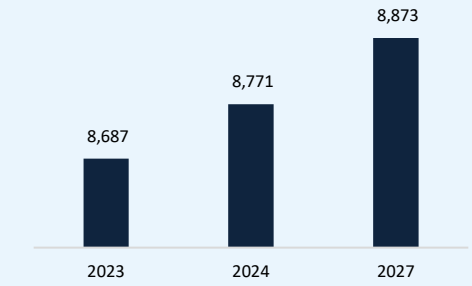
# COAL

## Coal Sector | Indonesia | July, 2025

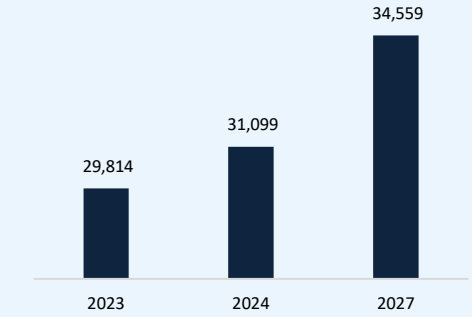
### KEY INDEX

**Chart 1: Global Coal Consumption (in MT)**




Source: Energy Information Administration (EIA)

**Chart 2: Global Electricity Generation (in TWh)**




Source: Energy Information Administration (EIA)

**Cut Nabila Saraziva**
PT Kredit Rating Indonesia
+62 21 3983 4411

## Coal Sector: Navigating Demand and Global Shifts

- **Global coal demand, primarily driven by Asian countries like China and India, is expected to remain high and even slightly increase until 2027, despite growth in renewable energy sources.**
- **Coal companies face financial risks from commodity price volatility and exchange rate fluctuations, and are increasingly scrutinized for environmental and social impacts amidst the global energy transition.**
- **Rising geopolitical tension will support energy prices.**

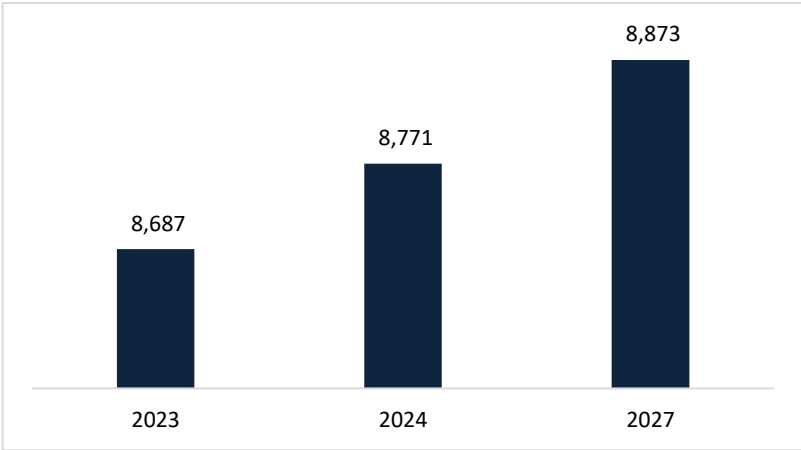
- ## Growth and Stability of the Industry

### Demand

### Global Coal Demand is Driven by Asia, Sustained by Electricity Needs

In 2023, the world used a record amount of coal, reaching 8,687 MT, mainly due to high demand in countries like China and India, and less electricity from water sources. Global coal demand is expected to rise further to 8,771 MT in 2024. This growth is mostly driven by Asian countries, even though Europe and the United States are using less. Looking ahead to 2027, it is projected that coal demand will slightly increase again to 8,873 MT. Overall, despite more renewable energy, the need for electricity means that coal use will stay high for several more years, with China's demand being a key factor.

**Chart 1: Global Coal Consumption (in MT)**

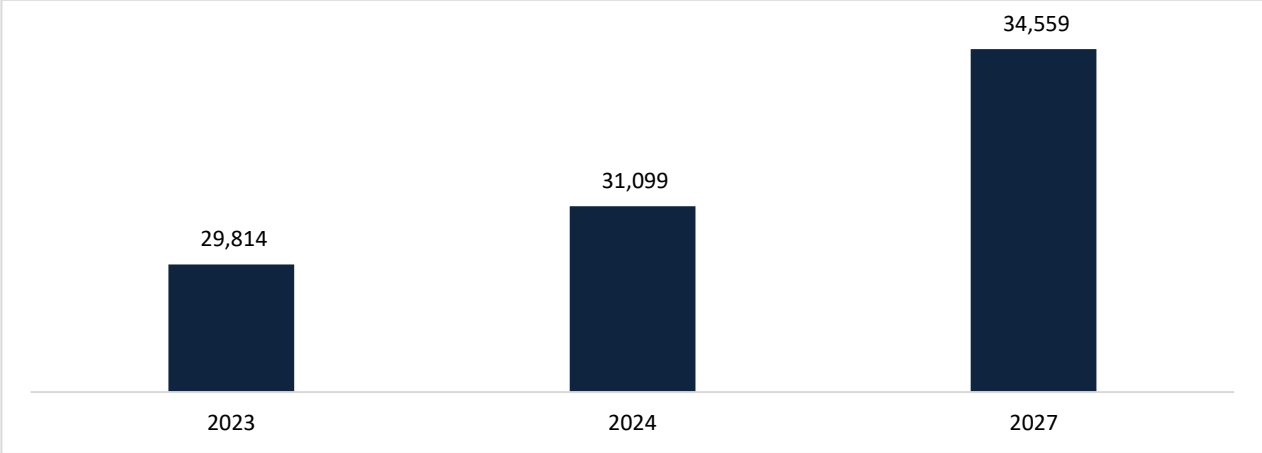



Source: Energy Information Administration (EIA)

## Rising Global Electricity Demand with Coal Remains Key

In 2023, the world generated 29,814 TWh of electricity, with coal being the largest source despite strong growth in renewable energy. Global electricity generation is expected to increase to 31,099 TWh in 2024, driven mostly by China and India. While China is adding more renewable energy, India is still relying heavily on coal for new electricity. Looking further ahead to 2027, global electricity generation is expected to reach 34,559 TWh. Even with more renewable energy and other power sources like nuclear and gas growing, coal-fired power generation is expected to remain stable, meaning coal will continue to be a significant part of the world's electricity mix.

**Chart 2: Global Electricity Generation (in TWh)**




Source: Energy Information Administration (EIA)

## Coal's Other Uses, Beyond Electricity

Beyond making electricity, thermal coal and lignite are used for things like making cement and heating homes and factories. In 2023, the use of coal for these other purposes went up by 2.5%, reaching 1,736 Mt based on data from Energy Information Administration (EIA). Most of this increase came from China, which is using more coal to make other products and rely less on imported oil and gas. Countries in Southeast Asia, especially Indonesia, also used more coal, mainly to produce nickel for batteries. Looking ahead to 2024, the use of coal for non-power purposes is expected to go up slightly due to more demand from India, even though other regions like Europe might use less. China's use of coal for heating and small industries might go down, but its coal conversion industry still needs a lot of coal. By 2027, the global use of coal for non-power purposes is expected to stay mostly the same, with a small decrease.

## Coal Demand in China Remains Strong

China, the biggest user of coal in the world, used 4,883 MT in 2023, which was 6% more than the year before and made up 56% of all coal used globally based on data from EIA. Most of this was thermal coal, used mainly to make electricity. EIA expects China's coal use for power to grow by 2.7% in 2024. Over the next three years, China's total coal use will mostly depend on how much electricity it needs. Even though China is adding more renewable energy like solar and hydropower, its overall economic growth and factory production will still play a big role in how much coal it uses.

## Demand for Coal Continues to Grow in India

India is set to be the main reason global coal use grows in 2024, with its own demand going up by 70 Mt to 1,315 MT based on data from EIA. EIA expected that this trend is to continue until 2027, reaching 1,421 MT, even though China still uses the most coal overall. Most of India's coal, about 75% in 2024, is used to make

electricity. India is building more coal power plants, but it also plans to add a lot of renewable energy, like solar and wind. So, while coal will still be important for India's electricity, its share in the energy mix is expected to slowly go down by 2027 as renewables grow quickly. Besides electricity, India will also use more coal for things like making cement and steel, as its industries grow. India is also looking into changing coal into gas to reduce needing to buy fuels from other countries, but these projects won't be ready for a few years.

## Strong Demand for Coal in Southeast Asia is Being Driven by Indonesia and Vietnam

In 2023, countries in Southeast Asia (ASEAN) used 457 MT of coal based on data from EIA, which was 10% more than the year before. Most of this coal (76%) was used to make electricity. Indonesia used almost half of the coal in ASEAN, followed by Vietnam, the Philippines, and Malaysia. In 2024, ASEAN's coal use likely went up to 491 MT, an 8% increase. This increase is mainly because Indonesia is using more coal, due to strong economic growth and new coal power plants being built. It is expected that by 2027, ASEAN countries will use 567 MT of coal each year, with Indonesia being responsible for two-thirds of this growth.

Indonesia's use of coal is growing because it needs more electricity and also because it produces a lot of nickel. In 2023, Indonesia made more than half of the world's nickel, a metal important for electric car batteries and steel. To make nickel, especially a type called Class 2, Indonesia often uses coal directly and for power in its factories. The country is also increasing its production of high-quality nickel (Class 1) for batteries. Beyond nickel, Indonesia is expanding its aluminum production, which will also require more electricity. Due to these growing industries, Indonesia's coal use is expected to keep increasing, reaching about 294 million tons by 2027. While Indonesia's president announced plans to stop using coal for power by 2040, this change won't happen quickly and coal use is expected to rise in the near future, making Indonesia the fourth-largest coal consumer globally.

In 2024, Vietnam's need for coal likely jumped to 106 MT. This was because of very hot weather in April, which made people use more air conditioning, and also because there wasn't enough electricity from water power. Looking ahead to 2027, Vietnam will need much more electricity. Even though new renewable energy sources will help, coal power plants will still burn more coal to meet this growing demand. When you add in other uses for coal besides electricity, Vietnam's total coal use is expected to hit 128 MT by 2027.

In Philippines, coal use is expected to have gone up a bit from 40 MT in 2023 to 42 MT in 2024. Most of this coal is used to make electricity, and much of it comes from Indonesia. Because the economy is growing strongly, we think the Philippines will use even more coal, reaching 47 MT in the next three years. Even though the country is also producing more renewable energy, the demand for electricity is growing even faster, so coal will still be needed.

In Malaysia, the amount of coal used is expected to stay at 37 MT in 2024. However, by 2027, the demand for this type of coal is predicted to go down by 3% to 35 MT. This is because Malaysia is building more power plants that use renewable energy and natural gas instead of coal.

## Geopolitical Volatility and its Unexpected Impact on Coal

The ongoing geopolitical tensions between Iran and Israel have significantly escalated. This heightened instability, particularly evident in recent direct strikes on each other's territories, creates a ripple effect across global markets. For the coal industry, this means increased demand, especially as oil and natural gas prices become more volatile due to disruptions in crucial shipping lanes like the Strait of Hormuz. When the cost of oil and liquefied natural gas (LNG) surges, countries, particularly in Asia, tend to seek more affordable alternatives like coal for their energy needs. This shift is already being observed with a notable increase in thermal coal imports by countries like Japan. While the long-term trend for coal may still be downward due to climate goals, immediate geopolitical disruptions can temporarily bolster its demand as nations prioritize energy security and cost-effectiveness in an uncertain global environment.

# Supply

## Global Coal Production Trends

In 2023, the world produced more coal, reaching 8,993 MT, with China leading the way to avoid shortages. Indonesia and India also significantly increased their coal production. Indonesia produced more for

international buyers and its own use, while India focused on supplying its own power plants to reduce imports. In 2024, global coal production is expected to slightly increase again, passing 9,000 MT for the first time, with India being the biggest contributor. However, this growth will be partly balanced by less production in the United States, Europe, and Russia, making 2024 a year with less major growth than before. Looking ahead to 2027, global coal production is expected to slightly drop to 8,984 MT. While India will continue to produce more, other countries will likely produce less, leading to a small overall decline.

## China’s Coal Production Continued to Growth

In 2023, China produced a record 4,610 MT of coal, which was 3.4% more than the year before. This increase was part of China's plan to avoid coal shortages, though the quality of the coal wasn't as good. While production kept growing, it was slower than in 2022, partly because some mines had to close due to accidents. To make mining safer, China banned the building of small new mines. Most of China's coal is thermal coal, used for power, and over 80% comes from just four regions, with Inner Mongolia having the biggest increase in production in 2023. Larger and medium-sized mines contributed most to this growth.

## China’s Coal Production Growth Slows in 2024

In 2024, China's coal production is estimated to have slightly increased by 1% to 4,653 MT. This wasn't a steady rise, production actually dropped by 3% in the first five months, with March seeing the biggest decline. However, things turned around in June with a significant increase, and in the third quarter, production grew by 4.2%, even reaching a record high in September. This late surge in production was to prepare for the winter, when heating needs increase and renewable energy sources produce less.

## India’s Coal Production Growth is Set to Continue

In 2023, India produced over a billion tons of coal for the first time, a 10% increase. This was part of India's plan to rely less on imported coal and secure its own energy. In 2024, India's coal production likely grew by another 8% to almost 1,100 MT, even with a dip in August due to heavy rains. Coal stored at power plants also increased significantly. India's rising need for coal and its goal to be more energy independent mean its coal production will continue to grow, aiming for about 1,270 MT by 2027, though this is still less than the government's target.

## Indonesia’s Coal Production Flattens Out

In 2023, Indonesia produced 775 MT of coal, a big jump of 13%. This coal was used at home, sent to China, and sold to other countries. China bought a lot more Indonesian coal, and Indonesia's own use also went up. In 2024, Indonesia's coal production likely grew more slowly to 805 MT, even though the government allowed much higher production. Some coal companies faced challenges with lower prices and too much low-quality coal. Looking ahead to 2027, Indonesia's coal production is expected to drop to 731 MT. This is because, while Indonesia's own factories will use more coal, other countries that usually buy Indonesian coal are expected to buy less.

## Australian Coal Production is Relying on Global Demand

Australia mostly mines coal to sell to other countries, with only a small amount used at home. So, how much coal Australia produces depends a lot on what other countries want to buy and the weather. In 2023, Australia's coal production went up by 6% to 459 MT based on data from EIA, helped by drier weather and strong demand from overseas. While early 2024 saw a dip due to bad weather and a mine fire, new mines opening are expected to keep overall production steady at 458 MT for the year. Looking ahead to 2027, Australia is expected to produce less coal overall, especially the type used for steelmaking, because other countries will import less and Australia's own use will continue to drop.

## Prices

### The Ups and Downs of Coal Price

In 2022, the price of thermal coal, used for power, shot up to record highs because there wasn't enough supply, natural gas prices were very high, and global events caused problems. For a while, thermal coal was even more expensive than coking coal, which is unusual. But in 2023, as energy markets calmed down, coking coal became more expensive again, returning to its normal price difference. This means coal prices are becoming more stable. Even so, the best quality thermal coal from Australia still showed bigger price swings between mid-2023 and mid-2024 than lower quality coal. Overall, coal prices in 2024 seem more stable for thermal coal, but coking coal prices are still changing a lot.

In the short term, coal prices, currently around $110-$120 per metric ton (MT), might see a slight increase. This is because ongoing geopolitical tensions, like conflicts or trade disputes, can disrupt coal supplies or make other energy sources more expensive. Stronger than expected demand in some growing economies, especially in Asia, could also play a part. However, looking further ahead, the price of coal is expected to go down. This is mainly due to countries worldwide focusing more on clean energy like solar and wind power, which reduces the need for coal. As more renewable energy sources are used, the demand for coal will naturally fall, leading to lower prices in the long run.

- ## Regulation of the Industry in Indonesia

### Domestic Market Obligation (DMO)

Indonesian Government established Domestic Market Obligation (DMO) scheme which requires coal mining companies to allocate a certain percentage of their production for domestic consumption, particularly for power plants. DMO scheme aims to ensure the security of sustainable domestic coal supply and optimize state revenues. From year to year, Indonesia's coal production continues to increase. In 2023, coal production was recorded at 775 million tons, far exceeding the production target of 695 million tons. There is an increase in DMO's realization of 213 million tones from its target of 177 million tones. This is due to the greater demand for coal, due to the addition of new steam power plants or *Pembangkit Listrik Tenaga Uap* (PLTU) that are being completed. Other than that, the supply of other alternative energy sources is somewhat disrupted.

### Coal Compensation Funds Updates

To secure domestic coal supply, Directorate General of Minerals and Coal together with related Ministries/Institutions is currently drafting a national policy regarding the collection and distribution of Coal Compensation Funds or *Dana Kompensasi Batubara* (DKB) for every coal sale domestically and abroad. This is also an effort by the government to overcome the disparity in coal prices in the international market with DMO prices. This scheme was first proposed in early 2022 and is currently still in the drafting process. DKB is a non-tax state revenue that must be paid by coal mining business actors. The amount of DKB is determined based on several variables, such as the tariff ratio, the price difference between HBA and the domestic coal selling price, and the volume of coal sales. DKB is paid to the managing agency account placed in managing agency partner or *Mitra Instansi Pengelola* (MIP). The MIP for DKB are three state-owned enterprises banks, namely PT Bank Mandiri (Persero) Tbk (BMRI), PT Bank Negara Indonesia (Persero) Tbk (BBNI) and PT Bank Rakyat Indonesia (Persero) Tbk (BBRI). All non-tax state revenues in the form of DKB must be deposited into the state treasury. The latest updates from Directorate General of Minerals and Coal related to DKB are the presidential regulation draft is still in the harmonization and finalization stage, while the derivative regulations and supporting applications are also being prepared.

- ## Competition in the Industry

### Highly Competitive Market

The Indonesian coal industry is highly competitive, with numerous players vying for market share. There are major players such as PT Bayan Resources Tbk (BYAN), PT Golden Energy Mines Tbk (GEMS), PT Bukit Asam Tbk (PTBA), PT Alamtri Resources Indonesia Tbk (ADRO) and PT Bumi Resources Tbk (BUMI). Domestically, state-owned mining companies and private companies compete for coal resources and market access. Internationally, Indonesia competes with other major coal-producing countries like Australia, China and South Africa. The competition is driven by factors such as coal quality, production costs, transportation infrastructure, and government policies. To maintain competitiveness, Indonesian coal companies must continuously improve their operational efficiency, reduce production costs, and explore new markets. Additionally, they must adapt to evolving global energy trends, including the increasing emphasis on renewable energy sources.

- ## Revenue and Cost Structure

### Exposure to Exchange Rate Risk

Indonesian coal companies are significantly exposed to exchange rate risk due to the nature of their business. The majority of coal contracts are denominated in US dollars, while the companies' operational costs are primarily incurred in Indonesian Rupiah (IDR). A weaker IDR against USD would lead to higher costs for these companies, as they would need to spend more IDR to pay for imported equipment, fuel and other dollar-denominated expenses. This increased cost can reduce profit margins and overall profitability. On contrary, a strengthening of the IDR against the USD would benefit coal companies by reducing their costs. However, it's important to note that a stronger currency can also impact the competitiveness of Indonesian coal exports in the global market, as it would increase the price of coal in US dollar terms.

- ## Financial Profile

### Strong Revenue Growth in 2022, yet Moderation in 2023

All companies experienced significant revenue growth in 2022 compared to the previous year. This surge can be attributed to the global energy crisis, which led to increased demand for coal as a primary energy source. However, in 2023, the revenue growth began to moderate, likely due to easing geopolitical tensions and a shift towards cleaner energy sources. Total revenue, dropped to USD 12,825 million in 2023 and further to USD 12,291 million in 2024, with 1Q2025 reporting USD 2,878 million. ADRO initially led in 2021 and 2022 with revenues of USD 3.993 million and USD 8.102 million respectively, before experiencing a substantial decrease in subsequent years. BYAN consistently remained among the top revenue generators, though its revenue also saw a decline after 2022. Overall, the Indonesian coal industry remains a significant contributor to the national economy, with companies adapting to changing market dynamics and seeking to capitalize on emerging opportunities.

**Table 1: Revenue of Indonesian Coal Companies**

| Company | Ticker | Revenue (USD Mn) | | | | |
|---|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 | 1Q2025 |
| PT Bayan Resources Tbk | BYAN | 2.852 | 4.704 | 3.581 | 3.446 | 890 |
| PT Golden Energy Mines Tbk | GEMS | 1.586 | 2.920 | 2.902 | 2.706 | 648 |
| PT Bukit Asam Tbk | PTBA | 2.045 | 2.875 | 2.527 | 2.700 | 609 |
| PT Alamtri Resources Indonesia Tbk | ADRO | 3.993 | 8.102 | 2.135 | 2.079 | 382 |
| PT Bumi Resources Tbk | BUMI | 1.008 | 1.830 | 1.680 | 1.360 | 349 |
| Total | | 11.484 | 20.431 | 12.825 | 12.291 | 2.878 |

Source: Capital IQ

There has been a significant decrease in the average DER across the sector. This reduction indicates improved financial health and reduced leverage for these companies. BYAN, ADRO, and BUMI have consistently maintained relatively low DER, suggesting a conservative approach to debt financing. GEMS and PTBA have shown fluctuations in their DER, potentially indicating changes in their capital structure or investment strategies. Overall, the decreasing trend in the average DER suggests that the Indonesian coal companies have become less leveraged and more financially resilient.

**Table 2: Capital Structure of Indonesian Coal Companies**

| Company | Ticker | DER (x) | | | | |
|---|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 | 1Q2025 |
| PT Bayan Resources Tbk | BYAN | NA | NA | 0,2 | 0,1 | 0,1 |
| PT Golden Energy Mines Tbk | GEMS | 0,4 | 0,2 | 0,4 | 0,4 | 0,2 |
| PT Bukit Asam Tbk | PTBA | 0,0 | 0,0 | 0,1 | 0,1 | 0,1 |
| PT Alamtri Resources Indonesia Tbk | ADRO | 0,4 | 0,2 | 0,2 | 0,1 | 0,1 |
| PT Bumi Resources Tbk | BUMI | 2,4 | 0,1 | 0,1 | 0,1 | 0,1 |
| Average | | 0,8 | 0,2 | 0,2 | 0,2 | 0,1 |

Source: Capital IQ

The average EBITDA margin for the listed companies rose from 38.6% in 2021 to 40.8% in 2022, before consistently declining to 29.2% in 2023, 26% in 2024, and further to 21.9% in 1Q2025. This decline can be attributed to several factors, including moderating coal prices, increased operational costs, and changes in the global energy landscape. Overall, the data suggests that while Indonesian coal companies enjoyed robust profitability during the high coal price environment of 2021-2022, their margins have since compressed considerably.

**Table 3: Profitability of Indonesian Coal Companies**

| Company | Ticker | EBITDA Margin (%) | | | | |
|---|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 | 1Q2025 |
| PT Bayan Resources Tbk | BYAN | 61,0 | 63,9 | 46,9 | 38,2 | 36,2 |
| PT Golden Energy Mines Tbk | GEMS | 30,7 | 32,0 | 26,0 | 25,1 | 23,4 |
| PT Bukit Asam Tbk | PTBA | 36,8 | 37,5 | 22,3 | 15,5 | 6,9 |
| PT Alamtri Resources Indonesia Tbk | ADRO | 50,2 | 58,7 | 47,1 | 45,8 | 33,5 |
| PT Bumi Resources Tbk | BUMI | 14,0 | 11,8 | 4,0 | 5,7 | 9,5 |
| Average | | 38,6 | 40,8 | 29,2 | 26,0 | 21,9 |

Source: Capital IQ

Indonesian coal companies generally demonstrate a strong ability to cover their interest obligations, although trends vary. The average interest coverage ratio for these companies fluctuated, rising from 52.5x in 2021 to a peak of 90.7x in 2023, before moderating to 48.6x in 2024 and 46.3x in 1Q2025. GEMS and PTBA consistently showed exceptionally high interest coverage, often exceeding 100x, indicating robust financial health and minimal risk in meeting their debt interest payments. Meanwhile, BYAN and ADRO have shown fluctuations in their ratios, potentially reflecting changes in their capital structure or operating performance. In conclusion, GEMS has the highest EBITDA to interest ratio in 2024 compared to other companies. Overall, the data points to a generally sound financial position for these coal companies regarding their ability to manage interest expenses

**Table 4: Interest Coverage Ratio of Indonesian Coal Companies**

| Company | Ticker | EBITDA to Interest Expense Ratio (x) | | | | |
|---|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 | 1Q2025 |
| PT Bayan Resources Tbk | BYAN | 72,3 | NM | 253,5 | 73,8 | 69,7 |
| PT Golden Energy Mines Tbk | GEMS | 64,2 | 104,7 | 101,5 | 103,1 | 106,3 |
| PT Bukit Asam Tbk | PTBA | 100,9 | 117,3 | 78,5 | 42,1 | 20,0 |
| PT Alamtri Resources Indonesia Tbk | ADRO | 24,6 | 57,7 | 15,7 | 19,4 | 27,2 |
| PT Bumi Resources Tbk | BUMI | 0,8 | 1,5 | 4,2 | 4,7 | 8,4 |
| Average | | 52,5 | 70,3 | 90,7 | 48,6 | 46,3 |

Source: Capital IQ

- ## Outlook 2025 - 2026

### Continued High Demand

Global coal demand is expected to remain high, particularly driven by countries like China and India, which are expanding their electricity grids and industrial output. While some developed economies are reducing coal use, the overall global demand is projected to stay near record levels for the next few years.

### Navigating the Energy Transition

The global shift towards cleaner energy sources, including renewable energy and natural gas, presents both opportunities and challenges for the Indonesian coal companies. While the immediate future looks promising, the long-term outlook may be more uncertain. To adapt to this changing landscape, Indonesian coal companies may need to diversify their operations, invest in cleaner technologies and explore new markets.

### Geopolitical Tensions and Coal Price

Escalating tensions between Israel and Iran can still impact global coal prices. This is because such conflicts often lead to higher oil and natural gas prices due to concerns about supply disruptions in key energy-producing regions. When oil and gas become more expensive, some industries and power generators might switch to cheaper alternatives like coal, increasing its demand and pushing up prices. Furthermore, any broader instability or disruptions to international shipping routes, particularly through major chokepoints, could hinder coal transportation, reduce supply, and further contribute to price increases.

- ## Industry Risk Profile: High

### Commodity Price Volatility

Coal prices are subject to significant fluctuations due to factors such as global economic conditions, geopolitical events, and changes in energy demand. A decline in coal prices can erode the profitability of coal companies, especially those with high production costs or significant debt burdens. Additionally, fluctuations in exchange rates can further amplify the impact of price volatility.

### Environmental and Social Risk

The coal industry is facing increasing scrutiny over its environmental and social impacts. Issues such as air pollution, water pollution, land degradation and climate change have led to stricter regulations and public pressure. Companies that fail to comply with environmental standards or address social concerns may face significant financial penalties, reputational damage and operational disruptions. Furthermore, the transition to a low-carbon economy could reduce demand for coal in the long term, posing a significant risk to the industry.