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THE WORLD OF PETROLEUM AND BITUMEN

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亚洲沥青生产商与消费者之间的桥梁



page 1



page 7



page 56



page 2



page 5



page 12



page 11



page 13



page 17



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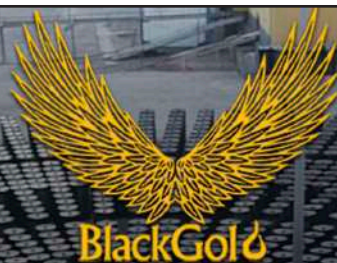
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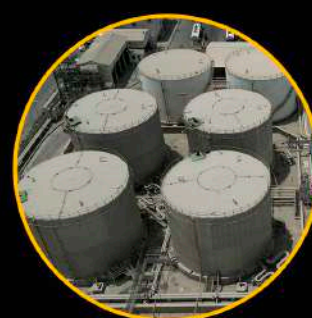
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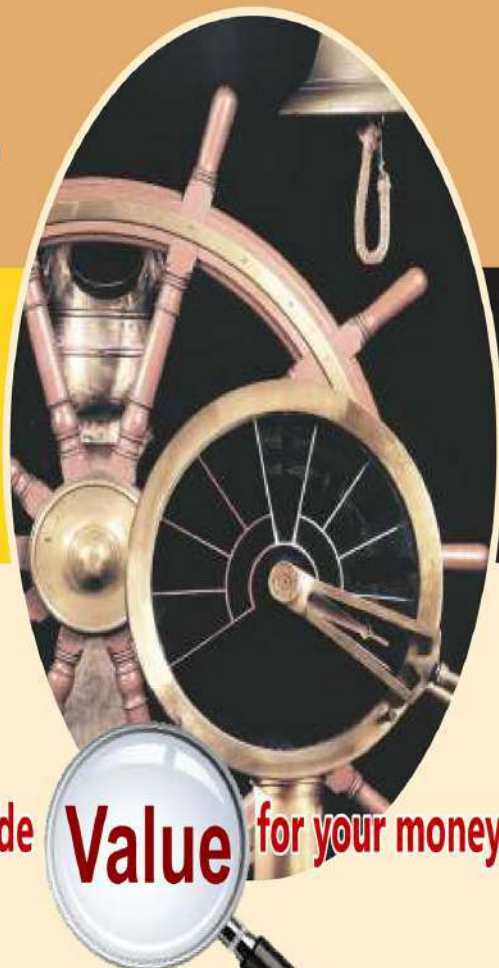
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Contents



EDITOR'S MESSAGE

With a decade of activity in the bitumen and petroleum derivatives industry in the field of printing and publishing specialized news and selected scientific articles from conferences, symposiums, research centers and universities, and introducing brands and companies producing petroleum and bitumen, the World of Petroleum and Bitumen Journal has been able to gain the trust of more than 6000 permanent audience in such a way that they would like to receive the print version of the journal every month.

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中国大宗商品进口揭示其经济状况

China, the world's biggest maker of solar panels, EVs, and wind turbines, has built the world's largest offshore oil platform that will be used at the Marjan field in Saudi Arabia.



24



中国今年的关键能源商品进口表现各异，其中原油采购的下降引发了投资者和市场对中国经济增长乏力的担忧。另一方面，煤炭进口量增加，预计2024年将创下历史新高，超过此前预期的增长乏力。

液化天然气（LNG）进口量今年也有所增加，主要由于亚洲现货价格较去年有所下降。随着中国电力需求的攀升，特别是工业和服务业消费增加，煤炭进口预计将超过以往的最高纪录，而液化天然气则越来越多地用于卡车燃料，推动了进口的增加。

截至2024年，中国进口的大多数主要大宗商品的数量都比去年同期有所增加，原油是唯一显著的例外。尽管房地产行业持续存在问题，经济增速放缓，第二季度增长未达到市场预期，但液化天然气、煤炭、铜和铁矿石的进口量在今年上半年仍较去年同期大幅上升。

中国在价格较低时囤积大宗商品的倾向可能解释了在经济增长不及预期的情况下，大多数大宗商品进口量仍然增加的现象。中国煤炭运输和分销协会预测，2024年煤炭进口量将创历史新高，比2023年的峰值增长约5%。

尽管中国在扩大太阳能和风能装机容量方面处于全球领先地位，其能源部门仍高度依赖煤炭，煤炭仍占其发电量的一半以上。2024年上半年，煤炭进口量较去年同期增长了12.5%，部分原因是国际价格相对较低。然而，年初国内煤炭产量下降以及夏季高峰期间为避免电力短缺的需要也可能在煤炭进口增加中发挥了重要作用。

虽然煤炭和液化天然气的进口量在上升，但中国的原油采购量今年有所下降。作为全球最大的原油进口国，中国似乎在进口量减少的情况下增加了库存，表明即时原油需求疲软。中国的原油进口量在6月和7月较2023年同期有所下降，且7月的进口量也较上月有所下降。

2024年7月，中国每日进口997万桶原油，较6月减少了12%，较2023年7月下降了3%。根据中国海关总署7月初发布的数



What China's Commodity Imports Reveal About Its Economic State

据·2024年上半年原油到港量较去年同期下降了2.3%。

分析师和市场参与者将密切关注2024年剩余时间的原油进口趋势，利用这些数据评估中国政府能否刺激经济并为短期反弹奠定基础。

今年以来，中国疲弱的石油消费已导致主要预测机构下调了2024年和

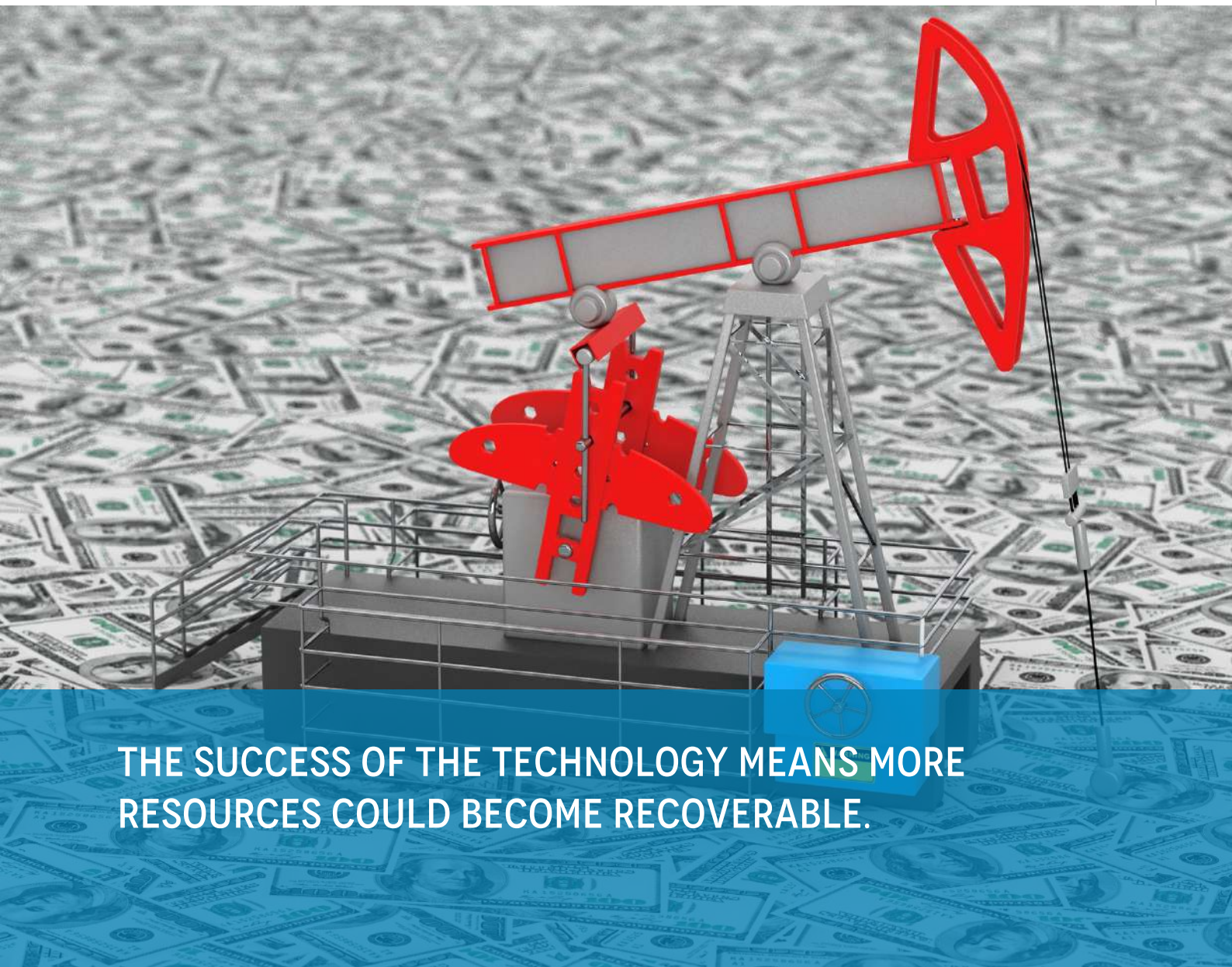
2025年全球石油需求增长的预期。

石油输出国组织（OPEC）本周下调了其2024年需求增长预测，这是自2023年7月首次发布以来首次调整，原因是消费数据令人失望以及预期中国需求增长放缓。

国际能源署（IEA）则在今年一直强调中国需求疲软的同时，将其全球需

求增长预估维持在上个月的水平不变，但指出中国石油需求已连续三个月下滑，且该国“显著”增加了原油库存。

从8月开始的原油数据将受到密切关注，以了解中国经济增长的走向及其作为国际原油价格关键影响因素的作用。



THE SUCCESS OF THE TECHNOLOGY MEANS MORE
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美国政府旨在限制伊朗石油出口

在中东紧张局势加剧的背景下，美国政府正在探索减少伊朗石油出口的策略。此前，德黑兰誓言为哈马斯领导人伊斯梅尔·哈尼亚之死进行报复。

据《政治》杂志报道，美国国务院一位发言人表示，国务院正在寻求额外的方法切断伊朗通过石油出口获得的收入，并将该地区近期的局势升级归因于伊朗，因为以色列在德黑兰暗杀了哈尼亚。

这位不具名的官员表示：“随着伊朗继续加剧地区紧张局势，我

们将与合作伙伴合作，向伊朗施加更大压力，减少其石油出口。”该官员还提到，规避制裁的成本很高，涉及向中介支付费用和洗钱。然而，该官员也承认，尽管有制裁措施，伊朗的原油出口量仍在增加。

今年早些时候，伊朗的石油出口量达到了六年来的最高水平，第一季度平均每天出口156万桶。拉皮丹能源集团（Rapidan Energy Group）地缘政治风险负责人费尔南多·费雷拉（Fernando Ferreira）在四月份表示：“伊朗人已经熟练掌握了规避制裁的技巧。要想让拜登政府产生显著影

响，他们必须将重点放在中国身上。”中国仍然是伊朗最大的石油买家，但并非唯一的买家。

本月早些时候，有报道称追踪数据显示，伊朗的石油运输正前往阿曼和孟加拉国。上个月，伊朗石油部长贾瓦德·欧吉（Javad Owji）表示，德黑兰正在向多达17个国家出口石油。

根据最近的一项调查，伊朗7月份的原油产量平均为每天322万桶，达到了自2018年以来的最高水平。



“印度对石油的需求增长导致俄罗斯进口量创纪录”



根据能源与清洁空气研究中心（CREA）最新的关于俄罗斯石化燃料出口的月度报告，印度作为全球第三大石油进口国，在7月继续保持其作为俄罗斯第二大原油买家的地位，进口额达到28亿美元。

7月，印度是俄罗斯化石燃料的第二大买家，CREA的分析显示，这些进口中约80%是原油，总金额为28亿美元（26亿欧元）。

CREA的数据显示，7月中国占俄罗斯原油出口的47%，其次是印度，占37%，欧盟占7%，土

耳其占6%。此外，印度购买了俄罗斯18%的煤炭出口，仅次于中国的45%。

自俄罗斯入侵乌克兰以来，以及随后西方对俄罗斯原油实施制裁，印度已成为俄罗斯石油的最大买家。在过去的两年中，印度显著增加了从俄罗斯采购现货原油的数量，现在正探讨达成长期供应协议的可能性。

上个月，一位政府内部人士透露，印度国有炼油厂已开始与俄罗斯讨论潜在的长期石油供应合同，指出印度需要“可预测和稳定”的石油供应，以应对其不断扩大的炼油能力。

一些印度私营炼油厂已经与俄罗斯达成

了长期购买石油的协议。这些公司包括部分由俄罗斯石油巨头俄罗斯石油公司（Rosneft）持股的奈拉能源公司（Nayara Energy）以及在印度贾姆讷格尔运营全球最大、最复杂炼油厂的信实工业公司（Reliance Industries）。今年早些时候，信实工业公司与俄罗斯石油公司签订了一项为期一年的协议，每月至少购买两船乌拉尔原油，付款以俄罗斯卢布结算。

俄罗斯连续第二年成为印度的最大石油供应国，俄罗斯原油进口量激增，导致石油输出国组织（OPEC）和中东国家供应的石油份额降至历史最低水平。

INDEPENDENT CHINESE REFINERIES REDUCE BITUMEN BLEND IMPORTS BY 30% IN MARCH



The volume of bitumen blend imports by China's independent refineries decreased by 30% in March, though it is expected to rise again from mid-April when sanctions on Venezuelan crude end.

In March, independent refineries imported about 500,000 metric tons (3.18 million barrels) of bitumen blend, a drop of 29.9% from the previous month. These bitumen blend imports were actually Venezuelan crude, declared as such to customs since the sanctions took effect.

For the first quarter of the year, 2.21 million metric tons (14 million barrels) of Venezuelan crude were imported, a 51.1% decrease from the same period last year. The decline was primarily due to low demand for asphalt, used for road construction, with Venezuelan Merey crude being ideal for asphalt production.

Sources noted that Venezuelan Merey crude was sold at a discount of \$10-\$12 per barrel against ICE Brent futures on a DES basis, down from \$8-\$9 per barrel a month earlier. A trade source mentioned that the price might drop further if sanctions resume after April 18, potentially leaving China's independent refineries as the only buyers.

However, some sources believe the sanctions might not be fully reimposed for several months. Since the sanctions began in October 2019, independent refineries have been the primary purchasers of Venezuelan crude, with few state-owned companies stepping in after the sanctions were eased.

Second Venezuelan Cargo for Guangdong

PetroChina's Guangdong Petrochemical received its second shipment of Venezuelan crude this week, just before the



expected mid-April sanction relief. The Panama-flagged VLCC Awin, which left Venezuela's Jose export terminal on February 8, delivered 1.288 million barrels (196,000 metric tons) of Merey crude to Jieyang port on April 11.

This was the second crude shipment since the company's commercial operations began in February 2023. Designed to process heavy crudes, no additional shipments are expected in the short term, according to a source familiar with the situation.

China's state-owned refineries generally avoid Venezuelan crude due to the sanctions imposed since October 2019. However, the Biden administration partially eased these sanctions on Venezuela's oil and mining sectors from

CHINESE REFINERIES

some sources believe the sanctions might not be fully reimposed for several months. Since the sanctions began in October 2019, independent refineries have been the primary purchasers of Venezuelan crude, with few state-owned companies stepping in after the sanctions were eased.

“Second Venezuelan Cargo for Guangdong
Expensive Canadian Crude”



29

October 18 for six months, ending on April 18.

Expensive Canadian Crude

In addition to Venezuelan crude, independent refineries are also interested in heavy Canadian crude, contingent on favorable economics once Canada's Trans Mountain Expansion pipeline starts in the second quarter. Traders mentioned that Canadian crude could be classified as bitumen blend if it meets specific standards, avoiding crude import quotas but incurring an additional 8% import tax and a Yuan 1.20 per liter consumption tax.

Customs might require bitumen blend to have a penetration index below 400, a density above 0.95 kg/cu m, and over 60% distillation residual at 360 degrees Celsius. However, these Canadian crudes, offered at a discount of around \$4 per barrel to ICE Brent futures, were more expensive than Venezuelan Merey crude, making them less competitive, sources said.



CHINA'S DECREASING DIESEL DEMAND AFFECTS OIL FORECAST

The property market crisis and increased use of LNG in trucking have dampened China's diesel consumption this year, negatively impacting the outlook for oil demand in the world's largest crude importer, a country that has driven global demand growth for years. Diesel consumption in China is notably weak, and experts predict it will remain low for the rest of the year.

Due to declining diesel and stagnant gasoline consumption, China's oil demand growth is expected to be just under 3% this year compared to 2023. In contrast, China's annual oil demand growth averaged 4.6% over the past decade and surged by 11.7% last year after almost three years of COVID-19 lockdowns.

Although gasoline demand may have stabilized, diesel demand is projected to fall, according to analysts. Experts anticipate a 2% to 7% annual decline in China's diesel demand in the second half of 2024.

Besides weaker-than-expected economic growth and the property sector crisis, the rise in LNG-fueled trucking is also impacting diesel demand in China. "Diesel demand is the most sluggish sector within oil demand in the second half, with significant displacement ... in the trucking sector," Wood Mackenzie consultant of Xia Shiqing told.

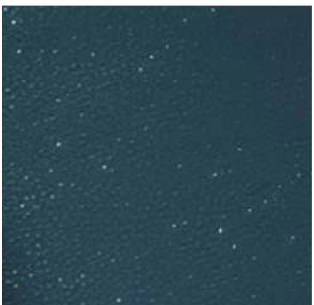
Heavy-duty vehicles powered by LNG are set to reduce diesel use in transportation, especially as LNG is currently cheaper than diesel. Sales of LNG trucks in China have surged in recent months, given that global and Asian LNG prices are much lower than the record highs reached during the energy crisis peak in the summer of 2022.



Experts anticipate a 2% to 7% annual decline in China's diesel demand in the second half of 2024.



The expectation of a substantial new LNG supply entering the market after 2026, particularly from Qatar's major expansion projects, leads analysts to be optimistic about the growth of



the Chinese LNG-fueled truck market, as increasing LNG supply could keep prices low enough to continue replacing diesel.





Modification of bitumen using green and sustainable reinforcing agents

32

Governments worldwide are increasingly challenged by significant environmental issues stemming from poor solid waste management, particularly the disposal of end-of-life tires (EOLTs), coupled with the annual rise in vehicle numbers. Globally, bitumen consumption is estimated at 102 million tons per year, with 85% utilized for asphalt roads, 10% for roofing, and the remaining 5%



for various applications such as waterproofing, adhesives, corrosion protection, and automotive uses. The combination of growing vehicle numbers and the accelerating impact of climate change, partly due to the use of unsustainable materials,

leads to the rapid deterioration of asphalt pavements. This deterioration, in turn, contributes to the increased wear of vehicle tires, releasing microplastics predominantly from asphalt and tires. The primary issue lies in the lack of chemical bonding between



bitumen and thermoplastic elastomers or waste tire rubber grains, resulting in loose particles being dispersed into the environment by wind.

Moreover, bitumen has been identified as a source of volatile organic compounds (VOCs) and particulate matter (PM), an issue that is particularly concerning in large urban areas. To enhance bitumen quality and longevity, it is crucial to modify bitumen, ideally using green and sustainable reinforcing agents.

Research indicates three primary methods for bitumen modification: synthetic elastomers (75%) like styrene-butadiene-styrene (SBS)

The limited use of waste materials in asphalt production hinders the development of recycling technologies and negatively impacts the environment.



and styrene-ethylene-butylene-styrene (SEBS); synthetic plastomers (15%) such as polyethylene (PE), polypropylene (PP), and ethylene vinyl acetate copolymer (EVA); and more environmentally friendly approaches (10%) using waste materials, particularly rubber from used tires. The limited use of waste materials in asphalt production hinders the development of recycling technologies and negatively impacts the environment.

This low utilization is largely due to the differing physical properties of waste components, such as density and surface tension, and the poor compatibility between polymer waste and the bitumen matrix due to weak chemical



interactions.

Additionally, efforts to reduce the road construction industry's environmental impact through the use of reclaimed asphalt are still constrained by concerns over performance, especially due to the presence of aged bitumen, which is associated with increased stiffness and potential fatigue cracking. Given the urgency of climate change, it is imperative to

develop green approaches and shift towards sustainable raw materials. Recent studies have explored this direction. For instance, Hong et al. (2022) examined how process variables affect the properties of waste low-density polyethylene (LDPE) and EVA modified asphalt. Their research indicated that LDPE significantly enhances asphalt's temperature

resistance, and higher viscosity improves bonding between asphalt and aggregate. Furthermore, Jamal and Giustozzi (2020) investigated the physical, chemical, thermal, and rheological properties of crumb rubber (CR) modified bitumen (CRMB), derived from EOLTs. Their study revealed that small amounts of CR substantially improve the rutting resistance of CRMB, as indicated by the multiple stress creep recovery (MSCR) test. Additionally, the inclusion of CR reduced the non-recoverable compliance (J_{nr}) by 63% and increased the recovery (R) by thirteen times at 3.2 kPa compared to standard bitumen.

However, this method has its drawbacks, as CR modification leads to a significant increase in the viscosity of rubber-bitumen compositions due to the swelling of rubber grains, which absorb aromatic oils from the bitumen. This also causes instability in liquid storage conditions due to the density differences between rubber and bitumen.

THE GROWTH OF POLYMER-ENHANCED BITUMEN AND RECYCLED PLASTICS

34



In 2024, the global market for polymer-enhanced bitumen is anticipated to reach USD 11,829.1 million. Between 2024 and 2034, this market is forecasted to grow at a compound annual growth rate (CAGR) of 4.9%, with the market value expected to climb to USD 19,169.4 million by the end of 2034.

Recent research has heavily focused on polymer-modified bitumen (PMB), exploring various aspects of its properties and applications. Over the past 20 years, the use of polymers—both virgin and recycled—in bitumen modification has gained significant traction. Studies have utilized various approaches

to assess the impact of polymer integration on bitumen properties, the morphology of polymer-bitumen blends, and the interactions between these materials.

The increasing focus on polymer-modified bitumen is largely driven by its potential for sustainability and environmental benefits. Numerous studies have explored the use of recycled plastic waste as a bitumen modifier, demonstrating that this approach not only supports eco-friendly construction practices but also helps reduce carbon emissions.

A recent study emphasized the significance of the chemical composition of base bitumen in determining its potential for modification. The interaction between polymers and additives that enhance the properties of pure bitumen may lead to complex and sometimes unexpected engineering characteristics in industrial and paving applications.

- By 2034, the market for polymer-modified bitumen is expected to reach a value of USD 19,169.4 million, growing at a CAGR of 4.9%.- The thermoplastic elastomer segment is projected to dominate the market, accounting for a 61.3% share in 2024.

"Advancements in technology, coupled with environmental considerations and sustainability, are set to propel the polymer-modified bitumen industry forward. Enhancing the performance of bitumen and refining its chemical composition will continue to fuel market growth," according to an analyst at Future Market Insights (FMI).

Key Insights from the Polymer-Modified Bitumen Market:

- By 2034, the market for polymer-modified bitumen is expected to reach a value of USD 19,169.4 million, growing at a CAGR of 4.9%.- The thermoplastic elastomer segment is projected to dominate the market, accounting for a 61.3% share in 2024.
- The U.S. market is anticipated to expand at a CAGR of 2.8% through 2034.- Germany's market is forecasted to grow at a CAGR of 2.3% during the same period.
- The U.K. market is expected to experience a CAGR of 1.9% from 2024 to

2034.

Competitive Landscape:

In the polymer-modified bitumen market, several well-established companies are striving to capture a significant share by investing in advanced research and development. To achieve long-term success in this market, ensuring high levels of customer satisfaction is crucial. Companies that deliver consistent product quality, technical support, and timely deliveries are likely to build trust and retain customer loyalty.

Recent Developments:

AMT Techno is reportedly offering services related to the production, application, and quality control of polymer-modified bitumen. Companies in the PMB sector may benefit from their expertise in research and development, process optimization, and technical assistance.

Gulf Petrochem, a prominent player in the petrochemical and energy sectors,

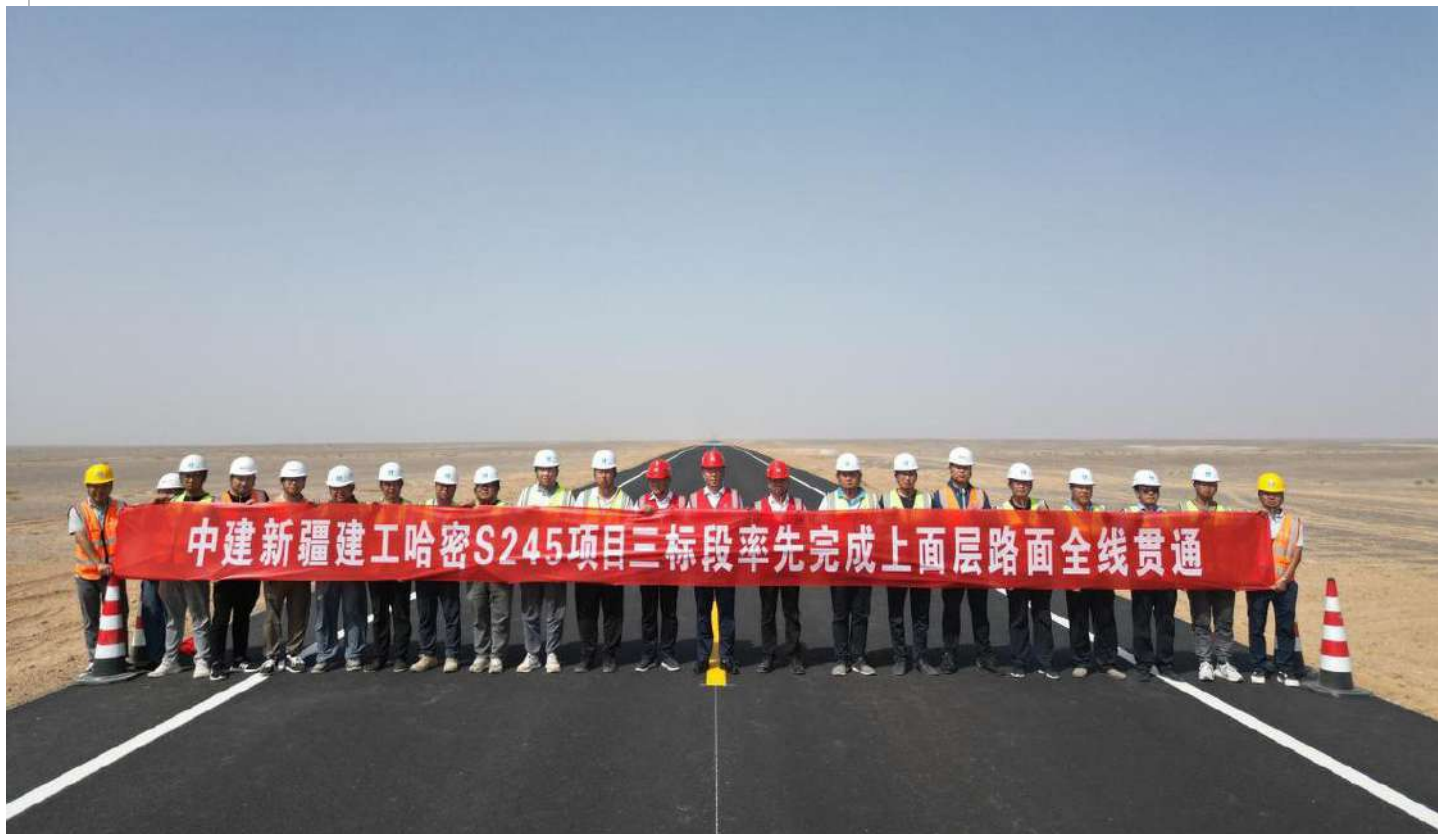
is involved in the production and distribution of bitumen and other petroleum products. With an extensive network for distribution and refining, they are well-positioned to supply polymer-modified bitumen for road construction projects.

About Future Market Insights (FMI):

Future Market Insights, Inc. (certified by ESOMAR, a Stevie Award winner, and a member of the Greater New York Chamber of Commerce) offers in-depth analysis on the factors driving market demand. FMI is recognized as a leading global provider of market intelligence, advisory services, consulting, and events across various sectors including Packaging, Food and Beverage, Consumer Technology, Healthcare, Industrial, and Chemicals. With over 400 analysts worldwide, FMI delivers insights on global, regional, and local market trends across more than 110 countries. As they celebrate 10 years of providing reliable market insights, FMI continues to lead with a commitment to integrity, innovation, and expertise.



The U.K. market is expected to experience a CAGR of 1.9% from 2024 to 2034.



COULD CHINA DELIVER A NEGATIVE SHOCK TO THE PETROLEUM MARKET?

36



CHINA'S ECONOMIC PROBLEMS



A look at China's daily petroleum import statistics shows why this country plays a crucial role in all forecasts and price movements.

When Reuters reported that petroleum imports to Asia slightly declined in the first half of the year, many traders immediately turned their attention to China, the world's largest crude oil importer.

In the first half of 2024, China imported an average of 11.08 million barrels of petroleum per day, which is not particularly strong. While this figure is strong in absolute terms, it is considered negative because it is lower than the record 11.28 million barrels per day last year.

There is a clear reason why China is so prominent in all forecasts about petroleum demand and price movements: China's daily imports alone exceed the daily consumption of the European Union. It seems that

demand forecasts assume that China will continue to consume more and more petroleum, making this country a disproportionately significant factor in petroleum price trends.

A Bloomberg report noted that the outlook for petroleum prices in the second half of the year is increasingly uncertain because petroleum demand growth in China did not meet the expectations of traders and analysts. The report pointed to slower-than-expected refinery restarts after the maintenance season, lower purchases by some major suppliers from the beginning of the month, and the possibility of monthly import declines.

Considering the specific processes currently underway in China, the unrealistic nature of expectations about the Chinese market is rarely seen in media coverage. This fact ensures

that China maintains its position as the largest price determinant, comparable only to the United States, while essentially ignoring the rest of the world and not mentioning the natural consequences of rising petroleum prices.

Mia Zheng, an analyst at energy consultancy FGE, told Bloomberg: "Rising crude prices could further

dampen China's crude-buying appetite. Although we expect China's crude imports to move sideways in the third quarter at around 11 million barrels a day, there is downside risk in the later part of the third and fourth quarters."

In other words, just like any other importer, China is sensitive to prices, and the higher they are, the less

willing petroleum buyers will be to increase their purchases. This is a natural market reaction, and as soon as petroleum prices drop, buying will likely resume, ending the demand.

China's Economic Problems

Concerns about China's economic growth and its petroleum demand growth have persisted this year. Ongoing problems in the country's



real estate sector, which have led to less construction activity, are a clear example of this disappointing growth. Additionally, the fact that China is the largest electric vehicle market is a significant argument for long-term petroleum demand. Even state petroleum giant Sinopec expects petroleum demand growth to peak in the next

three years.

For those who assumed that China's petroleum demand would continue indefinitely, this is bad news. For those who realized that indefinite demand growth is unrealistic, this is normal and there are no high expectations. Peak demand does not necessarily mean falling off a cliff; it



EVEN STATE PETROLEUM GIANT SINOPEC EXPECTS PETROLEUM DEMAND GROWTH TO PEAK IN THE NEXT THREE YEARS.

simply means the highest point. If Sinopec is correct, just because China is about to reach this point sooner than expected, it does not mean that demand will then immediately collapse.

In other words, there is still a lot of potential for optimism in the global petroleum market, especially with the slowing growth of electric vehicle sales in all regions except China. However, there will be more demand for petroleum from the petrochemical sector. According to a recent study by the Energy Institute, 60% of current

petroleum demand comes from petrochemical producers, influenced by urbanization in the Asia-Pacific region.

China will continue to play a prominent role in petroleum demand growth forecasts. Even when its petroleum demand peaks, China will still be the largest petroleum importer given the size of its economy. However, it might be a good idea to bring growth expectations to more realistic levels and acknowledge that no economy can grow at a constant rate, even with strong central government

control.

Moreover, there are other drivers for demand growth. Other Asian economies and their petroleum demand are also growing. Although India is a smaller consumer compared to China, it will be the largest driver of petroleum demand growth in the future. Asia can be a significant driver of global petroleum demand growth for some time, even if its imports do not reach 11 million barrels per day. Perhaps it is time to stop focusing solely on China for all matters related to petroleum demand.



Iran's new petroleum market in **China**

Iran's petroleum imports to Dalian have been flowing since late last year, helping maintain China's purchase of Iranian petroleum near record highs.

Iranian petroleum imports to Dalian have compensated for the weakened demand from smaller buyers in Shandong province, who have faced lower profit margins, higher crude prices, and weaker fuel demand. Refineries in Shandong refining hub have been the largest buyers of Iranian petroleum in China since 2019.

Despite the return of U.S. sanctions on Iran's petroleum industry in 2018, China has continued buying Iranian petroleum, with private Chinese

refineries becoming major purchasers. According to consulting firm Vortexa, 23 shipments totaling 45 million barrels of Iranian petroleum were unloaded in Dalian from October 2023 to June 2024. This volume includes 28 million barrels discharged

on Changxing Island, about 85 kilometers northwest of Dalian.

Consulting firm Kepler estimated that China imported 34 million barrels of Iranian petroleum to Dalian in the same period, equivalent to 124,000 to 164,000 barrels per day. This accounts for about 13% of China's total petroleum imports from Iran in the first half of 2024.

Analysts estimate that during this period, China imported 1.2 to 1.4 million barrels per day of Iranian petroleum.

According to Vortexa, China's petroleum imports from Iran surged to the record of 1.52 million barrels per day last October.

In response to Reuters' inquiries

***China has
continued
buying
Iranian
petroleum***

VORTEXA, BASED ON TANKER TRACKING DATA, IDENTIFIED HENGLI AS A BUYER OF IRANIAN PETROLEUM, THOUGH A HENGLI SPOKESPERSON DENIED THE COMPANY PURCHASED IRANIAN PETROLEUM.

about Iranian petroleum imports to Dalian, China's Ministry of Foreign Affairs stated that China and Iran have always maintained normal and legitimate trade relations within the framework of international law, and China opposes unilateral sanctions.

However, since June 2022, Chinese customs has not officially reported Iranian petroleum imports.

According to Reuters, potential destinations for Iranian petroleum imports to Dalian include the 400,000 barrels per day Hengli Petrochemical refinery, a 44 million barrel storage tank, two refineries operated by PetroChina, and a 30 million barrel storage facility managed by the Liaoning Port Group on Changxing Island.

Three trade sources close to Hengli told Reuters that the



According to Vortexa, China's petroleum imports from Iran surged to the record of 1.52 million barrels per day last October.

One source estimated that Hengli bought four million barrels per month during the first few months of 2024.

company has purchased at least some Iranian petroleum. One source estimated that Hengli bought four million barrels per month during the first few months of 2024.

Vortexa, based on tanker tracking data, identified Hengli as a buyer of Iranian petroleum, though a Hengli spokesperson denied the company purchased Iranian

petroleum.

Before last October, Dalian, which accounts for 6% of China's refining capacity, rarely received Iranian petroleum. Iranian petroleum, due to its competitive prices compared to Middle Eastern grades like Oman or Murban crude or Russia's ESPO grade, has been attractive to Chinese refineries.



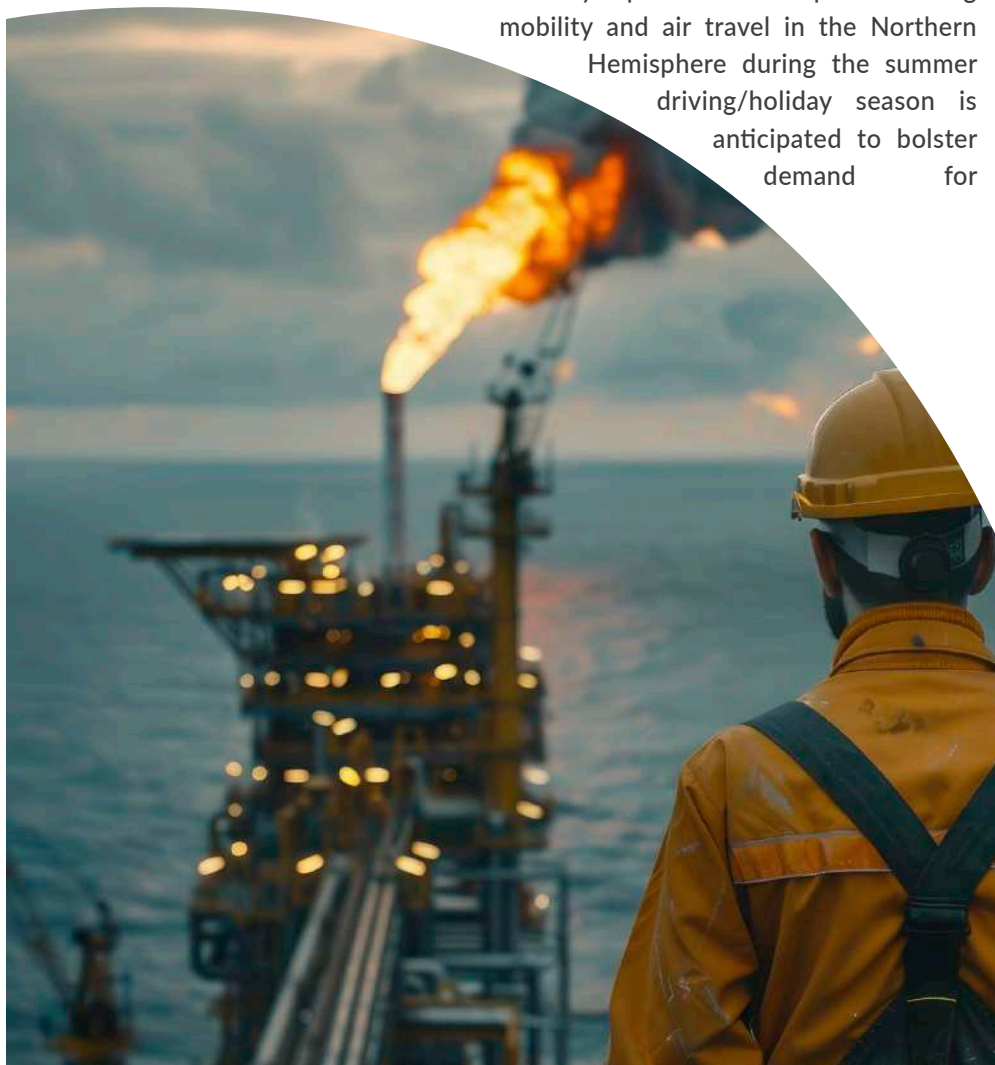
OPEC STICKS TO ITS FORECAST FOR STRONG PETROLEUM DEMAND

Expected strong mobility and air travel in the Northern Hemisphere during the summer driving/holiday season is anticipated to bolster demand for transportation fuels and drive growth in the United States.

> OPEC has maintained its forecast for relatively strong growth in global petroleum demand for 2024 and 2025, stating that resilient economic growth and strong air travel will support fuel consumption during the summer months.

In its monthly report, the Organization of the Petroleum Exporting Countries (OPEC) predicted that global petroleum demand would increase by 2.25 million barrels per day in 2024 and by 1.85 million barrels per day in 2025. Both forecasts remained unchanged from the previous month.

The OPEC monthly report stated: "Expected strong mobility and air travel in the Northern Hemisphere during the summer driving/holiday season is anticipated to bolster demand for



Both forecasts remained unchanged from the previous month.



41

Organization for Economic Cooperation and Development (OECD).

> transportation fuels and drive growth in the United States.”

Forecasting agencies have more disagreements than usual about the strength of petroleum demand growth, partly due to differences over the global transition towards cleaner fuels. While OPEC remains optimistic about strong demand growth, the International Energy Agency and the U.S. Energy Information Administration have lowered their demand growth estimates in recent months. British Petroleum predicted that petroleum

demand would peak in the next calendar year.

OPEC Plus, which includes OPEC and allies such as Russia, has implemented a series of production cuts since late 2022 to support the market. The group agreed on June 2 to extend the 2.2 million barrels per day production cut until the end of September and to gradually phase out the cut from October onwards.

According to Reuters, OPEC predicted that the global economic growth rate for the current calendar year would reach 2.9%, up

from 2.8% in the previous report, and suggested a possible upward revision of this growth rate based on the trends observed this year outside the developed countries in the Organization for Economic Cooperation and Development (OECD).

In the supply section, OPEC maintained its estimate for the growth of liquid supply outside the OPEC Plus group at 1.23 million barrels per day for 2024 and 1.10 million barrels per day for 2025. Non-OPEC Plus growth will be mainly driven by the U.S., Canada,

and Brazil.

According to secondary source statistics, OPEC Plus petroleum production decreased by 125,000 barrels per day in June, reaching 40.8 million barrels per day, which is 2.3 million barrels per day less than OPEC's forecast for OPEC Plus petroleum demand.



Saudi Arabia

Economic slowdown in Saudi Arabia and Gulf region due to reduced petroleum production

By WPB

Analysts predicted that the economies of the Gulf region would grow at a much slower pace this year due to continued cuts in petroleum production, with Saudi Arabia experiencing the most significant decline.

In a Reuters survey of 24 economists conducted between July 8 and 22, it was forecasted that Saudi Arabia's economy would grow by 1.3 percent this year, down from 1.9 percent predicted in the April survey and three percent forecasted in January.

However, the United Arab Emirates is expected to experience better growth at 3.7 percent, as it will soon increase its petroleum production and focuses on tourism. Kuwait is expected to remain in recession this year, while Qatar is projected to see 2.2 percent economic growth, Oman 1.6 percent, and Bahrain 2.6 percent. The Gulf Cooperation Council (GCC) economies are expected to grow by an average of 1.9 percent in 2024.

Ralf Wiegert, head of S&P Global Market Intelligence Middle East and Northern Africa economic forecasting team, commented: "Lower oil revenues are impacting non-oil growth. Saudi Arabia is in the process of an overhaul of Vision 2030 and adjusting investment spending. The impact on real GDP growth is clear – less investment means a more moderate growth outlook."

However, the outlook for GCC economies in 2025 is





brighter, with Saudi Arabia expected to grow by 4.5 percent and the UAE by 4.2 percent. Additionally, the region is anticipated to experience mild inflation rates, predicted by economists to range between one percent and three percent in 2024, with the lowest inflation in Oman and the highest in Kuwait. Saudi Arabia is expected to have an inflation rate of 2.1 percent this year. The International Monetary Fund (IMF) revised its previous growth forecast for Saudi Arabia, citing OPEC+ production cuts, and lowered it to a lower rate.

According to Oil Price, the IMF now predicts Saudi Arabia's growth rate in 2024 to be 1.7 percent, down from the previous estimate of 2.6 percent, and estimates the growth rate for 2025 to be 4.7 percent, which is 1.3 percent lower than the April forecast.



PETROLEUM GIANTS INVEST IN UAE LNG PROJECT

44

International petroleum and gas giants, including Shell, BP, TotalEnergies, and Japan's Mitsui & Co., have agreed to each purchase a 10% stake in a new LNG project in the United Arab Emirates.

These international companies are investing in the Ruwais LNG project by Abu Dhabi National Oil Company (ADNOC) to capitalize on the growing demand for gas and liquefied natural gas (LNG) in the coming years.

BP, TotalEnergies, and Mitsui are already partners in the Das Island LNG facilities in the UAE. Last month, ADNOC made the final investment decision to advance the Ruwais LNG project, which will more

than double the UAE's current LNG production capacity.

The Ruwais LNG plant will consist of two liquefaction units with a capacity of 4.8 million tons per year each, totaling 9.6 million tons. This will increase ADNOC's LNG production capacity to about 15 million tons per year.

According to ADNOC, this project, located in the industrial city of Ruwais, will be the first LNG export facility in the Middle East and North Africa to operate with clean fuel, making it one of the lowest-emission LNG plants in the world.

The UAE state-owned giant has also awarded an engineering, procurement, and construction contract for this project worth around \$5.5 billion.

In recent months, ADNOC has placed significant emphasis on LNG, aiming to expand domestic production and export capacity while acquiring minority stakes in foreign LNG projects. In May, ADNOC purchased an 11.7% stake in the first phase of NextDecade's Rio Grande LNG export project in Texas, marking its first strategic investment in the United States.

The company also signed a 20-year LNG purchase agreement from Rio Grande's fourth unit with NextDecade.

According to Oil Price, in May, ADNOC announced the acquisition of a 10% stake in the offshore Mozambique LNG project, continuing to expand its international gas operations.



RUSSIA TO BUILD PETROLEUM REFINERY IN CUBA



Russia and Cuba discussed a proposal to build a petroleum refinery in Cuba with the help of Russian companies.

According to a report by Russia's TASS news agency, Alexander Babakov, the Deputy Chairman of the Russian State



Duma, stated that during a recent visit by Russian representatives to Cuba, the idea of constructing a petroleum refinery was under consideration.

TASS quoted Babakov as saying, "The biggest Russian state companies could be working here. Cuba has crude oil: it is logical not to import oil products but to produce them here."

Russia and Cuba have had close relations since the 1950s when this Latin American country and the Soviet Union expanded their ties as communist

states.

Venezuela, which is located near Cuba, has been the main supplier of petroleum to the island. However, Venezuela's exports have decreased in recent years due to issues within its petroleum industry and U.S. sanctions against Caracas.

The collapsing petroleum industry in Venezuela means that less fuel oil from the country, which has the largest proven petroleum reserves in the world, is reaching Cuba to power its aging power

plants.

According to the International Energy Agency (IEA), Cuba's electricity production is heavily dependent on petroleum products, with more than 80 percent of electricity generated using these fuels. Amid the crisis in Venezuela and its petroleum industry, Cuba faced public protests in 2021.

Cuba, which has been experiencing severe shortages of gasoline and other fuels, announced earlier this year that fuel prices would increase by 500 percent starting February 1, 2024.

The Cuban government can no longer afford the extensive subsidy program that provided subsidized prices for all essential goods and services.

According to a report by Oil Price, Cuba has been importing Russian petroleum since 2022. After a one-year hiatus, Russian petroleum imports to Cuba resumed in March of this year.



Cuba has crude oil



Russian petroleum finds new customer

Indonesia's Pertamina has not purchased petroleum from Russia since the war in Ukraine began in February 2022.

However, the company has now added Russian Sokol and Urals crude to its procurement list for September 2024. According to Reuters, it has been over 10 years since Pertamina last bought Russian Sokol oil.

Whether Indonesia, as a buyer of Russian petroleum, will join countries like China and India remains uncertain and something to be watched.

A former OPEC member is looking to buy Russian petroleum for the first time in over a decade.



In 2024, Indonesia has witnessed strong economic growth. However, the country's domestic petroleum production has dropped below 600,000 barrels per day this year, while consumption has exceeded 1.6 million barrels per day.

Despite maintaining a relatively neutral stance in global politics, Indonesia announced in 2022 that it would purchase discounted Russian petroleum.

Nevertheless, the Indonesian government appears to have concluded that buying Russian petroleum at a 30% lower than Brent prices is not worth the political risks.

Higher petroleum imports, which increased by 17% month-on-month in June 2024, have impacted Indonesia's trade balance. The higher prices of oil and petroleum products have affected the country's trade balance.

The Star reported that the value of petroleum imports in June 2024 rose by 47% year-on-year.

According to Oil Price, despite the opportunity to buy discounted Russian oil, Indonesia's refineries are equipped to process light crude, which is primarily supplied by countries like Saudi Arabia, Nigeria, Angola, and Iraq.





Trump promises to increase U.S. petroleum production

47

Donald Trump has pledged to increase domestic petroleum production in the United States and to remove certain regulations to achieve this goal.

In an exclusive interview with Bloomberg Business, the Republican presidential candidate said: "We have more liquid gold than anybody else. We need low-cost energy. We need low-cost energy. The advantage we have over almost all countries, including very large countries, is that we have more energy than anybody. We have more real energy, energy that is usable."

Trump stated: "Wind power doesn't work. It's too expensive." He claimed that wind and solar farms are neither good for the environment nor for providing low-cost energy.

Trump did not provide extensive details on U.S. energy issues but clarified that if elected president, he would continue to support American petroleum and gas production.

The interview with the former U.S. president took place in late June, two days before the first presidential debate and two weeks before an assassination attempt on Trump in Mar-a-Lago. In this detailed interview, Trump addressed many domestic and global issues, emphasizing that energy costs must be reduced and that the U.S. has the energy resources to help achieve this.

If Trump wins in November, many of Biden's energy and climate policies, including methane regulations, a halt on new permits for liquefied

natural gas (LNG) exports, policies related to electric vehicles, federal petroleum and gas leasing, and even parts of the Inflation Reduction Act, would be repealed or at least undermined.

However, to repeal the Inflation Reduction Act, Trump would first need a Republican-controlled Congress. Analysts say that even in this scenario, reducing or eliminating incentives might be challenging because they largely benefit projects and jobs in Republican states.

J.D. Vance, the Republican senator who is Trump's vice-presidential candidate, has stated that Trump's second term would favor fossil fuels and disadvantage clean energy.



US ADMINISTRATION REQUESTS MORE FUNDS TO PURCHASE PETROLEUM

DATA FROM THE DOE SHOWS THAT THE CURRENT LEVEL OF THE SPR STANDS AT APPROXIMATELY 375 MILLION BARRELS, DOWN FROM ABOUT 600 MILLION BARRELS AT THE BEGINNING OF 2022.



48

The Biden administration has sought additional funds to purchase petroleum as part of its ongoing efforts to refill the US Strategic

Reserve (SPR). The Department of Energy (DOE) has been gradually replenishing the SPR, which reached its lowest level in four decades following unprecedented withdrawals in response to Russia's military actions in Ukraine. Two years ago, President Biden authorized the release of 180 million barrels from the SPR to control gasoline prices. Since then, the US administration has purchased approxi-



mately 43.25 million barrels to refill the reserves, including the acquisition of 4.65 million barrels announced on Monday.

David Turk, the Deputy Secretary of Energy, mentioned in an interview that around \$1.2 billion remains in the account designated for purchasing petroleum for the SPR. This amount is sufficient to buy roughly 15 million more barrels.

Turk expressed a desire to do more

but emphasized the need for additional budgetary allocations to purchase more petroleum. He stated that the DOE is in contact with Congress to ensure everyone plays their part. However, Turk did not specify the exact



dollar amount necessary for further petroleum purchases.

The Deputy Secretary also mentioned that the DOE has requested Congress to cancel the mandatory sales of additional reserves. This strategy has been successfully utilized by the administration to halt the planned sale of about 140 million barrels, which Congress had scheduled to fund unrelated legisla-

tion until the fiscal year 2027.

Turk noted that another 100 million barrels remain in the planned sales, and the administration will work with Congress to cancel more of these mandatory sales.

Kevin Book, Managing Director of ClearView Energy Partners, commented that it seems unlikely for Congress to take appropriate actions for further petroleum purchases given the current congressional and market balance. However, he acknowledged that this situation could change. Turk's statements come at a time when the Biden administration aims to capitalize on lower prices to purchase more petroleum.

The prices fell by about 10% in early April, dropping below the price level that the White House had set for buying petroleum to replenish the SPR.

On Monday, the DOE announced that it would refill the reserves at an average purchase price of \$77 per barrel and has accelerated the return of 5.5 million barrels of petroleum that had been loaned to petroleum companies.

Data from the DOE shows that the current level of the SPR stands at approximately 375 million barrels, down from about 600 million barrels at the beginning of 2022.

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Yuan hits a roadblock in Russia

RUSSIA'S RAPID ADOPTION OF THE CHINESE YUAN HAS FACED LIMITATIONS DUE TO THE RISK OF WESTERN SECONDARY SANCTIONS.



Russia's rapid adoption of the Chinese yuan has faced limitations due to the risk of Western secondary sanctions.

Countries continuing to trade with Russia face increasing pressure from the U.S., particularly through the threat of secondary sanctions, which has been an effective deterrent against the broader use of the yuan.

Alex Isakov, a Russian economist at Bloomberg Economics, noted: "Moscow may be more eager to adopt the yuan than Chinese banks are willing to accommo-

date. US secondary sanctions threats scare banks. The market is indicating a yuan shortage in Russia, as well as an aversion to provide liquidity among Chinese banks." After U.S. Treasury Secretary Janet Yellen announced in December that the U.S. would not hesitate to take decisive action against financial institutions facilitating Russia's war machine, the gap in overnight yuan borrowing rates in Russia and China widened significantly.

This difference has remained at several percentage points since the warning. In December, the U.S. also

agreed to secondary sanctions against foreign financial companies, leading Chinese state banks to tighten financial restrictions on Russian clients.

Chinese customs data show that over two years, Russia has surpassed Germany, Australia, and Vietnam in trade volume with China. Trade volume increased by over 60% in 2023, reaching \$240 billion. China benefits from discounted Russian petro-

leum and other commodities, while Russia gains access to a wide range of consumer and high-tech products.

As a result, China has become Russia's main trading partner, and the yuan now accounts for about 40% of Russia's export and import payments and more than half of Russia's foreign exchange market turnover. The extent of Russia's yuanization is remarkable, considering it start-



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This has made Russia the largest contributor to Beijing's efforts to increase the yuan's role in international payments.

ed from near zero at the beginning of 2022, before the Ukraine war.

This has made Russia the largest contributor to Beijing's efforts to increase the yuan's role in international payments.

According to Bloomberg Economics, the share of China's trade conducted in yuan continued to rise in the first quarter of this year, with 29% of the increase since 2021 attributed to Russia. Estimates indicate that almost all of Russia's trade with China is now in yuan, and Russian yuan-based exports exceed what it sells to China, meaning other countries are paying Russia in yuan.

However, Bloomberg's calculations based on Chinese customs data show that the annual growth rate of total trade between China and Russia in the first five months of 2024 slowed to 3% compared to about 42.5% last year. The Russian central bank's estimate indicates that the share of Russia's trade conducted in the currencies of friendly countries did not increase compared to last year.

Several major Chinese banks have stopped accepting yuan from Russia, affecting imports for several months. Russian companies told local media that after Putin's meeting with Chinese President Xi Jinping in May, this issue was resolved using smaller regional banks, but officials stated that concerns remain.

Evidence of the yuan's new role in the Russian economy is everywhere. American shareholders of Yandex in Netherlands received yuan instead of dollars or euros, which were impossible to transfer from Russia, when they sold their Russian business. Elsewhere, companies are turning to the yuan alongside



the ruble when converting dollar and euro loans and issuing new bonds, while the Russian central bank uses the Chinese currency for National Wealth Fund activities.

At the beginning of this year, the yuan overtook the dollar in Russian bank deposits, becoming the main savings currency. In 2023, the volume of yuan deposits in Russia doubled to \$68.7 billion, several times higher than in other major yuan economies like the UK and Singapore.

According to Bloomberg, the latest round of U.S. restrictions in June led to a halt in foreign exchange transactions for dollars and euros in Russia, leaving the yuan as the only available currency for transactions and purchases in brokerage accounts in the country.





Sanctions has little effect on Russia's ex- ports

Western efforts to further disrupt the flow of Russian petroleum indicate that the sanctions imposed to squeeze the country's economy have not been effective.

As the conflict between Russia and Ukraine continues to impact global petroleum markets, Ukrainian President Volody-

myr Zelensky is set to attend a meeting with the UK Cabinet to discuss strategies aimed at further disrupting Russian petroleum sales. While critics of Western sanctions against Russia question the effectiveness of these measures, Zelensky's participation in such a high-level meeting underscores Ukraine's efforts to weaken the foundation of Russia's economy, which heavily relies on petroleum exports.

Energy sanctions battle

The main focus of these sanctions is to cut off the financial support that Russian petroleum exports provide, thereby weakening Moscow's ability to fund its war in Ukraine. Energy sanctions have emerged as a powerful tool in this regard, but their effectiveness and impact have been the subject of serious debate. Western countries, particularly the U.S. and the European Union, have been at the forefront of imposing sanctions on Russian energy exports.

These measures are designed to reduce Russia's petroleum revenues, which constitute a significant portion of its GDP and federal budget. However, the global nature of the petroleum market complicates these efforts. While Western countries have reduced their imports of Russian petroleum, nations like China and India have stepped in to fill the gap, purchasing Russian crude at lower prices.

This shift in export flows has mitigated the shock of sanctions on the Russian economy to some extent but also revealed the vulnerabilities and limitations of unilateral sanctions. The interconnectedness of the global petroleum market means that sanctions can lead to unintended consequences, such as rising energy prices and supply shortages, which affect global petroleum prices and economies worldwide.

Russia's domestic maneuvering

Russia's prioritization of refining its own crude oil is reflected in its export flows. According to estimates by research firm Rystad Energy, Russian petroleum exports are expected to be limited to 2.7 million bar-



rels per day (bpd) in July and August, then improve to 2.9 million bpd in September. This figure is lower compared to the 3.6 to 3.7 million bpd of exports in April and May.

Although this reduction in supply will limit revenue from petroleum exports, it will stabilize domestic fuel prices and ensure sufficient fuel for domestic consumers and military purposes.

54

Impact on global energy market

The consequences of this shift in Russian petroleum flows are tangible across the global energy market, albeit perhaps weaker than Western sanctioners had hoped. The reduction in Russian petroleum exports has contributed to increased petroleum price volatility, impacting the cost of everything from gasoline at the pump to the final price of petrochemical products. For the petroleum and gas industry, these developments highlight the importance of resilience and adaptability in an unpredictable market.

Another outcome of this shift is the reduced revenue of Russia from petroleum sales, though not to the extent that sanctions promised.

Before the war, Russia earned about \$1.1 billion per day from energy exports. Last month, Russia's energy revenues reached \$720 million, which is lower than pre-war levels but still far from the complete depletion of petroleum revenues some had hoped to see. The only significant impact of sanctions and price caps has been the reduction in Russian natural gas exports via pipelines to Europe. However, petroleum and refined product exports continue, and higher

crude oil prices work against the sanctions, offsetting the impact of reduced Russian exports.

Russia might face a price cap of \$60 per barrel for its crude oil exports, but current petroleum prices are high enough that countries like China and India, which do not use Western insurance and are thus not subject to the cap, are paying more than \$60. The so-called "shadow fleets" of tankers transporting Russian petroleum without adhering to the G7 price cap mechanism are fully active. As many critics initially suggested, this mechanism is not entirely enforceable.

In the end, everyone seems satisfied except Ukraine. Western powers boast about their tough stance against Russia, and on paper, they are right. The tankers they sanction still participate in transporting Russian petroleum. Putin claims that the West has not been able to deprive him of petroleum revenue, and he is correct. Major traders benefit from increased petroleum volatility due to the war and sanctions, and China and India receive cheap petroleum.

Investment in alternative technologies and energies has accelerated due to the war in Ukraine. Only Ukraine remains unsatisfied.

According to Oil Price, the reality is that Russia continues to receive substantial petroleum revenue, and sanctions and price cap mechanisms have failed to deprive Russia of its income. Zelensky's plans to meet with Western powers to find alternative solutions underscore this fact.

Oman's Role in Iran's LNG Ambitions



Liquefied natural gas (LNG) has emerged as a crucial energy source globally, especially after Russia's invasion of Ukraine in February 2022. Unlike oil and gas transported via pipelines, LNG can be quickly delivered to any location, making it highly sought after. Iran, holding the world's second-largest gas reserves at around 34 trillion cubic meters, aims to become a leading LNG exporter, with Oman playing a significant role in this strategy.

Iran's collaboration with Oman on LNG was formalized in a 2013 agreement, expanded in 2014, and finalized in 2015. The deal initially planned for Oman to import 10 billion cubic meters of Iranian gas annually for 25 years, later adjusted to 28 billion cubic meters over 15 years. The project

included constructing pipelines both on land and underwater to transport Iranian gas to Oman's Sohar Port, enabling Iran to bypass sanctions and export gas globally.

Oman's work on the project, including seabed surveys and pipeline design, was completed long ago, and adjustments were made to avoid UAE waters due to regional tensions. Once Iranian gas reaches Oman, converting it to LNG for export is straightforward, with Iran planning to use a portion of Oman's LNG production capacity.

Although international interest in the Iran-Oman pipeline was strong before the U.S. withdrew from the JCPOA in 2018, subsequent U.S. sanctions halted progress. Oman shifted its fo-

cus, but Iran then engaged Russia's Gazprom to advance its LNG goals. However, these plans faced further delays due to heightened sanctions and economic challenges.

Despite setbacks, Oman's Energy Minister announced in April last year that the Iran-Oman pipeline project was back on track, with operations expected to start by late 2024 or early 2025.

Additionally, Oman is building a new LNG plant in Qalhat, boosting its production capacity, which is favorable for Iran's broader export strategy. This project, along with Iran's Goreh-Jask pipeline, is set to strengthen Iran's energy exports, potentially extending through Oman and even into Yemen.



NEW MUTUAL INVESTMENT OPPORTUNITIES IN CHINA'S BELT AND ROAD INITIATIVE (BRI) IN AFRICA

AHMAD REZA YOUSEFI- RAZIEH GILANI

Ahmad Reza Yousefi, the managing director of Infinity Galaxy and a PhD candidate in international entrepreneurship, possesses over a decade of experience in the export of bitumen and petrochemicals. He leads a dynamic and committed team with a vision to enhance his country's economy through exports.

He places a strong emphasis on building trust with clients and delivering exceptional service. For the past three years, he has actively kept his clients updated on industry developments, trends, and market insights to help them make informed business decisions.

Infinity Galaxy also has a specialized team dedicated to East Asian markets, offering customized support to importers, enabling them to make timely and informed choices.

Razieh Gilani, the export manager at Infinity Galaxy, has over eight years of experience in analyzing and consulting on the bitumen market. With a specialization in the export, trade, and shipping of bitumen and petrochemicals, she concentrates on markets in Africa, China, India, and East Asia.

For the past 200 weeks, she has been delivering valuable market analyses to help industry stakeholders make informed decisions based on the latest trends. Working alongside a dedicated team of professionals with extensive commercial expertise, she effectively addresses market challenges by providing deep insights and strategic guidance.



56

Introduction:

The Belt and Road Initiative (BRI), launched by China in 2013, is one of the most ambitious infrastructure and economic development projects in modern history. Aimed at enhancing global trade and stimulating economic growth across Asia and beyond, the BRI encompasses a vast network of railways, highways, maritime routes, and pipelines. It seeks to connect Asia with Europe and Africa, fostering a new era of international collaboration and connectivity.

BRI is a Major Country Diplomacy and aims to take the lead on a wider global scale for growth and development of China.

Components of the BRI

The BRI is composed of two main components:

1. **Silk Road Economic Belt:** This overland route connects China to Europe through Central Asia, incorporating countries such as Kazakhstan, Russia, and various Eastern European nations. It focuses on developing railways, highways, and energy pipelines.
2. **21st Century Maritime Silk Road:** This maritime route links China to Southeast Asia, South Asia, Africa, and Europe through sea lanes. It aims to enhance port infrastructure and shipping networks, facilitating trade across oceans.

Together, these components create a comprehensive framework for international cooperation, aimed at addressing critical infrastructure deficits in participating countries.

- Dams
- Railways
- Coal-fired power plants
- Roads
- Railway tunnels
- Bridges



Economic Implications of BRI

The BRI has significant economic implications for both China and participating nations:

- **Investment Opportunities:** China has committed trillions of dollars to fund BRI projects, providing much-needed investment in infrastructure for developing countries. This funding can help stimulate local economies and create jobs.
- **Trade Expansion:** By improving connectivity, the BRI facilitates smoother trade routes, reducing transportation costs and time. This can lead to increased trade volumes between China and partner countries.
- **Market Access:** For China, the BRI opens up new markets for its goods and services. By establishing trade links with countries along the routes, Chinese companies can expand their reach internationally.

Some examples of BRI investments can be seen in:

- Ports
- Airports
- Skyscrapers

According to the World Bank studies, the BRI can:

- Increase the amount of trade in the participating countries by about 4.1 %
- Decrease the global trade costs by 1.1% to 2.2%
- Growing the GDP in developing countries in East Asia and the Pacific by an average of 2.5% to 3.9%
- The possibility of increasing the world GDP by \$7.1 trillion/year until 2040
- Eliminating frictions and barriers that stop global trade

BRI Projects in Nigeria:

The construction and opening of the Abuja-Kaduna railway line took place on July 27, 2016. It is one of the standard railway modernization projects in Nigeria. The business centers of Nigeria will be connected to the centers of economic activity in the northwestern part of the country through this railway.

Bitumen in Nigeria:

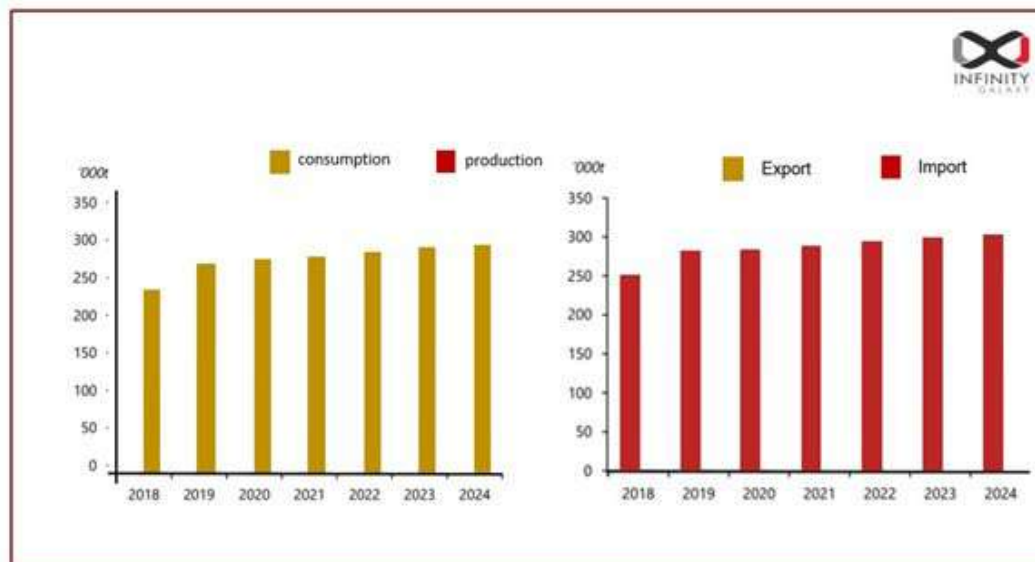
The Nigerian National Petroleum Corporation (NNPC) is the only refinery in Nigeria, Kaduna that produces bitumen. Although this refinery has the capacity to produce about 800,000 tons per year, it cannot produce a significant quantity as it usually processes light crude oil. It had been expected that producing these small volumes of bitumen would continue. Despite the rich natural bitumen reserves, Nigeria cannot explore and process the gilsonite due to weak infrastructures.

In 2018, it was estimated that Nigeria's consumption would grow by 1.9% a year. Obviously, projects are just started after the covid, and the

required amount of bitumen and asphalt is suddenly increasing.

To meet the local bitumen demand, the country is forced to import.

Approximately more than 90 % of bitumen in Nigeria is imported. Most of the imports have come from the Ivory Coast, Europe, and the Middle East. The import level might reach 370,000t up to 2024.



BRI Project in Djibouti:

Djibouti is one of the member countries of BRI, which has borrowed about 1 billion dollars from China. It can cover 40% of the cost of infrastructure.

According to the BRI, Ethiopia and Djibouti are currently bridged by the Addis Ababa-Djibouti railway and the Ethiopia-Djibouti water pipeline.

Economic relations between China and Djibouti are not limited to these projects. China has even built a military base and deployed ships from its South Sea fleet. It believes that the anti-piracy efforts in the region have increased the capacity to support BRI.

Bitumen in Djibouti:

Some of the projects in Djibouti include:

- A 30 megawatt-peak (MWp) solar plant, that will be located in southern Djibouti, Grand Bara desert area (2022)

- Second Djibouti-Power System Interconnection Project, which costs 55 million dollars (2022)

- The Ethiopia – Djibouti Transport Corridor Project Phase I

- An airport

These are only several projects of Djibouti and all of them require huge amount of bitumen and construc-

tion material. Therefore, the consumption of bitumen and related products will surely increase.

BRI Projects in Ethiopia:

the Addis Ababa-Djibouti railway gradually replaced the Ethiopia-Djibouti railway through a contract signed with Chinese companies.

Bitumen in Ethiopia:

Building the railway between Ethiopia and Djibouti increased bitumen and asphalt consumption in Ethiopia. There is not enough data about the imports and exports level of the country but the market experience shows that it has a decent level of imports.

BRI Projects Uganda:

China financed two important hydroelectric projects in the region:

- Karuma hydropower project
- Isimba hydroelectric power station

In addition to Entebbe International Airport and Kabale International Airport

To support these projects, 85% of the budget was provided by China and the remaining 15% was funded by Uganda.

Bitumen in Uganda:

The country mainly relies on imported bitumen. The ports such as Mombasa in Kenya and Dar-es-salaam in Tanzania are the regions that the country receives

the cargoes.

Uganda's bitumen is mostly imported from the Middle East too.

Why BRI Contractors in Africa Imports most of its Bitumen from the Middle East?

It can be questioned why most of African bitumen imports are from the Middle East while there are European countries and Bahrain. Here, we discuss the 3 main reasons.

1.Pricing: Iran price is more feasible as it is 20% lower down the global price of bitumen due to political and economic restrictions.

2.Shipping: European countries can supply the northern parts of Africa easily but it will be expensive to supply Eastern and Southern parts because the vessel has to pass the Suez Canal to reach to the destination. Bahrain, though, has a feasible shipping price, it does not produce enough bitumen to supply Africa. UAE, on the other hand, has both enough bitumen and feasible shipping. Jebel Ali port is the second port in the world with high congestion and constant service.

3.Packing: Europe and Bahrain prefer bulk bitumen therefore they almost don't have drum. While Iran and UAE have all the packings including bulk, new steel drum and jumbo bags.

Conclusion

The Belt and Road Initiative represents a monumental effort by China to reshape global trade dynamics

and foster economic development across multiple regions. While it offers significant opportunities for growth and collaboration, it also presents challenges that need to be addressed. As the BRI continues to evolve, its long-term impact on global trade patterns, international relations, and the economies of participating countries will be closely watched by stakeholders around the world. Balancing ambition with sustainability and partnership will be key to realizing the full potential of this transformative initiative.

The BRI's impact on the bitumen sector goes beyond mere supply and demand dynamics. It raises important considerations regarding sustainability and environmental stewardship. As countries strive to meet infrastructure needs, the extraction and production processes of bitumen must be managed responsibly to mitigate ecological harm. This calls for innovation in production techniques, such as the use of recycled materials and more environmentally friendly extraction methods.

In essence, while the BRI offers significant growth potential for the bitumen industry, it also necessitates a commitment to sustainable practices and collaborative efforts among stakeholders. As nations work together to build the infrastructure of tomorrow, the bitumen industry must adapt to these evolving demands and challenges, ensuring that it contributes positively to both economic development and environmental integrity. Balancing growth with responsibility will be crucial as we navigate this new era of global connectivity.





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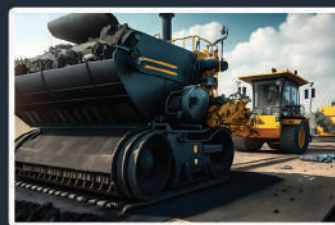
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62



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63



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