

# The Effect of Coal DMO Policy on National Energy Security in Supporting National Defense and Security

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**Abstract:** People's dependence on electricity is very large, and the largest electricity company in Indonesia currently uses coal as the main fuel for power generation, considering the affordable price and the large availability of coal reserves in Indonesia. The need for coal in the global market is also very large, resulting in a significant increase in coal prices, this makes domestic coal producers prefer to sell coal to the global market. Coal exports do provide great benefits for Indonesia, but domestic needs must also be met. DMO is a policy to maintain coal energy reserves available. In other words, the DMO policy affects the level of national energy security. Indonesia's energy security can be seen through several criteria, namely availability, accessibility, affordability, acceptability, and sustainability (4A+1S).

**Keywords:** Coal, Electricity, CFPP, NZE, Renewable Energy

## I. INTRODUCTION

Coal is a commodity that is being targeted by many countries as a source of fuel for industrial activities and electricity generation. Indonesia has enormous coal resources, but Indonesia's abundant coal potential does not make the domestic electricity supply fulfilled solely from domestic mining products. The reason is that coal business actors prefer to export their coal to other countries considering the price of coal in the international market is higher than the domestic market. This raises a problem in the form of a lack of coal supply to meet domestic electricity needs, to overcome this the Indonesian Government issues policies related to meeting domestic coal needs through the Domestic Market Obligation (DMO) policy. This policy requires coal business actors to sell their coal to the domestic market, provided that the amount is 25% of the total annual production.

The main objective of the establishment of the DMO policy is to ensure the fulfillment of domestic coal needs in a sustainable manner and to prevent the occurrence of coal scarcity in the country which is based on the 1945 Constitution (UUD) Article 33 paragraph (3). The law states that natural resources in Indonesia must be used as much as possible for the prosperity of the Indonesian people, one of which is oil and gas. Furthermore, it is clarified in Law Number 4 of 2009 concerning mineral and coal, especially in Article 5 paragraphs (1) to (5) which states that the government can make policies to prioritize mineral and coal in meeting domestic needs, but in this law there is still no strict policy restrictions. To overcome this, the Government of Indonesia issued Government Regulation (PP) no. 23 of 2010 in Article 84 paragraph (1) which explains that the Government has legal

products to ensure the utilization and management of domestic coal, but the quantity and price have not yet been determined in the regulation.

In 2018 the government issued a policy through the Ministerial Decree (Kepmen) of ESDM No. 139K/30/MEM/2018 which is aimed at coal producing companies to sell their coal production to the domestic market at a price set by the government, which is US\$ 70 per ton. Furthermore, the minimum quantity that must be sold in the domestic market is regulated in the Minister of Energy and Mineral Resources Decree No. 23K/30/MEM/2018 which states that coal producing companies must sell their coal to the domestic market for 25% of the planned coal production in 2018. This decree finally covers the shortfall. The law that has been enacted previously is related to the quantity and price set by the government in coal trading in the domestic market. Until now there has been no change regarding the minimum quantity that must be sold by coal producing companies in the domestic market to meet domestic coal needs.

Basically the DMO policy was first implemented since 2009, through the Minister of Energy and Mineral Resources No. 34 of 2009 concerning the prioritization of coal supply for domestic fulfillment. Since 2009 until now, PT. PLN as the largest user of coal commodities is still experiencing a shortage of coal supply for power generation activities. The shortage of domestic coal supply has occurred several times, such as in 2008, 2018, and 2021. In fact, there are still many coal-producing companies that do not meet the DMO targets that have been set for various reasons. So far, the shortage of domestic coal supply is caused by several factors such as the declining level of coal production in the rainy season, the soaring demand for coal abroad so that producers prefer to export their coal abroad at higher prices, and distribution problems such as ship damage. tankers although this is rare.

In early 2022, the Indonesian government banned coal exports to foreign countries due to the non-fulfillment of coal supply in 2021. This action was taken by the Indonesian government to prevent an energy crisis in the country. The lack of coal supply to the country is caused by the number of entrepreneurs who did not meet the DMO target in the previous year, so that domestic needs, especially for electricity generation activities, are threatened not to be met if there is no export ban. Coal entrepreneurs prefer to sell their coal to the international market because in 2021 there will be an increase in coal demand which will result in a spike in coal prices. The

ban on coal exports was taken seriously by entrepreneurs and countries that rely on coal supplies from Indonesia, such as Japan, South Korea, and the Philippines. The protests of these countries show the importance of coal supply to maintain the stability of a country, both in terms of the economy and the security of a country.

Indonesia currently still relies on coal as the main fuel for power generation on a national scale. This happens because Indonesia still uses Steam Power Plants (PLTU) as the main power plant. Thus, the role of coal becomes very important to maintain the stability of electricity supply in Indonesia. Electricity is an important aspect considering that almost all human activities currently require electrical resources. Lack of electricity supply can have fatal consequences, such as blackouts in some areas, hampering trade activities and company productivity in those areas. On the other hand, power outages in border areas for a long period of time can also weaken the level of security so that security threats become increased, because modern defense equipment requires electricity to operate properly. In other words, the shortage of coal supply has a great influence on national energy security and even on the security of a country.

#### *Problem*

People's dependence on electricity is very large, and the largest electricity company in Indonesia currently uses coal as the main fuel for power generation, considering the affordable price and the large availability of coal reserves in Indonesia. Based on data from Minerba One Data Indonesia (MODI), as of July 26, 2021, the realization of Indonesia's coal production was 328.75 million tons, with details of 96.81 million tons (domestic realization), 161.99 million tons (export realization), and 52.22 million tons for DMO (EBTKE). Thus, keeping the domestic coal supply needs met is an important aspect to maintain the stability and security of a country. The government's strategic step to realize this is the implementation of a DMO policy scheme. However, in its implementation, the DMO policy does not provide clear clarity regarding the addition of the number of DMO coal supplies in urgent conditions.

In the DMO policy setting contained in the Letter of the Minister of Energy and Mineral Resources Number 2783/32/MEM.B/2018 dated April 19 2018, it states that PKP2B and IUP/PMDN companies must sell and supply to PLN 1/12 of the DMO obligation every month or according to with a meeting agreement with PLN. This means that the amount that must be sold to the domestic market has been mutually agreed upon so that the quantity is static. Meanwhile, in urgent and emergency conditions such as war, the need for electricity becomes very crucial and will increase considering that quite a number of defense equipment systems use electrical energy sources to operate. In other words, the electricity sector is included in the realm of the strategic environment.

Basically, the strategic environment can be grouped into

three categories, namely immediate security (borders), close security (regional) and wide security (global). The strategic environment contains various issues related to the three categories, issues that are included in the realm of the strategic environment include environmental issues of the Sustainable Finance Action Council (SFAC), military developments in countries around the region, border issues, intra and inter-state conflicts, contemporary conflicts, the existence of threats related to weapons of mass destruction, Asymetric wars, possible future wars, espionage, transnational crime organizations, climate change, disaster prone areas, food security, national security environment, and future challenges. Meanwhile, in the study of the strategic environment of a country, it is important to pay attention to the security environment, be it in military, political, economic and social aspects. Because these four security aspects can support a country's strategic environmental defense posture.

The issue of meeting coal supply needs is directly related to the four security aspects, namely the military, political, economic, and social aspects, because these four aspects cannot run smoothly without electricity. Therefore, the fulfillment of domestic coal supply must consider various conditions, including the readiness of reserves for urgent and emergency situations. In other words, the quantity of DMO must be sufficient to supply coal reserves under various conditions. Although Indonesia's coal reserves are very large, it does not mean that the process of exploitation and production runs without problems. This is because the amount of coal supply that is able to be supplied by coal producing companies tends to decrease during the rainy season so that it has the potential to lead to scarcity.

In addition, scarcity can also occur as a result of too many companies not complying with the agreed DMO requirements. This can happen due to various reasons, such as weather, distribution constraints, as well as the tendency of entrepreneurs to sell coal in the international market rather than the domestic market. The demand for coal in the global market is very high compared to the domestic market, this can be seen from the percentage of coal exports from Indonesia which reaches around 70% of the total annual production. In addition, Indonesia's strategic geographical location also supports Indonesia to be able to compete in coal sales in the global market. The high demand for coal in the global market and Indonesia's large coal reserves make Indonesia's ability to export coal also high, so many countries rely on coal supplies from Indonesia. This can provide benefits for Indonesia because coal sales increase Indonesia's economic strength and bargaining power against coal importing countries from Indonesia.

Bargaining power is the ability of an actor to be able to influence an opponent by providing something that is beneficial to the interests of the opponent himself (2005, Branislav). When one actor has stronger bargaining power and can fulfill or fulfill the wishes of his opponent, the opponent tends to act in accordance with the wishes of the actor who has

stronger bargaining power. It can be seen from the contract negotiations between the two parties, the negotiation of a contract that is more profitable for one actor shows a stronger bargaining power than the opponent. Bargaining power is very dependent on the rational actor model, meaning that bargaining power should not exceed certain areas, such as an actor who may be strong enough in the economic field, but weak in the military or security sector.

Indonesia's coal supply to other countries provides a strong bargaining power for Indonesia in the economic sector because there are still many countries that need coal for power generation activities. but on the other hand, this power can turn into a threat if contract negotiations related to coal are carried out with a country that has much greater power than Indonesia, in other words Indonesia has strength due to its coal export capabilities but is weak in other fields such as technology or other fields that become strategic sector to support the country's growth. On the other hand, Indonesia will have great power if coal cooperation occurs with a country that has lower power than Indonesia. Therefore, Indonesia must consider favorable negotiations for its side through coal export cooperation.

Coal exports do provide great benefits for Indonesia, but domestic needs must also be met. DMO is a policy to maintain coal energy reserves available. In other words, the DMO policy affects the level of national energy security. Indonesia's energy security can be seen through several criteria, namely availability, accessibility, affordability, acceptability, and sustainability (4A+1S).

## II. DISCUSSION

In this study, the influence of the DMO policy on national energy security in supporting defense is seen from the 4A+1S criteria, politics, and defense perspectives.

### *Effect of DMO policy on energy security (4A+1S)*

Indonesia's large coal reserves must be utilized as much as possible for the benefit of the nation. In practice, Indonesia's coal production has not been able to fully meet the needs of domestic coal supply. Domestic coal production is basically very large and able to meet domestic needs, but not all coal production is sold to the domestic market. To regulate the amount of coal production that must be sold to the domestic market, the Indonesian government implements a DMO policy. The DMO policy has determined the amount that must be sold to the domestic market, which is 25% of the total production per year at a price of US\$ 70 per ton. The presence of the DMO policy has a positive effect on coal sales in the domestic market, because coal producers have an obligation to sell their coal to the domestic market so that the availability of coal in the domestic market is guaranteed.

The distribution of coal from the hands of producers to consumers also needs to be considered, given the geographical shape of Indonesia which is an archipelagic country. The largest coal-producing region in Indonesia is Kalimantan with

78,910.91 million coal and 14,330.85 million coal reserves (2018, Director General of Minerals and Coal). The largest electricity demand is on the island of Java, so that coal production in Kalimantan must be distributed to the island of Java by sea. Coal carrier ships often experience problems in the form of technical and weather problems. The solution to this problem can be done by increasing the use of local energy sources such as cofiring combustion carried out by PT. PJB so that it saves more on the use of coal in power generation activities.

Indonesia's electricity generation activities are highly dependent on coal energy, so that the affordability of coal energy prices greatly impacts national energy security. Based on the DMO policy, the price for coal in the domestic market is set at US\$ 70 per tonne. This price is considered quite cheap compared to coal prices in the global market so that producers are more likely to sell their coal to the global market. However, the price set by the government has basically provided benefits for coal producers. Domestic coal production costs usually range from US\$ 20 per ton to US\$ 30 per tonne, in other words, the profit earned by producers is quite high. The current DMO policy does provide coal prices that are cheaper than coal prices in the global market, but Indonesia's coal resources should be utilized as well as possible for the national interest so that the DMO policy is a solution that benefits both users and producers.

In the national energy policy, there are principles of national energy development priorities as stated in Presidential Regulation 22 of 2017 concerning RUEN. The regulation states that one of the priorities for energy development is coal development based on the principle of "using coal as the mainstay of national energy supply". This reflects that coal energy is still accepted and used as the mainstay of national energy supply even though the use of coal for electricity generation activities has begun to be stopped at a global level due to the implementation of the Net Zero Emission (NZE) scheme. To overcome this, the Indonesian government requires the use of environmentally friendly coal energy technology (Clean Coal Technology / CCT) and high efficiency (Ultra Super Critical I / USC) in stages through Presidential Decree 22 of 2017 concerning RUEN.

The sustainable use of coal in Indonesia will continue both as an export commodity and as an energy resource, given Indonesia's very large coal reserves. However, Indonesia is also faced with the challenge of reducing and even stopping the use of coal as a form of Indonesia's commitment to achieving NZE. The current DMO policy will ensure that domestic coal supply remains available so that the level of sustainability of coal utilization is also high. However, this availability has not been able to meet energy needs as a whole, therefore the utilization of New and Renewable Energy (EBT) must be increased so that it can cover the shortage of coal supply.

The current DMO policy has a positive impact on

national energy security, because Indonesia's current condition still relies on coal as the main energy source for power generation and coal is also included in the energy development priorities as stipulated in Presidential Regulation 22 of 2017 concerning RUEN. Therefore, the DMO policy must continue to be implemented and needs to be updated following the dynamics of the environment and ongoing technological developments in order to have a better impact on national energy security.

#### *DMO Policy from the Political Perspective*

The coal DMO policy is a strategic policy that was initiated to meet the demand for coal supply in the domestic market. Unfortunately, this policy is still facing several obstacles, including the non-compliance of coal producers in implementing the policy. The government took this very seriously, ranging from providing light sanctions such as adjustments to the RKAB to severe sanctions such as export bans as happened in early 2022. Based on the Minister of Energy and Mineral Resources Decree No. 1952K/84/MEM/2018, sanctions given to coal producers who do not meet the stipulated DMO are revoking recommendations for mineral export approvals, recommending the revocation of coal ET, written warnings and temporary suspension of business activities, and adjustment of RKAB for the following year.

The design of the number of DMO quantities that must be met by producers will refer to the amount of national coal production per year. This process requires good communication between entrepreneurs and the government so that a number of agreements are reached that are agreed upon by both parties. That way, entrepreneurs cannot file a protest regarding the sanctions given because the number of DMOs that must be met has been agreed in advance. But the fact is that there are still many companies that do not meet the DMO targets issued by the government. The impact of not fulfilling the coal DMO is the reduced supply of coal in the domestic market, which poses a threat of energy scarcity. The case is similar to what happened in 2021, where many companies did not fulfill the coal DMO so the government took strategic steps in the form of banning coal exports.

This export ban can be seen as a strategic step to inform entrepreneurs that there is no other way but to meet the previously agreed DMO targets. In addition, the export ban is also a strategic step to prove Indonesia's influence in the Asian region. The export ban that occurred in early 2022 received protests from several countries such as Japan, South Korea, and the Philippines. This opportunity can be used by Indonesia to negotiate with related countries to get more benefits. This shows that coal provides more bargaining power for Indonesia, thereby increasing the ability to negotiate with cooperating countries.

Coal is Indonesia's natural wealth that must be utilized as well as possible for the benefit of the community as contained in Article 33 paragraph (3) of the Constitution. Coal DMO

policy is a political product to make the best use of natural resources in Indonesia. The DMO policy also regulates coal prices in the domestic market so that these prices can provide the maximum benefit to the community. The DMO policy is also supported by Presidential Decree 22 of 2017 concerning RUEN which states that coal is the mainstay of the national energy supply. This shows that the role of coal for the continuity of electricity supply is very large. Therefore, the utilization of coal resources as a national strategic resource must be used to support the prosperity of the people.

The case of the export ban that occurred in early 2022 is the long aftermath of the constraints in the supply of natural gas experienced by a number of countries in Europe. These countries finally chose to use coal as a substitute for natural gas in order to maintain the stability of their countries. This results in increasing demand for coal in the global market and will significantly increase coal prices. This phenomenon is a good opportunity for entrepreneurs to take big profits from the increase in coal prices so that coal exports increase, on the other hand, the fulfillment of coal supply needs for the domestic market is reduced. Despite receiving various negative responses in the form of protests from businessmen and other countries, the government's move is a form of disposition to maintain the stability of coal supply in the domestic market.

The DMO policy is made by the Ministry of Energy and Mineral Resources which is stated in the Decree of the Minister of Energy and Mineral Resources Number 139.K/HK.02/MEM.B/2021 concerning the Fulfillment of Domestic Coal Needs. In the Ministerial Decrees number 8 and 9 it is written the task "Business entities that provide electricity for the public interest are obliged to make plans for meeting coal needs every year by prioritizing the mechanism" and "The Director General of Mineral and Coal determines the holder of a Mining Business Permit for the stage of Coal Production Operation activities, Special Mining Business Permit for Coal Production Operation stage, Coal Mining Concession Work Agreement for Production Operation stage, Special Mining Business Permit as Continuation of Contract/Agreement Operation, and Coal Transportation and Sales Permit that does not meet domestic coal needs every month, with the approval of the Minister of Energy and Mineral Resources.

#### *Influence of DMO Policy in Support of Defense*

The positive impact of the DMO policy on national energy security will certainly affect Indonesia's defense and security. Coal's position as a strategic commodity will have an influence in achieving the defense objectives as stated in Law No. 3 of 2002, namely territorial integrity, state sovereignty, and the safety of the entire nation. The DMO policy that can guarantee the fulfillment of coal supply will have an indirect impact on the territorial integrity of Indonesia. This is caused by the disappointment of the community if the electricity supply is not met. People's disappointment can cause divisions



because people's trust in the state is reduced, so people prefer to break away from the Indonesian government. In addition, the lack of electricity supply can also be used by other countries to damage the territorial integrity of Indonesia, because areas that are not electrified have a lower level of security and economic activity in the area decreases or is below the area with electricity. therefore the influence of DMO in maintaining the territorial integrity of the Republic of Indonesia is very significant.

The DMO policy provides an opportunity for the Indonesian government to utilize existing natural resources. As stated in Article 33 paragraph (3) of the Constitution that oil and natural gas as strategic natural resources contained in Indonesian soil are national assets that must be utilized for the benefit of the nation. With the presence of the DMO policy, coal natural resources will be sold to meet the needs of the domestic market. This means that the DMO policy supports the Indonesian government to make the maximum use of natural resources so that Indonesia is sovereign over its natural resources. Guaranteed electricity supply thanks to the presence of the DMO policy will also provide strength for Indonesia not to depend on other countries for electricity generation, so that Indonesia becomes sovereign over the continuity of energy supply.

National defense and security will not run well if it is not supported by electricity. The need for electricity to maintain national defense and security is something that must be considered very well. Increased defense and security will also not be separated from electricity resources, therefore the availability of electricity is very important for national defense and security. With the assurance of national defense and security, the safety of the entire nation can be realized. Therefore, the presence of the DMO policy supports the safety of the entire nation because the availability of electricity will support national defense and security.

### III. CONCLUSION

Coal DMO is a political product to limit entrepreneurs from exporting all of their products abroad. Coal exports do provide great benefits for Indonesia, but domestic needs must also be met. DMO is a policy to maintain coal energy reserves available. In other words, the DMO policy affects the level of national energy security. The coal DMO policy also supports national defense and security through ensuring the supply of electricity through meeting the demand for coal supply in the domestic market. Therefore the coal DMO policy is a strategic step to support national energy security and national defense and security.

### REFERENCE

- [1] Teaching Materials for Energy and Defense Courses by Marine Colonel (KH) Dr. Ir. Yanif Dwi Kuntjoro, M.Si
- [2] Presentation Material "National Coal Production Policy and DMO Obligations" Presented at the Coal Policy FGD and its Implications Coordinating Ministry for the Economy
- [3] CNBC Indonesia. 2021. For the sake of the National Interest, Coal Companies Must Fulfill DMO. Retrieved from CNBC Indonesia:

- [4] <https://www.youtube.com/watch?v=o2-GhwOt4bo&t=3493s>  
CNBC Indonesia. 2022. Government VS Entrepreneurs on the Prohibition of Coal Exports. Accessed via <https://www.cnbcindonesia.com/news/20220102135753-4-303877/government-vs-pengusaha-atas-pelarangan-eksport-batu-bara>
- [5] CNBC Indonesia. 2022. Coal Companies Are Prohibited from Exporting, This is the Attitude of Adaro Cs!. Accessed via <https://www.cnbcindonesia.com/tech/20220102153938-37-303899/usahabatu-bara-dilarang-export-begini-sikap-adaro-cs>
- [6] Ministry of Energy and Mineral Resources. 2021. Coal Reserves Still 38.84 Billion Tons, Clean Technology Management Continues to be Pushed. [On line]. Press conference. Accessed via <https://www.esdm.go.id/id/media-center/arsip-berita/cadangan-batubara-masih-3884-miliar-ton-technology-net-pengelolaannya-terus-driven> on February 26, 2022 .
- [7] L. Slantchev, Branislav. (2005). Introduction to International Relations, Lecture 4: Bargaining and Dynamic Commitment. Journal: Department of Political Science, University of California, San Diego.