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地缘政治紧张局势及其对国际沥青市场的连锁反应

据《世界石油与沥青》报道，伊朗与以色列之间近期的冲突升级在全球能源市场引发了强烈震荡，再次凸显了地区不稳定因素如何迅速影响下游石油产品的动态。尽管此次军事对抗持续时间较短，并最终通过停火协议得到控制，但地缘政治动荡立即干扰了原油运输，从而不可避免地波及了沥青行业——一个市场结构深受油价波动影响的领域。本报告评估了这场地区冲突在近期动荡与过渡时期对国际沥青市场的影响。

全球市场的敏感性与油价波动

冲突的爆发导致原油价格迅速飙升，源于对中东关键海上运输通道可能中断的普遍担忧。尽管紧张局势在达成停火协议后有所缓解，但价格波动仍持续了一段时间，随后才逐步趋于平稳。包括高盛在内的市场分析表明，在停火之后，市场对该地区发生重大供应冲击的担忧大幅下降。随后，原油市场价格重新进入相对稳定的区间，布伦特原油价格在每桶中位区间盘整。

原油与沥青的关联性

沥青作为原油的高密度衍生物，与油价趋势呈现出显著的相关性。业内人士指出，虽然油价的波动并不总是完全传导至沥青价格，但历史数据显示约有25%至40%的传导比例；而在供应不确定性增强的时期，这种联系变得更加明显。此类不稳定时刻往往加剧市场的敏感性，引发沥青交易和定价的快速反应。

出口中断与供应重新分配

在冲突最激烈的阶段，伊朗南部多个出口码头和炼油厂的物流运作曾暂时中断。作为全球主要沥青出口国之一，此次突发停滞迫使进口方寻找替代来源，导致对阿联酋、印度及东南亚部分地区沥青的需求激增。虽然随着局势恢复稳定，这一问题很快得到解决，但短暂的减产仍在全球供应链中造成了



阶段性失衡。

稳定回归与价格调整

随着敌对行动的结束，市场对局势的可预测性作出了迅速反应。原油和沥青价格开始下滑，回吐了危机期间积累的投机性溢价。能源流动的恢复有效化解了此前因恐慌而产生的价格上涨。在供应链恢复正常运作后，关键进口市场——尤其是南亚和非洲地区——重新根据市场基本面而非战争驱动展开合同谈判。

OPEC+信号与未来市场走势

与上述动态同步，OPEC+发出适度增产的信号，进一步稳定了能源行业。主流财经机构的分析师认为，这一举措是OPEC+为全球增强原油供应、抑制包括沥青在内的石油衍生品价格上涨压力而采取的战略举措。因此，行业情绪从地缘政治焦虑逐步过渡到以供应为主导的更温和预期。

结语

尽管伊朗与以色列之间的冲突持续时间较短，但其对全球沥青贸易的影响迅速且深远。在此次事件中，原油供应风险与沥青价格之间的直接关联再次得到验证。然而，地区稳定的恢复以及OPEC+的战略干预正在逐步将市场带回均衡状态。这一连串事件再次凸显出大宗商品市场在地缘政治面前的脆弱性，以及在稳定回归时展现出的韧性。

美国对伊朗石油网络实施新一轮制裁，引发地区影响

据WPB报道，美国已扩大对伊朗石油行业的经济制裁，宣布新一轮制裁措施。这一轮制裁涉及30多个船只、公司和个人，这些实体被指参与伊朗石油产品的运输和销售。此举是美国更广泛政策的一部分，旨在影响伊朗在地区的角色，并通过外交渠道促使其对话。

美国财政部下属的海外资产控制办公室

(OFAC)表示，被制裁的实体涉嫌转运和销售伪造来源的石油，其中包括将伊朗石油标注为伊拉克或阿联酋石油的案例。OFAC指出，此次涉及的国际参与者分布在中东、南亚和东南亚，相关的船对船转运活动主要发生在伊拉克霍尔祖拜尔港附近海域。

制裁中提到的关键人物之一是萨利姆·艾哈迈德·赛义德 (Salim Ahmed Said)，他拥有英伊双重国籍，并与位于伊拉克的VS石油码头有关联。该设施被指在石油混合和出口过程中发挥了作用。多个总部位于阿联酋、印度和新加坡的海运和物流公司也被列入制裁名单，原因是其涉嫌参与相关活动。OFAC表示，这些制裁依据有关伊朗能源行业及反恐的总统行政命令实施。

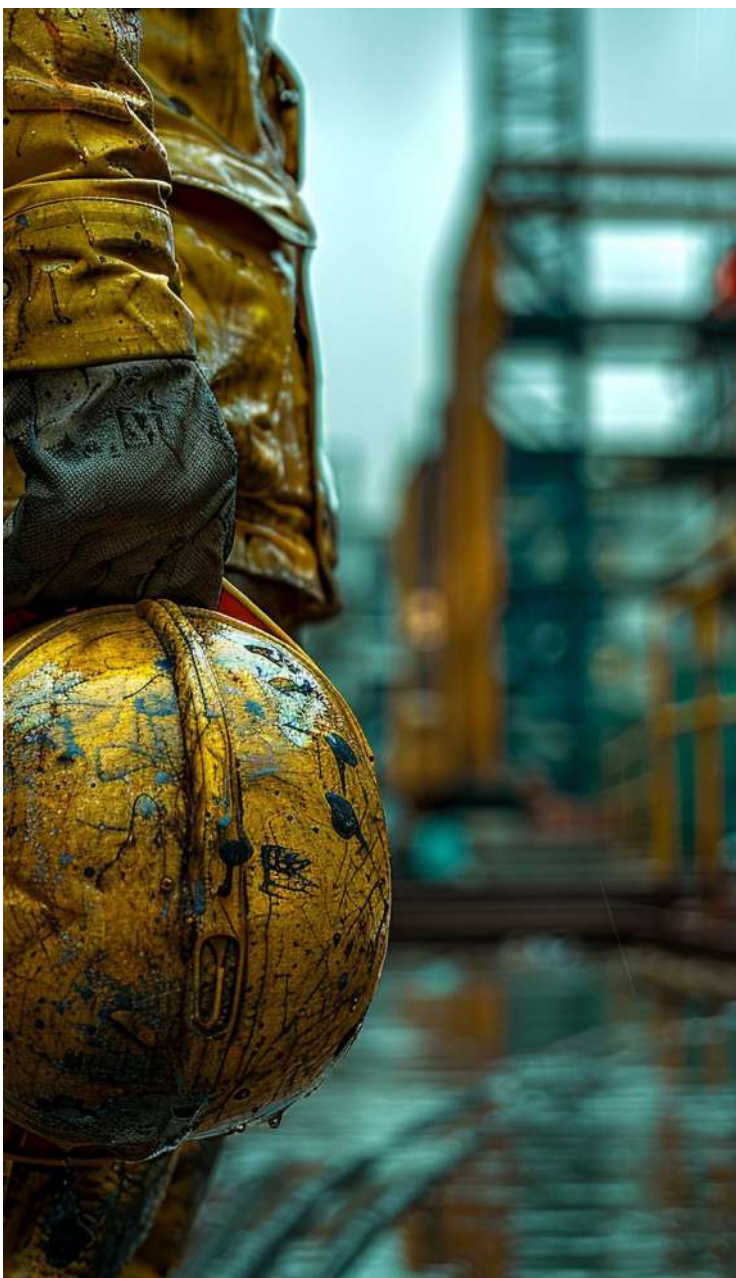
这轮制裁发生在更广泛的地区背景下。由于部分受制裁实体在伊拉克境内运营，伊拉克的能源基础设施和贸易格局可能会受到间接影响。巴格达方面一直在努力加强与西方伙伴的能源合作，但在当前形势下，吸引外国投资可能面临更多复杂性。

在国内方面，伊拉克正面临政治与经济的双重挑战，包括与库尔德自治区在能源合同上的持续谈判。与此同时，库尔德媒体报道称，多个省份遭遇无人机袭击，这些袭击被归因于地区紧张局势。已有报告证实，埃尔比勒、杜胡克和基尔库克等地区的局势日益不稳。

观察人士指出，美国的战略可能旨在重新塑造地区影响力，同时应对其他全球大国在中东的地缘竞争。尽管制裁对伊朗能源出口的具体影响仍在评估中，但有报道称伊朗石油仍在流向部分亚洲国家。

分析人士认为，这些措施能否在长期内发挥作用，不仅取决于限制物流网络的能力，还取决于全球范围内的执行与

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Iran- Israel Tensions and Their Ripple Effects on the International Bitumen Market

According to WPB, the recent escalation between Iran and Israel sent waves across global energy markets, placing the spotlight once again on how swiftly regional instability can influence downstream petroleum products. While the military confrontation was brief and eventually contained through a ceasefire agreement, the geopolitical unrest triggered immediate disruption in crude oil transportation, which inevitably affected the

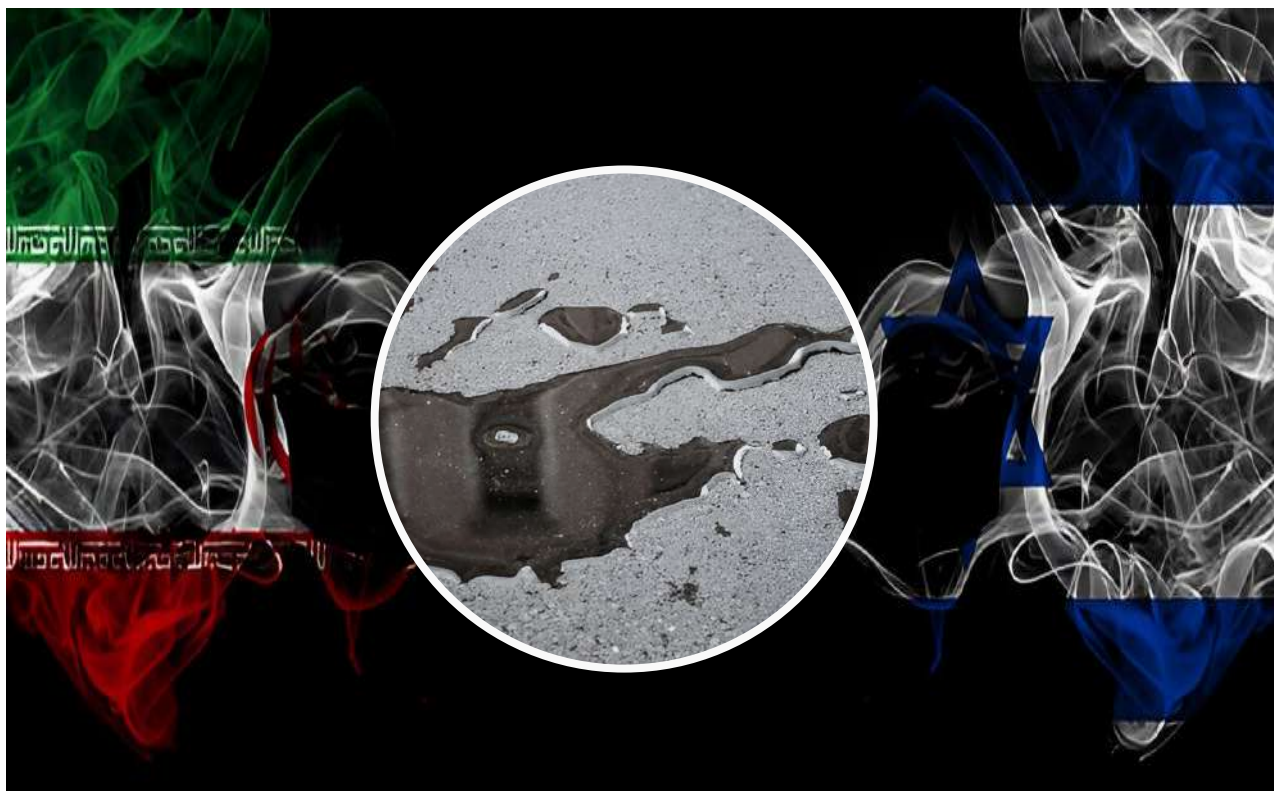


bitumen sector—a market whose dynamics are deeply rooted in oil price behavior. This report evaluates the implications of this regional conflict on the international bitumen market during the recent period of unrest and transition.

Global Market Sensitivities and Oil Price Fluctuations

The conflict's eruption prompted a sudden surge in crude oil prices, fueled by widespread fears surrounding potential interruptions in critical maritime supply routes across the Middle East. Although tensions de-escalated after a ceasefire was reached, price volatility lingered briefly before beginning to subside. Market analyses, in-

Global Market Sensitivities and Oil Price Fluctuations



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cluding those by Goldman Sachs, confirmed that the perceived threat of a major supply shock from the region dropped significantly in the aftermath of the truce. Subsequently, crude oil markets recalibrated toward a more stable pricing band, with Brent crude consolidating in the mid-range spectrum per barrel.

The Crude Oil–Bitumen Connection

The Crude Oil–Bitumen Connection

Bitumen, being a dense derivative of crude oil, reflects oil market trends with a notable degree of correlation. Industry sources such emphasize that although not all oil price changes translate directly into bitumen prices—historical figures suggest a pass-through of approximately 25–40%—the link becomes much more pronounced during periods of supply uncertainty. These moments of instability tend to amplify market sensitivity, prompting immediate responses in bitumen trading and pricing.





Export Disruptions and Supply Re-allocation

Amid the height of the hostilities, logistical operations at various southern Iranian export terminals and refineries came to a temporary halt. This unanticipated stoppage in one of the world's major bitumen-exporting nations caused importers to seek alternative sources, resulting in increased demand for supplies from regions such as the UAE, India, and parts of South-east Asia. Although this situation was resolved shortly after stability returned, the period of restricted output caused temporary imbalances in global supply chains.

Return of Stability and Pricing Adjustments

Following the cessation of hostilities, markets responded promptly to renewed predictability. Both

crude and bitumen prices began to decline, shedding the speculative premiums they had acquired during the crisis. Stabilization of energy flows effectively defused the fear-driven price hikes. With supply lines functioning normally again, key importing regions—especially across South Asia and Africa—resumed contract negotiations based on market fundamentals rather than conflict-induced urgency.

OPEC+ Signals and Forward-Looking Market Trends

In parallel to these events, OPEC+ signaled its intent to modestly raise production, which further reinforced calm in the energy sector. Analysts from major financial outlets interpreted this move as a strategic effort to bolster crude oil availability globally, thus dampening any remaining inflationary pressures on petroleum derivatives

such as bitumen. As a result, industry sentiment transitioned from geopolitical concern toward more moderate, supply-driven expectations.

Conclusion

While the Iran-Israel clash was relatively short-lived, its influence on the global bitumen trade was both swift and significant. The direct correlation between oil supply risks and bitumen pricing was evident during this episode. However, the subsequent restoration of regional stability, coupled with strategic OPEC+ interventions, has gradually ushered the market back toward equilibrium. This chain of events once again underscores the fragility of commodity markets in the face of geopolitical tensions, as well as the resilience they can exhibit when stability returns.

Impact of the Iran–Israel Conflict on Global Bitumen Supply and Trade



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According to WPB, geopolitical tensions in the Middle East have begun to reshape global dynamics in the bitumen market, influencing supply chains, cost structures, and procurement strategies across several regions. The escalation of conflict between Iran and Israel has particularly disrupted trade flows from the Gulf, prompting buyers and suppliers worldwide to reassess their logistical and financial exposure.

Middle East: Strategic Disruptions and Operational Adjustments

Amid intensified regional tensions, Iran’s energy and transport infrastructure shifted into a heightened state of preparedness. Although refineries remained physically intact, operational slowdowns were observed, especially in port cities like Bandar Abbas. Export logistics faced

momentary suspensions and diversions, resulting in extended customs inspections and slower cargo turnover. Iranian exporters experienced shipment delays, while global buyers confronted longer lead times and higher insurance charges for goods originating from Iran.

In the UAE, especially at Jebel Ali, availability of bitumen packaged in Iran declined. To maintain continuity in supply, traders sought alternative sourcing from markets such as India and South Korea—choices that came with increased costs and longer shipping durations. Despite these adjustments, pricing levels in Bahrain remained relatively steady due to pre-existing inventories, though

risk premiums were reflected in shipping contracts and insurance terms.

South Asia: Monsoon Demand Dip Meets Supply Concerns

In India, internal bitumen consumption remained subdued, influenced by early seasonal rains that interrupted roadworks. The resulting decline in demand brought marginal reductions in domestic prices, particularly for VG30 and VG40 grades. However, in light of rising uncertainties over Gulf supply, Indian refiners paused certain export agreements and maintained a cautious posture. Imports from Iran were suspended briefly and rechanneled through alternative routes.

East Asia: Weather, Infrastructure, and Geopolitical Costs

China's bitumen demand softened under the weight of widespread rainfall and slowed infrastructure investments. Though not directly entangled in the conflict, the Chinese market felt its ripple effects through elevated import prices. The cost of acquiring material from South Korea and Singapore increased due to climbing freight and bunker charges. In Shandong, refinery gate prices crossed ¥3,600 per ton, but tepid local consumption curtailed substantial price rallies.

In South Korea, FOB export prices experienced a moderate increase, driven by strong interest from Gulf and East African buyers hedging against potential Iranian supply constraints. Nevertheless, an oversupplied Northeast Asian market prevented sharper upward pricing movements.

Southeast Asia: Strategic Realalignments Amid Steady Pricing

Bitumen traders in Singapore recorded stable CIF values near \$415 per ton, while noticing a rise in inquiries from importers traditionally reliant on Gulf-origin material. Indonesian buyers were quick to transition toward Korean alternatives, leading to extended delivery periods. Additionally, the cost of shipping through the Strait of Hormuz—factoring in higher insurance—added pressure to overall expenditures. Malaysian procurement patterns showed similar caution, though pricing remained stable.

Africa: Supply Gaps and Cost Escalations

In West and Central Africa, markets like Nigeria and Ghana, which largely depend on Iranian and UAE exports, saw CIF values increase by \$15–20 per ton. Although these regions were not directly affected by the geopolitical developments, indirect consequences like rerouted shipments and higher freight rates introduced temporary shortages and pricing instability.

East African nations such as Kenya and Tanzania, heavily reliant on drum-packed bitumen from Gulf suppliers, experienced tight inventories during the pre-rainy season. Shipping delays and re-routing through Indian ports added both time and cost burdens, with CIF prices rising by \$10–12 per ton as buyers scrambled to restock.

In South Africa, the instability surrounding Gulf-origin logistics encouraged a strategic pivot toward Indian and Mediterranean sources. This shift came amid frequent re-quotations and scheduling disruptions of previously arranged deliveries from the UAE.

Europe: Price Volatility and Tightened Supply

Western and Mediterranean Europe witnessed price hikes of approximately \$18–20 per ton, attributed to climbing global crude prices and concerns over potential export constraints from the Gulf. Spot market activity in countries like Italy and Spain declined as traders faced tighter availability and rising forward contract costs. Concurrent maintenance shutdowns at regional refineries further intensified pressure on supply.

Conclusion: Recalibration in a Volatile Market

The escalation of geopolitical friction in the Middle East, particularly between Iran and Israel, has led to widespread operational disruptions and market recalibrations, even in the absence of physical damage to refining assets. Critical consequences have included shipment delays, modified export routes, and cautious trading behavior. Regions most affected span the Middle East, Africa, and parts of Europe. Although a temporary ceasefire has since introduced some measure of stability, market participants continue to explore alternative sourcing options in an effort to reduce exposure to future geopolitical shocks.

Ripples from Iran-Israel Tensions Reshape Global Oil Outlook

According to World of Petroleum and Bitumen (WPB), recent geopolitical tensions between Iran and Israel sent immediate shockwaves through global oil markets, yet markets quickly demonstrated a return to balance as structural forces prevailed over short-lived fears.

Market Response to Escalating Tensions

The confrontation between Iran and Israel sparked a sharp, albeit brief, surge in crude oil prices. International benchmarks like Brent crude climbed significantly—surpassing \$81 per barrel after nuclear-related military actions were reported. However, the upward momentum faded rapidly following signals of de-escalation. Iran's restrained missile response and the decision to leave the Strait of Hormuz operational helped temper fears. As conditions stabilized, prices retreated by nearly 6%, landing closer to \$67 per barrel. This abrupt correction illustrated how swiftly geopolitical premiums can dissipate in today's marketplace.

Shifting Market Sensitivities and Structural Fortitude

This pattern of volatility highlighted a broader trend: the oil market's growing maturity and resistance to regional shocks. Observers noted that unlike in previous eras, the Middle East no longer wields the same destabilizing influence. The price adjustment revealed that markets are now more responsive to underlying fundamentals—such as spare production capacity and diversified supply—than to fleeting geopolitical developments. The resilience was further underscored by efficient global communication and transparent data, allowing traders to recalibrate expectations swiftly.

Continuity in Supply and Buffering Mechanisms

Despite heightened political risks, physical oil flows remained uninterrupted. Iran maintained steady export levels—approximately 1.7 million barrels per day—with shipments primarily directed toward Asia. Both Iranian and Israeli production hubs remained largely unaffected. Simultaneously, robust strategic petroleum reserves, especially in the United States and East Asia, acted as safety nets. Rising U.S. inventories further reassured the market that supply networks had remained resilient during the crisis phase.

Production Strategy Takes Center Stage

Amid the unfolding developments, OPEC+ announced a

forthcoming increase in oil output—projected at around 411,000 barrels per day in successive months. This move was interpreted as a deliberate return to supply-demand fundamentals, aimed at easing any potential constraints in the second half of the year. Consequently, post-ceasefire oil prices dropped significantly, effectively erasing the war-induced premium. Industry analysts emphasized that production strategies, not conflict escalation, continue to exert the greatest influence on pricing trends.

Short-Term Risk vs. Long-Term Trajectory

Market surveys during the period indicated a brief risk premium in the range of \$0.9 to \$1.0 per barrel, driven primarily by investor sentiment. However, forecasts pointed to a reversion to baseline pricing, with Brent averaging in the high \$60s and U.S. crude trailing just behind. Experts argued that future pricing will likely hinge on global demand cycles and production decisions rather than geopolitical instability. Some projections anticipate Brent trending toward \$50–60 per barrel within the next two years, highlighting the diminishing impact of transient crises on long-term forecasts.

Strategic Implications for Energy and Economics

Although the immediate crisis was short-lived, the incident exposed underlying fragilities in global energy security. Analysts caution that future escalations—particularly scenarios involving restricted access to the Strait of Hormuz or broader disruptions in Iranian exports—could exert more sustained upward pressure on prices. Moreover, any internal instability within Iran could have longer-term ramifications for global supply chains and economic planning. Such outcomes would likely steer the world toward more constrained growth environments.

While the recent conflict caused a temporary spike in oil prices, market mechanisms and international coordination ensured rapid stabilization. With long-term projections anchored in supply-demand fundamentals, the episode serves as a reminder of the persistent but manageable nature of geopolitical risk. For industry leaders and policymakers, the lesson is clear: reinforcing energy diversification, investing in reserve strategies, and strengthening global partnerships will remain essential to navigating future uncertainties.

June 2025: The Bitumen Game in the Shadow of War, Logistics Crisis, and Growing Uncertainty in Iran's Export Ecosystem

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 asphalt 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 asphalt market. With a specialization in the export, trade, and shipping of asphalt and petrochemicals, she concentrates on markets in Africa, China, India, and East Asia.

For the past 240 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.



→ Iran: A Pivotal Player in Asian and African Bitumen Markets

Between May 31 and June 30, 2025, Iran's bitumen industry faced one of its most turbulent periods in recent years. The unprecedented unilateral military attacks by Israel against Iran's oil and energy infrastructure not only disrupted refineries and export terminals but also triggered

widespread psychological uncertainty across the market.

In the very first week after the attacks, daily production capacity plummeted. Disruptions in feedstock supply, damage to key facilities, and strict limitations on shipments from Bandar Abbas forced exporters to delay or rethink their plans. Many international customers, particularly in China and East Africa requested

shipment extensions or suspended deliveries altogether. Ocean freight rates became subject to War Risk surcharges, and for key buyers, baseline export prices climbed well above seasonal averages.

Yet, as Infinity Galaxy has highlighted in its weekly reports, Iran's bitumen industry, empowered by its resilient private sector and flexible logistics networks, managed to swiftly restore its export cycle.

After the ceasefire and partial de-escalation, not only did Iran maintain its export price levels, but persistent regional risks drove demand for prompt shipments, positioning Iran once again as a major supplier for East Asia and Africa.

→ Singapore: Asia's Benchmark Hub and the First to React

Singapore, the pricing hub and main trading center for bitumen in Asia, was the first market to react sharply to the outbreak of war. In the opening days of the Israeli assault, escalating geopolitical risk and reduced

flows from West Asia especially Iran pushed Singapore Pen 60/70 bitumen prices up by 3-5% per week, reaching a half-year high by month-end.

During the second and third weeks of June, major buyers anticipating further disruptions brought forward orders for future months. Shipping companies passed on increased insurance and freight costs to customers, further elevating end prices. By the third week, as alternative cargoes arrived from Malaysia and Indonesia and oil prices began to ease, the pace of price growth slowed, but Singapore's bitumen price remained firmly above \$420.

Date	FOB Singapore (\$)	Weekly Change (\$)
6 June	402	-
13 June	417	+15
20 June	420	+3
27 June	427	+7



→ China: Relentless Demand and Competition for Fast Delivery

China remained a top destination for Iranian bitumen exports throughout the past year. However, the war shock in June 2025 disrupted market dynamics.

In the first week of the Middle East crisis, Chinese importers, desperate to supply ongoing infrastructure projects, scrambled for alternative shipments and accepted prices \$10-15 higher than the previous week. From the second week, as Iranian supply resumed, imports in flexitank and jumbo bag formats picked up again, sparking renewed competition among buyers in coastal provinces such as Shanghai, Xiamen, and Ningbo.

In the final week of June, with war tensions easing and oil prices beginning to correct, some major importers postponed their next purchases. Nevertheless, spot transactions remained robust, and Iran retained its position as China's leading bitumen supplier.

→ India: Dual Market, Shifting Demand, and Long-Term Regional Risk

For over a year, India has navigated between Iranian and Iraqi supply. This time, the Middle East crisis changed the equation.

During the initial week of disrupted Iranian exports, orders shifted toward Iraq, but long lead times and the unavailability of specialized Iranian drum formats like Jey embossed and Pasargad embossed led Indian buyers back to the Iranian market. In subsequent weeks, as Iranian shipments from Bandar Abbas increased, India's market saw a dual price reference: premium rates for fast Iranian cargoes, and lower (but delayed) Iraqi cargoes.

By month-end, as global oil prices adjusted and stocks at India's western ports increased, price growth slowed but still ended above the annual average.

→ East & West Africa: Shipping Crisis and Loyalty to Longstanding Suppliers

African markets were more affected than ever by shipping disruptions throughout June.

In West Africa (Nigeria, Senegal, Ghana), the Middle East crisis raised serious concerns about supply chain continuity, prompting long-term buyers to seek immediately available cargo. In some cases, War Risk pushed freight rates up as much as 10%, and loading delays stretched to several weeks.

A similar story unfolded in East Africa (Kenya,

Tanzania, Djibouti), though demand held firm thanks to ongoing seasonal road construction projects. By month-end, as oil prices stabilized and primary risks receded, the market calmed somewhat-but prices remained above seasonal averages.

Date	CFR Kenya (\$)	CFR Tanzania (\$)
6 June	466	477
13 June	472	483
20 June	484	495
27 June	481	492

June in Review: Key Operational Takeaways

June 2025 marked a decisive turning point for the global bitumen market and Iran's exports. The post-attack price surge, effective crisis management, and rapid restoration of export capacity ultimately led to a month ending with prices stabilized above yearly trends.

Despite initial setbacks from the war, Iran's supply chain demonstrated remarkable operational flexibility and a strong commitment to customers-reaffirming the value of the country's export ecosystem beyond mere production capacity. East Asia and Africa remained the core destinations, and June's roller-coaster ride left a crucial lesson for the future: in the bitumen market, resilience and rapid response are everything.



2025年6月：战争阴影、物流危机与不确定性加剧下的沥青博弈，伊朗出口生态深度观察

阿赫玛德·礼扎·尤赛菲 (Ahmad Reza Yousefi)

，Infinity Galaxy 的董事总经理，同时是国际创业学博士候选人，拥有十多年沥青及石化产品出口经验。他领导着一支充满活力且备受敬业的团队，秉持通过出口推动国家经济发展的愿景。

他非常重视与客户建立信任并提供卓越服务。在过去三年里，他一直积极向客户通报行业动态、趋势及市场信息，帮助他们做出明智的商业决策。

Infinity Galaxy 还拥有一支专注于东亚市场的专业团队，为进口商提供定制化支持，促进他们及时、准确地做出选择。

拉齐耶·吉拉尼 (Razieh Gilani)，Infinity Galaxy 的出口经理，在沥青市场分析 & 咨询领域拥有超过八年的经验。她专注于沥青及石化产品的出口、贸易和船运业务，主要面向非洲、中国、印度和东亚市场。

在过去的 240 周里，她一直提供有价值的市场分析，旨在帮助行业参与者依据最新趋势做出明智决策。她与一支具备深厚商业专业知识的团队协同工作，通过提供深入见解和战略指导，有效应对市场挑战。

伊朗：亚洲和非洲沥青市场的关键角色

2025年5月31日至6月30日，伊朗沥青行业经历了近年来最为动荡的时期。以色列对伊朗石油及能源基础设施的前所未有的单边军事打击，不仅扰乱了炼油厂和出口码头，还在市场上引发了广泛的心理不安。

袭击发生后的第一周，日均产能骤降。原料供应中断、关键设施受损，以及从阿巴斯港的装船严格受限，迫使出口商推迟或重新规划他们的计划。许多国际客户，尤其是中国和东非的客户，纷纷要求延长装运时间或干脆暂停收货。海运费用因“战争风险”附加费大幅上，主要买家的基础出口价格大大高于往年同期均价。

但正如Infinity Galaxy在每周报告中指出，得益于伊朗强大的私营部门和灵活的物流体系，伊朗沥青行业得以迅速恢复出口循环。停火及紧张局势缓解后，伊朗不仅保持了出口价格水平，持续的区域风险反而推动了对快速装运的需求，使伊朗再次成为东亚和非洲的主要供应国。

新加坡：亚洲基准中心，率先反应

新加坡作为亚洲沥青定价和主要贸易中心，是对战争爆发反应最快的市场。在以色列发动袭击的头几天，地缘政治

风险飙升，西亚尤其是伊朗的供应减少，推动新加坡60/70渗透级沥青价格每周上涨3-5%，到月底达到半年高点。在6月的第二和第三周，主要买家因担心进一步中断，提前下单锁定未来数月的货源。航运公司把上涨的保险和运费转嫁给客户，进一步推高了终端价格。到第三周，随着马来西亚和印度尼西亚的替代货源到港，加之原油价格回落，价格增速趋缓，但新加坡沥青价格仍稳定在420美元以上。

新加坡FOB价格趋势（美元）

日期	价格 (\$)	周变化
2025 年 6 月 6 日	402	-
2025 年 6 月 13 日	417	+15
2025 年 6 月 20 日	420	+3
2025 年 6 月 27 日	427	+7



中国：持续的需求与交付速度的竞争

过去一年，中国始终是伊朗沥青出口的主要目的地之一。然而，2025年6月的战争冲击彻底改变了市场格局。危机的第一周，中国进口商为确保基础设施项目建设，急于寻找替代货源，甚至愿意接受比前一周高出10-15美元的价格。从第二周起，随着伊朗供应恢复，柔性罐和吨袋包装的沥青进口重新启动，沿海省份如上海、厦门和宁波的买家之间竞争更加激烈。

6月最后一周，随着紧张局势缓解、油价开始回调，一些大型进口商推迟了下一轮采购。但现货交易依旧活跃，伊朗继续保持中国沥青头号供应国的地位。

印度：双轨市场、需求切换与长期区域风险

过去一年多，印度一直在伊朗与伊拉克供应之间灵活切换。这一次，中东危机打破了平。伊朗出口受阻的最初一周，订单转向伊拉克，但长交货周期和特定伊朗钢桶（如Jey embossed和Pasargad坦桑尼亚和肯尼亚CFR价格趋势（美元）

embossed）无法供应，使印度买家重新回到伊朗市场。随后，随着伊朗从阿巴斯港的出口恢复，印度市场出现了“双轨价格”——快速到货的伊朗货源高价，延迟到货的伊拉克货源低价。

月底，随着全球油价调整及印度西部港口库存增加，价格涨幅放缓，但仍高于年度均值。

东西非洲：运输危机与长期供应关系

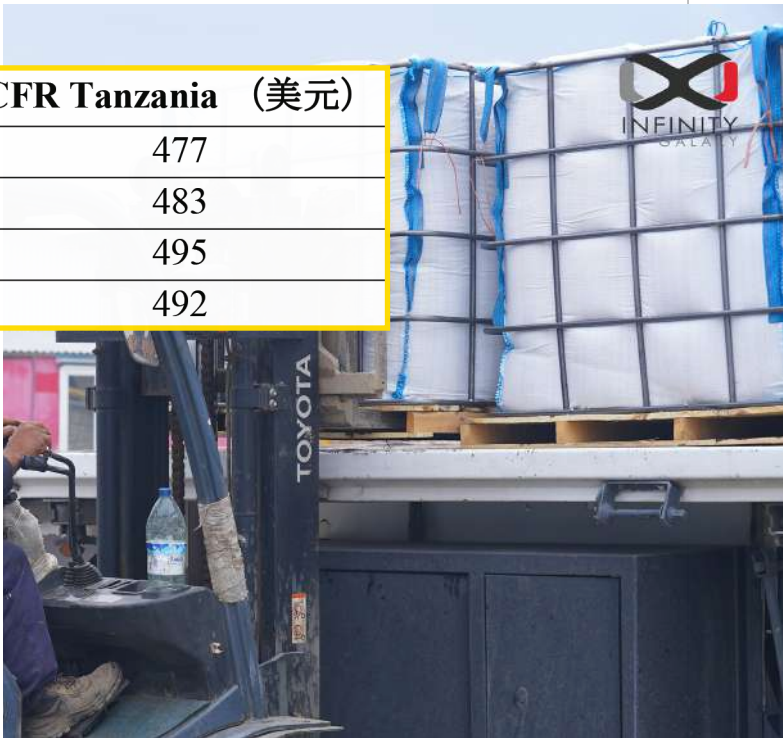
整个6月，非洲市场受运输中断影响尤其严重。在西非（尼日利亚、塞内加尔、加纳），中东危机加剧了供应链中断的担忧，长期买家急于寻找现货。一些情况下，“战争风险”使运费上涨高达10%，装船延误持续数周。

在东非（肯尼亚、坦桑尼亚、吉布提），虽然局势类似，但由于道路建设项目带动，需求依旧旺盛。月底，随着油价趋稳及主要风险消退，市场稍显平静，但价格仍高于往年同。

日期	CFR Kenya (美元)	CFR Tanzania (美元)
2025 年 6 月 6 日	466	477
2025 年 6 月 13 日	472	483
2025 年 6 月 20 日	484	495
2025 年 6 月 27 日	481	492

6月回顾：核心运营启示

2025年6月成为全球沥青市场和伊朗出口的关键转折点。袭击后的价格飙升、有效的危机管理与出口能力的快速恢复，最终使当月价格稳定在全年高位。尽管战争初期带来诸多挑战，伊朗供应链展现了卓越的灵活性与对客户的高度承诺，再次证明伊朗出口生态的价值远远超越生产能力本身。东亚和非洲依然是核心市场，而6月的跌宕起伏则为未来留下重要启示：在沥青市场，韧性和快速响应才是制胜之道。



British Asphalt Group

British Asphalt Group Leads the Charge with Live Asphalt Emissions Monitoring

BY bitumen magazine

According to WPB, a major leap toward achieving net-zero emissions has been made in the UK highways sector as the British company Asphalt Group pioneers a groundbreaking collaboration with Asphalt-IQ. Through an innovative app paired with a smart tracking system, these road surface specialists can now capture precise carbon emissions data directly from worksites in under a minute. This fast, intelligent approach is transforming sustainability practices across the industry.

The days of rough estimates and clunky spreadsheets are over. By adopting real-time Scope 3 carbon reporting technology, Asphalt Group now generates auditable, on-demand data. This advancement aligns with PAS 2080:2023 and ADEPT CCAS standards, positioning the company as a model for others to follow.

The Technology Behind the Transformation

At the heart of this innovation is the Carbon-IQ app, developed by Asphalt-IQ. This user-friendly platform is tailored to each client and activated either by a Smart A-Tag embedded in the road or by tapping a smart card, automatically logging details such as site location and transport distances. Within sixty seconds, it produces a precise carbon figure ready for reporting.

Stephen Cooke, Managing Director of Asphalt Group, describes the system as a game changer: "It's crucial for us as a company to decarbonise our operations and help others do the same. A big part of that is the ability to track emissions effectively — and we're thrilled to use a system that makes this simple and effective."

By collecting site-specific, real-time data rather than relying on generic databases, the company ensures its figures are precise, auditable, and instantly accessible.

From Data to Strategy

Asphalt Group is not merely piloting this system; it has rolled it out across all four of its business divisions: Reinforcement, Preservation, Surface Dressing, and Surfacing. The system is already in use on contracts in Wales and England.



Stephen Cooke, Managing Director of Asphalt Group, describes the system as a game changer: "It's crucial for us as a company to decarbonise our operations and help others do the same."

Setting an Industry Example with PAS 2080

This effort goes beyond mere regulatory compliance. With live data, the company can assess seasonal impacts and fine-tune operational strategies. Decisions are now driven by on-the-ground facts rather than projections.

Gary Cook, Founder and CEO of Asphalt-IQ, highlights the significance: "Accurate emissions data



英国沥青集团引领沥青排放实时监测革命

据WPB报道，英国公路行业在实现净零排放方面迈出了重大一步，英国沥青集团（Asphalt Group）与Asphalt-IQ携手开展开创性合作，走在了行业前沿。通过一款创新的应用程序与智能跟踪系统的结合，这家道路表面专家公司现在可以在不到一分钟的时间内，从施工现场精准捕捉碳排放数据。这种快速而智能的方法正在彻底改变整个行业的可持续发展实践。

is essential for advancing toward net zero. The Asphalt Group-IQ app delivers this seamlessly, providing instant reports with real, site-specific numbers.”

Setting an Industry Example with PAS 2080

In recent times, Asphalt Group became one of the first companies in the sector to secure PAS 2080 verification — a formal recognition of its commitment to reducing whole-life carbon in infrastructure projects.

Beyond Emissions: Building Resilience?

PAS 2080 promotes carbon management across the value chain, encouraging better collaboration, accountability, and innovation. By integrating the Carbon-IQ system, Asphalt Group not only meets these standards but also pushes their boundaries.

“As a leading road repair specialist, we’re proud to be among the first companies in the sector to achieve PAS 2080 verification,” says Stephen

Changing the Narrative in Highways

Cooke. “Looking ahead, we’ll continue helping the industry achieve both carbon and cost savings through durable, long-lasting solutions.”

Beyond Emissions: Building Resilience

For Asphalt Group, the journey is about more than just meeting carbon targets. The company recognises that sustainability must go hand in hand with resilience and cost-effectiveness.

Driving Toward a Greener Future

Its ongoing focus on integrated asset management draws a direct connection between environmental responsibility and long-term infrastructure value.

Their holistic approach includes:

- Reinforcement: Extending pavement life using geosynthetics
- Preservation: Slowing deterioration with timely



treatments

- Surface Dressing: Providing skid-resistant, waterproof surfaces

Each solution is effective individually but also enhances the others, reducing lifecycle costs while delivering sustainable outcomes.



From Data to Strategy

Each solution is effective individually but also enhances the others, reducing lifecycle costs while delivering sustainable outcomes.

Changing the Narrative in Highways

Asphalt Group's collaboration with Asphalt-IQ is more than just a tech upgrade — it signals a cultural shift in how the highways sector approaches emissions monitoring. Carbon reporting is no longer a back-office task but a strategic advantage.

The key benefits? Transparency, trust, and the ability to demonstrate measurable progress to clients, regulators, and communities. As Gary Cook puts it: "Our partnership with Asphalt Group sets a new benchmark for carbon data collection and accounting in the highways industry. No more vague databases or assumptions

— just practical, customised, real-time site data."

Driving Toward a Greener Future
Across UK roads, a quiet revolution is underway. It's no longer just about fixing potholes or extending pavement lifespan; it's about achieving these goals with minimal environmental impact and clear accountability. Asphalt Group isn't waiting for the sector to catch up — it's setting the pace.

Through smart partnerships, precise reporting, and certified carbon management, the company proves that sustainability and performance can go hand in hand. In fact, when done right, they reinforce each other.

Asphalt Group's forward-thinking approach offers an inspiring blueprint for others in the highways and infrastructure sectors. Because when every tonne of carbon counts, every second saved on reporting helps build a better, more sustainable tomorrow.

•Reinforcement: Extending pavement life using geosynthetics
•Preservation: Slowing deterioration with timely treatments
•Surface Dressing: Providing skid-resistant, waterproof surfaces

LNG-Powered Bitumen Carrier Strengthens McAsphalt's Fleet and Sustainability Goals

According to WPB, McAsphalt Industries, a prominent Canadian producer and supplier of asphalt and bitumen, has recently added a cutting-edge LNG-fueled bitumen tanker to its operational fleet. This newly built vessel, named McAsphalt Advantage, signifies a pivotal move in the company's long-term strategy to reinforce the reliability of bitumen transport while simultaneously advancing environmental performance.

The McAsphalt Advantage boasts a deadweight tonnage of 12,500 and is engineered to run on liquefied natural gas (LNG), a fuel alternative known for its lower carbon emissions compared to conventional marine fuels. With a length of 140 meters and a beam measuring nearly 24 meters, the

vessel is capable of transporting up to 11,000 cubic meters of liquid cargo — an impressive capacity that will serve the firm's needs across key shipping routes.

Designed by FKAB Marine Design, a well-respected name in innovative naval architecture, the tanker was constructed at Wuhu Shipyard, a Chinese facility known for building specialized vessels. The propulsion and onboard energy systems were supplied by Wärtsilä, a Finnish technology leader in the maritime sector. Wärtsilä's contribution includes two 20DF dual-fuel engines, controllable pitch propellers, advanced rudder systems under the Energopac brand, gearboxes, and a transverse thruster — all tailored to maximize both fuel efficiency and

根据《WPB》杂志报道，McAsphalt工业公司——加拿大知名的沥青和石油沥青生产及供应商，近日为其运营船队新增了一艘采用液化天然气（LNG）驱动的先沥青运输船。这艘新建成的船舶名为**“McAsphalt Advantage”**，标志着该公司在提升沥青运输可靠性以及推进环保目标方面迈出了关键一步，体现了其长期发展战略的重要进展



maneuverability.

Flying under the Canadian flag, the McAsphalt Advantage is expected to play a vital role in supporting the company's operations across the Great Lakes region. This area is a central hub for inland maritime commerce in North America and is critical to the transportation of bulk materials like bitumen, particularly for road maintenance and infrastructure development projects.

In a public statement, Chuck Van Dyk, Executive Vice President of McAsphalt Industries, emphasized the broader significance of this vessel. "The McAsphalt Advantage represents a step forward in aligning our logistical capabilities with sustainable practices," he noted.

"By incorporating LNG propulsion, we are actively reducing our environmental footprint while improving the efficiency and reliability of our fleet. This investment reflects our broader mission to deliver quality products responsibly and adapt to a rapidly changing industry landscape."

McAsphalt Advantage 的载重吨位为12,500吨,设计采用液化天然气(LNG)作为燃料,这是一种相较于传统船用燃料碳排放更低的替代能源。该船长140米,船宽近24米,能够运输多达11,000立方米的液态货物——这一令人印象深刻的运载能力将满足公司在主要航线上的运输需求。

The inclusion of LNG-powered vessels in commercial fleets has been gaining traction globally. LNG emits significantly lower levels of sulfur oxides, nitrogen oxides, and particulates, contributing to reduced air pollution and compliance with increasingly stringent maritime environmental regulations. McAsphalt's initiative thus places it among a growing number of forward-thinking

companies adopting clean energy solutions in shipping logistics.

By integrating advanced ship design and eco-conscious technology, McAsphalt Industries is not only fortifying its supply chain but also contributing meaningfully to the global effort to decarbonize the maritime sector.

Transforming Agricultural Waste into Sustainable Road Infrastructure: Brazil's Bagasse Ash Innovation

According to WPB

Brazil is pioneering a new path in sustainable road construction by integrating sugarcane waste into asphalt production. In a bold departure from conventional practices, researchers have identified sugarcane bagasse ash—a residue generated during ethanol and sugar manufacturing—as a viable alternative to traditional mineral fillers in asphalt mixtures. This shift not only enhances the mechanical strength and durability of roads but also significantly reduces the environmental impact of road construction.

By replacing a portion of mineral filler with this agricultural by-product, the approach delivers multiple benefits: minimizing landfill waste, lowering carbon emissions, and decreasing the reliance on non-renewable resources. This strategy showcases a successful intersection of agriculture, infrastructure, and environmental stewardship.

Utilizing Industrial Residue for Pavement Innovation

Bagasse, the fibrous remainder after extracting juice from sugarcane, has long been a challenge to manage.

将农业废弃物转化为可持续道路基础设施：
巴西甘蔗渣灰的创新应用

根据《WPB》杂志报道，巴西正在开创可持续道路建设的新路径，通过将甘蔗废料融入沥青生产来实现这一目标。研究人员大胆突破传统做法，发现甘蔗渣灰（在乙醇和糖生产过程中产生的残渣）可作为沥青混合料中传统矿物填料的可行替代品。这一转变不仅提高了道路的机械强度和耐久性，还大大减少了道路建设对环境的影响。



Utilizing Industrial Residue for Pavement Innovation

Once incinerated to generate energy, it leaves behind large volumes of ash—typically considered waste. However, in Brazil, where sugarcane production reaches massive scales, the volume of resulting ash is substantial enough to justify its reconsideration as a functional material.

Researchers at the State University of Maringá proposed substituting around 5% of conventional mineral filler in asphalt with this ash. Initial laboratory tests and on-site applications confirmed that the modified asphalt not only satisfies standard performance criteria but often exceeds them. The fine texture and silica-rich nature of bagasse ash make it a compatible and effective component for binding aggregate and bitumen.

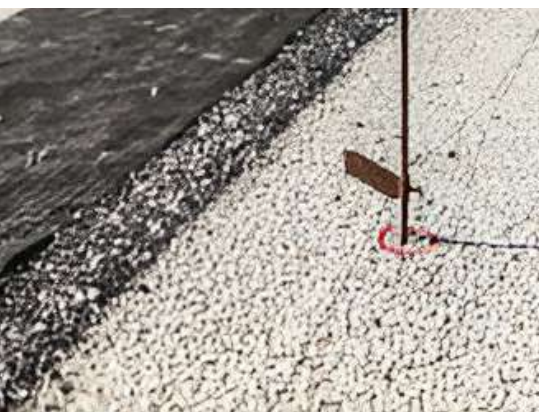
This concept follows a broader global trend in which industrial by-products are being transformed into building materials. Much like the use of fly ash in concrete or recycled polymers in bricks, bagasse ash represents an evolution in the philosophy of material sourcing for infrastructure.

Reinforcing Road Performance with Sustainable Materials

Technical assessments of the modified asphalt have indicated notable improvements. Laboratory evaluations demonstrated a roughly 40% increase in Marshall stability and a significant boost in tensile strength. These enhancements translate into pavements that better resist deformation and endure heavier loads over time.

Field trials validated these results under actual traffic conditions. Road sections incorporating bagasse ash showed enhanced resistance to rutting and a slower rate of deterioration. In quantitative terms, resistance to flow improved by over 70%, and permanent deformation was reduced by nearly 30% compared to traditional mixes.

From an ecological perspective, the substitution reduces the need for mining and transporting new materials, conserving natural resources and reducing emissions. The recycling of ash diverts waste from landfills and repurposes it in a productive, value-adding way. The benefits are multifaceted: enhanced road longevity, reduced environmental harm, and economic efficiency.



通过以这种农业副产品替代部分矿物填料，该方法带来了多重益处：减少填埋垃圾、降低碳排放，并减少对不可再生资源的依赖。这一策略成功展现了农业、基础设施与环境保护三者之间的有机结合。

Economic Advantages and Cost Efficiency

Economic Advantages and Cost Efficiency

While mineral filler isn't prohibitively expensive, it still incurs extraction and transport costs. In contrast, bagasse ash is readily available and requires minimal processing. By integrating it into asphalt production, the overall cost can be lowered without compromising on quality. In fact, researchers found that this substitution simultaneously decreased expenses and improved structural performance—a rare dual advantage in construction materials.

This economic logic adds a practical layer to the environmental benefits, making the proposition even more appealing to government agencies and private contractors tasked with managing limited infrastructure budgets.



利用工业残渣推动路面创新

甘蔗渣是从甘蔗中提取汁液后的纤维性残留物，长期以来一直是难以处理的问题。过去通常将其焚烧以发电，焚烧后会产生大量的灰烬——这些灰烬通常被视为废弃物。

然而在甘蔗产量巨大的巴西，所产生的灰渣数量庞大，足以促使人们重新考虑将其作为一种功能性材料加以利用

Reinforcing Road Performance with Sustainable Materials

From Research to Real-World Application

The transition from laboratory development to practical deployment occurred swiftly. A test segment of a major highway in Paraná was constructed using the new asphalt mix. Despite being exposed to heavy traffic from agricultural vehicles, the road performed admirably, validating both its technical resilience and feasibility for large-scale implementation.

The initiative was spearheaded by Vinícius Milhan Hipólito, a civil engineer with dual roles in academia and industry. His involvement bridged research and real-world execution, ensuring the innovation was not confined to academic journals but translated into tangible outcomes. The successful pilot was documented and peer-reviewed, earning international recognition and laying the groundwork for broader adoption.

Integration of Agricultural and Infrastructure Systems

This approach exemplifies the principles of the circular economy. Instead of treating sugarcane ash as a disposal issue, it is repositioned as a resource within another industrial sector. Given Brazil's massive output of sugarcane, the potential volume of usable ash is substantial, creating a steady and scalable supply chain.

News

Unlike its limited value as a soil amendment—where concerns over contaminants persist—bagasse ash shows real promise in civil engineering. Its mineral composition and fine granularity make it ideal for reinforcing asphalt and potentially other construction applications such as concrete.

Global Potential and Leadership by Example

Though other countries with strong sugar industries have explored similar pathways, Brazil distinguishes itself through the scale and success of its application. Field implementation on a functional highway is a significant leap beyond theoretical research and controlled lab testing.

The project's implications stretch beyond Brazil's borders. Nations with similar agricultural outputs could adapt this model, making road networks more sustainable

while managing agri-waste more effectively. As infrastructure demands and climate commitments converge, such solutions offer a pathway to meeting both simultaneously.

Strategic Pathways for National Expansion

Encouraged by the results, experts advocate for scaling this practice across Brazil, particularly along agricultural corridors critical to the national economy. Strengthening these logistical arteries with cost-effective, eco-friendly materials could streamline commodity transport and reduce infrastructure maintenance demands.

Wider adoption would require establishing logistical links between sugar mills and asphalt plants, formulating technical standards, and ensuring buy-in from public and private sectors. Current monitoring data continues to affirm the long-

term durability of the test road, suggesting readiness for broader implementation.

Advancing Sustainability through Infrastructure

This case represents a meaningful advancement in sustainable development. By identifying value in a previously overlooked residue, Brazil has unlocked a new resource that meets performance, economic, and environmental goals in tandem. The innovation proves that forward-thinking engineering and environmental responsibility can coexist, offering a replicable model for infrastructure in the age of climate awareness.

The continued success of this initiative could serve as a foundation for reshaping construction materials worldwide—where a by-product of one industry becomes the backbone of another.



马林加州立大学的研究人员提出，用这种甘蔗渣灰替代约 5% 的传统矿物填料用于沥青中。初步的实验室测试和现场应用结果表明，这种改性沥青不仅符合标准性能要求，甚至在许多方面表现优于传统材料。甘蔗渣灰质地细腻、富含二氧化硅，使其能够有效与骨料和沥青结合，成为一种兼容且高效的成分。

这一理念也契合全球范围内正在兴起的一种趋势：将工业副产品转化为建筑材料。就像粉煤灰在混凝土中的应用或回收聚合物制成砖块一样，甘蔗渣灰也代表着在基础设施材料来源理念上的一种进化。



MALAYSIA'S
INFRASTRUCTURE-DRIVEN
BITUMEN DEMAND SURGE:

CAN SUPPLY KEEP PACE WITH NATIONAL DEVELOPMENT GOALS?



According to WPB, Malaysia's bitumen market is undergoing a period of significant transformation driven by a surge in infrastructure investments. This trend is reshaping the country's construction landscape and posing critical questions about the capacity of local refineries, reliance on imports, and the sustainability of supply systems under pressure. As demand outpaces historical trends, the country must navigate both logistical and structural challenges to ensure

steady material availability.

Infrastructure Expansion Accelerating Bitumen Consumption

The nation has initiated its largest-ever infrastructure development plan, with approximately RM85 billion earmarked for multi-sectoral projects, focusing on transportation and urban development. A substantial portion of this investment is being funneled into large-scale road networks and preparation for

upcoming global events.

Major initiatives propelling demand include:

- Ongoing construction of the Pan Borneo Highway
- Acceleration of the Central Spine Road
- Expansion efforts under the Greater Kuala Lumpur Transportation Master Plan
- Infrastructure supporting the East Coast Rail Link (ECRL)

IMPORT DEPENDENCIES AND REGIONAL COMPETITION

According to officials, this period marks a new chapter in Malaysia's development, with enhanced connectivity and modernization driving extraordinary levels of material consumption.

Unprecedented Growth in Bitumen Usage

Malaysia's bitumen consumption, which historically ranged between 650,000 and 700,000 metric tons annually, is expected to rise significantly—potentially reaching 800,000 to 850,000 metric tons. This projected increase of up to 22% represents one of the sharpest year-on-year surges on record.

Consumption figures indicate a consistent upward trend across the first quarter of the current year, with percentage increases in the double digits month after month. If this momentum continues, actual demand could surpass even the most optimistic projections.

Refinery Output Constraints and the Resulting Supply Gap

The country's three main refining facilities—operated by Petron, Petronas, and Shell—collectively have a theoretical production capacity of around 540,000 metric tons annually. However,

due to standard operational limitations, actual output tends to fall within the 460,000 to 485,000 metric ton range.

This disparity between supply and demand creates a shortfall of approximately 350,000 to 400,000 metric tons, which must be addressed through increased production efficiency, import diversification, and possible expansion of refining operations.

Import Dependencies and Regional Competition

To fill the production gap, Malaysia has traditionally relied on bitumen imports from nearby countries.

The largest shares come from:

- Singapore – known for high-grade and modified products
- Indonesia – primary supplier of standard grades
- Thailand – various grades, with increasing export capacity

However, a concurrent rise in infrastructure activity across Southeast Asia is placing strain on regional supply chains. Export prioritization policies in countries like Indonesia and limited surplus capacity in Singapore are compelling Malaysia to look further afield, including toward the Middle East and Australia—though these sources come with higher logistical costs and longer lead times.

Logistical Limitations and Quality Challenges

Bitumen's unique handling requirements—such as heated transport and storage—introduce additional complexity into the supply chain. These logistical hurdles include limited capacity for thermal transport, inadequate terminal infrastructure in key regions, and coordination difficulties in last-mile delivery for

Market Volatility and Rising Prices

市场波动与价格上涨

remote projects.

Simultaneously, newer infrastructure projects are demanding higher-grade bitumen with enhanced resistance to wear, aging, and extreme weather conditions.

Meeting these performance specifications requires specialized production runs and modified formulations, further straining existing supply chains.

Market Volatility and Rising Prices

The imbalance between surging demand and constrained supply has led to substantial price increases—estimated at 15-18% since the start of the year, with premium and modified grades experiencing the highest hikes. This volatility complicates budget planning and encourages developers to secure supply through long-term agreements.

Strategic Responses to the Crisis

Malaysia is responding with both short- and long-term strategies:

Domestic Refining Enhancements:

- Capacity upgrades at Petron Port Dickson and Petronas Melaka facilities
- A planned specialized bitumen plant in Johor

Import Strategy Revisions:

- Expansion of import terminals
- Development of new trade relationships
- Creation of strategic reserves

Technological Innovation:

- Adoption of polymer-modified bitumen and warm mix



asphalt

- Increased use of recycled materials (RAP)
- Exploration of bio-based additives

Sectoral Adaptations to Limited Supply

Highway Construction:

Major projects are mitigating supply issues through staggered construction schedules, early procurement, and flexible performance-based specifications.

Urban and Municipal Projects:

These typically smaller initiatives are using cooperative purchasing and alternative pavement designs to stay on schedule despite supply constraints.

Industrial and Specialty Applications:

This segment is adjusting formulations, improving efficiency, and sourcing alternative materials for waterproofing and other niche uses.

Sustainability and Environmental Implications

This segment is adjusting formulations, improving efficiency, and sourcing alternative materials for waterproofing and other niche uses.

The bitumen sector's growth comes with heightened scrutiny of its environmental footprint. Industry stakeholders are increasingly focused on energy efficiency, emissions reductions, and the integration of recycled and bio-based materials. Emerging regulations covering emissions limits, lifecycle assessments, and material composition are pushing producers toward more sustainable practices.

Outlook and Industry Recommendations

In the near term, tight supply conditions and elevated prices are expected to persist. Priority will likely be given to large-scale strategic projects, with smaller developments needing to adapt through scheduling and sourcing innovations.

Over the medium term, improved local production capabilities, expanded import options, and maturing supply relationships are anticipated to ease pressures. However, market equilibrium will likely stabilize at higher price levels than in previous years.

Recommendations for Key Stakeholders:

- Project Developers: Secure supply early, maintain flexibility in scheduling and specifications, and stockpile where feasible.
- Producers and Importers: Focus on efficiency, storage expansion, diversified sourcing, and integrated logistics.
- Government Authorities: Align project timelines, streamline import procedures, incentivize capacity upgrades, and encourage adoption of alternative technologies.

Conclusion: Coordinated Efforts to Sustain Growth

Malaysia's rapid infrastructure development presents both



opportunity and strain for the bitumen market. While the current supply chain faces notable limitations, coordinated industry efforts and strategic policy support can bridge the gap between demand and capacity.

By investing in infrastructure, embracing innovation, and enhancing collaboration across sectors, Malaysia is well-positioned to meet its national development goals while building a more resilient and forward-looking bitumen supply ecosystem.

This report reflects the present conditions and forecasted trends in Malaysia's bitumen market. Stakeholders are advised to stay updated on evolving regulations, policy shifts, and international developments that may impact supply and pricing dynamics.





How Recycled Plastics Are Shaping the Future of Road Construction



According to World of Petroleum and Bitumen (WPB), a German cleantech startup is introducing a transformative solution in road building by replacing traditional polymer additives in asphalt with high-performance recycled plastics — a move poised to reduce both carbon emissions and plastic waste.

The company, ecopals, emerged from a student initiative rooted in firsthand exposure to unmanaged plastic pollution across regions in Asia. Witnessing the widespread burning of plastic and the lack of infrastructure, the founders began to explore practical applications for this waste. Their research led to the idea of utilizing discarded plastic as a replacement for the virgin polymers commonly used in European road construction — materials that account for nearly a third of asphalt formulations in the region.



In Germany, where over half of plastic waste is incinerated under the term “thermal recovery,” ecopals identified a striking contradiction:



In Germany, where over half of plastic waste is incinerated under the term “thermal recovery,” ecopals identified a striking contradiction: while resources are burned locally, costly, CO-intensive polymers are imported for construction use. The team recognized an opportunity for intervention.

To address the technical challenges of integrating recycled plastics with bitumen — an oil-derived binder that doesn't naturally combine with polymers — ecopals collaborated with a research institute in Itzehoe. This partnership led to the development of EcoFlakes: clean, engineered polymer pellets specifically tailored for asphalt mixing. These additives not only improve road performance and elasticity but also cut down environmental impact.

Despite its innovation, ecopals

had to navigate a complex and highly decentralized market. Unlike some other European countries with consolidated infrastructure sectors, Germany's road construction industry comprises hundreds of independent companies. To gain ground, ecopals adopted a hands-on approach — conducting pilot projects, on-site tests, and extensive outreach to prove the reliability of its product. From emissions and durability assessments to compliance with specific elasticity standards, the company invested heavily in data-driven validation to build confidence among contractors and regulators.

Support from MHI, a strategic investor with deep ties in Germany's infrastructure sector, further accelerated ecopals' integration into the market. The financial and logistical backing helped the company navigate industry resistance and regulatory hurdles, where long-standing practices

and skepticism toward recycled materials often slow innovation.

Now poised for international growth, ecopals is eyeing global markets — each with distinct regulatory frameworks and industry mindsets. According to the company's co-CEO, gaining acceptance abroad hinges not just on product quality, but on relationship-building and contextual understanding. Motivations vary across countries; while some prioritize cost-efficiency, others focus on environmental benefits.

根据《石油与沥青世界》（World of Petroleum and Bitumen, 简称 WPB）的报道，一家德国清洁技术初创公司正在道路建设领域引入一项变革性解决方案：用高性能再生塑料取代沥青中传统的聚合物添加剂——这一举措有望同时减少碳排放和塑料废弃物。

The team recognized an opportunity for intervention.



Fortunately, ecopals' solution addresses both.

Nonetheless, significant challenges remain. The road construction industry is still largely risk-averse, and adoption of new materials typically requires cooperation across multiple stakeholders — from mixers to contractors to regulatory bodies. The startup advocates for greater openness and flexibility in testing and implementing innovations, emphasizing that performance must remain at the core of all sustainable alternatives.

As climate and waste crises intensify, ecopals believes the pressure to decarbonize infrastructure will eventually drive systemic change. Until then, the company continues its mission: to offer a practical, cost-effective, and sustainable material that redefines what roads can be made of — one project at a time.

Tensions at Sea: Assessing the Ripple Effects of the Iran–Israel Clash on Global Maritime Trade

According to WPB, recent military tensions between Iran and Israel sent significant shockwaves through the international shipping sector. As two influential powers in the Middle East became embroiled in armed confrontation, global concerns mounted regarding the security and continuity of maritime trade—particularly around the Strait of Hormuz, a strategic passageway vital to global energy flows. Although the confrontation came to a halt following a ceasefire, its repercussions—both immediate and potential—have underscored vulnerabilities in shipping networks, insurance systems, and freight

pricing worldwide.

Immediate Repercussions and Surge in War-Risk Charges

During the peak of hostilities, the maritime industry witnessed a sharp uptick in both freight and insurance costs for vessels operating in the Persian Gulf. Underwriters raised war risk premiums considerably, with tanker coverage rising to between 0.35% and 0.45% of vessel value—substantially higher than during stable periods. Market participants responded with caution; several shipping companies either postponed voyages or opted for alter-

Despite international anxiety, Iran chose not to restrict passage through the Strait of Hormuz, a maritime chokepoint that facilitates nearly one-fifth of the world's oil trade.



Strait of Hormuz Stays Operational: A Decisive Move

native routes to avoid potential threats. In some cases, charter rates for large crude carriers more than doubled, driven by elevated risk assessments and operational delays.

Strait of Hormuz Stays Operational: A Decisive Move

Despite international anxiety, Iran chose not to restrict passage through the Strait of Hormuz, a maritime chokepoint that facilitates nearly one-fifth of the world's oil trade. This strategic decision played a key role in preventing a broader logistics breakdown. Analysts suggest Tehran's restraint stemmed from diplomatic pressure exerted by major trade partners and the deterrent effect of potential retaliation from global powers. The uninterrupted function of this corridor allowed vital energy supplies to continue flowing and helped avert a global supply chain disruption.

IMMEDIATE REPERCUSSIONS AND SURGE IN WAR-RISK CHARGES

46



Gradual Stabilization of Insurance Markets

In the conflict's aftermath, insurers began recalibrating their war-risk coverage. Although premiums remained higher than historical norms, rates began to ease as market confidence improved. A number of insurance firms re-entered the Gulf coverage space, boosting underwriting capacity to meet lingering demand. According to industry specialists, this adaptive response by insurers helped maintain continuity in coverage, even amid residual uncertainties, showcasing the agility of the maritime insurance sector in times of heightened geopolitical strain.

Freight Rates Recover as Confidence Returns

With the reduction in hostilities, freight prices began trending downward. Shipments delayed during the

FREIGHT RATES RECOVER AS CONFIDENCE RETURNS

unrest resumed, and transport costs along Gulf routes saw gradual normalization. Shipping companies restarted full-scale operations across affected lanes, buoyed by a growing sense of stability. This swift recovery in trade logistics illustrated the shipping industry's capacity to absorb external shocks—particularly when major maritime routes remain open and functional.

Strategic Takeaways and Long-Term Industry Shifts

Although the disruption was short-lived, the confrontation exposed structural weaknesses in global shipping infrastructure. Analysts emphasize the importance of expanding trade routes beyond high-risk zones and diversifying export hubs to build greater resilience. Going forward, routes deemed geopolitically sensitive may continue to face elevated premiums, even in the absence of conflict. Yet, barring further deterioration in regional relations, maritime trade appears to have re-entered a phase of relative balance.

STRATEGIC TAKEAWAYS AND LONG-TERM INDUSTRY SHIFTS

Final Reflections

The Iran–Israel confrontation served as a stark demonstration of how regional conflicts can swiftly impact global commerce. While the episode caused temporary volatility in insurance and freight markets, the decision to keep the Strait of Hormuz operational and the rapid diplomatic de-escalation prevented a long-term shipping crisis. Ultimately, the event reinforces the necessity for geopolitical foresight, robust contingency strategies, and continuous investment in maritime security to safeguard international trade flows.



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New US Sanctions Target Iranian Oil Network, Pose Regional Implications

According to WPB, the United States has expanded its economic measures targeting Iran's oil sector by introducing a new round of sanctions. These designations include over 30 vessels, companies, and individuals involved in the transport and sale of Iranian petroleum products. The action is part of a broader policy aimed at influencing Iran's regional role and prompting engagement through diplomatic channels.

The U.S. Department of the Treasury, through its Office of Foreign Assets Control (OFAC), stated that the targeted entities were involved in transferring and marketing oil that was allegedly misrepresented in origin, including cases where Iranian oil was labeled as Iraqi or Emirati. OFAC highlighted the involvement of international actors based in the Middle East, South Asia, and Southeast Asia, along with ship-to-ship transfers occurring near Iraq's Khor Al Zubair Port.

A key figure named in the sanctions is Salim Ahmed Said, a dual British-Iraqi national linked to infrastructure such as the VS Oil Terminal in Iraq. This facility reportedly played a role in the blending and export of oil. Several maritime and logistics companies based in the UAE, India, and Singapore have also been designated for their alleged participation in related activities. According to OFAC, these designations are issued under Executive Orders focused on the Iranian energy sector and counterterrorism measures.

These sanctions occur within a wider regional context. Iraq's energy infrastructure and trade dynamics may be indirectly affected, as some entities involved in these activities operate within its jurisdiction. Bagh-



dad, which has been working to enhance energy cooperation with Western partners, may face additional complexity in attracting foreign investment under current conditions.

Internally, Iraq is navigating both political and economic challenges, including its ongoing negotiations with the Kurdistan Regional Government over energy contracts. Meanwhile, Kurdish media have reported drone strikes in various provinces, which have been attributed to regional tensions. Confirmed reports indicate increased instability in areas such as Erbil, Duhok, and Kirkuk.

Observers note that the U.S. strategy may aim to reshape influence in the region, amid broader geopolitical competition involving other global actors. While the impact of sanctions on Iran's energy exports remains under assessment, reports suggest continued oil flows to parts of Asia.

Analysts suggest that the long-term effectiveness of these measures depends not only on restricting logistical networks but also on the enforcement of global compliance. The developments highlight the complex interplay between economic pressure, geopolitical alignments, and regional energy security.

Rising Insurance Premiums in the Red Sea as Maritime Security Deteriorates

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Analysts suggest that the long-term effectiveness of these measures depends not only on restricting logistical networks but also on the enforcement of global. According to WPB, the cost of securing ships navigating through the Red Sea has significantly risen, following renewed assaults on commercial vessels by Houthi forces. This escalation in maritime threats has triggered mounting concern over the stability of one of the world's most vital shipping corridors.

War-risk premiums for vessels transiting the route between Africa and Asia have climbed sharply, reaching up to 1% of a ship's insured value—more than double the previous high of 0.4%. For a cargo vessel worth \$100 million, this translates into a jump from \$300,000 to \$1 million per voyage, as explained by Marcus Baker, head of marine and cargo at Marsh McLennan.

The shift in pricing follows two recent attacks, including one on a Greek-owned bulk carrier, Magic Seas, and another on the Eternity C, operated under a Liberian flag. These incidents mark the first major assaults in months,

with the Houthi group using firearms, rocket-propelled grenades, maritime drones, and speedboats to execute the strikes. While the attack on Magic Seas has been officially claimed by the Houthis, the group has not taken responsibility for the Eternity C assault, which reportedly resulted in three fatalities.

Baker highlighted the unusual nature of the current insurance landscape, stating that the pace and intensity of Houthi activity is unlike anything seen previously. He added that if shipping continues to pass through the Red Sea, premiums are likely to rise even further.

The Red Sea serves as a critical global trade artery, and growing instability in the region not only threatens maritime safety but also poses broader economic risks. Heightened insurance costs, possible rerouting of vessels around Africa, and potential disruptions to oil supplies and international goods movement are among the cascading effects.

Houthi representatives have justified their actions as retaliation against companies they accuse of violating restrictions related to Israeli ports. Meanwhile, in response to the recent incidents, Israel has launched retaliatory airstrikes targeting Houthi-controlled infrastructure, including key ports and energy facilities. Among the targets was the Galaxy Leader, a vessel previously seized by the Houthis and alleged by the Israeli military to have been outfitted with equipment to aid hostile tracking of international ships.

These developments reflect a rapidly shifting security landscape in the Red Sea, with growing implications for commercial shipping, regional politics, and global supply chains.

interplay between economic pressure, geopolitical alignments, and regional energy security.



Turkish Energy Companies to Cooperate with Pakistan in Offshore Oil and Gas Prospects



According to WPB, Turkish energy entities are set to engage in offshore oil and gas exploration activities in Pakistani waters through strategic collaboration with domestic partners. This initiative marks a significant advancement in the bilateral energy relations between the two nations.

Turkish Foreign Minister Hakan Fidan highlighted this development during an official visit to Pakistan, describing it as a result of a more structured and institutionalized framework the two countries aim to implement. While the minister refrained from disclosing technical details regarding the exploration and drilling phases, the agreement signals a growing alignment in energy cooperation.

In addition to the offshore exploration plans, Ankara and Islamabad are actively exploring broader avenues of collaboration in the fields of hydrocarbon production, mineral resources, and rare earth elements. The ongoing dialogues and signed agreements indicate an expanding strategic partnership focused on energy security and regional stability.

A cooperation agreement between the two sides, formalized in the recent past, laid the foundation for joint initiatives targeting offshore resource development. The Turkish Petroleum Corporation (TPAO), in conjunction with Pakistan's three state-run oil enterprises, is expected to submit collective bids for several offshore blocks being offered in Pakistan's current licensing round, which includes

40 exploration zones.


Turkish Energy Minister Alparslan Bayraktar emphasized that this move would further consolidate the strategic energy alliance between Turkey and Pakistan, while also serving as a critical step toward enhancing energy security across the region.

Pakistan's domestic oil reserves have witnessed a notable upturn in the recent past—the first considerable growth since 2020. With new field discoveries and increased output, the nation's proven reserves expanded by 23%, reaching 238 million barrels.

In contrast, the country's natural gas reserves have remained relatively stable, with minimal variation compared to the previous estimates. Despite the gains in oil production, Pakistan continues to depend significantly on imported energy resources to fulfill its domestic consumption needs.

Meanwhile, Turkey is intensifying efforts to elevate its own gas production capacity, particularly in the Black Sea. It is also seeking to diversify its upstream portfolio through international partnerships across various regions including the Caspian basin, northern Iraq, and the Bulgarian sector of the Black Sea.

This evolving cooperation underscores both nations' intent to strengthen mutual ties through shared energy ventures, supporting long-term regional resilience and economic development.



Regional Supply Imbalances and Weather-Driven Disruptions Influence Global Bitumen Market Trends

According to WPB, shifts in regional availability, evolving infrastructure strategies, and seasonal weather disruptions are reshaping bitumen markets across multiple continents. While supply limitations are driving prices upward in some areas, reduced demand and logistical challenges are capping market momentum in others. The third quarter is now being defined by careful inventory management, weather-related delays, and adjustments in production patterns.

Southeast Asia: Price Pressures Intensify Despite Modest Demand

Bitumen delivered by truck from Singapore to neighboring countries has seen a notable price escalation in the recent past. Cargoes sold ex-refinery have climbed from previous levels, reflecting a tightening supply outlook. Although demand in Malaysia has picked up following the release of infrastructure budgets and the launch of several small-to medium-scale roadwork projects, market players still categorize overall consumption as moderate. Intermittent rainfall in key cities like Kuala Lumpur and Johor Bahru has further hindered consistent project execution.

Malaysian refineries located in Malacca, Tanjung Langsat, and Port Klang have been providing steady output, keeping local availability largely stable. One major refinery faced temporary distribution inconsistencies due to internal blending activities, but the supply situation has since stabilized, according to buyers.

Elsewhere in the region, Vietnamese importers have re-

mained active, making strategic purchases in anticipation of the monsoon season. This forward buying has helped support regional prices, particularly for marine shipments. Export availability from Singapore has remained constrained, and truck-based cargoes — typically priced with a moderate premium — have recently commanded an elevated spread of \$50–70/t over marine values due to tightening truckload availability.

Dealers in Malaysia anticipate a possible supply surplus relative to short-term demand, which could apply downward pressure on trucked cargo prices. However, with many buyers reportedly underutilizing their current purchase quotas, the impact of this anticipated shift remains uncertain.

Africa: Weather Extremes, Legislative Shifts, and Infrastructure Aspirations

West African markets, particularly Nigeria, are facing significant slowdowns as seasonal rainfall disrupts both import logistics and road construction activity. However, forward-looking policy developments — including the establishment of a Bitumen Development Commission — signal a renewed push for domestic production capacity in the years ahead.

In East Africa, Kenya saw cooler temperatures and sporadic rain that hampered bitumen movement and road delivery volumes. Uganda, meanwhile, has begun to recover from a sluggish start to the year, and Rwanda is pursuing an ambitious infrastructure program, including a planned



100 km road expansion following a recent peace agreement with the Democratic Republic of the Congo.

Further south, the South African market remains relatively balanced. Imports into Durban are steady for now, though a scheduled round of refinery maintenance may constrain local production capacity in the near future. Neighboring landlocked countries like Zambia and Botswana continue to rely on consistent cross-border flows, primarily from Mozambique's Beira terminal.

Europe: Mixed Regional Dynamics Ahead of Summer Construction Slowdown

In Europe, the approach of traditional summer construction breaks has begun to generate regional oversupply, especially in northwest and

central markets. A recent sell tender from a major supplier in Rotterdam has been interpreted by market participants as a sign of excess inventory. Despite this, truck-based demand in France and the Benelux region remains healthy, underpinned by stable project flow and firm retail pricing.

Poland, on the other hand, is showing limited momentum due to a slowdown in project activity. Germany reflects a split picture — strong performance in the north and southwest contrasts with subdued volumes in the northeast. The UK continues to import steadily despite a decline in domestic production. In central Europe, Hungary and Romania are maintaining relatively stable market conditions, supported by local truck movement and regular cargo imports, particularly into Romania.

Strategic Outlook: Adaptability is Crucial in Q3

With weather disruptions and changing infrastructure priorities at play across all regions, the bitumen market remains in flux. Stakeholders must navigate a complex landscape marked by uneven supply, shifting procurement strategies, and the unpredictability of seasonal demand cycles. As the third quarter progresses, market participants are expected to focus on flexible sourcing, localized logistics, and careful inventory positioning to mitigate risk and capture emerging opportunities.

In Europe, the approach of traditional summer construction breaks has begun to generate regional oversupply, especially in northwest and central markets.

India Strengthens Energy Ties with U.S. and Brazil Following Global Oil Market Shifts



According to WPB, India has significantly diversified its crude oil sourcing strategy by boosting imports from the United States and Brazil, signaling a deeper alignment with non-OPEC producers in response to evolving global supply dynamics and geopolitical uncertainties.

Recent analysis by S&P Global Commodity Insights—referenced by Indian industry sources—reveals a marked surge in oil shipments from these Western Hemisphere nations. U.S. crude exports to India recorded a 51% rise in volume, averaging 271,000 barrels per day, while Brazilian exports climbed by 80%, reaching 73,000 barrels per day. These figures reflect the most pronounced growth among India's crude suppliers, pointing to a deliberate shift in procurement priorities.

This strategic adjustment is rooted in several converging trends. Indian state-owned refiners have actively sought to reduce exposure to OPEC+ market fluctuations and instability in the Middle East. At the same time, decreased Chinese demand for U.S. oil has unlocked opportunities for Indian buyers in the spot market, supported by more favorable freight costs from the Atlantic Basin. Diplomatic outreach has further reinforced these trade flows, with



high-level meetings between Indian and Brazilian energy authorities and strengthened bilateral cooperation between India and the United States on energy matters.

Despite these developments, Russia remains India's largest crude supplier, maintaining a volume of approximately 1.67 million barrels per day, although its growth has leveled off. In contrast, Iraqi and Saudi exports to India experienced slight declines, while Nigerian volumes rose by 26%, reaching 158,000 barrels per day.

India's ramp-up in U.S. crude purchases also serves a diplomatic function, reflecting broader strategic signaling amidst ongoing trade negotiations. A short-term suspension of select bilateral tariffs—currently in effect—is approaching its end, placing energy trade at the center of high-stakes discussions between New Delhi and Washington.

By strengthening ties with alternative suppliers and leveraging energy flows in trade diplomacy, India is positioning itself to navigate a volatile energy market with greater flexibility and resilience.



Australia Explores Luminescent Road Markings as a Sustainable Safety Innovation

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According to WPB, Australia has embarked on an innovative infrastructure initiative by trialing glow-in-the-dark road markings designed to enhance nighttime driving safety and reduce energy consumption. These luminescent lines, created using advanced photoluminescent materials, offer a self-sustaining alternative to traditional road lighting systems—particularly in remote and poorly lit regions.

The initiative addresses growing concerns about limited visibility during dark hours, especially in rural areas where electrical infrastructure is often lacking. By absorbing sunlight during daylight and emitting a visible glow in darkness, these markings could redefine current standards in road safety and environmental efficiency.

A Joint Effort Toward Smarter Roads

The project is being carried out through a collaboration between regional transport authorities and private-sector innovation firms. The central aim is twofold: improve visual guidance for drivers at night and decrease dependence on conventional streetlights, which are costly to maintain and

energy-intensive.

The selected location for this experimental rollout lies in Victoria—a region with winding roads and a notable history of night-time vehicle collisions. Here, centerlines and edge markings have been coated with photoluminescent paint and are under active observation. Real-time camera monitoring and driver feedback serve as key tools for evaluating the effectiveness of the trial.

How It Works

Unlike standard reflective paints that require external light sources such as headlights, this novel coating emits its own light. The core compound, strontium aluminate, is a safe, non-toxic, and non-radioactive material that stores solar energy and glows for up to 10 hours after sunset. Researchers are also developing variations that can respond to artificial light sources, making the technology more adaptable to cloudy weather and low-light seasons.

A Response to Safety Demands



Data shows that the risk of accidents increases significantly in darkness due to diminished visual perception. While streetlights offer some mitigation, they pose challenges in terms of cost, infrastructure, and ecological disruption. Luminescent road markings offer a practical solution, especially where traditional lighting cannot be deployed efficiently.

Notably:

- They do not rely on electricity.
- They require little maintenance.
- They have a lifespan that may exceed a decade under normal conditions.
- They minimize environmental impact by reducing light pollution, which is particularly beneficial for nocturnal wildlife near roads.

Public Reception and Observations

Initial feedback from road users has been encouraging. Many reported improved confidence when driving at night, clearer visual cues on curves, and enhanced depth perception—all of which contribute to safer travel.

Broader Significance

Australia's exploration of photoluminescent road technology has attracted global attention. While similar concepts have been tested elsewhere—in parts of Europe, for example—this is among the most extensive applications to date. If proven effective, the technology could be adopted worldwide, especially in regions that face high rates of night-time accidents and infrastructural limitations.

Technical Insights and Future Enhancements

The system is based on phosphorescent principles, where embedded compounds such as strontium aluminate store UV energy and gradually release it as light. Green is cur-

rently the dominant color, though additional hues like blue and red are being assessed for future use.

Longer-term visions for the technology include integrating smart features, such as:

- Temperature-sensitive markings that alert drivers to icy surfaces,
- Real-time traffic flow indicators,
- Emergency symbols that activate automatically in hazardous conditions.

Such upgrades could contribute to more responsive, intelligent road networks in the future.

Toward Vision Zero

This initiative aligns with Australia's broader commitment to eliminating traffic fatalities and severe injuries under the Vision Zero framework. It complements other ongoing advancements, including the deployment of AI-driven traffic systems and the encouragement of vehicle automation technologies.

Final Thought

By leveraging solar energy and luminescent science, Australia's road safety experiment demonstrates a compelling blend of innovation and practicality. If successful, this model could serve as a blueprint for modern, sustainable infrastructure—where public safety, cost-efficiency, and environmental preservation go hand in hand.

According to WPB

China Launches Its First Smart Deep-Sea Research Vessel

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► By Bitumenmag

China has introduced a new milestone in its maritime scientific capabilities by commissioning its first intelligent deep-sea research vessel, marking a significant technological leap in the country's oceanographic exploration efforts.

The new vessel, named Tongji, was constructed at the Huangpu Wenchong Shipyard in Guangzhou and is now officially part of China's expanding fleet of civilian research

ships. Following successful sea trials, the ship is now under the operation of Tongji University in Shanghai, and it is poised to become a central hub for scientific investigations in the East China Sea. Its first mission is expected to take place in the South China Sea, lasting approximately one month.

The 2,000-ton ship is equipped with a domestically developed diesel-electric propulsion system and is the first in



Measuring 81.5 meters in length with a draft of 6.9 meters, Tongji can travel at speeds of up to 15 knots and accommodates a crew of 45, including 30 scientific personnel. The vessel also contains 320 square meters of dedicated laboratory space and is capable of supporting complex marine engineering tasks such as cable laying and subsea infrastructure maintenance.

While this advancement reflects China's growing investment in marine science, the activities of Chinese research vessels have drawn attention internationally. Observers have raised concerns over the potential overlap between civilian exploration and military objectives, particularly as Chinese ships expand operations beyond their exclusive economic zone into strategically sensitive waters like the Western Pacific and Indian Ocean. In areas such as the South China Sea, especially within the western Philippine EEZ, Chinese research activity remains under close watch by regional authorities.

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China to be classified as an Intelligent-ship (I-ship) by the China Classification Society. Among its advanced technological systems are capabilities for remote land-based operation, self-directed navigation in open waters, smart energy optimization, and a unified digital integration platform. These features reflect China's strategic emphasis on artificial intelligence in national development plans.



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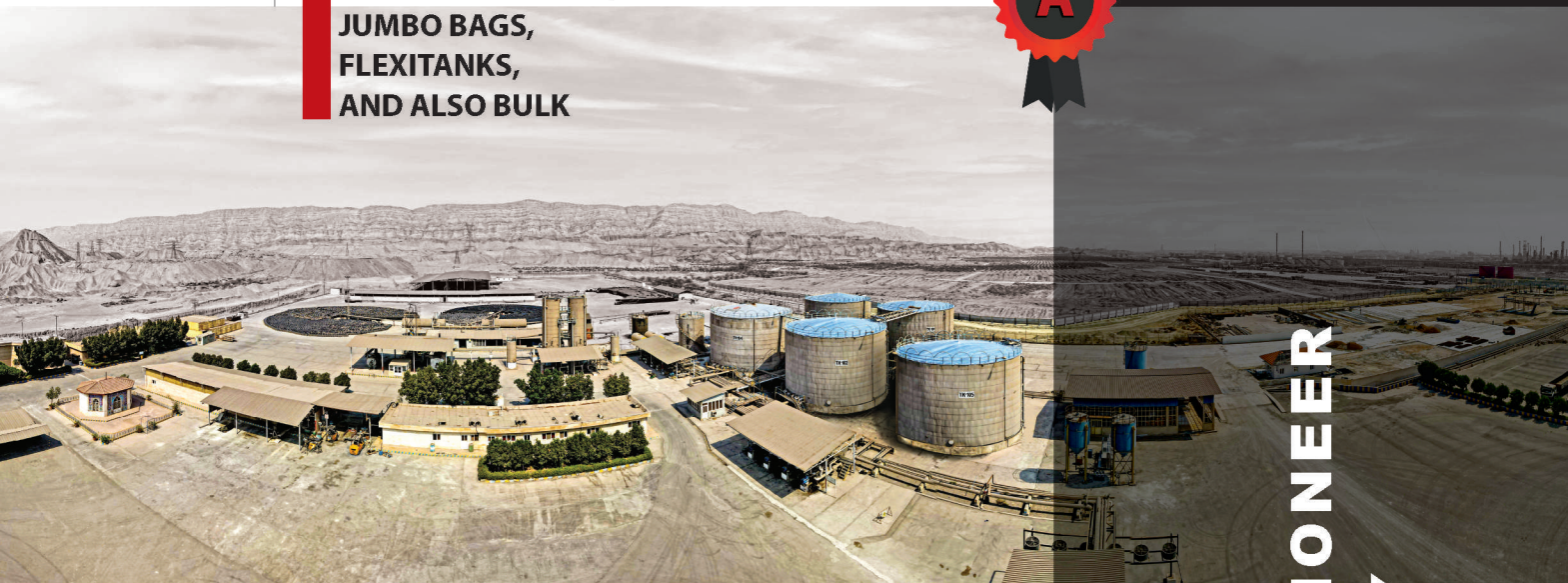


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