

## **Downstreaming of Oil And Gas From Environmental Legal Aspects in Indonesia**

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### **Abstract**

As one of the natural resources owned by the Indonesian state, oil and gas in its utilization process must comply with applicable regulations. Downstreaming of oil and gas has various benefits such as economic diversification, increased investment, and better environmental management. With a normative juridical type of research, this research discusses the regulation of oil and gas downstreaming and reviews of oil and gas downstreaming from the aspect of environmental law. Importance synchronization of various regulations regarding oil and gas downstreaming including policies related to the environment, both in its protection and management and in law enforcement, for the sake of sustainable development towards Indonesian Energy Security Gold 2045 and Net Zero Emission 2060 which remains environmentally friendly.

**Keywords: Oil and gas downstreaming, Environmental Law**

### **Introduction**

Oil and gas (oil and gas) downstream policy is one of the government's focuses on optimizing natural resources. Apart from increasing added value, oil and gas downstreaming has various benefits such as economic diversification, increased investment and better environmental management.

General Chairperson of the Purnomo Yusgiantoro Center (PYC) Filda C. Yusgiantoro (Jakarta, 2/4/2024) said that the right strategy is needed for oil and



gas downstreaming in Indonesia. Indonesia has a great opportunity to utilize oil and gas resources through a downstream approach as a national development strategy. Downstreaming in this case is the processing of natural resources before they are exported, can encourage economic growth and sustainable development, but requires integrated policies. It covers political, economic, social, technological, environmental and regulatory aspects. Regarding oil and gas and mineral and coal downstreaming in Indonesia, his party has also prepared a brief report with the title 'Effective Oil and Gas and Mineral and Coal Downstreaming Policy Strategy for Indonesia', in mid-March 2024. This short report evaluates the stages of downstreaming in the petroleum and natural gas sectors. , minerals, and coal. In general, this report shows that:

1. In the energy context, policies are needed that support technology investment and increase human capacity.
2. In the oil and gas sector, resource exploration and exploitation must be balanced with sustainable environmental protection.
3. In the minerals sector, industry involvement and environmental regulations need to be strengthened.
4. In the coal sector, economic diversification and the use of clean energy are key to reducing environmental impacts.<sup>1</sup>

In Outline of National Energy Direction (GBHEN) to achieve Energy Security towards a Golden Indonesia 2045 and Net Zero Emission 2060 with conditions of energy sovereignty and independence, what must be done is to increase Energy Security, Equity and Affordability, Sustainability, Investment and Growth, and Energy Governance. Indonesia's oil trade balance is experiencing a deficit, due to domestic consumption being higher than production, this will endanger the APBN, especially when oil prices fluctuate and tend to be high. Even though there is a deficit in oil,

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<sup>1</sup> Noviana Geby, PYC: Hilirisasi Migas dan Minerba Jadi Fokus Pemerintah, Siaran RRI Jakarta 02 Apr 2024 - 08:57.



there is a surplus in natural gas because Indonesia, as the LNG pioneer in the world, is still a net exporter of gas. In the future, gas absorption for both domestic and export will continue to increase.<sup>2</sup>

Natural gas as a commodity has very strategic value, namely:

1. Supporting energy security as an energy source (power plants, fuel replacement transportation sector, households and industry).
2. Supporting economic growth through downstreaming and strengthening domestic industry as raw materials (Fertilizer, Petrochemical, Methanol, Plastic and LPG Industries).
3. Supporting the development of renewable energy and energy transition (as a transition energy towards new renewable energy).
4. Sources of State revenue and priorities for domestic use of natural gas.<sup>3</sup>

The problems in this research include regulations regarding oil and gas downstreaming and juridical review of oil and gas downstreaming from the environmental legal aspect.

## **Method**

The type of legal research carried out is normative juridical. According to Philipus M. Hadjon, normative legal research is research aimed at finding and formulating legal arguments through analysis of the main problem.<sup>4</sup>Therefore, this legal research is focused on examining the rules or norms in positive law, namely legal norms related to the main issues regarding the regulation of oil and gas downstreaming and environmental legal norms. Meanwhile, the legal approach used is a statutory approach. This approach examines laws and regulations related to the main problem.

## **Discussion**

### **Oil and Gas Downstream Regulations**

Oil and gas is one of the natural resources owned by the State of Indonesia, so the process of utilizing it must comply with applicable regulations. In article

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<sup>2</sup>Prof (HC UNP) Dr. Ir. Dwi Soetjipto, MM (Kepala SKK Migas), Ketahanan Energi Menuju Indonesia Maju 2045, Kuliah Umum Strategic Leadership Pascasarjana Unair, Surabaya, 4 Maret 2024.

<sup>3</sup>Ibid.

<sup>4</sup>Dr. Bachtiar, S.H., M.H, Metode Penelitian Hukum, Unpam Press, Pamulang – Tangerang Selatan, 2018, Hal. 55.



33 paragraph 3 of the 1945 Constitution of the Republic of Indonesia it is stated that the Earth and water as well as the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people, which is continued by the provisions of paragraph 4 determining that The national economy is organized based on economic democracy with the principles of togetherness, efficiency, justice, sustainability, environmental insight, independence, and by maintaining the balance of progress and unity of the national economy.

The implementation of oil and gas downstreaming which will be carried out in 2025-2040 is targeted to bring in a total investment of around IDR 1,053 trillion. This is distributed over IDR 314.71 trillion for downstreaming oil and gas and IDR 771.70 trillion for natural gas downstreaming.<sup>5</sup>

As an implementation, there are several regulations regarding oil and gas downstreaming which have been established since 1960 and continue to experience development and refinement to this day, as a legal basis, including:

1. Law No. 44 Prp. 1960 Concerning Oil and Gas Mining.
2. Law No. 15 of 1962 concerning Oil Companies' Obligations to Meet Domestic Needs.
3. Law No. 8 of 1971 concerning Oil and Gas Mining Companies.
4. Law No. 22 of 2001 concerning Oil and Gas.
5. Law No. 3 of 2014 concerning Industry.
6. Perppu No 2 of 2022 (Job Creation Law).
7. Government Regulation Number 36 of 2004 concerning Downstream Oil and Gas Business Activities.
8. Presidential Regulation of the Republic of Indonesia Number 18 of 2020 concerning the 2020-2024 National Medium Term Development Plan.
9. Minister of Energy and Mineral Resources Regulation Number 26 of 2009 concerning LPG Supply and Distribution.

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<sup>5</sup><https://mediaindonesia.com/economic/658430/hilirisasi-migas-berkontribut-positive-bagi-penerimaan-negara>



10. Minister of Energy and Mineral Resources Regulation Number 29 of 2017 concerning Licensing for Oil and Gas Business Activities and amendments to Regulation of the Minister of Energy and Mineral Resources Number 52 of 2018.

11. Minister of Energy and Mineral Resources Regulation Number 40 of 2017 concerning Delegation of Authority to Grant Licensing for Oil and Gas Business Activities to the Head of BKPM.

For points 1, 2 and 3, the above regulations have been declared invalid. According to Law No. 22 of 2001, what is meant by oil and gas is oil and natural gas, while oil and natural gas are petroleum and natural gas. So, there are differences in meaning between petroleum and natural gas, this is in accordance with Article 1 of Law No. 22 of 2001 which is meant by:

- (1) Petroleum is the result of natural processes in the form of hydrocarbons which, under conditions of atmospheric pressure and temperature, are in liquid or solid phase, including asphalt, mineral wax or ozokerite, and bitumen obtained from mining processes, but does not include coal or other hydrocarbon deposits in solid form obtained from activities that are not related to Oil and Gas business activities.
- (2) Natural Gas is the result of natural processes in the form of hydrocarbons which under atmospheric pressure and temperature conditions are in the form of a gas phase obtained from the oil and gas mining process.

Oil and gas mining business activities based on Law No. 22 of 2001 article 5 are divided into two parts, namely:

1. Upstream Business Activities are business activities that have as their core or are based on Exploration and Exploitation business activities;
2. Downstream Business Activities are business activities that have as their core or are based on Processing, Transportation, Storage and/or Trading business activities.

The implementation of oil and natural gas management activities is aimed at the welfare of the people as a support based on the people's economy as stated in Article 2 of Law No. 22 2001, namely: The implementation of Oil and



Natural Gas business activities regulated in this Law is based on the principles of people's economy, integration, benefits, justice, balance, equality, shared prosperity and welfare of the people at large, security, safety and legal certainty as well as being environmentally friendly.

More specific regulations for oil and gas downstreaming are contained in article 23 of Law No. 22 of 2001:

- "(1) Downstream Business Activities as intended in Article 5 point 2, can be carried out by Business Entities after obtaining a Business License from the Government.
- (2) Business permits required for Petroleum business activities and/or Natural Gas business activities as intended in paragraph (1) are differentiated into:
- a. Processing Business License;
  - b. Transportation Business License;
  - c. Storage Business License;
  - d. Commercial Business License.
- (3) Each Business Entity can be given more than 1 (one) Business License as long as it does not conflict with the provisions of the applicable laws and regulations.

Further regulations for downstream oil and gas business activities, supply and distribution of LPG, licensing for oil and gas business activities, and delegation of authority to grant permits for downstream oil and gas are implemented in Government Regulations and Ministerial Regulations.

### **Downstreaming of Oil and Gas from the Aspect of Environmental Law in Indonesia**

In the oil and gas downstream process, there is some pollution to the air, water and land. Air pollution due to burning oil which produces CO<sub>2</sub> emissions into the open air, can cause acid rain, namely hydrocarbon gas, hydrogen sulfide gas, carbon dioxide gas. Water pollution, namely drilling waste, produced



water. There are two types of soil pollution, namely oil sludge, dirt resulting from the process of collecting and settling contaminants in oil, which consists of contaminants that are already in the oil and contaminants that accumulate during the processing process and are formed from the process. The operations in the oil and gas industry that have the greatest potential for producing sludge are oil storage tanks. And oil spills in the field can occur from leaks in refineries, transportation, storage and commercial facilities. Leaks can occur in pipes, tank trucks. Leaks can be caused by operator negligence, outdated equipment, damaged pipe seals or natural disasters. Thus, it can be ascertained that the impact of the oil and gas industry on the environment is very dangerous because the oil and gas industry can cause environmental damage which can be classified as B3 waste pollution.<sup>6</sup>

So, if viewed from the aspect of environmental law in Indonesia, there are two important things in oil and gas downstreaming, namely first, efforts to protect and manage the environment, secondly, efforts to enforce environmental law if there is a violation of the regulation of oil and gas downstream activities.

Regarding efforts to protect and manage the environment in oil and gas downstream activities, the government issues regulations to maintain environmental sustainability, as stated in Article 39 paragraph 1b of Law No. 22 of 2001:

"Determination of policies regarding Oil and Natural Gas business activities based on the reserves and potential of Oil and Natural Gas resources owned, production capabilities, domestic Oil and Natural Gas Fuel needs, mastery of technology, environmental aspects and environmental preservation, national capabilities, and development policy."

Likewise with article 40 paragraph 3 of Law No. 22 of 2001:

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<sup>6</sup> Bintang Ardhian Hermansyah, JurnalPost.com Ekonomi, Dampak Industri Minyak dan Gas Terhadap Lingkungan, 2022.



"Environmental management as referred to in paragraph (2) takes the form of an obligation to prevent and control pollution as well as restore environmental damage, including post-mining operation obligations."

Meanwhile, efforts to enforce environmental law if there is a violation of the regulation of oil and gas downstream activities can be seen at:

1. Article 74 paragraph 1 of Law Number 40 of 2007 concerning Limited Liability Companies, which reads: "Companies that carry out business activities in the field and/or related to natural resources are obliged to carry out social and environmental responsibilities." Control of B3 waste is carried out by storing B3 waste in TPS and then handing over the B3 waste to third parties.<sup>7</sup>
2. Law No. 32 of 2009 concerning Environmental Protection and Management (UUPPLH) in article 116:

“(1) If an environmental crime is committed by, for, or on behalf of a business entity, criminal charges and criminal sanctions are imposed on: a. business entity; and/or b. the person who gives the order to carry out the criminal act or the person who acts as the leader of the activity in the criminal act.

(3) If an environmental criminal act as intended in paragraph (1) is committed by a person, based on a work relationship or other relationship acting within the scope of work of a business entity, criminal sanctions are imposed on the person giving the order or leader in the criminal act without regard to whether the criminal act was committed. individually or together."

Apart from criminal offense provisions, UUPPLH also regulates: administrative sanctions, civil sanctions and criminal sanctions.

Administrative sanctions are regulated in article 76 which states:

1. The minister, governor or regent/mayor applies administrative witness to the person in charge of the business and/or activity if during supervision a violation of the environmental permit is found.
2. Administrative sanctions consist of;
  - a. Written warning

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<sup>7</sup>Ibid.



- b. Government coercion
- c. Suspension of environmental permits
- d. Revocation of environmental permits.

Civil sanctions are regulated in article 87 which states:

1. Every person responsible for a business or activity that commits unlawful acts in the form of environmental pollution and destruction which causes harm to other people or the environment is obliged to pay compensation and take certain actions.
2. Any person who transfers, changes the nature and form of business, and/or activities of a business entity that violates the law does not discharge the legal responsibility and/or obligations of that business entity.
3. The court can determine the payment of forced money for each day of delay in implementing the court decision.
4. The amount of forced money is decided based on statutory regulations.

Criminal sanctions are regulated in article 98 which states:

- (1) Every person who intentionally commits an act that results in exceeding the ambient air quality standards, water quality standards, sea water quality standards, or environmental damage standard criteria shall be punished by imprisonment for a minimum of 3 (three) years and a maximum of 10 (ten ) year and a fine of at least IDR 3,000,000,000.00 (three billion rupiah) and a maximum of IDR 10,000,000,000.00 (ten billion rupiah).
- (2) If the act as intended in paragraph (1) results in injury to a person and/or danger to human health, he shall be punished with imprisonment for a minimum of 4 (four) years and a maximum of 12 (twelve) years and a fine of at least Rp. 4,000,000. 000.00 (four billion rupiah) and a maximum of IDR 12,000,000,000.00 (twelve billion rupiah).
- (3) If the act as intended in paragraph (1) results in serious injury or death to a person, he shall be punished with imprisonment for a minimum of 5 (five) years and a maximum of 15 (fifteen) years and a fine of at least IDR 5,000,000,000.00 (five billion rupiah) and a maximum of IDR 15,000,000,000.00 (fifteen billion rupiah).

If due to negligence, criminal sanctions are regulated in article 99 UUPPLH.

Apart from the policies mentioned above, related to efforts to protect and manage the environment in oil and gas downstream activities, there are technological efforts that can reduce carbon emissions, namely Carbon Capture and Storage/Carbon Capture, Utilization and Storage (CCS/CCUS). This



technology has a number of benefits. Not only does it reduce carbon emissions, CCS/CCUS is also able to boost oil and gas production. The ability of CCS/CCUS to increase oil and gas production can be done through CO<sub>2</sub>-EOR or EGR while reducing greenhouse gas (GHG) emissions significantly.<sup>8</sup>

### **Conclusion**

Even though oil and gas downstreaming contributes positively to the economy because it supports revenue and plays an important role in the future economy of Indonesia, it must still pay attention to environmental aspects both in its protection and management and in law enforcement. Importancesynchronization of various regulations regarding oil and gas downstreaming including policies related to the environment. This is for the sake of sustainable development towards Indonesian Energy Security Gold 2045 and Net Zero Emission 2060 which remains environmentally friendly.

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<sup>8</sup>Jurnal Migas, Urgensi Transisi Energi Berkelanjutan, Potensial, Pemerintah Dorong Pengembangan CCS/CCUS, Direktorat Jenderal Minyak Dan Gas Bumi, Issue 09 Januari-Juni 2022, hal. 12

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