurnal Pajak Indonesia* 1 (2023): 91–107, https://jurnal.pknstan.ac.id/index.php/JPI/article/download/2193/1143.
[46] *Ibid.*
[47] *See,* Article 50 of Government Regulation No. 33 of 2023.

regulation also grants flexibility to the minister to determine additional non-fiscal incentives aligned with technological advancements, thereby opening space for innovative policy instruments. On the investment side, Regulation of the Investment Coordinating Board Number 6 of 2023 concerning Guidelines and Governance for the Provision of Import and/or Delivery Incentives for Four-Wheeled Battery Electric Vehicles in the Framework of Investment Acceleration, strengthens incentives for the import of four-wheeled EVs in order to accelerate investment. This regulation facilitates the entry of EV technology and components, while still requiring the development of local industry to increase the Domestic Content Level. It also streamlines licensing and investment procedures through the Online Single Submission (OSS) system managed by Investment Coordinating Board and ensures that EV import and delivery incentives remain consistent with the broader agenda of accelerating investment and technology transfer.

The chain of implementation is reinforced by the sustainable finance ecosystem. Financial Services Authority Regulation No. 51/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies obligates financial service institutions, issuers, and public companies to implement sustainable finance through action plans and reporting requirements.[48] Furthermore, Financial Services Authority Regulation No. 60/2017 concerning the Issuance and Requirements for Environmentally Aware Debt Securities (Green Bonds), governs the issuance of Green Bonds, *i.e.,* debt securities whose proceeds are used to finance or refinance environmentally friendly business activities. This regulation provides legal certainty, standards, and credibility for Green Bond issuance in Indonesia, and supports sustainable finance particularly for RE projects, energy efficiency, and climate change mitigation.[49]

In practice, these various incentives cover a wide spectrum: corporate income tax reductions for RE and EV investments, import duty exemptions for key components, subsidies for EV purchases, support for research and innovation, streamlined licensing, vehicle tax reductions for EVs, subsidies for the construction of charging infrastructure, and guaranteed electricity purchases from RE producers by SEC. Yet, significant implementation challenges remain, particularly in terms of coordination among stakeholders and consistency of regulations between central and regional governments.

[48] *See,* Article 2 of OJK Regulation No. 51/POJK.03/2017.
[49] Green Fiscal Policy Network, Accelerating Green and Sustainable Finance in Indonesia, 2023.

Thus, from a normative perspective, Indonesia possesses a comprehensive legal and regulatory framework to advance energy transition, encompassing both renewable power generation and EVs. Fiscal incentives, non-fiscal measures, and sustainable financing instruments such as green sukuk and green bonds now complement the regulatory structure. However, the real challenge lies in effective implementation, coordination, and policy continuity. If international best practices such as the establishment of an independent regulator for the RE sector and the adoption of market-based incentive schemes, can be integrated, Indonesia holds strong potential to accelerate its energy transition, generate green jobs, and achieve its ambitious clean energy target.

The policy framework for RE incentives in Indonesia involves a range of state institutions with distinct yet interlinked mandates. At the strategic level, the MEMR holds the primary role as the sector's regulator. Pursuant to Law No. 30/2007 on Energy ("Energy Law"), NRE are governed by the state and must be utilised for the greatest benefit of the people, in accordance with the principles of equity, rationality, sustainability, and optimisation.[50] To operationalise this mandate, MEMR develops a roadmap for RE deployment, as stipulated in Regulation of the Minister of Energy and Mineral Resources No. 10/2025 concerning Roadmap for the Energy Transition in the Electricity Sector, and coordinates the implementation of national energy mix targets. This role is reinforced by Law No. 30/2009 on Electricity, as amended by Law No. 6/2023 on the enactment of Government Regulation in place of Law No. 2/2022 on Job Creation, which mandates MEMR to formulate policies and establish technical provisions for RE utilisation.[51]

MEMR's authority is further clarified under Presidential Regulation No. 112/2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply ("Law 112/2022"), which underscores its central role in administering RE incentive policies. These include setting benchmark electricity prices for FiTs, facilitating procurement by the SEC, and expediting the development of RE projects. SEC serves as the *single off-taker* for RE-generated electricity, entering into Power Purchase Agreements with developers through direct appointment or selection, in line with the procurement mechanisms stipulated in the same regulation. While SEC operates under the oversight of the SOE, its procurement and tariff arrangements remain subject to MEMR's regulatory authority.[52]

[50] *See* Article 2 dan 4 of Energy Law.
[51] *See* Law No. 30/2009 on Electricity.
[52] Teuku Naraski Zahari and Benjamin C. McLellan, "Review of Policies for Indonesia's Electricity Sector Transition", *Energies* 16, no. 8 (2023): 3406, https://doi.org/10.3390/en16083406.

On the fiscal side, the MoF plays a crucial role in providing investment incentives, including *tax holidays*, *tax allowances*, and exemptions from import duties for RE project equipment, as regulated in Minister of Finance Regulation No. 130/2020 later amended by Minister of Finance Regulation No. 69/2024 concerning Corporate Income Tax Reduction Facilities for Pioneer/Strategic Industries and Government Regulation No. 78/2019 concerning Income Tax Facilities for Investment in Certain Business Fields and/or in Certain Regions ("Law 130/2020"). The MoF also advances RE development through green financing initiatives, working with financial institutions such as PT Sarana Multi Infrastruktur and the Environmental Fund Management Agency to support infrastructure investment, including via Public–Private Partnership schemes.

Non-fiscal incentives are reinforced by the Investment Coordinating Board, which administers the Online Single Submission ("OSS") licensing system under Government Regulation No. 28/2025 concerning the Implementation of Risk-Based Business Licensing, streamlining administrative procedures for RE developers.[53] The Financial Services Authority ("FSA") regulates green financing instruments, including *green bonds*, under Financial Services Authority Regulation No. 60/2017 concerning the Issuance and Requirements for Environmentally Aware Debt Securities (Green Bonds), to broaden capital access for RE investments. At the cross-sectoral coordination level, the National Energy Council ("NEC") defines long-term policy directions through the National Energy Policy and General Plan, while the Coordinating Ministry for Maritime Affairs and Investment and the Committee for Acceleration of Priority Infrastructure Provision work to resolve bottlenecks, ensuring incentives are effectively absorbed and priority RE projects are delivered on schedule.[54]

The 2021 OECD report[55] on Indonesia's energy support measures identifies robust institutional coordination as a prerequisite for mobilising public–private financing for RE infrastructure. The report highlights that without structured collaboration between the MoF (as the fiscal authority), MEMR (as the technical regulator), and financial intermediaries such as PT Sarana Multi Infrastruktur and the Environmental Fund Management Agency,

[53] Aidy Halimanjaya, *Loc.Cit.*
[54] Presidential Regulation Number 122 of 2016 concerning Amendment to Presidential Regulation No. 75 of 2014 on the Acceleration of the Provision of Priority Infrastructure.
[55] Organisation for Economic Co-operation and Development, Clean Energy Finance and Investment Policy Review of Indonesia, 2021.

investment flows tend to be sporadic, administrative bottlenecks increase, and the disbursement of incentives is delayed.

At the domestic level, empirical evidence from several case studies indicates that the absence of a formalised integration framework between fiscal incentive providers (*e.g.*, MoF) and technical implementers (*e.g*., MEMR and SEC) results in significant underutilisation of available incentives.[56] For instance, many renewable project developers fail to access tax holidays or concessional financing because the procedures for linking these incentives to project licensing and procurement are not clearly operationalised.[57]

2. UK Regulatory Overview on Energy Incentive

Some of the key legislative instruments outlined are the incentive framework for energy policy in the UK. The foundation of UK energy policy is found in the Energy Act 2013 and its amendments ("2013 Act"). According to its explanatory notes, this Act aims to establish a legislative framework for the provision of secure, affordable, and low-carbon energy. This regulation aims to ensure that even if older power plants are retired, the UK can still meet the growing energy needs for the consumers.[58] The 2013 Act also promotes investment in renewable technologies through fiscal and non-fiscal measures while ensuring active engagement of public and private stakeholders in achieving national decarbonization targets.[59]

At the core of this legal framework is the Contracts for Differences (“CfDs”), which provides long-term electricity price stability for electricity suppliers and income certainty for investors, enhancing the bankability of low-carbon projects.[60] The 2013 Act also regulates the authority of the Secretary of State ("Secretary") to appoint counterparties to generators in this CfDs scheme,[61] where the counterparty in this case is the Department for Energy Security & Net Zero (“DESNZ”).[62] The counterparty is also tasked by ensuring the continuity and implementation of CfDs and following the Secretary's directions.[63]

[56] Aidy Halimanjaya, *Loc.Cit.*
[57] Suzanty Sitorus, *et al.,* “Energizing Renewables in Indonesia: Optimizing Public Finance Levers to Drive Private Investment”, *Climate Policy Initiative* (2018): 3–4, https://climatepolicyinitiative.org/wp-content/uploads/2018/11/Energizing-Renewables-in-Indonesia-Optimizing-Public-Finance-Levers.pdf.
[58] *See* Explanatory Notes of the Act 2013.
[59] *Ibid*.
[60] *See* Section 6 to 8 and 9 and 15 of Part 2 *Ibid*.
[61] *See* Section 7 of Part 2 *Ibid.*
[62] Regulated through the Companies Act 2008.
[63] *See* Section 7 to 8 of Part 2 *Ibid.*

The CfD mechanism also regulates the role of Electricity Suppliers, who will make payments to generators through DESNZ and provide financial guarantees if necessary.[64] To support the operationalization of CfDs, the National System Operator can monitor the implementation and provide notification to DESNZ regarding eligible generators and other information required in the CfD contract.[65] Before issuing CfD regulations, the Secretary is also required to consult with several parties, including Scottish Ministers, Welsh Ministers, the Department of Enterprise, Trade and Investment for projects in Northern Ireland, electricity suppliers, the National System Operator, the Office of Gas and Electricity Markets ("Ofgem"), and other parties deemed necessary by the Secretary.[66]

The 2013 Act also provides for several non-fiscal incentives, such as the Capacity Market, a mechanism designed to ensure electricity supply security through market design.[67] In addition, it introduces Standard Terms, CfD Notification, and Allocation Framework, that facilitate the CfDs process for CfDs participants.[68] Furthermore, Schedule 6 of Finance Act 2000[69] regulates the Carbon Price Floor, a mechanism that raises the price of carbon for power generators by imposing a tax on the fossil fuels they use. This mechanism is intended to incentive power generators to transition to low-carbon energy sources.

Moreover, the Smart Export Guarantee ("SEG"), established under the Smart Export Guarantee Order 2019, obliges certain electricity suppliers to make payments to small-scale low-carbon generators for the electricity they export to the grid.[70] Under the SEG Guidance for Licenses, certain electricity suppliers are defined as those with at least 150,000 domestic electricity consumers.[71] The implementation and oversight of this scheme falls under the jurisdiction of DESNZ and Ofgem.[72]

This legal framework not only set the mechanisms for low-carbon electricity generation but also inherently shapes the roles and responsibilities of key stakeholders. For instance,

[64] *See* Section 9 *Ibid*.
[65] *See* Section 12-13 *Ibid.*
[66] *See* Section 24 *Ibid.*
[67] *See* Section 34 of Chapter 3 *Ibid*.
[68] *See* Section 12 to 14 *Ibid*.
[69] This Act constitutes primary legislation; see also the secondary legislation: The Climate Change Levy (General) Regulations 2001 (SI 2001/838), as amended by the Climate Change Levy (General) (Amendment) Regulations 2013 (SI 2013/713).
[70] *See* the Purpose of the instrument of Explanatory Memorandum to The Smart Export Guarantee Order 2019, 2019 No. 1005.
[71] Ofgem, "About Us: What We Regulate", September 4, 2025, https://www.ofgem.gov.uk/about-us/what-we-regulate.
[72] *Ibid.*

DESNZ plays a key role in maintaining UK energy security and reducing UK emissions.[73] What makes DESNZ unique is that, unlike many other countries, the UK has a dedicated ministry responsible for emission reduction. DESNZ is tasked with ensuring that the UK has a well-functioning energy market, promoting greater energy efficiency, and capitalizing on net zero opportunities to lead the green industry globally.[74] DESNZ is also the sponsoring department of Ofgem, and through the Secretary is responsible for providing information to Parliament on Ofgem's performance.[75] In regulatory development, DESNZ, along with Ofgem, acts as a competent authority to create guidelines and assess the compliance of Operators of Essential Services in the electricity and gas sectors.[76] In addition, DESNZ is also authorized to regulate CfDs as an instrument to encourage low-carbon electricity generation.[77]

The next stakeholder is His Majesty's Treasury ("HMT"), the Ministry of Finance and Economic Affairs. One of its functions is to formulate and hold authority over energy incentive policies involving subsidies, taxes, or financial guarantees.[78] One of HMT's policies is the Control for Low Carbon Levies. This policy is a moratorium scheme for new low-carbon energy subsidies funded through levies (generally a charge levied by the government on consumers' electricity bills).[79] This scheme is implemented to control the fiscal burden on consumers, which is predicted to continue to rise.[80] HMT plays a strategic role in establishing transparent and clear fiscal rules, thereby providing a fiscal foundation for other stakeholders, such as DESNZ. HMT's control over a number of incentive instruments, as mentioned above, signals stability to investors.[81] By acting as a gatekeeper, providing fiscal space for energy policy, HMT creates certainty and attracts private investment in the clean energy sector.[82]

Furthermore, there is also the Ofgem which is an independent (non-ministerial) UK

[73] Department for Energy Security and Net Zero, "About Us", September 4, 2025, https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about.
[74] GOV.UK, "Department for Energy Security and Net Zero: Working for DESNZ", September 14, 2025, https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about/recruitment.
[75] Department for Energy Security and Net Zero, Strategy and Policy Statement for Energy Policy in Great Britain, 2024.
[76] Department for Energy Security and Net Zero, *Loc.Cit*.
[77] *See* Section 6 of the Act 2013.
[78] GOV.UK, *Loc.Cit*. *See also*, Matthew Lockwood, "The Political Sustainability of Climate Policy", *Global Environmental Change* 23, no. 5 (2013): 1339–1348, https://doi.org/10.1016/j.gloenvcha.2013.07.001.
[79] HM Treasury, *Control for Low Carbon Levies*, no. September, 2017. HM Treasury, Control for Low Carbon Levies, 2017.
[80] *Ibid.*
[81] Renewable Energy Association, "Written Evidence Submitted by the Renewable Energy Association", September 4, 2016, https://committees.parliament.uk/writtenevidence/64817/html/.
[82] *Ibid.*

agency tasked with regulating energy.[83] In carrying out its functions, Ofgem collaborates with energy companies, consumer representatives, governments, and charities to achieve a clean, fair, and safe energy system.[84] Ofgem's authority in regulating the energy market includes issuing licenses and setting license conditions, providing guidance for energy companies, managing changes to industry codes, as well as making sure that energy companies are following the rules, and taking action if not."[85]

Ofgem's regulations do not only oversee but also encourage the creation of a competitive energy market and the acceleration of RE by providing incentives and obligations to energy suppliers.[86] As an independent body, it also plays a role in increasing investor confidence by offering a positive investment environment. [87] This is partly due to the fact that the relevant regulator, Ofgem, is independent from the government. This creates a balanced environment, where the government sets energy policy and the regulator implements it within a defined legal framework. This system boosts investor confidence due to legal certainty, regulatory independence, and transparency in regulation.[88] Ofgem also has an Investor Relations team that actively communicates with global investors, analysts, rating agencies, and bankers.[89] Communications are conducted through conference calls and one-on-one meetings. This communication is carried out to ensure transparency and clarity, especially for investors.[90]

An addition set of stakeholders are the UK's devolved governments, namely Scotland, Wales, and Northern Ireland. Thomas & Ellis states that the distribution of authority among devolved administrations significantly influences energy decarbonization in the UK.[91] One factor is the geographic context of the devolved administrations, which significantly influences the UK's energy legal regime, including its incentive mechanisms.[92] Devolved

[83] Ofgem, "About Us: Who We Are", September 14, 2025, https://www.ofgem.gov.uk/about-us.
[84] *Ibid.*
[85] Ofgem, "About Us: What We Regulate", September 4, 2025, https://www.ofgem.gov.uk/about-us/what-we-regulate.
[86] Elizabeth Blakelock and John Turnpenny, "The Impact of Participatory Policy Formulation on Regulatory Legitimacy", *Policy and Politics* 50, no. 4 (2022): 507–525, https://doi.org/10.1332/030557321X16510710879298.
[87] Renewable Energy Association, "Written Evidence Submitted by the Renewable Energy Association", September 4, 2016, https://committees.parliament.uk/writtenevidence/64817/html/.
[88] *Ibid.*
[89] Ofgem, "About Us: Investor Relations", September 14, 2025, https://www.ofgem.gov.uk/about-us/contact-us/investor-relations.
[90] *Ibid.*
[91] Thomas L. Muinzer and Geraint Ellis, "Subnational Governance for the Low Carbon Energy Transition: Mapping the UK's 'Energy Constitution'", *Environment and Planning C: Politics and Space* 35, no. 7 (2017): 77–86, https://doi.org/10.1177/2399654416687999.
[92] *Ibid.*

administrations implement many local incentives, creating complex dynamics for the UK's energy regulatory landscape.

In Scotland, the government operates the Community and RE Scheme.[93] This scheme provides loans and grants for locally managed RE more than 990 projects worth over €67 million.[94] Meanwhile, in Wales, one of the incentives under the Energy Wales: A Low Carbon Transition Delivery Plan includes financial assistance for energy efficiency improvements and local clean energy programs.[95] Furthermore, Wales has one of the world's largest tidal energy potential, the Severn Estuary.[96] Energy potential has encouraged the Welsh government to prioritize the marine sector, including funding for the Morlais Tidal Demonstration Zone project, one of Europe's largest test zones for tidal technology.[97] In the example presented, it can be concluded that incentive differentiation can be rooted in the geographic advantages of each devolved government.

Next, there are electricity providers, which facilitate payments to power generators through DESNZ and provide financial collateral when needed to support CfD obligations.[98] Their participation is crucial to maintaining the financial stability of the CfD scheme and ensuring timely contract completion.[99] Finally, there is the National Operating System, which monitors CFD implementation, notifying DESNZ of eligible power generators. By coordinating the operation of the national transmission system, the National System Operator ensures that CFD-supported power generators are efficiently integrated with the electricity grid.[100]

3. Addressing the Challenges of Renewable Energy Incentives

The implementation of RE incentives in Indonesia faces multiple structural, institutional, and technical challenges that prevent both fiscal and non-fiscal incentive policies from delivering their intended outcomes. Normatively, the Government of Indonesia has issued various policies to stimulate clean energy investment through mechanisms such as

[93] Local Energy Scotland, "Community and Renewable Energy Scheme", Energy Saving Trust, February, 19, 2025, https://energysavingtrust.org.uk/programme/community-and-renewable-energy-scheme/.
[94] *Ibid.*
[95] Welsh Government, "Welsh Government Backs Tidal Power with £2 Million Investment", March 19, 2025, https://www.gov.wales/welsh-government-backs-tidal-power-2-million-investment.
[96] Jamie Grierson, "Urgent Action Needed to Harness Tidal Power in Severn Estuary, Say Experts", *The Guardian*, March 19, 2025, https://www.theguardian.com/environment/2025/mar/19/urgent-action-needed-to-harness-tidal-power-in-severn-estuary-say-experts.
[97] Welsh Government, *Loc.Cit*.
[98] *See* Section 9 of Chapter 2 of Act 2013.
[99] *Ibid*.
[100] *See* Section 12-13 *Ibid*

tax holidays, tax allowances, import duty exemptions, subsidies, and non-fiscal incentives, including infrastructure provision and green financing support. However, in practice, these incentives have not yet been optimally utilized by businesses.[101] This differs from what is stipulated in the regulations in the UK, where each institution is responsible for providing targeted incentives in line with its respective functions.

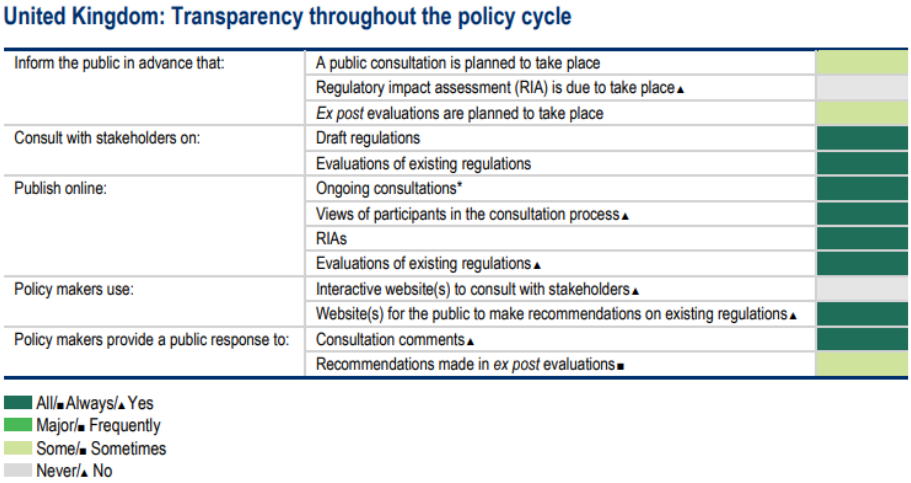
First, there exists a significant coordination gap between institutions, particularly between the MoF, as the provider of fiscal incentives, and the MEMR along with SEC as technical implementers in the energy sector. While fiscal instruments such as tax holidays and tax allowances have been designed, their implementation often fails to connect directly with actual project needs in reality due to the absence of a formal integration framework that links fiscal and technical tracks. As a result, investors face the uncertainty about when and how these incentives can effectively be applied to support the financial viability of projects.[102] This finding is reinforced by the Organisation for Economic Co-operation and Development (OECD) in 2021, which highlights that the lack of coordination mechanisms between fiscal and technical authorities often leads to delays in the disbursement of incentives and low levels of utilization of the facilities provided.[103] In contrast, the UK demonstrates a more coherent alignment of authority through the coordination model established between the DESNZ and HMT. DESNZ is responsible for technical policy and energy market regulation, while HMT oversees fiscal policy.[104] Their coordination is conducted through formal mechanisms, ensuring that fiscal incentives are effectively aligned with technical needs. In addition, Ofgem, as an independent regulator, separates technical and supervisory functions while ensuring that incentive rules remain transparent and predictable for investors.[105]

Second, lengthy and poorly operationalized administrative procedures remain a major obstacle. Many RE developers fail to access fiscal incentives such as tax holidays because of complex cross-agency bureaucratic procedures and the absence of clear linkages between fiscal policies and project licensing or procurement mechanisms. In 2021, OECD noted that although incentive policies exist on paper, procedures that connect fiscal facilities with project milestones are not clearly outlined, generating administrative uncertainty and the risk of delays.[106]

[101] SIP Law Firm, "Tax Incentive Policy for Green Energy", February 22, 2025, https://siplawfirm.id/kebijakan-insentif-pajak-untuk-energi-hijau/?lang=id.
[102] Aidy Halimanjaya, *Loc.Cit.*
[103] OECD, *Loc.Cit.*
[104] Department for Energy Security and Net Zero, *Loc.Cit.*
[105] Renewable Energy Association, *Loc.Cit.*
[106] OECD, *Loc.Cit.*

Picture 1.

Transparency Throughout the Policy Cycle



Source: Indicators of Regulatory Policy and Governance Survey 2021

This is also identified in the study by Winarsih et al. (2025) [107], which concludes that although tax incentive regulations are stipulated under Government Regulations and Minister of Finance Regulations, their implementation mechanisms remain unsynchronized with licensing procedures and project needs in the field for instance, concerning spatial planning and environmental permits, thereby creating uncertainty for investors and severely limiting the incentives' practical utilization. With regard to administration, the UK has an incentive portal known as the CfD portal, which represents the full digitalization of the incentive application process, complete with technical guidance and FAQs.[108] In addition, there is a consultation period for the public on proposed policy changes related to incentives, accompanied by a pre-accreditation system to lock in incentives as regulated under the UK FiT scheme, thereby ensuring early certainty for investors. This system minimizes overlapping procedures and shortens the time required for incentive disbursement. Just as Ofgem's regulations not only oversee but also encourage the creation of a competitive energy market and the acceleration of renewable energy through incentives and obligations for suppliers, the CfD portal and consultation process strengthen investor confidence by ensuring legal certainty, regulatory predictability, and administrative transparency.

Third, there is a lack of equitable distribution of non-fiscal incentives, particularly with regard to infrastructure support such as public electric vehicle charging stations. Although the

[107] Tri Winarsih, *et.al.*, *Loc.Cit.*
[108] Electricity Operator System, *CfD Application Allocation Round 6 (AR6) Guidance*, Vol. 6, 2024. Electricity Operator System, "CfD Application Allocation Round 6 (AR6) Guidance", *ESO* 6 (2024), https://www.emrdeliverybody.com/Contracts%20for%20Difference%20Document%20Library/CfD-AR6-Application-Guidance.pdf.

number of the charging station has increased significantly in recent years, their locations remain highly concentrated in major urban centers such as Jakarta, Bali, and Surabaya.[109] This uneven distribution forces investors in other regions to bear higher additional costs, as they must develop supporting infrastructure independently. Consequently, the benefits of non-fiscal incentives are enjoyed only by certain regions, while other areas lag behind in the transition to clean energy.[110] This geographic disparity illustrates that non-fiscal incentives in Indonesia are not yet for all regions and fail to establish a level playing field for all market participants. This contrasts with the approach adopted by the UK government, where devolved administrations provide local incentives tailored to geographic potential, alongside community RE grant schemes for villages and remote areas.[111] This framework is further supported by Local Net Zero Hubs, which deliver technical assistance and access to central government funding.[112] Through such decentralized regulation, the acceleration of incentives becomes more effective, including non-fiscal incentives, followed by a faster pace of renewable energy development.

Fourth, shortcomings in monitoring, evaluation, and transparency undermine the effectiveness of incentives. There is neither clear public data on how many companies have actually accessed fiscal or non-fiscal incentives, nor on the concrete impacts of these incentives on RE investment and emissions reduction. According to the International Institute for Sustainable Development (2021)[113], weak monitoring and evaluation mechanisms make it difficult to measure policy effectiveness, thereby limiting the government's ability to assess whether existing instruments should be improved, simplified, or shifted to more effective alternatives. Without transparency and regular reporting, the risks of inefficiency, mistargeting, and even potential rent-seeking behavior are amplified. In contrast, in the UK, Ofgem plays a central role in oversight by maintaining the RE incentive database, which contains a list of incentive recipients, the value of incentives granted, and the status of projects.[114] In addition, Ofgem conducts policy review cycles to ensure that regulations remain relevant to developments in society.

[109] Khairunnisa Wahyudi, "Implementasi SPKLU sebagai Infrastruktur Penunjang Electrical Vehicle", *Jurnal Teknik Industri (JATRI)* 2, no. 2 (2024): 38–46, https://e-journals2.unmul.ac.id/index.php/jatri/article/view/1491/613.
[110] Institute for Essential Services Reform (IESR), *Loc.Cit.*
[111] Local Energy Scotland, *Loc.Cit.*
[112] GOV.UK, "Supporting the Transition across the Economy", September 14, 2022, https://www.gov.uk/government/publications/net-zero-strategy/4-supporting-the-transition-across-the-economy.
[113] G. S. I. Report, Indonesia's Energy Support Measures, 2022.
[114] Ofgem, *Loc.Cit.*

The implementation of RE incentives in Indonesia illustrates a paradox: while regulatory frameworks and a range of fiscal and non-fiscal facilities have been introduced, their practical utilization remains limited due to persistent structural, institutional, and technical barriers. Key challenges include weak coordination between fiscal and technical authorities, complex and poorly synchronized administrative procedures, unequal distribution of non-fiscal support, and insufficient monitoring, evaluation, and transparency. These constraints undermine investor confidence and restrict the actual impact of incentive schemes on clean energy deployment.

In contrast, the UK demonstrates how a coherent governance architecture, anchored by a clear division of roles between DESNZ and HMT, the regulatory independence of Ofgem, digitalized and transparent administrative systems such as the CfD Portal, as well as devolved and locally responsive incentive mechanisms, can effectively translate the policies into implementation. The UK's experience highlights that coordination, regulatory clarity, decentralization, and transparency are essential foundations for incentive effectiveness.

For Indonesia, adopting similar practices by establishing formal inter-institutional coordination mechanisms, streamlining procedures through digitalization, decentralizing non-fiscal incentives according to regional potential, and strengthening transparency through regular monitoring and reporting could significantly enhance the effectiveness of its RE incentive framework. Ultimately, without addressing these governance gaps, Indonesia's RE incentives risk remaining normative instruments rather than transformative drivers of energy transition.

4. Proposal for Independent Regulatory Framework in Indonesia's Energy Sector

In Indonesia, the governance of RE involves multiple institutions with distinct mandates, ranging from the MEMR as the primary regulator to the MoF, which provides fiscal incentives. In contrast, the United Kingdom adopts a more centralized structure through the Department for Energy Security and Net Zero, supported by HM Treasury in formulating incentive policies, and the Ofgem, which is sponsored by DESNZ as an independent regulator overseeing the energy market, promoting competition, and accelerating RE adoption. The key difference lies in the multiplicity of institutions in Indonesia compared to the UK model, which emphasizes the role of a strong and independent regulator that ensures regulatory certainty and enhances investor confidence.

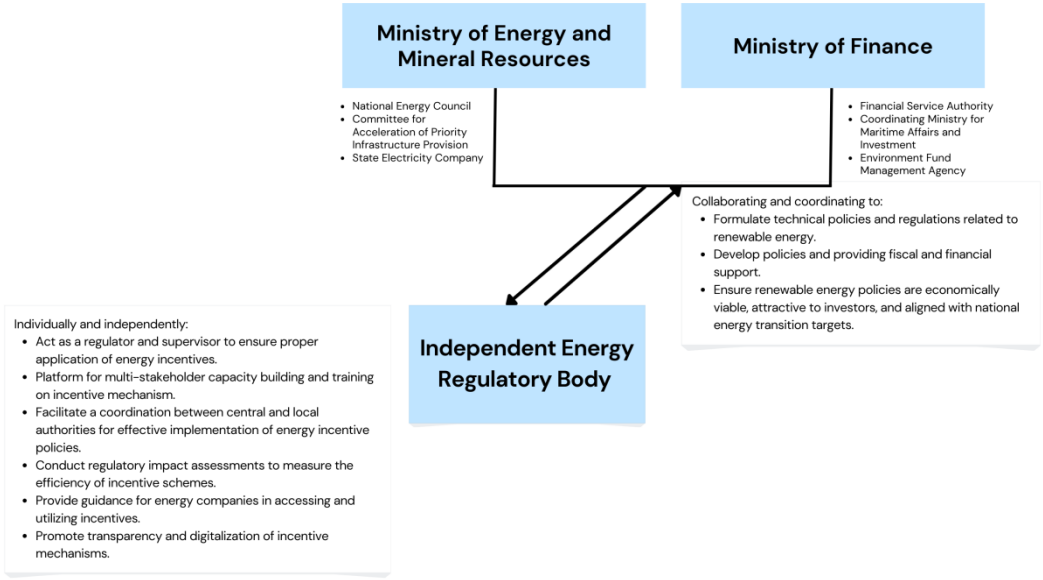
In addition, Indonesia's centralized authority often delays the regulatory implementations and makes inconsistencies between regulations and actual practices in the

reality. Such conditions may undermine investor confidence and slow down the allocation of RE incentives. Lessons can be learned from how the UK government designs and implements its energy policies. Despite the existence of devolution that gives greater authority for devolved administrations to have more control over energy policy and funding,[115] Ofgem still plays a vital role in aligning various regional energy initiatives and local stakeholder engagement. This can be likened to how a centralized body can help coordinate and align Indonesia's various regional energy policies especially those that are enacted by regional governments.

Based on the presented discussion, Indonesia's energy transition may be assisted and accelerated by the existence an Independent Energy Regulator **("IER"),** similar to Ofgem in the UK, which would operate independently rather than under the MEMR or the MoF with clearly defined authority to regulate the RE market. Such IER, in coordination with MEMR and MOF, can have the powers as follows:

Picture 2.

Governance Mapping of the Independent Energy Regulator



Source: Author's Self Analysis, 2018-2023

IER will be entrusted with several key responsibilities, including: conducting public consultations on planned RE initiatives to ensure that incentive schemes meet both public and market needs; serving as a platform for multi-stakeholder capacity building and training on incentive mechanisms; facilitating coordination between central and local governments for the effective implementation of energy incentive policies; carrying out regulatory impact

[115] The UK Decentralization and Community Empowerment Bill 2025.

assessments to evaluate the efficiency of incentive schemes; providing guidance for energy companies in accessing and utilizing incentives; and promoting transparency and digitalization of incentive mechanisms.

In conducting public consultations on planned RE initiatives, IER will ensure that the design of incentive schemes reflects market needs, ranging from developers to investors, while also addressing public interests such as affordable energy prices. With regard to its role as a platform for multi-stakeholder capacity building and training on incentive mechanisms, the IER will organize training programs that encompass not only operational skills but also strategic issues, including regulatory impact assessment, smart grid management, carbon mechanisms, and the provision of RE incentives. Such training is crucial to strengthening human resource capacity in designing and overseeing complex energy systems.

To facilitate coordination between the central and local governments for the effective implementation of energy incentive policies, IER will serve as a liaison between the central government (MEMR and MoF) and local authorities to ensure comprehensive policy implementation. Furthermore, the IER will develop joint standard operating procedures to support local governments in applying incentive schemes, provide regular coordination forums involving the central government, local governments, PLN, and investors to address implementation challenges, and oversee the consistency of regulatory enforcement at the regional level while offering policy recommendations where bureaucratic obstacles are identified.

In conducting regulatory impact assessments to measure the efficiency of incentive schemes, the IER will collect data on the implementation of incentive policies, including costs, benefits, and potential barriers. The IER will then analyze whether the incentives provided reduce the cost of capital and enhance investment in the RE sector. Subsequently, the IER will identify risks associated with the incentive policies and formulate recommendations for improving the design and effectiveness of such schemes.

In providing guidance for energy companies to access and utilize incentives, as well as promoting transparency and digitalization of incentive mechanisms, the IER will develop publicly accessible guidelines outlining the procedures, requirements, and technical steps for obtaining incentives. In addition, the IER will establish a dedicated division as an information service center for energy companies seeking to access and benefit from RE incentives. The IER will also develop a digital platform containing information on available incentives, application status, evaluation processes, and approval outcomes, thereby facilitating the application process for energy companies. With regard to incentive registration, the IER will

ensure that the entire process of application and disbursement can be monitored in real time and is subject to public audit.

D. Conclusion

Indonesia has committed to reducing emissions through the Paris Agreement. However, short-term emission reduction targets have never been achieved. One major obstacle lies in the suboptimal implementation of renewable energy incentives. This is influenced by weak coordination between stakeholders and fragmented policy governance. In contrast, the UK has successfully demonstrated more advanced practices through a strong institutional framework, the existence of an independent energy regulator, and an evidence-based incentive scheme.

From the UK's experience, best aspect that could be adopted by Indonesia is the establishment of an independent energy regulator similar to Ofgem, namely IER. IER is envisioned as a key institution to strengthen renewable energy governance in Indonesia by ensuring that incentive schemes are transparent, efficient, and responsive to both market and public needs. Through its functions—ranging from public consultations and multi-stakeholder training to central–local government coordination, regulatory impact assessments, and digitalized guidance for energy companies—the IER can reduce bureaucratic barriers, foster investor confidence, and enhance policy coherence. In doing so, it has the potential to become a cornerstone for accelerating investment in renewable energy and achieving national decarbonization and energy security goals.

References

Journal Articles

Ardiansyah, Harun, *et al.*, "Bridging the Gap between Policy and Net-Zero Realization in Indonesia: An Outlook of Available Approaches", *Journal of Physics: Conference Series* 2828, no. 1 (2024): 1–11, https://doi.org/10.1088/1742-6596/2828/1/012003.

Arsita, Savira Ayu, *et al*., "Perkembangan Kebijakan Energi Nasional dan Energi Baru Terbarukan Indonesia", *Jurnal Syntax Transformation* 2, no. 12 (2021): 1779–1788, https://doi.org/10.46799/jst.v2i12.473.

Balaman, Şebnem Yılmaz, *et al.*, "Incentivising Bioenergy Production: Economic and Environmental Insights from a Regional Optimization Methodology", *Renewable Energy* 130 (2019): 101975, https://doi.org/10.1016/j.tre.2020.101975.

Blakelock, Elizabeth, and John Turnpenny, "The Impact of Participatory Policy Formulation on Regulatory Legitimacy", *Policy and Politics* 50, no. 4 (2022): 507–525, https://doi.org/10.1332/030557321X16510710879298.

Derks, Milou, and Henny Romijn, "Sustainable Performance Challenges of Rural Microgrids",

Energy for Sustainable Development 53 (2019): 57–70, https://doi.org/10.1016/j.esd.2019.08.003.

Electricity Operator System, "CfD Application Allocation Round 6 (AR6) Guidance", *ESO* 6 (2024), https://www.emrdeliverybody.com/Contracts%20for%20Difference%20Document%20Library/CfD-AR6-Application-Guidance.pdf.

Firdaus, Insan, "Dukungan Kebijakan dan Peraturan Perundang-Undangan untuk Mengakselerasi Aktivitas Riset Energi Baru Terbarukan di Indonesia", *Jurnal RechtsVinding* 11, no. 3 (2022): 411–434, http://dx.doi.org/10.33331/rechtsvinding.v11i3.986.

Hafizh, Naufal Luthfi, et al., "Kebijakan Harga Pembelian Tenaga Listrik sebagai Hambatan dalam Akselerasi Proyek Pembangkit Listrik Tenaga Panas Bumi untuk Mendukung Ketahanan Energi Nasional", *Journal Discretie* 4, no. 3 (2023): 296–297, https://dx.doi.org/10.20961/jd.v4i3.84762.

Halimanjaya, Aidy, "The Political Economy of Indonesia's Renewable Energy Sector and Its Fiscal Policy Gap", *International Journal of Economics, Finance and Management Sciences* 7, no. 2 (2019): 45–64, https://doi.org/10.11648/j.ijefm.20190702.12.

Jatimulya, Richard, and Alam Wibowo, "Kebijakan Hukum Insentif Perpajakan pada Sektor Energi dan Transportasi untuk Mendukung Net Zero Emission Tahun 2060", *Jurnal Pajak Indonesia* 1 (2023): 91–107, https://jurnal.pknstan.ac.id/index.php/JPI/article/download/2193/1143.

Kirana, Dhea Nur, and Febry Triantama, "Beyond Environmentalism: The Geopolitical Chess Game behind Indonesia's Mineral Export Bans and Renewable Energy Transition", *Masyarakat, Kebudayaan dan Politik* 37, no. 1 (2024): 30–45, https://doi.org/10.20473/mkp.v37i12024.30-45.

Lockwood, Matthew, "The Political Sustainability of Climate Policy", *Global Environmental Change* 23, no. 5 (2013): 1339–1348, https://doi.org/10.1016/j.gloenvcha.2013.07.001.

Mathieu, Emmanuelle, and Jose Maria Valenzuela, "The Governance of Renewable Energy Auctions", *Journal of Comparative Policy Analysis* 27, no. 1 (2024): 39–61, https://doi.org/10.1080/13876988.2024.2405589.

Muinzer, Thomas L., and Geraint Ellis, "Subnational Governance for the Low Carbon Energy Transition: Mapping the UK's 'Energy Constitution'", *Environment and Planning C: Politics and Space* 35, no. 7 (2017): 77–86, https://doi.org/10.1177/2399654416687999.

Nasution, Amiradiaty, and Hauna Tsabitul Azmi, "Tinjauan Yuridis Pemberian Insentif dalam Rangka Mendorong Percepatan Battery Electric Vehicle (BEV): Potensi Dukungan pada Greenwashing dibalik Solusi Persoalan Lingkungan", *Presidensial: Jurnal Hukum, Administrasi Negara, dan Kebijakan Publik* 1, no. 3 (2024): 57–70, https://doi.org/10.62383/presidensial.v1i3.76.

Sambodo, Maxensius Tri, *et al.*, "Breaking Barriers to Low-Carbon Development in Indonesia", *Heliyon* 8, no. 4 (2022): e09304, https://doi.org/10.1016/j.heliyon.2022.e09304.

Sitorus, Suzanty, *et al.*, "Energizing Renewables in Indonesia: Optimizing Public Finance Levers to Drive Private Investment", *Climate Policy Initiative* (2018): 3–4, https://climatepolicyinitiative.org/wp-content/uploads/2018/11/Energizing-Renewables-in-Indonesia-Optimizing-Public-Finance-Levers.pdf.

Supriyanto, Eko, *et al.*, "Policy and Strategies of Tariff Incentives Related to Renewable Energy", *Sustainability* 14, no. 20 (2022): 13442, https://doi.org/10.3390/su142013442.

Suraharta, I Made, *et al.*, "Electric Vehicle Policy: The Main Pillar of Indonesia's Future Energy Security", *International Journal of Science and Society* 4, no. 4 (2022): 142–156, https://doi.org/10.54783/ijsoc.v4i4.561.

Thomas, L., *et al*., "Subnational Governance for the Low Carbon Energy Transition: Mapping the UK's 'Energy Constitution'", *Environment and Planning C: Politics and Space* 35 (2017): 1176–1197, https://doi.org/10.1177/2399654416687999.

Wahyudi, Khairunnisa, "Implementasi SPKLU sebagai Infrastruktur Penunjang Electrical Vehicle", *Jurnal Teknik Industri (JATRI)* 2, no. 2 (2024): 38–46, https://e-journals2.unmul.ac.id/index.php/jatri/article/view/1491/613.

Winarsih, Tri, *et al.*, "Redesign of Electricity Sector Tax Incentives Based on SDGs and Green Energy", *Jurnal Akademi Akuntansi* 8, no. 1 (2025): 149–158, https://doi.org/10.22219/jaa.v8i1.37529.

Zahari, Teuku Naraski, and Benjamin C. McLellan, "Review of Policies for Indonesia's Electricity Sector Transition", *Energies* 16, no. 8 (2023): 3406, https://doi.org/10.3390/en16083406.

Reports/Official Documents

Climate Policy Initiative, Energizing Renewables in Indonesia: Optimizing Public Finance Levers to Drive Private Investment, 2018.

Department for Energy Security and Net Zero, Strategy and Policy Statement for Energy Policy in Great Britain, 2024.

Directorate General of New, Renewable Energy and Energy Conservation, Laporan Kinerja Ditjen EBTKE, 2020.

G. S. I. Report, Indonesia's Energy Support Measures, 2022.

Green Fiscal Policy Network, Accelerating Green and Sustainable Finance in Indonesia, 2023.

HM Treasury, Control for Low Carbon Levies, 2017.

House of Commons Library, The UK's Plans and Progress to Reach Net Zero, 2050.

Institute for Essential Services Reform, Indonesia Energy Transition Outlook, 2023.

Institute for Essential Services Reform, Indonesia Energy Transition Outlook 2025, 2024.

Office for National Statistics, UK Environmental Accounts: UK Onshore Wind Sector 2014, 2016.

Organisation for Economic Co-operation and Development, Clean Energy Finance and Investment Policy Review of Indonesia, 2021.

Internet

Cladco, "Renewable Energy Percentage UK", January 20, 2025, https://www.cladco.co.uk/blog/post/renewable-energy-percentage-uk.

detikkalimantan, "World Oil Prices Rise 4% on Israel-Iran War", June 18, 2025, https://www.detik.com/kalimantan/bisnis/d-7970020/harga-minyak-dunia-naik-4-imbas-perang-israel-iran.

Department for Energy Security and Net Zero, "About Us", September 4, 2025, https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about.

GOV.UK, "Department for Energy Security and Net Zero: Working for DESNZ", September 14, 2025, https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero/about/recruitment.

GOV.UK, "Supporting the Transition across the Economy", September 14, 2022, https://www.gov.uk/government/publications/net-zero-strategy/4-supporting-the-transition-across-the-economy.

Grierson, Jamie, "Urgent Action Needed to Harness Tidal Power in Severn Estuary, Say Experts", *The Guardian*, March 19, 2025, https://www.theguardian.com/environment/2025/mar/19/urgent-action-needed-to-harness-tidal-power-in-severn-estuary-say-experts.

Institute of Sustainability and Environmental Professionals, "Devolved Powers Reveal Low-CO2 Energy Plans", September 4, 2025, https://www.isepglobal.org/articles/devolved-powers-reveal-low-co2-energy-plans/.

Ismoyo, Bambang, "Energy Minister Bahlil Alleges Sabotage Behind Indonesia's Oil Import Dependence", *Jakarta Globe*, May 26, 2025, https://jakartaglobe.id/news/energy-minister-bahlil-alleges-sabotage-behind-indonesias-oil-import-dependence.

Local Energy Scotland, "Community and Renewable Energy Scheme", Energy Saving Trust, February, 19, 2025, https://energysavingtrust.org.uk/programme/community-and-renewable-energy-scheme/.

National Grid, "How Much of the UK's Energy Is Renewable?", January, 17, 2024, https://www.nationalgrid.com/stories/energy-explained/how-much-uks-energy-renewable.

Ofgem, "About Us: Investor Relations", September 14, 2025, https://www.ofgem.gov.uk/about-us/contact-us/investor-relations.

Ofgem, "About Us: What We Regulate", September 4, 2025, https://www.ofgem.gov.uk/about-us/what-we-regulate.

Ofgem, "About Us: Who We Are", September 14, 2025, https://www.ofgem.gov.uk/about-us.

Primantoro, Agustinus Yoga *et al*., "What Is the Impact of the Iran-Israel War on the Indonesian Economy?", June 18, 2025, https://www.kompas.id/artikel/en-apa-dampak-perang-iran-israel-terhadap-perekonomian-indonesia.

Puspitalova, Angelina Tiara, "7 Reasons Why Indonesia Still Reliant on Oil Imports", *Tempo English*, January 14, 2025, https://en.tempo.co/read/1963732/7-reasons-why-indonesia-still-reliant-on-oil-imports.

Putra, Nandito, "Aspebindo: Increase in Oil Prices Can Have an Impact on the State Budget", *Tempo*, June 17, 2025, https://en.tempo.co/read/2018362/rising-oil-prices-from-iran-israel-conflict-highlight-indonesias-energy-vulnerability-warns-aspebindo.

Renewable Energy Association, "Written Evidence Submitted by the Renewable Energy Association", September 4, 2016, https://committees.parliament.uk/writtenevidence/64817/html/.

RenewableUK, "RenewableUK Press Release: Official Stats Show Renewables Generated over Half UK's Electricity for the First Time in 2024", March 27, 2025, https://www.renewableuk.com/news-and-resources/press-releases/official-stats-show-renewables-generated-over-half-uk-s-electricity-for-the-first-time-in-2024/.

Rinaldi, Renold, "Indonesia Still Dependent on Fuel Imports from Singapore: Bahlil", *Indonesia Business Post*, January 30, 2025, https://indonesiabusinesspost.com/3785/national-resilience/indonesia-still-dependent-on-fuel-imports-from-singapore-bahlil.

SIP Law Firm, "Tax Incentive Policy for Green Energy", February 22, 2025, https://siplawfirm.id/kebijakan-insentif-pajak-untuk-energi-hijau/?lang=id.

Welsh Government, "Welsh Government Backs Tidal Power with £2 Million Investment", March 19, 2025, https://www.gov.wales/welsh-government-backs-tidal-power-2-million-investment.

West Midlands Combined Authority, "Devolution of Powers on Energy", September 4, 2025, https://www.wmca.org.uk/what-we-do/environment-energy/energy-capital/devolution-of-powers-on-energy/.