

Balancing Investment and Sustainability: Legal Challenges in Implementing the Domestic Market Obligation (DMO) in Indonesia's Coal Sector

Anggawira^A, Rahmat Dwi Putranto^B, Anthony^C, Ayler Beniah Ndraha^D

Abstract

The Domestic Market Obligation (DMO) policy in Indonesia's coal sector has created tensions between domestic energy supply interests and a stable investment climate. Its implementation faces serious challenges, including regulatory inconsistency, price uncertainty, and the risk of legal conflicts. In addition, this policy is considered counterproductive to the energy transition agenda and national climate sustainability commitments. This study aims to analyze legal challenges and formulate alternative policies and legal recommendations in the implementation of DMO. This study uses a normative legal approach with a conceptual and legislative approach. Data are analyzed normatively and interpretively against primary, secondary, and tertiary legal materials. The results of the study indicate that the implementation of DMO has not been supported by stable and harmonious regulations with the principles of sustainability and investment protection. A more consistent legal framework, a clear energy transition mechanism, and strengthening of legal instruments are needed to ensure a balance between state interests and legal certainty for investors. DMO policy reform must be placed in the context of long-term energy transformation to align with Indonesia's sustainable development goals.

Keywords: *Investment, Sustainability, Domestic Market Obligation (DMO), Coal.*

INTRODUCTION

Indonesia is currently facing an increasingly complex policy dilemma in the energy sector, particularly in the management of coal resources. On the one hand, coal is still the mainstay of meeting national energy needs, especially for power plants and heavy industry. The high dependence on this resource has made the government strive to ensure its availability domestically, both to maintain supply stability and to ensure affordable energy prices for the community. However, on the other hand, international pressure on commitments to reduce carbon emissions and the transition to clean energy is getting stronger,

^ASekolah Tinggi Ilmu Hukum IBLAM, Jakarta, Indonesia, Email: anggawira@iblam.ac.id

^BSekolah Tinggi Ilmu Hukum IBLAM, Jakarta, Indonesia, Email: rdp@iblam.ac.id

^CHimpunan Pengusaha Muda Indonesia (HIPMI), Jakarta, Indonesia, Email: anthonyleong.id@gmail.com

^DUniversitas Nias, Gunungsitoli, Indonesia, Email: aylerndraha@gmail.com

giving rise to a contradiction between national policies oriented towards energy security and global demands that lead to environmental sustainability (Xiao et al., 2023).

In this context, the Domestic Market Obligation (DMO) policy, which requires coal companies to meet the domestic market before exporting, has become the government's main instrument in maintaining domestic supply. However, the implementation of this policy is not free from various legal issues and implications for the business world (Adam et al., 2023). Amidst the high demand for coal exports that promise huge profits for companies, the DMO policy is often considered to limit the scope of business actors in determining market strategies and investment directions. The imbalance between the state's goal of ensuring energy supply and investors' desire to maximize profits creates complex frictions of interest, especially when regulations change rapidly and do not provide long-term legal certainty (Pūķis et al., 2023).

The existence of the DMO policy also raises concerns about the investment climate in the mining sector. Investors, both domestic and foreign, consider that government intervention that is too strong in market orientation and commodity prices can disrupt business continuity and investment stability. Policies that are considered inconsistent, frequently changing, or not communicated transparently can reduce interest in new investment and encourage capital relocation to countries that offer better regulatory stability (Pathak et al., 2025). This is a crucial problem amidst the government's efforts to continue to attract investment as one of the driving forces of national economic growth. When regulations such as the DMO are not formulated with a solid and accountable legal framework, the risk of disputes between the state and investors will increase, both through domestic legal mechanisms and through international arbitration forums (Khater et al., 2024).

Meanwhile, at the global level, Indonesia continues to be in the spotlight regarding its commitment to reducing carbon emissions and sustainable development. In various international forums, the government has stated its commitment to reducing dependence on fossil fuels and strengthening the energy transition to cleaner and more environmentally friendly sources. However, the reality on the ground shows that domestic coal production and consumption continue to increase, especially due to the DMO policy, which strengthens the role of coal in the national electricity system (Govindarajan et al., 2023). This disparity between policy rhetoric and implementation on the ground raises major questions about the direction and consistency of the national strategy in the energy and environmental sectors. In addition, international pressure from trading partner countries, global financial institutions, and multilateral institutions is also growing stronger in encouraging Indonesia to reduce coal subsidies and accelerate the termination of fossil-based energy projects (Jiang & Raza, 2023).

No less important, the implementation of the DMO policy also presents challenges in terms of legal and institutional governance. Regulations governing the DMO often overlap, experience sudden changes, or do not have adequate oversight instruments. This causes business actors to be in a situation full of uncertainty, while government institutions often do not have good coordination in carrying out their regulatory, supervisory, and law enforcement functions (Gretzel, 2022). When policies are implemented without clear transparency and accountability mechanisms, the potential for abuse of authority, discriminatory practices, or legal loopholes that are exploited unethically becomes greater. This condition not only harms investors but also creates a negative perception of the national legal system as a whole (Kiritchenko et al., 2021).

Furthermore, the implementation of the DMO has not fully considered the perspective of long-term sustainability. In many cases, the obligation to fulfill the domestic market is carried out without considering energy efficiency, distribution justice, or long-term environmental impacts. Most of the coal allocated to the domestic market is used in low-tech power plants with high emission levels, which ultimately increases the burden of pollution and worsens the quality of the environment. The absence of adequate incentives for companies to innovate environmentally friendly technologies in fulfilling DMO obligations is one of the main obstacles in the national energy transition process (Pot, 2021).

Amid this complex situation, the role of the legal system becomes crucial in ensuring that policies such as DMO can not only be implemented effectively, but also fairly, transparently, and consistently with sustainable development goals. The challenges faced lie not only in the technical implementation of the policy but also in how the law can be a tool to bridge the conflict between the state's interests in maintaining energy security, the needs of business actors in obtaining business certainty, and the national commitment to environmentally conscious development. In this context, a study of the legal challenges in the implementation of DMO becomes important and relevant to produce normative solutions that can strengthen the foundation of energy policy in Indonesia in a more balanced and sustainable manner.

LITERATURE REVIEW

Investment

Investment can be understood as a form of placement of funds or other resources made at present with the expectation of generating economic benefits in the future. This process reflects a strategic decision in which individuals or entities are willing to allocate their assets by not using them for immediate consumption, but rather directing them to activities that are expected to provide benefits in the future (Logue & Grimes, 2022). Thus, investment is essentially a conscious act of delaying satisfaction or current consumption needs to obtain greater and more sustainable potential results in the future. The

decision to invest requires careful consideration because it contains elements of risk and uncertainty regarding the expected results, while also reflecting confidence in the opportunity for value growth in the future (Olujobi et al., 2023).

Furthermore, investment can also be viewed as a mechanism for delaying current consumption, directed at placing funds in productive instruments or assets for a certain period of time. In this context, the main objective of investment activities is to create increased welfare, especially in the financial aspect. This increase in welfare is measured by the accumulation of income received currently plus the projection of the present value of future income generated by the investment (Karakosta et al., 2021). Therefore, the decision to invest is not merely mechanical, but also reflects the investor's time preference for consumption and risk management of the assets they own. In a broader framework, investment is an important instrument in long-term financial planning, both for individuals and institutions, because it can support economic growth, encourage productivity, and strengthen financial positions sustainably (Hanlon et al., 2022).

Sustainability

Sustainable development is a contemporary concept that emphasizes long-term environmental preservation through integrated management of natural, social, and economic resources to maintain the sustainability of the ecosystem and the lives of living things around it. This concept is in the global spotlight because it seeks to meet current needs without reducing the ability of future generations to meet their needs. Within the framework of sustainable development, policy makers have the responsibility to formulate decisions that take into account the balance between ecology, social interests, and economic goals (Hariram et al., 2023). Companies are also required to develop strategies that include short-term and long-term plans, taking environmental aspects into account as an integral part of the decision-making process. If the environmental dimension is ignored, this can lead to negative assessments of the company's performance, especially regarding commitment to sustainability and its impact on profitability. Therefore, it is important for companies to adopt a multidimensional perspective in sustainable development to maintain a balance between business profits and environmental responsibility (Kuruppu et al., 2024).

The idea of sustainable development began to be widely known in the mid-1980s, in response to the imbalance between environmental degradation caused by human activities and various socio-political issues. This concept also encouraged the growth of scientific discourse on the environment, which developed significantly from the 1960s to the 1980s. Along with the emergence of attention to environmental issues, various thoughts were also born that formed the basis of environmental literacy theory, which has been discussed since the 19th century. The two main approaches that emerged were 'preservationist' and 'conservationist' (Tenzing & Conway, 2022). The preservationist

approach is spiritual and is heavily influenced by the teachings of transcendentalism in America and romanticism in Europe, with an emphasis on nature needing to be protected in its entirety without being exploited. In contrast, the conservationist approach is more pragmatic by emphasizing the need to protect land and natural resources to ensure the sustainability of their use by future generations. Both approaches originate from utilitarian views and social thinking, which then helped form the philosophical framework of sustainable development (Azizi et al., 2025).

Domestic Market Obligation (DMO)

Domestic Market Obligation (DMO) is a government policy that requires business actors in the mining sector, especially coal, to set aside part of their production to meet domestic market needs before exporting. This policy is implemented as a state strategy to ensure national energy security and stability of fuel supply for strategic sectors such as power plants and domestic industry (Sunardi et al., 2023). Through DMO, the government can intervene in the coal commodity market by determining a certain proportion of production that must be supplied domestically at a set or controlled price. The provisions regarding DMO not only regulate the volume of supply but are also closely related to the domestic price structure, which is lower than the international market price, as a form of indirect subsidy to ensure affordable energy prices for the community and industry (Wong & Dewayanti, 2024).

The implementation of DMO in the context of energy policy in Indonesia has complex economic, legal, and political dimensions. From an economic perspective, DMO acts as an instrument of state intervention to maintain the continuity of domestic energy supply, but this policy also creates potential disincentives for business actors due to price disparities and export restrictions (Halimatussadiyah et al., 2024). In practice, the implementation of DMO often faces challenges in the form of regulatory uncertainty, unpredictable changes in annual quotas, and non-transparent pricing mechanisms. In addition, its impact on export competitiveness and investment sustainability in the mining sector is also in the spotlight. This policy requires comprehensive and consistent legal arrangements so as not to cause tension between national interests and the commercial interests of business actors (Bálint et al., 2025).

Legally, DMO is based on national laws and regulations, especially Law Number 3 of 2020 concerning Mineral and Coal Mining (UU Minerba) and its derivative regulations such as the Regulation of the Minister of Energy and Mineral Resources (Permen ESDM) which regulates the technical implementation, including the determination of domestic coal quotas and prices. This provision provides a legal basis for the government to direct the production of natural resources for the national interest. However, the implementation of DMO often raises questions regarding legal certainty, especially if this policy is

implemented unilaterally or changes suddenly, thus potentially violating the principles of legal protection for investors. In international legal relations, DMO can also conflict with provisions in bilateral investment treaties (Bilateral Investment Treaties/BITs) if it is considered to cause indirect expropriation or unfair treatment for foreign investors (Dimitropoulos, 2023).

Thus, DMO can be understood not only as an energy policy instrument but also as a policy tool that has broad legal and economic consequences. To ensure the effectiveness and sustainability of this policy, stable, transparent, and fair regulations are needed, as well as harmonization between public interests and investment interests. DMO implemented without mature legal considerations can cause conflict between the state and business actors, both at the national and international levels. Therefore, the success of DMO implementation is highly dependent on the integration of legal norms, national energy planning, and long-term commitment to energy sector transformation, so that this policy does not become an obstacle to investment, but instead becomes part of a sustainable development strategy that is oriented towards national interests (Leonhardt et al., 2022).

METHOD

This study uses a normative legal research type with a conceptual and legislative approach, which focuses on the analysis of positive legal norms and legal ideas underlying the Domestic Market Obligation (DMO) policy in the coal sector in Indonesia. This study is not oriented towards empirical data in the field, but rather on the study of legal documents and relevant theories, in order to understand in depth how the DMO policy is regulated, implemented, and interpreted in the context of national law and its compliance with the principles of sustainability and investment certainty. The data sources used include primary legal materials such as Law Number 3 of 2020 concerning Mineral and Coal Mining (UU Minerba), work contracts such as PKP2B and IUP, and implementing regulations related to DMO, including Regulation of the Minister of Energy and Mineral Resources No. 139.K/HK.02/MEM.B/2021. Secondary legal materials are obtained from legal journals, academic studies, and policy analysis that discuss the legal and economic aspects of DMO, while tertiary legal materials are used to strengthen term searches and conceptual understanding. The analysis techniques used in this study are normative and interpretative analysis, by examining the relationship between legal norms, government policies, and relevant case studies in order to produce a complete understanding of the legal challenges and alternative solutions in the implementation of DMO policies in Indonesia (Huda & Hi, 2021).

RESULTS AND DISCUSSION

DMO Policy in Indonesia

The Domestic Market Obligation (DMO) policy in Indonesia was born from the urgent need to secure domestic energy supplies, especially amidst increasing dependence on coal as the main source of electricity generation. The background to the birth of this policy cannot be separated from the dynamics of the utilization of Indonesia's natural resources, which for decades have been more oriented towards exports than meeting national needs. Along with rapid economic growth and the surge in domestic energy demand, the government began to realize that the dominance of coal exports had a negative impact on national energy security. Therefore, the DMO policy began to be formulated as a regulatory instrument to ensure that part of the coal production from mining companies must be distributed to the domestic market, with certain quotas and prices set by the government.

Over time, the DMO policy has undergone various developments, both in terms of its implementation mechanism and in adjusting the quotas set each year. At the beginning of its implementation, this policy faced various challenges, ranging from resistance from mining companies who felt they were losing potential export profits to technical obstacles in monitoring and enforcing regulations in the field (Paraschiv et al., 2024). The government, through the Ministry of Energy and Mineral Resources (ESDM), then strengthened this policy by setting a national DMO quota target and imposing administrative sanctions on companies that did not comply with these provisions. In practice, the implementation of DMO continues to experience adjustments based on global market dynamics, domestic supply conditions, and changes in national energy policies. Several times, the government has also adjusted coal prices for DMO, especially for the electricity sector, so as not to burden PLN and ensure the stability of electricity rates for the community.

The main objective of the DMO policy is to ensure the availability of domestic coal at affordable prices, as well as to support the sustainability of strategic sectors such as electricity and the manufacturing industry. The government believes that without intervention in the form of policies such as DMO, coal producers will prefer to channel their products to the export market, which offers prices much higher than the domestic market. With the DMO, the government hopes to reduce dependence on energy imports and maintain the stability of the national electricity supply, especially amidst increasing energy consumption from the household, industrial, and transportation sectors. This policy is also part of the government's medium-term strategy to strengthen national energy independence and increase the competitiveness of the domestic industry, which is highly dependent on coal as the main energy source.

However, behind this objective, the DMO policy also has a significant impact on the dynamics of the export market and investment interest in the mining sector. Business actors consider that the

obligation to sell part of their products to the domestic market, especially at prices lower than international market prices, can reduce profit margins and disrupt their long-term business schemes. The provisions that require companies to meet the DMO quota are considered to limit flexibility in responding to global market fluctuations. In some cases, mining companies have to bear losses due to significant price differences between DMO and exports, without adequate compensation or incentives from the government. This creates tension between the government's efforts to secure national energy and the aspirations of industry players who demand business certainty and protection of the economic value of coal production (Franken & Schütte, 2022).

Furthermore, the DMO policy also affects the structure of the domestic coal market and Indonesia's international trade patterns. With an increasing portion of total coal production allocated to the domestic market, coal exports have experienced quite sharp fluctuations in recent years. This has an impact on the trade balance and state revenues from the natural resource export sector. On the other hand, in the context of energy geopolitics, changes in the DMO policy also affect Indonesia's bargaining position in the global coal market. Trading partner countries that have relied on supplies from Indonesia have begun to seek alternative supplies from other countries, which in the long term could reduce Indonesia's export competitiveness. This challenge becomes increasingly complex when the DMO policy is not accompanied by institutional reform and strengthening of legal instruments that can guarantee certainty and consistency in the implementation of the policy on an ongoing basis.

The DMO policy also poses its challenges in supervision and law enforcement. The government must ensure that all mining companies comply with applicable provisions, including in terms of the volume, quality, and selling price of domestic coal. However, in practice, there are still legal loopholes and weaknesses in supervision that cause the implementation of the DMO not to always go according to plan (Wambwa et al., 2023). Some companies have been reported to have carried out practices of manipulating production data or avoiding DMO obligations through non-transparent trading schemes. On the other hand, the enforcement of sanctions against DMO violations often faces bureaucratic obstacles and a lack of coordination between government agencies. These weaknesses not only reduce the effectiveness of the policy but also reduce the credibility of the government in managing the energy sector fairly and accountably.

The DMO policy in Indonesia reflects the state's efforts to safeguard national interests amidst global market pressures and demands for sustainability. However, to be able to run effectively and sustainably, this policy requires a stronger legal basis, transparent governance, and better synergy between the interests of the government and business actors. Without structural improvements in the formulation and implementation of the policy, the DMO risks becoming

an additional burden for industry players and hampering Indonesia's efforts to build a resilient, sustainable, and equitable energy sector. Thus, an in-depth study of the history, development, and impact of the DMO policy is very important in formulating future energy policies that are more responsive to national needs and global challenges.

Legal Challenges in DMO Implementation

The implementation of the Domestic Market Obligation (DMO) policy in the coal sector in Indonesia cannot be separated from various complex legal challenges, which arise as a result of regulatory inconsistencies, uncertainty in technical arrangements, and weak legal certainty for business actors. One of the main issues that arises is the inconsistency of regulations between the central and regional governments, as well as between sectors within the scope of energy resource governance. Law Number 3 of 2020 concerning Amendments to Law Number 4 of 2009 concerning Mineral and Coal Mining (Minerba Law) has indeed emphasized that mining management is under the authority of the central government. However, in practice, regional governments still play an important role in technical licensing, supervision, and operational control in the field, which are often not in line with the DMO policy set nationally.

This disharmony is exacerbated by differences in the interpretation of the DMO regulation between technical ministries, such as the Ministry of Energy and Mineral Resources (ESDM), and other agencies such as the Ministry of Trade and the Ministry of Finance, especially in terms of taxation, export trade, and supervision of domestic distribution. For example, the Regulation of the Minister of Energy and Mineral Resources No. 139.K/HK.02/MEM.B/2021 concerning the Fulfillment of Domestic Coal Needs (a revision of the previous regulation) requires mining companies to fulfill a certain percentage of their production for the domestic market. However, this regulation often does not have an effective synchronization mechanism with other derivative regulations, such as the regulation of the coal benchmark price (HPB) by the Directorate General of Mineral and Coal or export provisions by the Ministry of Trade, thus creating ambiguity in its implementation.

In addition, the unclear regulations regarding coal prices and quotas in the DMO scheme add to the burden of legal uncertainty for business actors. In some cases, the government sets domestic selling prices that are significantly lower than international market prices, without a transparent and participatory formula in the determination process (Scholvin et al., 2025). For example, in the electricity sector, the DMO coal price for PLN is limited to USD 70 per metric ton, regardless of global market prices, which can be much higher. This provision is reflected in the Decree of the Minister of Energy and Mineral Resources No. 139.K/HK.02/MEM.B/2021 and similar regulations, which are considered not to provide business certainty and can disrupt investment continuity. This kind of price setting, which is unilateral

without contractual negotiation, has the potential to violate the principle of justice in the legal relationship between the state and business actors.

The DMO quota set each year also often changes, following domestic market needs and supply conditions, without being based on a regulatory approach based on long-term planning. The absence of a consistent reference for quota allocation between companies or sectors creates inequality before the law, which is contrary to the principle of good governance (Fatras et al., 2022). Not a few mining companies have difficulty adjusting their long-term cooperation contracts with third parties due to sudden changes in quotas. In the context of contract law, this can lead to default, both against foreign buyers and domestic partners, which ultimately gives rise to the potential for civil disputes or arbitration.

Furthermore, the implementation of DMO may legally conflict with investment commitments guaranteed by national laws and international agreements. Law Number 25 of 2007 concerning Investment guarantees investors' rights to fair and non-discriminatory treatment as well as legal certainty and legal protection for ownership and contract rights. When DMO regulations are applied unilaterally and substantially change the obligations of business actors without going through a consultative mechanism, the state may be considered to have violated the principle of investor protection, which has the potential to trigger lawsuits, including through international arbitration based on bilateral agreements (Bilateral Investment Treaties/BITs) that Indonesia has signed (Van der Ploeg, 2024). Several of Indonesia's investment partner countries may use the investment protection provisions in BITs as a basis for filing lawsuits for treatment that is considered unfairly detrimental to foreign investors.

The potential for legal conflicts also shows the weakness of Indonesia's legal framework in anticipating the impact of sectoral policies on broader legal relations, including long-standing contracts in the Coal Mining Business Work Agreement (PKP2B) scheme and Special Mining Business Licenses (IUPK). Many of these contracts were signed before the DMO policy was formally implemented, so that adjustments to new obligations such as DMO can be viewed as unilateral amendments to the agreement, which is very problematic from a legal perspective. If there is no renegotiation clause or adaptation clause in the contract, then the direct implementation of DMO can be considered an act of expropriation or indirect taking over of rights, which is certainly contrary to the principles of civil law and investment protection.

In addition, the existence of gaps in supervision and the ambiguity of legal sanctions also add to the complexity of DMO legal challenges. Although the government has implemented a quota monitoring system and sales reporting through an online system such as MODI (Minerba One Data Indonesia), there are still many reports of discrepancies between production data, DMO realization, and export

reports. When supervision is not carried out effectively, the application of legal norms cannot be enforced fairly. In many cases, administrative sanctions for DMO violations are not imposed consistently, giving rise to a discriminatory perception among business actors. This not only damages the principle of justice in law enforcement but also erodes the credibility of the state as a regulator and contractual partner.

Impact of DMO on Investment Climate

The implementation of the Domestic Market Obligation (DMO) policy in the Indonesian coal sector has created significant dynamics in the national investment climate, especially in investor perceptions of the stability of energy policies. This policy, which requires mining companies to allocate part of their production to the domestic market, is often seen as a form of direct government intervention in market freedom and commercial structures that have been agreed upon in business contracts. Investors, both domestic and foreign, basically need assurance that the applicable regulations are not only clear and transparent but also stable in the long term. When policies such as DMO are implemented suddenly, change periodically, or do not have a strong and predictable legal basis, it will create high uncertainty for capital owners in planning and realizing their investments.

The perception of policy instability is further exacerbated by the minimal participation of investors in the policy formulation process, as well as the lack of public consultation in determining DMO quotas and domestic selling prices. In many cases, the government sets coal prices for domestic needs unilaterally without considering international price fluctuations or production costs borne by the company (Hao & Wang, 2025). Provisions such as the DMO price for the electricity sector set at USD 70 per metric ton, while global market prices can exceed twice that, show a large disparity between market value and policy value. This mismatch not only causes economic losses for companies but also creates a sense of insecurity among investors who worry about unfair treatment and policy inconsistencies over time. In the long term, this perception could reduce Indonesia's attractiveness as an investment destination in the energy and mining sectors.

Investor concerns over the implementation of DMO are also closely related to the potential for conflict with provisions in bilateral investment treaties (BITs). Indonesia is a party to several BITs that regulate the protection of foreign investment, including the principle of fair and equitable treatment, guarantees against expropriation without compensation, and the right to dispute resolution through international arbitration. When the government implements a DMO policy that is considered to reduce the economic value of the investment or substantially change the rights agreed upon in the investment agreement, the country has the potential to be considered to have violated these international commitments. For example, if a foreign mining company feels that the DMO obligation forces them to sell products below market prices and cancel international sales contracts,

they can use the provisions of the BIT as a basis for filing a lawsuit against the Indonesian government.

The potential for legal conflict in the context of BITs is even greater when there is no transparent and effective domestic mechanism for resolving disputes. When investors feel that they are not getting adequate protection in the national legal system, they will be more likely to bring the problem to an international arbitration forum such as the International Centre for Settlement of Investment Disputes (ICSID) or UNCITRAL. In recent decades, Indonesia itself has faced a number of lawsuits from foreign investors over national policies deemed to violate investment agreements, and this provides a clear precedent that the mining sector is highly vulnerable to such disputes. If DMO policies are not designed with the principle of legal prudence and compliance with international norms, then the risk of litigation or arbitration cannot be avoided, which in turn can create a large fiscal burden for the country and damage Indonesia's image in the eyes of global investors (Liu & Ai, 2025).

The risk of international arbitration as a result of the implementation of the DMO is not just a theoretical threat, but has become a real concern in the international business community. Investors see that coercive policies, such as DMOs implemented unilaterally without contract renegotiation or adequate compensation, are an indirect form of expropriation. In many international arbitration decisions, the courts have stated that state intervention that substantially reduces the value of an investment, even without physical takeover, can be considered expropriation if not accompanied by adequate compensation. In this context, Indonesia's DMO policy has the potential to be debated in the international legal realm as an action that violates the principles of investment protection if it is not prepared and implemented carefully, openly, and consistently with global legal norms.

Furthermore, investor concerns also arise from the government's tendency to revise or change DMO regulations periodically without any clarity regarding the time frame or the transition mechanism. Changes in DMO quotas from year to year, price adjustments that are not based on predictable economic formulas, and the sudden imposition of administrative sanctions give the impression that Indonesia's energy policy is reactive and not based on long-term planning (Zhang, 2022). This creates additional pressure for investors who need regulatory stability in preparing revenue projections, determining expansion strategies, and establishing long-term business partnerships. When the policy environment is considered unpredictable, interest in investing in the energy sector will decline, and investors will tend to shift their attention to countries that offer a more certain and business-friendly investment climate.

In the long term, the negative impact of DMO on the investment climate can spread to broader aspects, including slowing capital inflows, reducing technological innovation in the energy sector, and

decreasing the mining sector's contribution to state revenues. The energy sector, especially coal, requires large investments in exploration, processing, logistics, and compliance with increasingly stringent environmental standards. If policies such as DMO continue to be implemented without providing adequate incentives or legal certainty, companies will be reluctant to make sustainable investments in clean technology, production efficiency, or market diversification. Instead, they will minimize expansion and only pursue short-term profits, which ultimately harms the country in the form of reduced taxes, royalties, and economic added value.

Thus, to maintain and improve Indonesia's competitiveness as an investment destination in the energy sector, the DMO policy must be designed and implemented with a more progressive and inclusive legal approach. The government needs to build a legal framework that is able to guarantee protection for investors, without sacrificing the national strategic goal of ensuring domestic energy supplies. Harmonization between domestic regulations and international commitments, strengthening dispute resolution mechanisms, and transparency in the policy formulation process are absolute prerequisites for DMO to run in line with efforts to create a healthy and sustainable investment climate. Without these steps, the DMO policy intended to strengthen national energy security is at risk of becoming a major obstacle in attracting and retaining the investment needed for future energy sector development.

Implications of DMOs for the Sustainability Agenda

The Domestic Market Obligation (DMO) policy in Indonesia's coal sector has had broad implications for the national sustainability agenda, especially in the context of efforts to transition to clean energy. The implementation of the DMO, which requires coal companies to allocate part of their production to the domestic market, directly strengthens Indonesia's dependence on fossil fuels, especially coal as the main source of electricity generation. On the one hand, this policy aims to guarantee the availability of energy supplies for the community and industry, as well as maintain the stability of domestic energy prices. However, on the other hand, it structurally extends the life of coal in the national energy mix and hinders the acceleration of the transition to a more sustainable, low-carbon energy system. In practice, the DMO has created conditions in which coal-fired power plants (PLTU) remain the dominant choice, because the cheap and guaranteed supply of coal makes renewable energy alternatives less competitive.

This policy is counterproductive to the various climate commitments that have been declared by the Indonesian government in international forums, including in the Nationally Determined Contributions (NDC) scheme under the Paris Agreement (Abi Suroso et al., 2022). In the NDC, Indonesia targets significant reductions in greenhouse gas emissions, both through business-as-usual scenarios (unconditional) and with international assistance (conditional). However, the existence of the DMO strengthens the use of fuels with

high emissions and weakens incentives to develop renewable energy sources such as solar, wind, biomass, and geothermal. When coal is sold to PLN at a fixed and low price, the cost of generating renewable energy is often considered more expensive in the short term, even though it is more environmentally friendly in the long term. This imbalance of incentives indirectly creates distortions in energy decision-making at the national level and widens the gap between sustainability policy discourse and implementation in the field.

The challenges in the energy transition become even more apparent when we see that the DMO not only regulates the volume of supply but also shapes the economic and institutional structure of the energy sector as a whole. The dependence on coal reinforced by the DMO policy has resulted in the allocation of state resources—both fiscal, institutional, and technological—continuing to be focused on coal management and distribution. This has an impact on the limited support available to develop renewable energy technologies, build infrastructure that is compatible with clean energy systems, and create regulations that encourage green innovation. Meanwhile, companies operating in the renewable energy sector face various obstacles, ranging from complicated licensing to regulatory uncertainty and the lack of certainty of profitable electricity selling prices. When the DMO continues to be maintained without a clear transition framework, Indonesia's long-term goal of achieving net-zero emissions by 2060 or sooner will become increasingly difficult to achieve (Alonso-Travesset et al., 2023).

Moreover, the existence of the DMO also has negative implications for international perceptions of Indonesia's seriousness in carrying out energy reforms that support sustainable development. As a country rich in renewable resources and one of the largest economies in Southeast Asia, Indonesia has a strategic position in global efforts to combat climate change. However, domestic policies such as DMO often send negative signals to international partners, donor agencies, and green energy investors. Many parties question the consistency between Indonesia's climate commitments and domestic energy policies that are still heavily dependent on coal. In this case, DMO becomes a symbol of failure to integrate sustainability principles into the national energy policy framework, because it shows that short-term energy supply guarantees are still prioritized over structural transformation efforts towards clean energy.

In addition to worsening Indonesia's image on the international stage, the sustainability of DMO also has the potential to create greater environmental and social burdens at the local level. Coal mining activities that continue to be pushed to meet DMO targets have caused environmental damage, air pollution, and social conflict in many coal-producing areas (Busch et al., 2023). Regions such as Kalimantan and Sumatra have felt the direct impacts of this massive exploitation, ranging from land degradation, pollution of water sources, to loss of biodiversity. When the DMO policy indirectly extends the operational life

of these mines, the cumulative impact on the environment will also increase. In this context, sustainability is not only at stake at the national and international levels, but also in the lives of local communities who are directly affected by environmentally unsound energy policies.

In the roadmap towards clean energy, the DMO policy should be positioned not as an obstacle, but as part of a transition phase that has a clear time limit and exit strategy. The government needs to start designing a roadmap to gradually reduce the portion of coal in the national energy mix, while increasing the renewable energy mix with the support of concrete fiscal, regulatory, and investment policies. This requires a comprehensive evaluation of the DMO scheme, including a review of the pricing structure, allocation quotas, and incentives for companies that contribute to reducing emissions. In addition, there needs to be a mechanism that encourages integration between the DMO policy and energy transition programs such as the National Energy General Plan (RUEN), the National Electricity General Plan (RUKN), and the long-term strategy for low-carbon development (Low Carbon Development Indonesia). Without such integration, the DMO policy will continue to operate outside the context of energy transformation and will only become a short-term policy that weakens Indonesia's position in facing the challenges of global climate change.

Policy Alternatives and Legal Recommendations

Amidst the complexity of the implementation of the Domestic Market Obligation (DMO) policy and its various impacts on investment, sustainability, and regulatory stability, alternative policies and legal recommendations are needed that are not only corrective but also strategic and visionary. One of the starting points for this policy reform is the preparation of regulations that are more consistent, predictive, and integrated within the framework of national energy governance. Currently, the DMO policy tends to be reactive and changes depending on market conditions and short-term political pressures. This creates uncertainty for business actors and weakens the credibility of Indonesian law in the eyes of global investors. Therefore, a regulatory design is needed that establishes the basic principles of the implementation of the DMO comprehensively, starting from the quota determination mechanism, price regulation, supervision procedures, to dispute resolution procedures, all of which are regulated in a clear, predictable, and long-term legal framework (Simanjuntak & Widyadhana, 2025).

One step that can be taken is to integrate the principles of the DMO into higher laws and regulations, for example, a revision of Law Number 3 of 2020 concerning Mineral and Coal Mining (UU Minerba). This revision is important to provide a solid legal basis, not only as an implementing regulation that can easily be changed at any time, but as a national strategic policy that is subject to the legislative process and public testing. The preparation of this consistent regulation also needs

to be based on a data-based approach and long-term energy transition scenarios. Regulations can no longer stand solely on short-term supply considerations, but must take into account the need for energy diversification, clean technology innovation, and carbon emission reduction targets as stated in the National Energy General Plan (RUEN) and other strategic planning documents.

In the context of harmonization between investment interests and public policy, there needs to be a legal mechanism that guarantees a balance between investor protection and national development goals. This can be done by strengthening clauses in investment contracts and sectoral regulations that guarantee a consultative process when there are policy changes that impact the economic value of investment (Wiegant et al., 2024). In many countries, this approach has been applied to create a healthy investment ecosystem while still allowing the state to implement legitimate public policies. For example, in the German and Dutch legal systems, the principle of "Regulatory Stability Clauses" is known, which guarantees that regulatory changes cannot be applied retroactively to existing contracts, except with fair compensation. This model can be adopted in mining contract schemes or revisions to laws governing the treatment of investors. With this approach, the government can still regulate the energy sector according to national needs, without violating the principles of investment protection and legal certainty.

In addition to harmonization between policy and investment, it is also important to propose legal revisions or at least strengthen long-term sustainability legal instruments. Currently, many energy policies are running separately from the principles of sustainable development. In this regard, Indonesia needs to develop legislation that places sustainability as a binding legal principle in the formulation of energy policies. For example, it can be considered to adopt the Norwegian model, which makes the principle of sustainability part of constitutional law through integration into the national energy strategy and fiscal policy. In Norway, the Sustainable Development Goals (SDGs) are used as a legal reference that must be adhered to in the entire public policy process. If Indonesia follows this approach, then policies such as DMO will not only be assessed in terms of supply efficiency, but also in terms of the extent to which they are in line with sustainability targets and environmental responsibility.

Strengthening legal instruments for sustainability can also be done through the preparation of an Energy Transition Law that explicitly regulates the stages, targets, and principles of the transition from fossil fuels to clean energy. This law must contain a long-term roadmap that regulates the role of coal, the role of renewable energy, and incentives for industry to switch from polluting to low-emission technologies (Heffron, 2022). In the context of the DMO, the existence of this law will help design the DMO transition framework—for example, by setting a time limit for validity, incentives for companies that reduce dependence on coal, and special treatment for sectors that successfully

innovate in energy efficiency. Without a transitional legal framework, the DMO will continue to run as an isolated policy that is not connected to long-term national energy goals.

In order to support sustainability and investment, it is also necessary to establish an independent energy monitoring institution that has the authority to assess the impact of energy policies on the economic sector, the environment, and society. This institution must have the legal authority to issue policy recommendations, provide assessments of regulations that will be enforced, and oversee the implementation of sustainability principles in energy policies. Countries like the UK and Canada already have similar bodies, such as the Committee on Climate Change (UK) and the Canadian Institute for Climate Choices, which act as a bridge between legislators, executives, and civil society in developing evidence-based policy. These bodies also act as a watchdog to ensure that energy policies remain in line with international climate commitments and protect people's rights.

CONCLUSION

Although the Domestic Market Obligation (DMO) policy in Indonesia's coal sector has a strategic objective to guarantee domestic energy supply, its implementation faces serious challenges in terms of law, investment, and sustainability. Inconsistent regulations between institutions and levels of government, unclear pricing and quota mechanisms, and weak contractual protection have created legal uncertainty that is troubling business actors. As a result, investor perceptions of the stability of national energy policies have become negative, which has the potential to trigger the risk of international litigation and arbitration and reduce Indonesia's competitiveness in attracting long-term investment. Furthermore, the sustainability of the DMO policy is also questionable in the context of Indonesia's climate commitments and the transition to clean energy. DMOs that strengthen the dominance of coal in the national energy mix have the potential to hinder the transformation to a more equitable and sustainable low-carbon energy system. Therefore, alternative policies are needed that are based on a consistent, predictive, and forward-looking legal framework. Regulatory reform, harmonization between investment protection and public interest, and strengthening legal instruments for sustainability are absolute prerequisites to ensure that Indonesia's energy policy is able to answer today's challenges without sacrificing the future.

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