September 2025

AmInvestment Bank

Oil & Gas

Primer: Beginner's Guide

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Oil & Gas Industry Landscape

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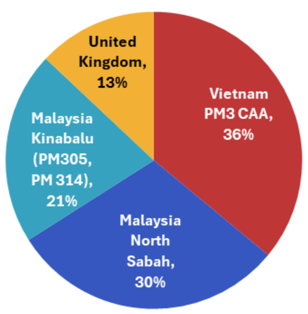
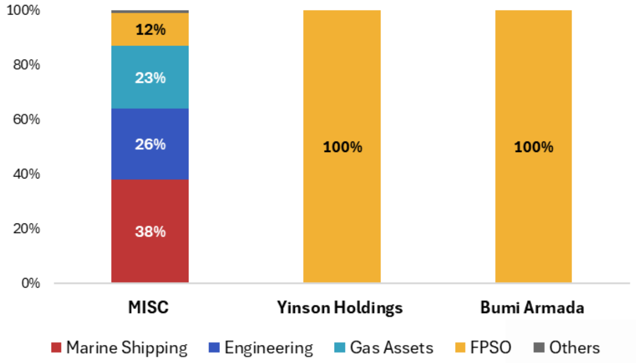
	Subsectors	Description	Drivers	Risks	Securities	Petronas Capex/ Valuation Angle
Upstream	Exploration & Production (E&P)	Independent oil & gas companies engaged in finding, developing, and producing fields.	Brent oil price, production volumes, reserve replacement.	Oil price volatility, exploration risk, ESG and regulatory hurdles.	Hibiscus Petroleum	Highly sensitive to oil price. Valuations anchored by reserves NAV and production growth; high-beta proxy for Brent.
	FPSO & Offshore Production / Shipping	Provide floating production, storage & offloading (FPSO) units and offshore shipping solutions (LNG, crude tankers).	FPSO contract awards, offshore field developments, long-term charters.	Project delays, financing/capex overruns, contract expiry risk.	MISC , Yinson Holdings , Bumi Armada	Valuations supported by contract backlog (7–20-year FPSO charters) which provide predictable cash flows, less directly tied to oil prices. **MISC has LNG shipping*
	Offshore Support Vessels (OSV) / Marine Logistics	Operate vessels that transport crew, supplies, and equipment to offshore drilling and production sites.	Offshore exploration & production activity, vessel utilisation, charter day rates.	Industry overcapacity, cyclical rates, high operating costs.	Keyfield International, Lianson Fleet, Coastal Contracts, Perdana Petroleum, Marine & General, Alam Maritim	Earnings closely linked to Petronas' upstream capex cycles. Valuations rise in high-activity periods when vessel demand and day rates improve. **Marine & General has both OSV (upstream) and product tankers (downstream)*
	Hook-up, Commissioning, Maintenance (HUC/ MCM)	Provide offshore platform installation, hook-up, commissioning, and brownfield maintenance services.	Offshore maintenance spending, safety requirements, contract wins.	Contract timing, execution risk, reliance on Petronas as key client.	Dayang Enterprise, Vantris Energy, Petra Energy	Direct beneficiaries of Petronas' ongoing O&M and maintenance capex. Earnings visibility tied to contract rollouts and order book.
	EPCC, Fabrication & Process Equipment	Deliver engineering, procurement, construction, commissioning, and fabrication services for O&G plants and terminals.	Refinery and petrochemical expansion projects, RAPID and downstream capex.	Cost overruns, execution risk, contract pipeline visibility.	Dialog Group, Steel Hawk, T7 Global	Valuations supported by contract order books and project pipeline. Dialog also benefits from recurring tank terminal income (downstream logistics). **Dialog has significant downstream beyond EPCC*
Midstream	Gas Transmission & Infrastructure	Operates gas pipelines, processing plants, and LNG regasification terminals.	Domestic gas demand growth, regulated tariffs.	Regulatory changes, reliance on Petronas supply.	Petronas Gas	Defensive earnings. Valuations anchored by regulated returns (EV/EBITDA multiples), relatively insulated from commodity cycles.
Downstream	Gas Distribution (Utility)	Distributes natural gas to industrial, commercial, and residential customers.	Industrial gas demand, tariff adjustments.	Margin pressure from regulation, limited scope for expansion.	Gas Malaysia	Stable, utility-like earnings. Seen as a bond proxy — dependable dividends, but limited growth re-rating potential.
	Petrochemicals	Manufacture petrochemicals such as olefins, polymers, fertilizers, and methanol used in consumer and industrial goods.	Global petrochemical demand, spreads between feedstock (naphtha) and products.	Feedstock volatility, regional oversupply, cyclical demand swings.	Petro Chemicals Group, Lotte Chemical Titan	Valuations tied to petrochemical spreads. EV/EBITDA multiples move with margin cycles; currently at cyclical lows.

Segment Revenue Contribution

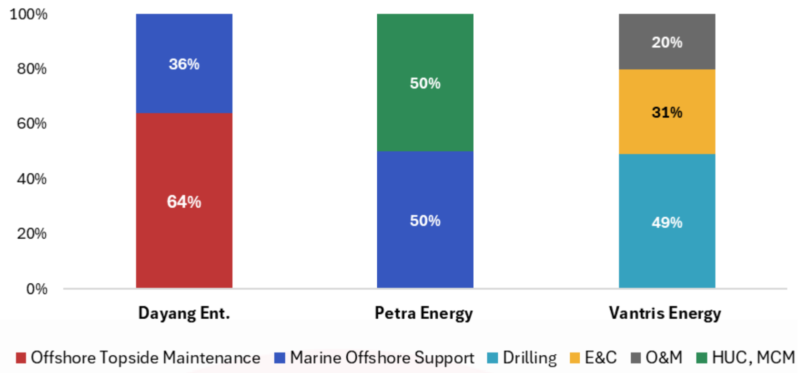
E&P: Hibiscus Petroleum



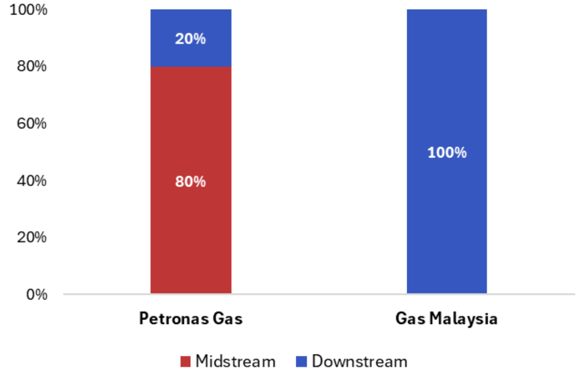
FPSO



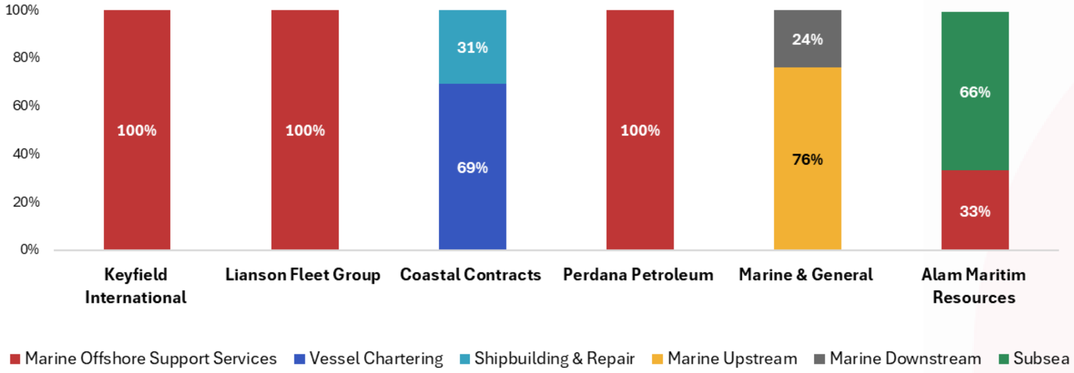
HUC, MCM & Brownfield & Drilling



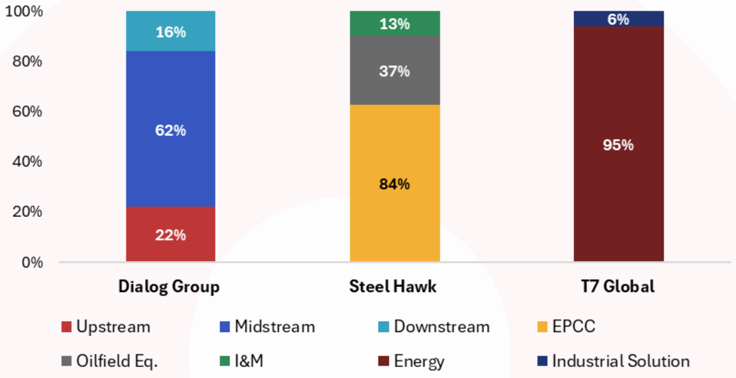
Gas Companies



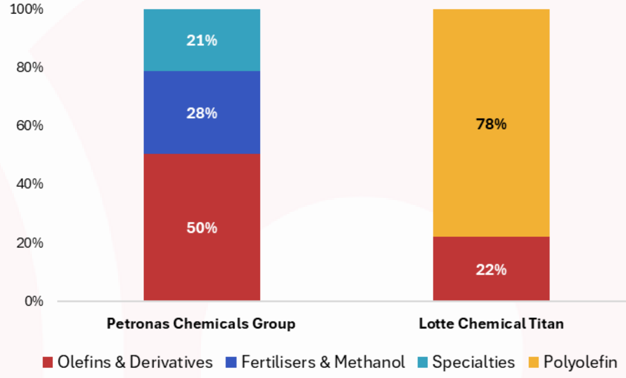
Offshore Support Vessels/ Marine Logistics



EPCC, Fabrication & Process Equipment



Petrochemicals



Source: Company data

Peer Comparison of Malaysian Oil & Gas Companies

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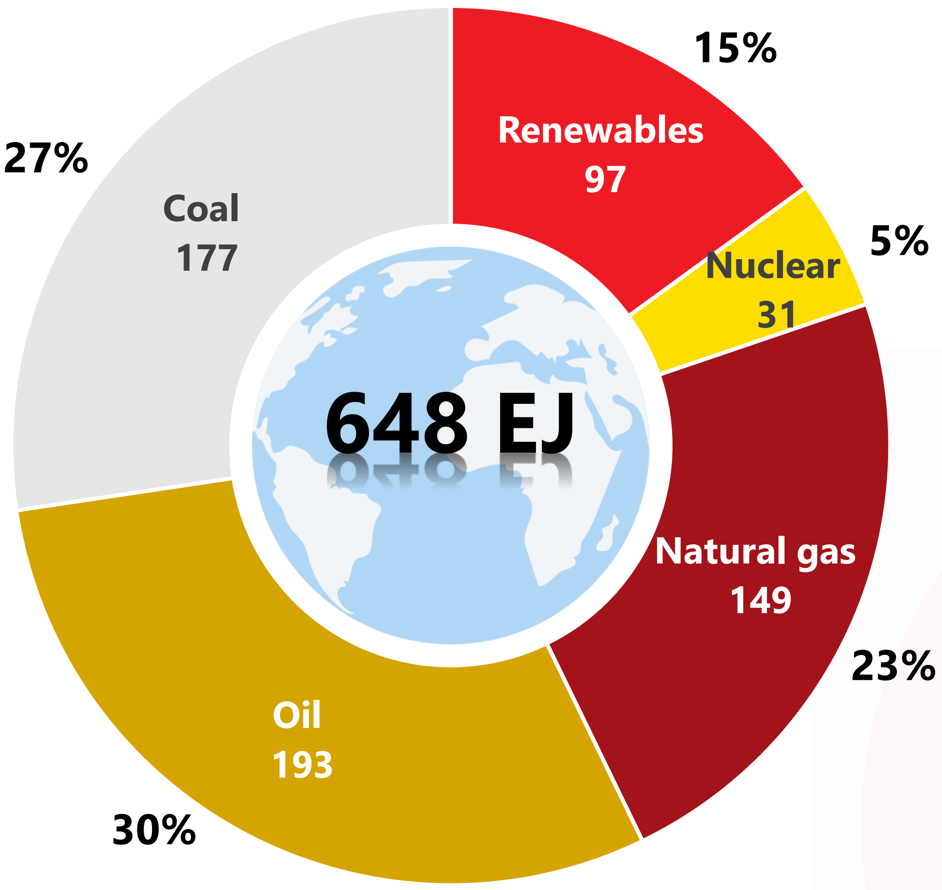
Name	Ticker	Mkt Cap (RM bil)	Recom.	TP	Last Price	Up/down-side	PE	1 Year Forward EV/EBITDA	PB	Div Yld	EPS (3Y-Cagr)	Next FY EBITDA Margin
Exploration & Production												
Hibiscus Petroleum	HIBI MK	1.2	PR	PR	1.58	-	5.16	1.84	0.43	4.5%	25%	51%
FPSO & Offshore Production/ Oil Gas Shipping												
MISC	MISC MK	33.3	Buy	8.50	7.47	14%	14.63	8.89	0.80	4.4%	27%	39%
Yinson Holdings	YNS MK	7.0	Buy	4.02	2.40	65%	10.17	7.05	0.94	2.5%	-6%	69%
Bumi Armada	BAB MK	2.1	NC	NC	0.36	-	2.77	3.98	0.27	10.2%	-6%	55%
Offshore Support Vessels/ Marine Logistics												
Keyfield International	KEYFIELD MK	1.1	PR	PR	1.35	-	4.13	2.12	96.11	8.9%	2%	56%
Lianson Fleet Group	LFG MK	1.8	NC	NC	1.68	-	15.97	9.33	-	1.2%	14%	63%
Coastal Contracts	COCO MK	0.7	NC	NC	1.20	-	-	-	0.34	-	-	-
Perdana Petroleum	PETR MK	0.4	NC	NC	0.17	-	-	-	-	-	-	-
Marine & General	MARG MK	0.1	NC	NC	0.18	-	-	-	-	-	-	-
Alam Maritim Resources	AMRB MK	0.1	NC	NC	0.17	-	-	-	-	-	-	-
Hook-up, Commissioning, Maintenance (HUC,MCM) & Brownfield												
Dayang Enterprise Holdings	DEHB MK	2.0	PR	PR	1.72	-	10.58	4.40	0.94	5.6%	-12%	38%
Vantris Energy	VANTNRG MK	0.5	NC	NC	0.51	19%	-	12.01	-	-	5%	13%
Petra Energy	PENB MK	0.3	NC	NC	0.92	-	-	-	-	-	-	-
EPCC, Fabrication & Process Equipment												
Dialog Group	DLG MK	10.8	Trading Buy	2.10	1.91	10%	15.92	14.35	1.47	2.3%	24%	22%
Steel Hawk	SKHAWK MK	0.2	NC	NC	0.37	-	-	-	-	-	-	-
T7 Global	T7G MK	0.2	NC	NC	0.24	-	3.90	7.75	0.42	-	8%	25%
Gas Companies												
Petronas Gas	PTG MK	37.0	Hold	18.60	18.70	-1%	19.48	10.12	2.73	4.1%	2%	62%
Gas Malaysia	GMB MK	5.5	NC	NC	4.30	-	13.28	8.35	3.30	5.8%	-1%	8%
Petrochemicals												
Petronas Chemicals Group	PCHEM MK	33.6	Hold	4.70	4.20	12%	11.76	6.93	0.86	3.7%	11%	14%
Lotte Chemical Titan Holding	TTNP MK	1.2	NC	NC	0.53	-	-	233.02	0.17	0.0%	-15%	2%

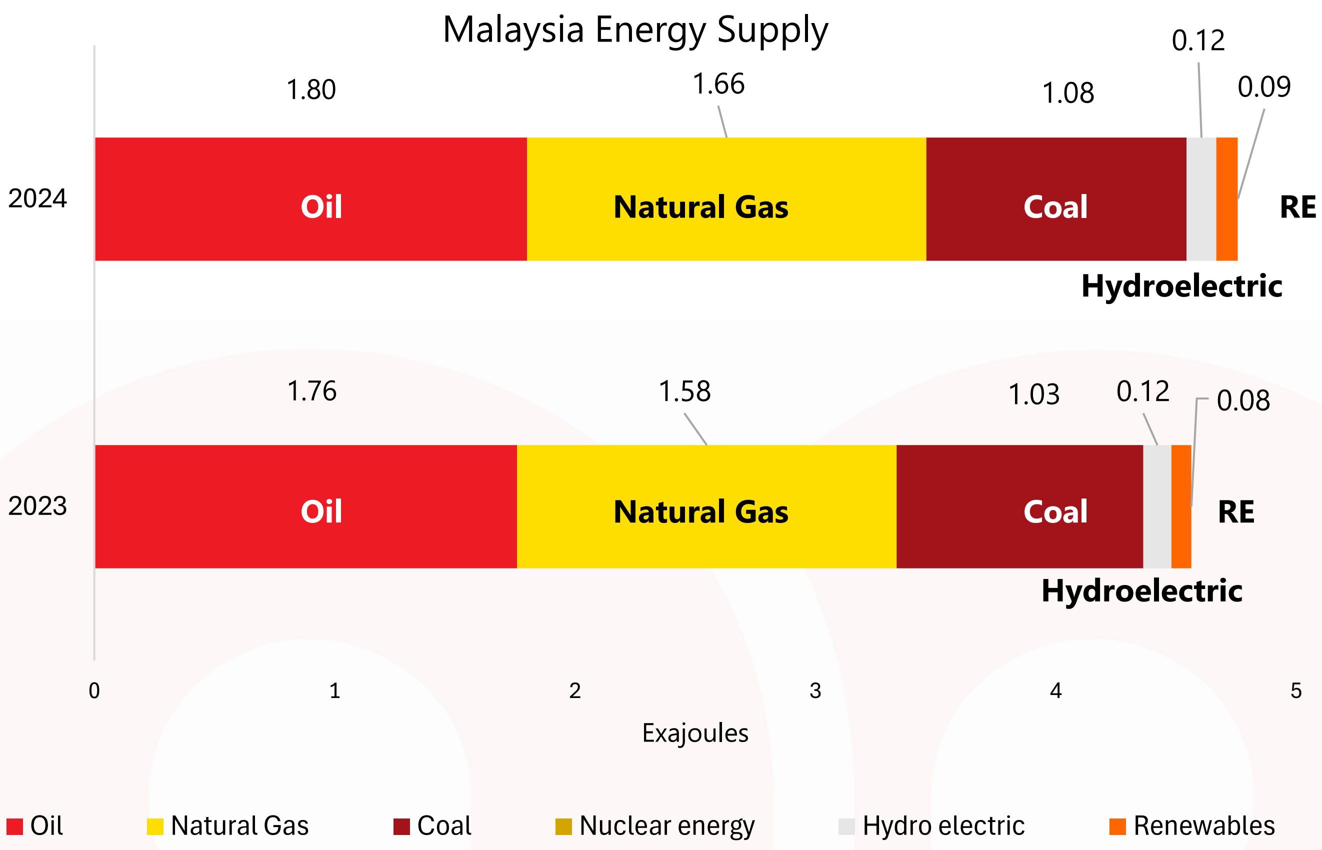
Source: Bloomberg, 6 Sep 2025. Valuations: 1-yr fwd (AmBank for covered stocks; consensus where available). "–" = no consensus estimates,PR= pending review.

Table of Content

Why oil & gas matters?

Fossil fuels still dominate global energy



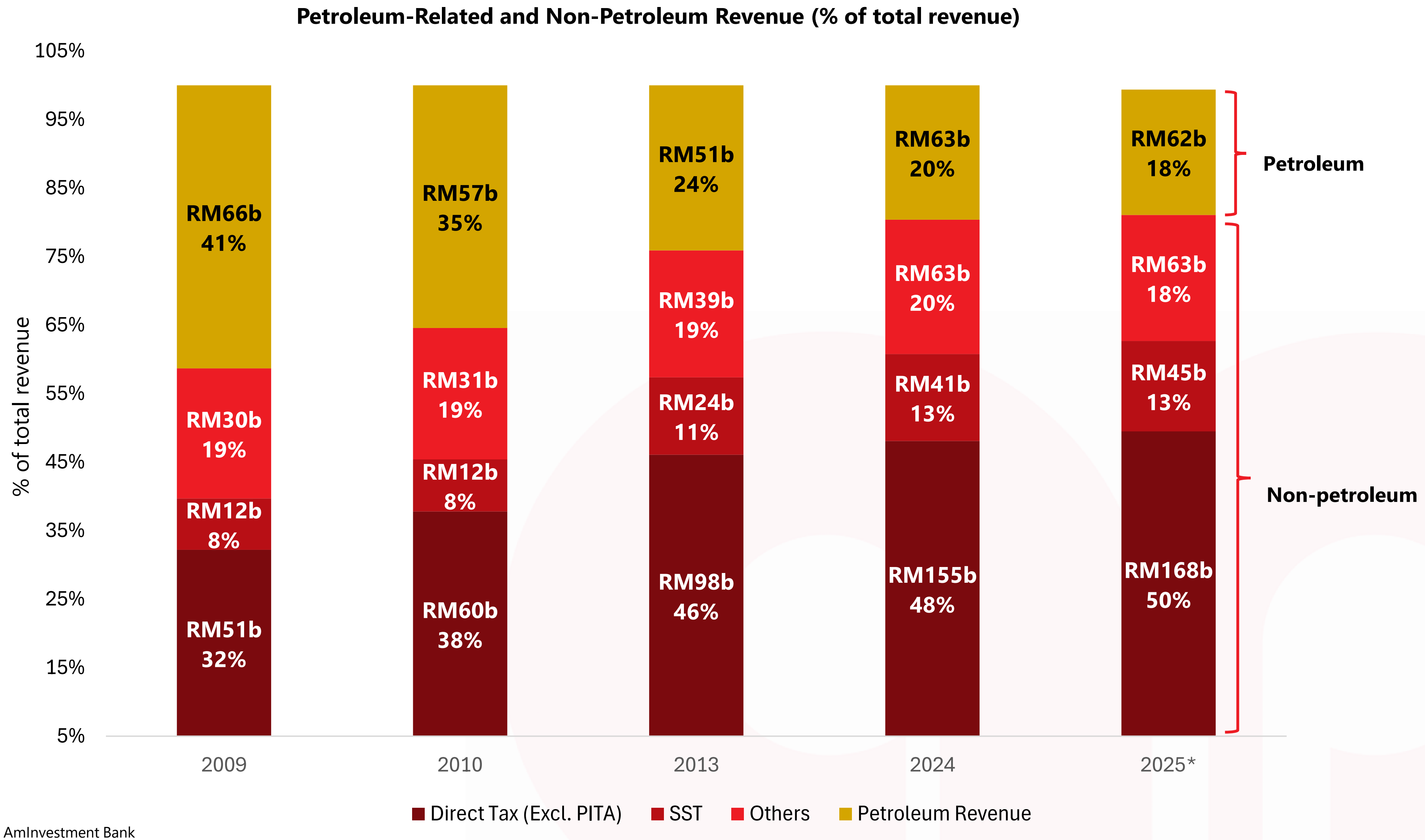


Source: IEA Global Energy Review 2025

Source: Statistical Review of World Energy 2025

Oil & Gas: How Oil & Gas power Malaysia's budget

AmInvestment Bank



Source: Belanjawan 2025, AmInvestment Bank

Oil & Gas Fundamentals

From fossils to fuels

1 **Marine Life & Organic Matter**

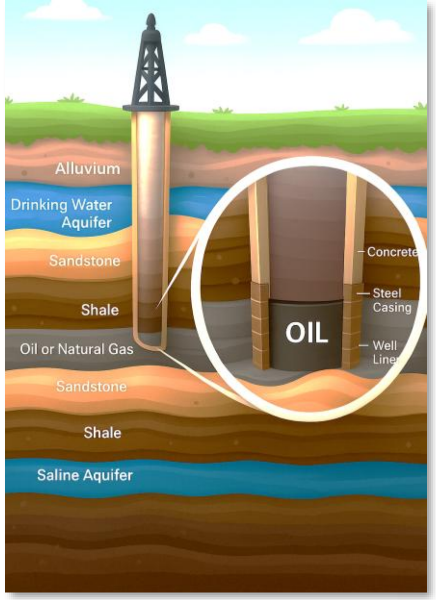
2 **Sediment Accumulation**

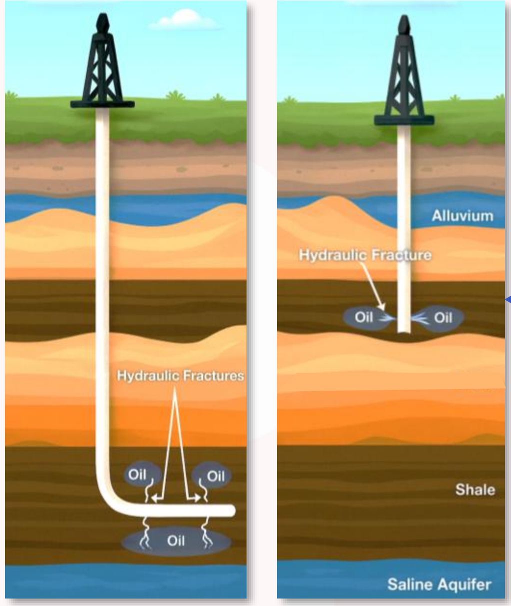
3 **Transformation into Fossil Fuel**

4 **Extraction**

Conventional

(simple reservoir)





Unconventional

(shale, hydraulic fracturing)

Source: Shutterstock, AmInvestment Bank

Oil & Gas value chain: From Exploration to End-Use

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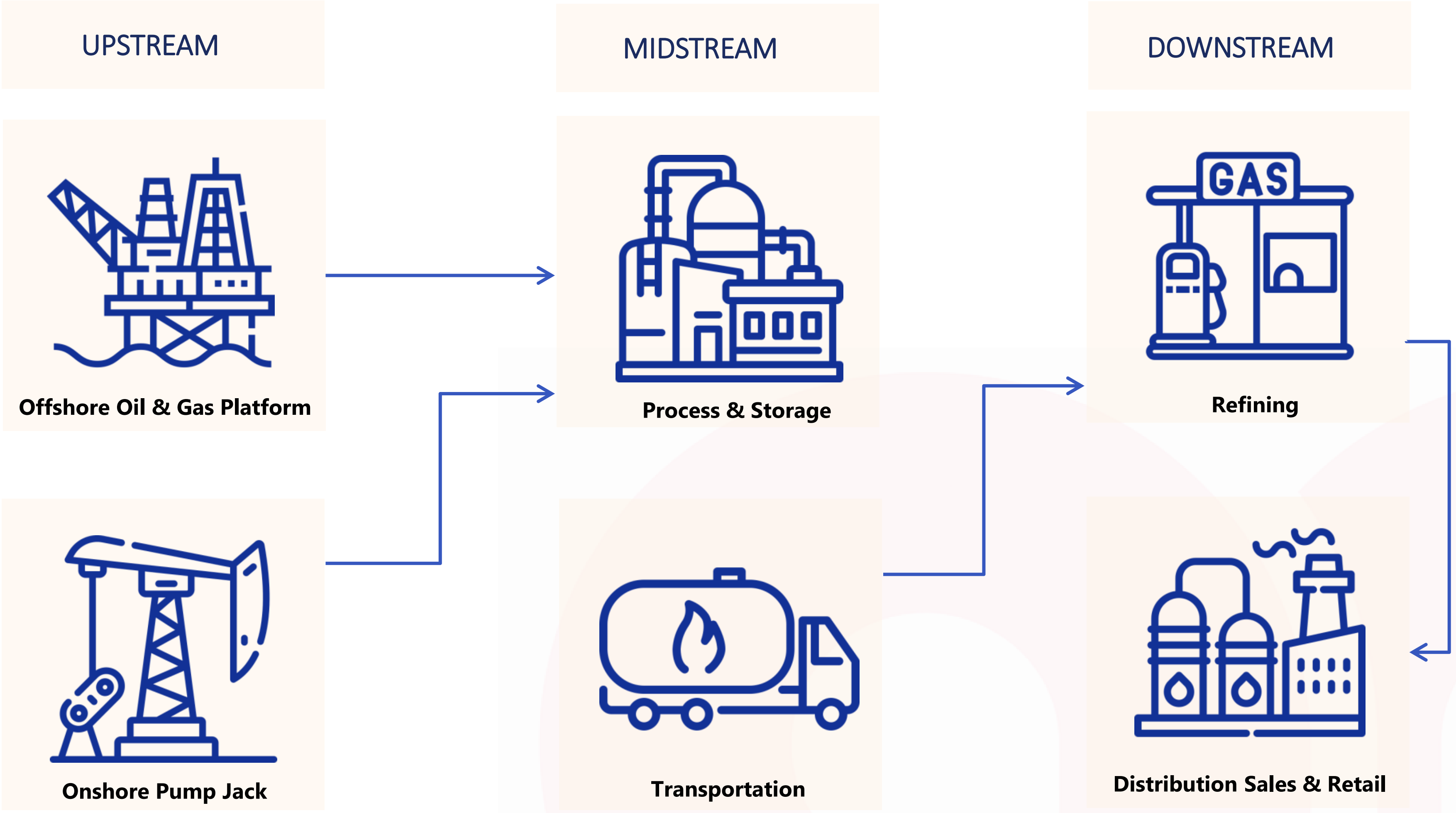
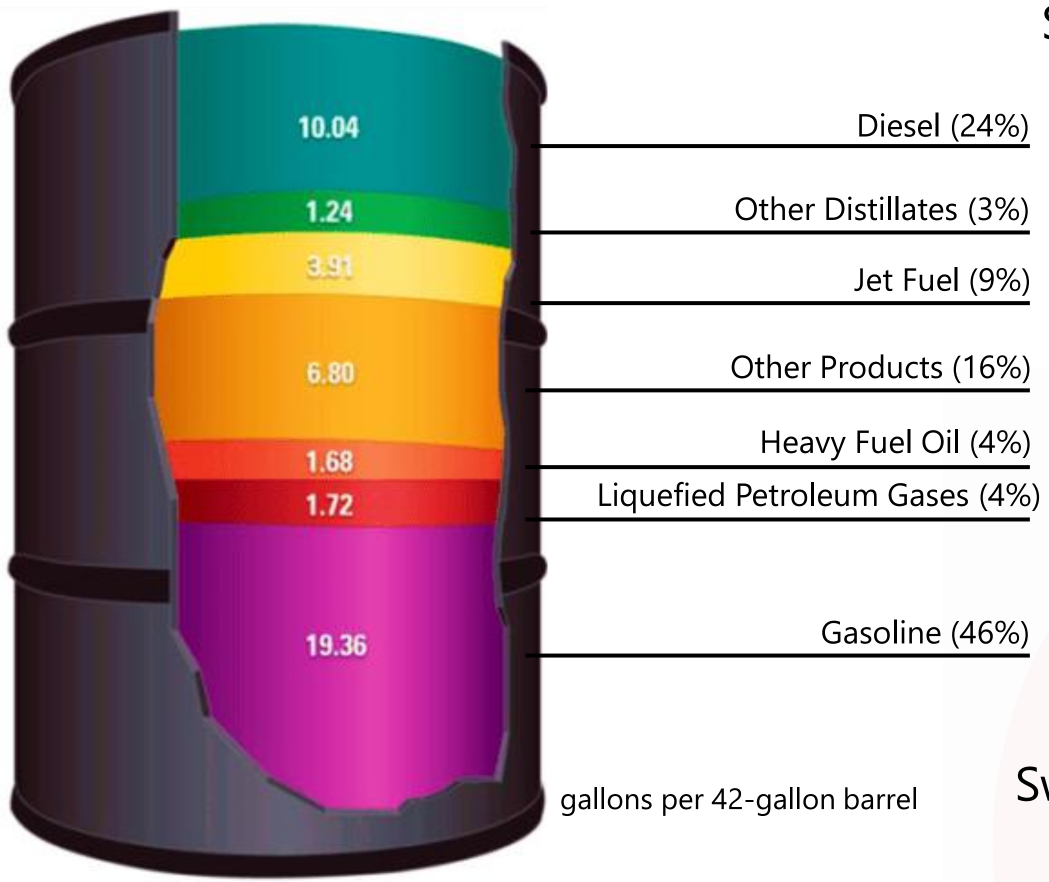
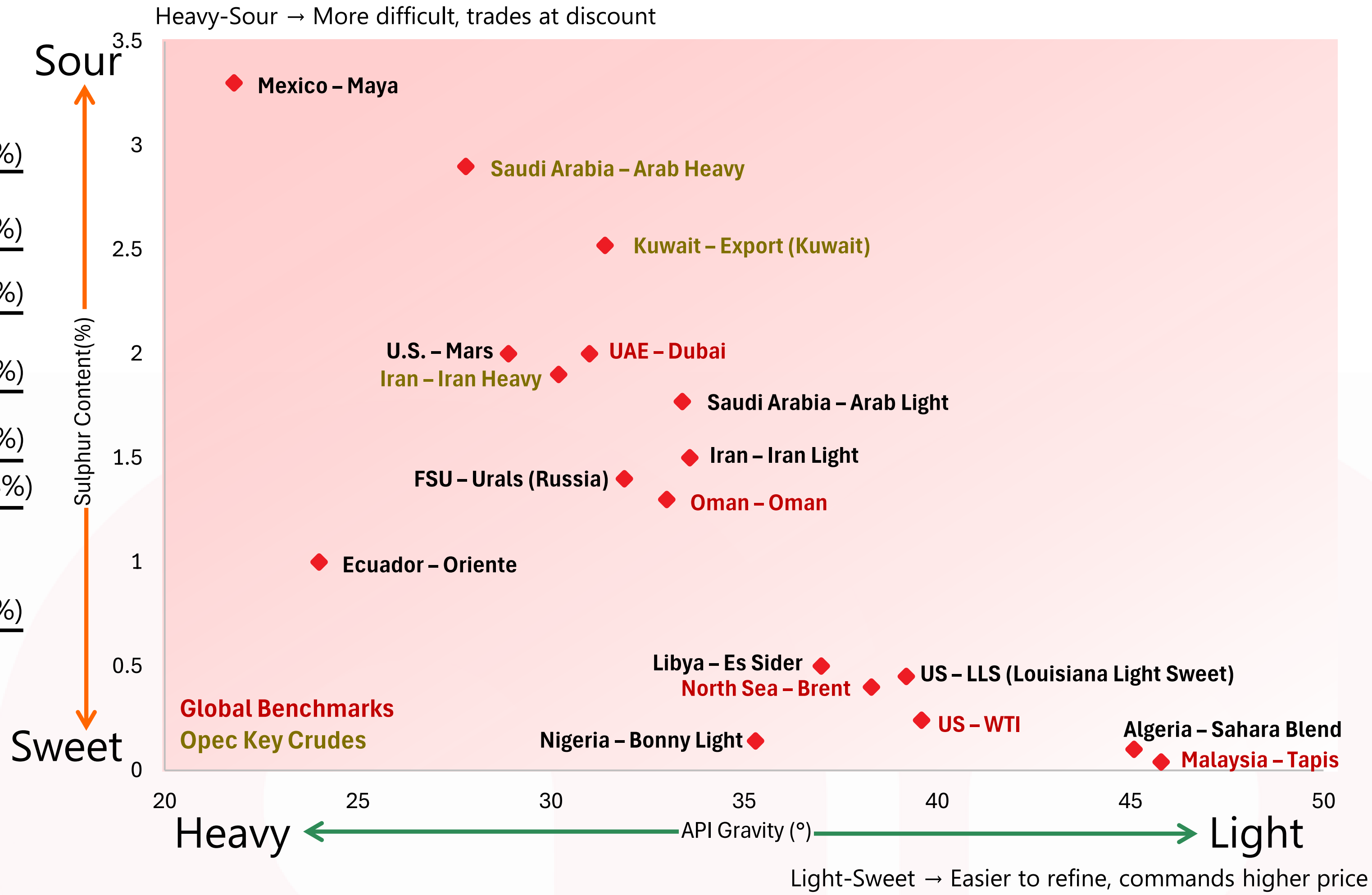


What's in a barrel of oil?

AmInvestment Bank

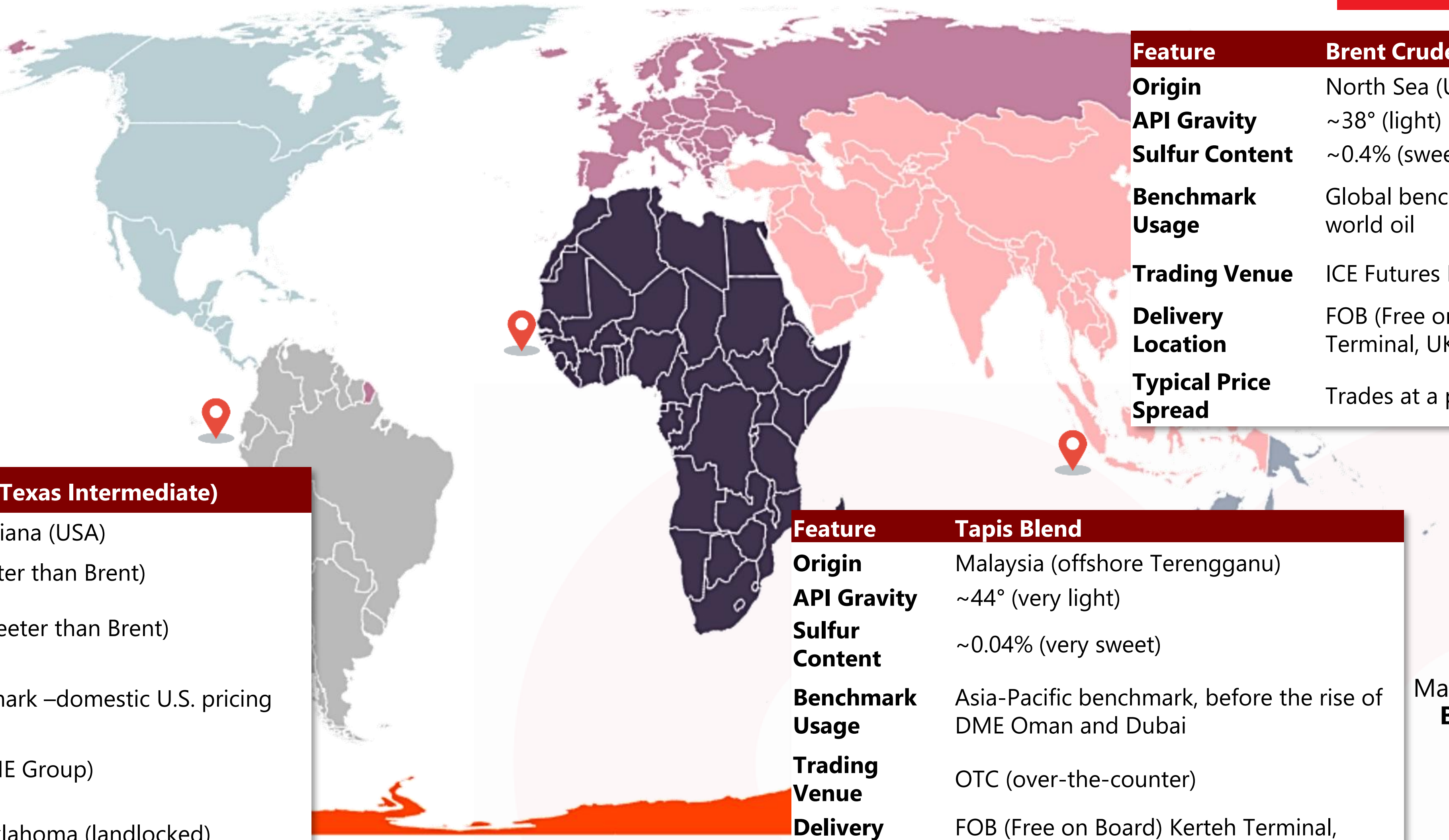




Source: EIA, Argus, Platts, Company Data, AmInvestment Bank

Oil Pricing Benchmark: Brent and WTI Dominate, Tapis Premium Reflects Quality

AmInvestment Bank



Feature	Brent Crude
Origin	North Sea (UK/Norway)
API Gravity	~38° (light)
Sulfur Content	~0.4% (sweet)
Benchmark Usage	Global benchmark – price ~2/3 of world oil
Trading Venue	ICE Futures Europe
Delivery Location	FOB (Free on Board) at Sullom Voe Terminal, UK
Typical Price Spread	Trades at a premium to WTI

Feature	WTI (West Texas Intermediate)
Origin	Texas, Louisiana (USA)
API Gravity	~39.6° (lighter than Brent)
Sulfur Content	~0.24% (sweeter than Brent)
Benchmark Usage	U.S. benchmark –domestic U.S. pricing
Trading Venue	NYMEX (CME Group)
Delivery Location	Cushing, Oklahoma (landlocked)
Typical Price Spread	WTI trades at a discount to Brent, due to landlocked and transport cost

Source: EIA, Argus, Platts, Company Data, AmInvestment Bank

Feature	Tapis Blend
Origin	Malaysia (offshore Terengganu)
API Gravity	~44° (very light)
Sulfur Content	~0.04% (very sweet)
Benchmark Usage	Asia-Pacific benchmark, before the rise of DME Oman and Dubai
Trading Venue	OTC (over-the-counter)
Delivery Location	FOB (Free on Board) Kerteh Terminal, Peninsular Malaysia
Typical Price Spread	Trades at a premium to Brent due to high quality

Regional crudes (inc. Malaysia) priced **relative to Brent** or **Dubai/Oman** benchmarks

but **Tapis** remains a reference for **quality differentials**.

Malaysia oil & gas

Key milestones for Malaysia oil & gas

AmInvestment Bank

- **1910** – Shell’s first discovery in Miri Well No. 1, Sarawak.
- **1974** – Global oil crisis led to a policy shift toward **nationalization** and **resource sovereignty.**

  Petroleum Development Act (PDA) creates Petronas and PSC model
- **1983** – First LNG cargo departs Bintulu and Malaysia enters global LNG trade.
- **1984** – PGU pipeline begins supplying gas to industry.
- **2007** – Kikeh comes onstream as Malaysia’s first deepwater oil field.
- **2014** – Gumusut Kakap onstream with SOGT and SSGP integrating Sabah–Sarawak resources.
- **2016** – PFLNG Satu delivers first offshore LNG
- **2019** – Pengerang RAPID complex begins refining and petrochemical operations.
- **2020** – Sarawak and PETRONAS settle the state sales tax and PETROS expands its role.
- **2025** – Kasawari CCS advances toward start up, positioning Malaysia in low-carbon gas.

Source: Petronas, AmInvestment Bank

Malaysia's oil & gas legal framework

AmInvestment Bank

1958 — **Sarawak Oil Mining Ordinance** Establishes state licensing for upstream activity

1963 — **MA63 signed**
Sabah & Sarawak keep control over natural resources.

1974 — **Petroleum Development Act**
All petroleum rights given to Petronas; States get 5% royalty

PETRONAS

1976 — **Vesting Agreements signed**
Sabah & Sarawak formally transfer ownership to Petronas.

2012 — **Territorial Sea Act**
State waters at three nautical miles and frames later jurisdictional claims

2016 — **Distribution of Gas Ordinance**
Empowers PETROS to plan license and regulate domestic gas distribution

2019 — **Court upholds State sales tax on petroleum**
Boosts State revenue powers.

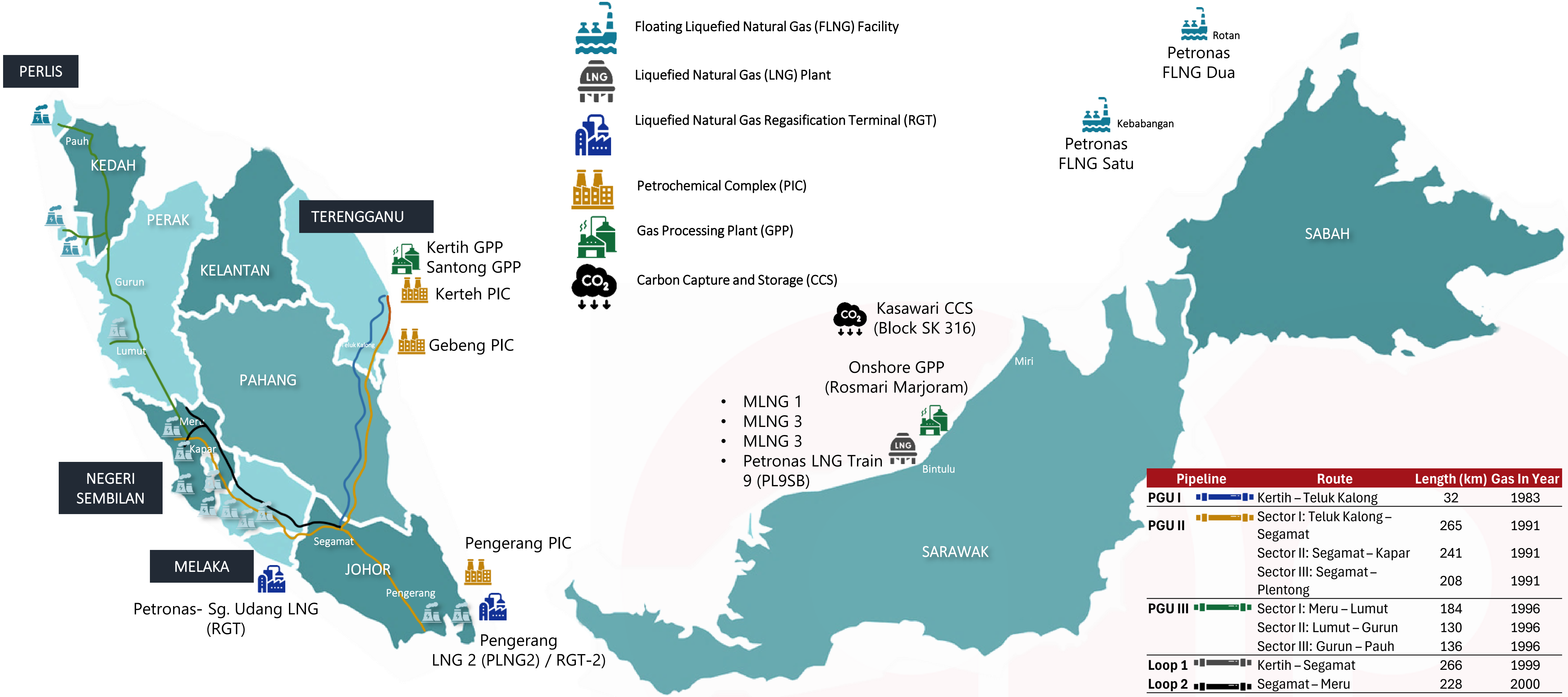
2022 — **MA63 amendments**
Recognises Sabah & Sarawak as equal partners in Malaysia

Source: TheEdge, Petronas, AmInvestment Bank

Mapping Malaysia's oil & gas landscape

AmInvestment Bank

- Gas Power Plant
- Floating Liquefied Natural Gas (FLNG) Facility
- Liquefied Natural Gas (LNG) Plant
- Liquefied Natural Gas Regasification Terminal (RGT)
- Petrochemical Complex (PIC)
- Gas Processing Plant (GPP)
- Carbon Capture and Storage (CCS)



Pipeline	Route	Length (km)	Gas In Year
PGU I	Kertih – Teluk Kalong	32	1983
PGU II	Sector I: Teluk Kalong – Segamat	265	1991
	Sector II: Segamat – Kapar	241	1991
	Sector III: Segamat – Plentong	208	1991
PGU III	Sector I: Meru – Lumut	184	1996
	Sector II: Lumut – Gurun	130	1996
	Sector III: Gurun – Pauh	136	1996
Loop 1	Kertih – Segamat	266	1999
Loop 2	Segamat – Meru	228	2000
Total	—	**2500**	

Source: Malaysia Gas Map, Petronas, AmInvestment Bank

Evolution of Malaysia Petroleum Arrangement Contracts (PSCs)

AmInvestment Bank

Pre 1976	1976	1985	1994	1997	2011	2012	2017
Concession	1976 PSC	1985 PSC	Deepwater / Ultra Deepwater	R/C PSC	Risk Service Contract	Progressive Volume based	Deepwater R/C PSC
Agreement between oil companies and government	Convert existing concessions into PSCs	Attract foreign players for exploration and production	Encourage deepwater exploration, development, and production	Promote foreign investment and effective exploration of high-risk plays	Encourage innovation and local development capability	Boost foreign investment in brown fields and accelerate recovery	Attract deepwater investment and promote cost-effective technology
Traditional concession model	Fixed profit split	Production-based fiscal terms	Production-based fiscal terms	Profitability-based sliding fiscal term tied to index	Modified risk/reward sharing structure	Cost recovery platform + progressive profit sharing	Profitability-based sliding fiscal term tied to index

Source: Petronas Website, AmInvestment Bank

Malaysia's Oil & Gas Key Stats

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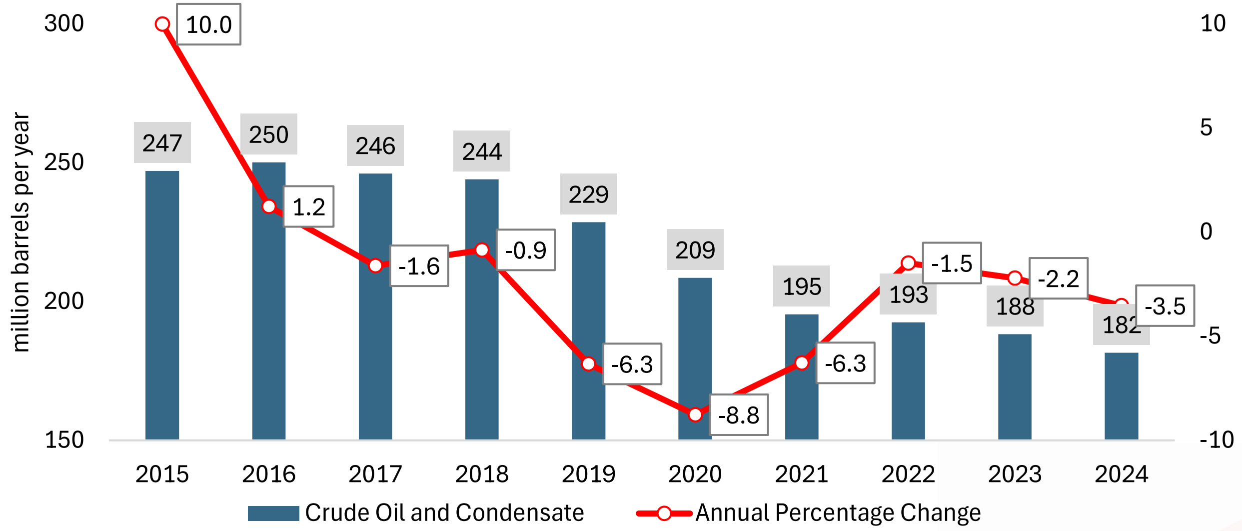
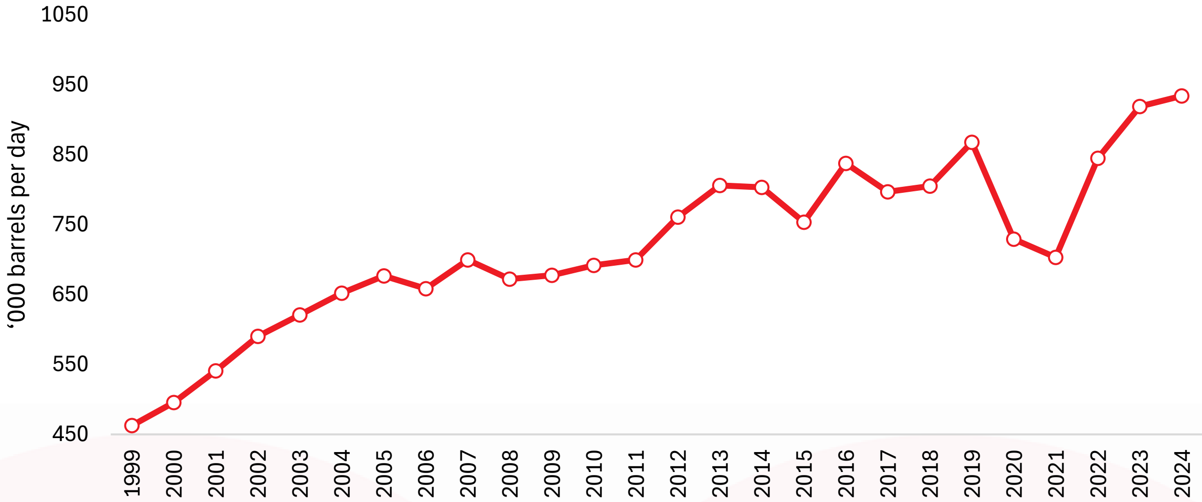
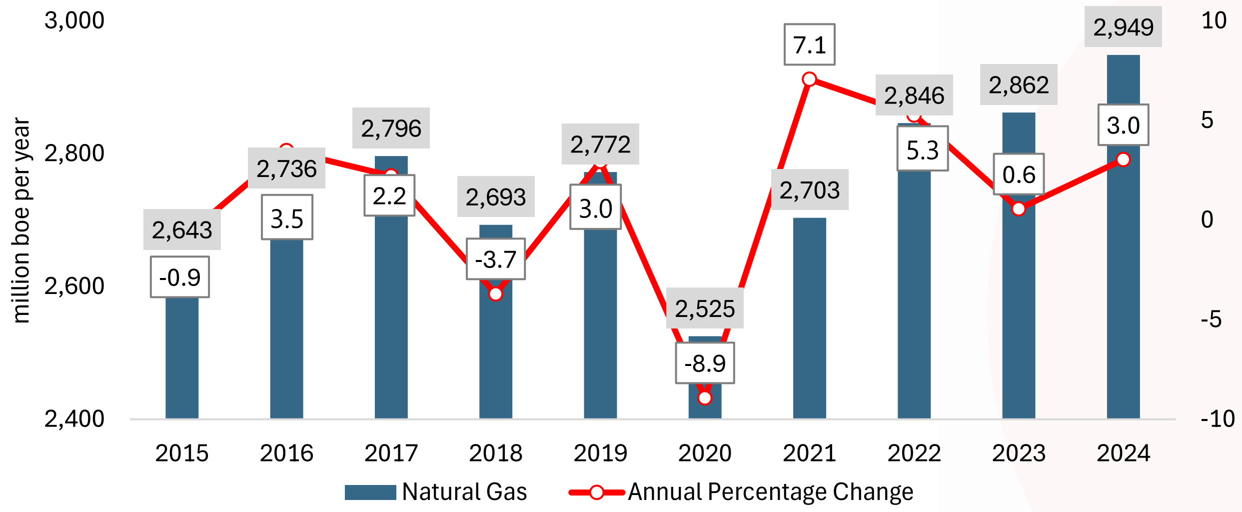
Production of Crude Oil & Condensate

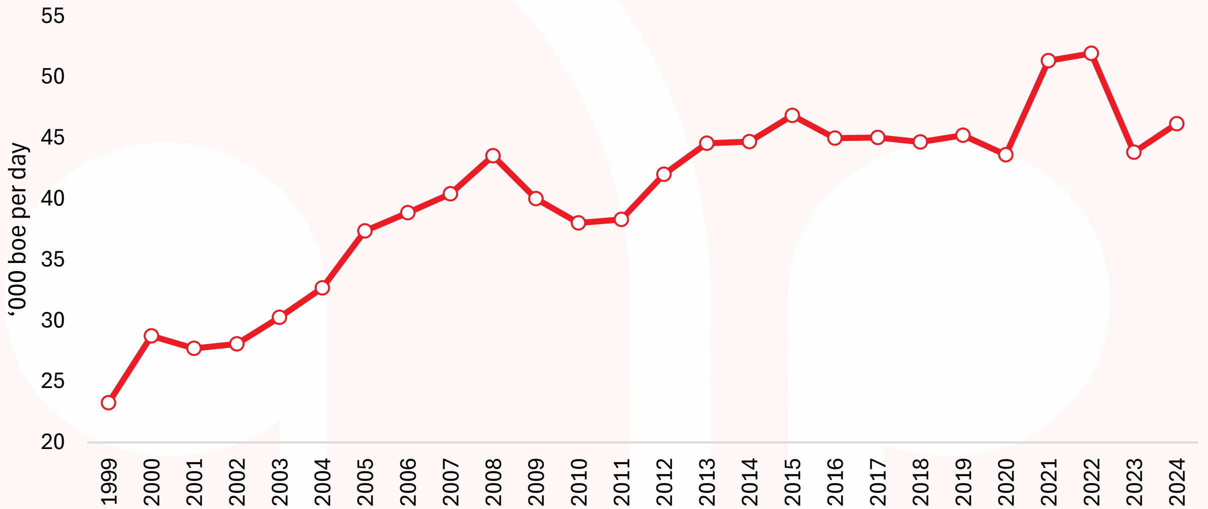


Consumption of Crude Oil





Consumption of Natural Gas



Source: Jadual Penerbitan Statistik Perlombongan Petroleum dan Gas Asli ST1 2025, 2025 Energy Institute Statistical Review of World Energy

Malaysia's Oil & Gas Key Stats

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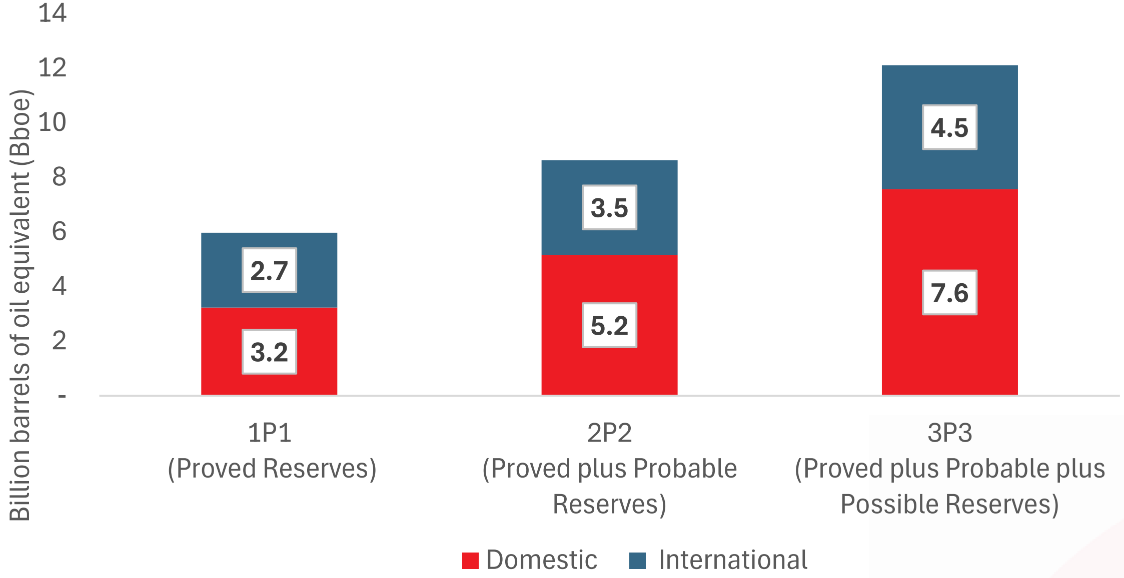
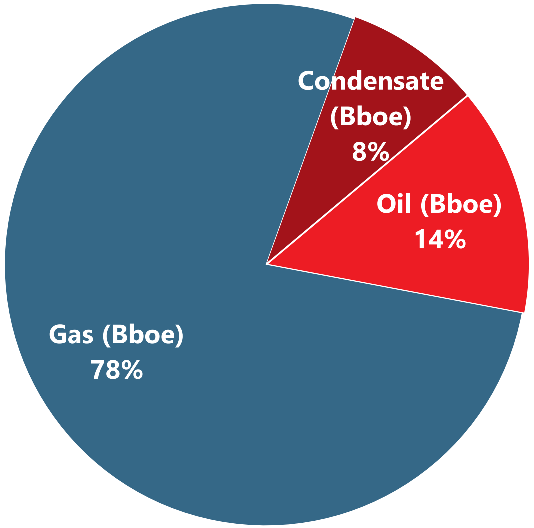
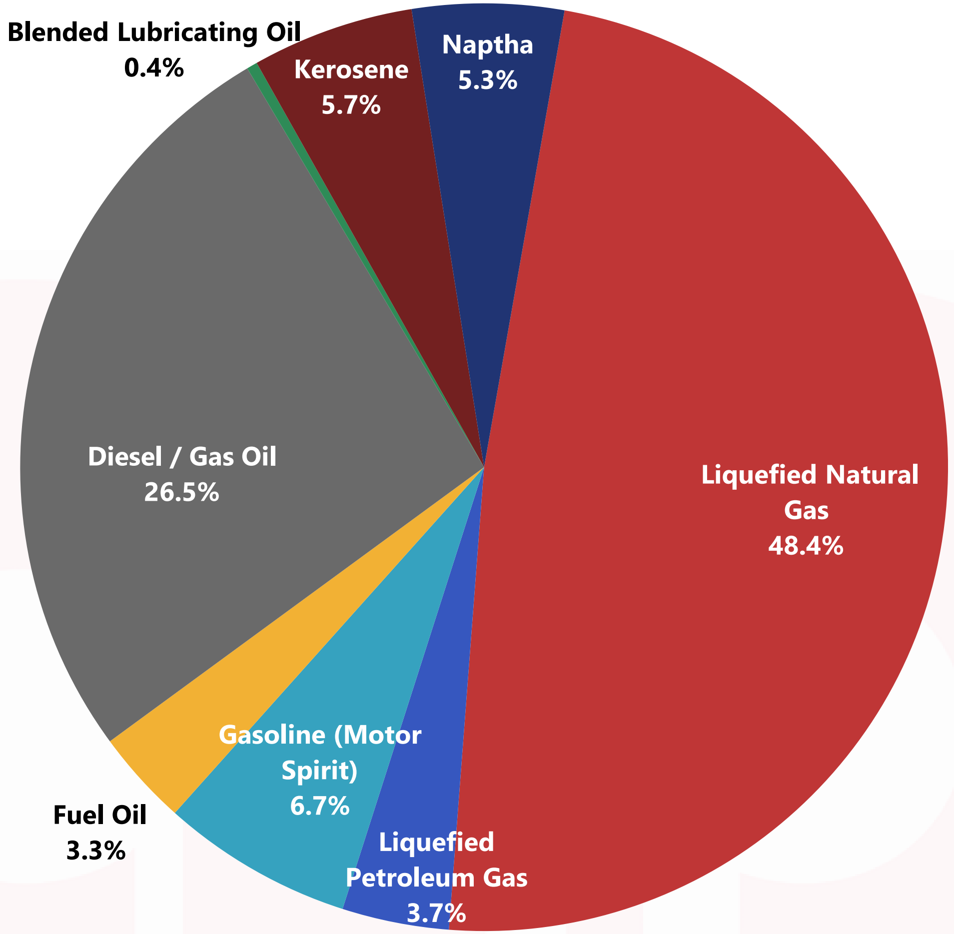
Proved Reserves as at 1 Jan 2025



Proved Reserves Composition

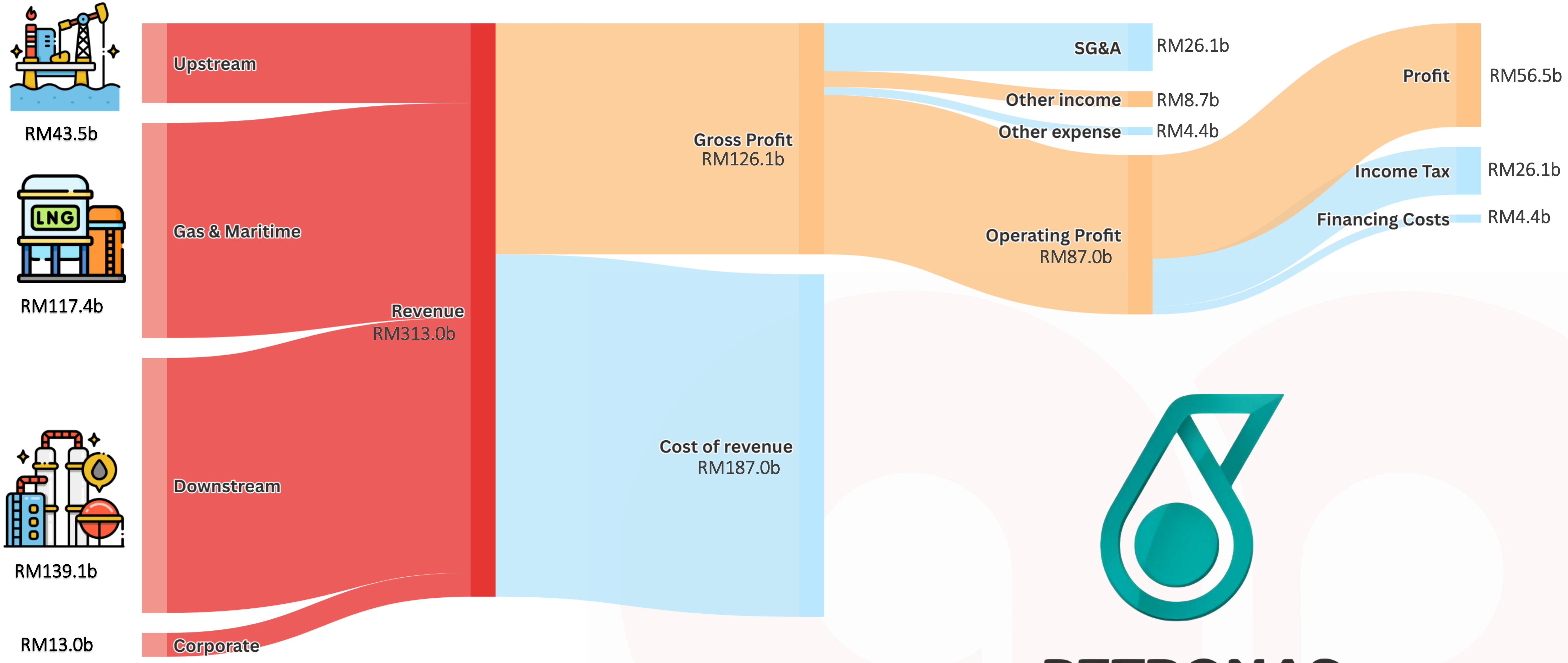


Production of Major Products in Refined Petroleum Products Industry



Source: Annual Report Petronas 2024, Jadual Penerbitan Statistik Perlombongan Petroleum dan Gas Asli ST1 2025, AmInvestment Bank

How Petronas made money in 2024?



Source: Annual Report Petronas 2024, AmInvestment Bank

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Oil Markets

US leads global oil output after 2015 shale boom

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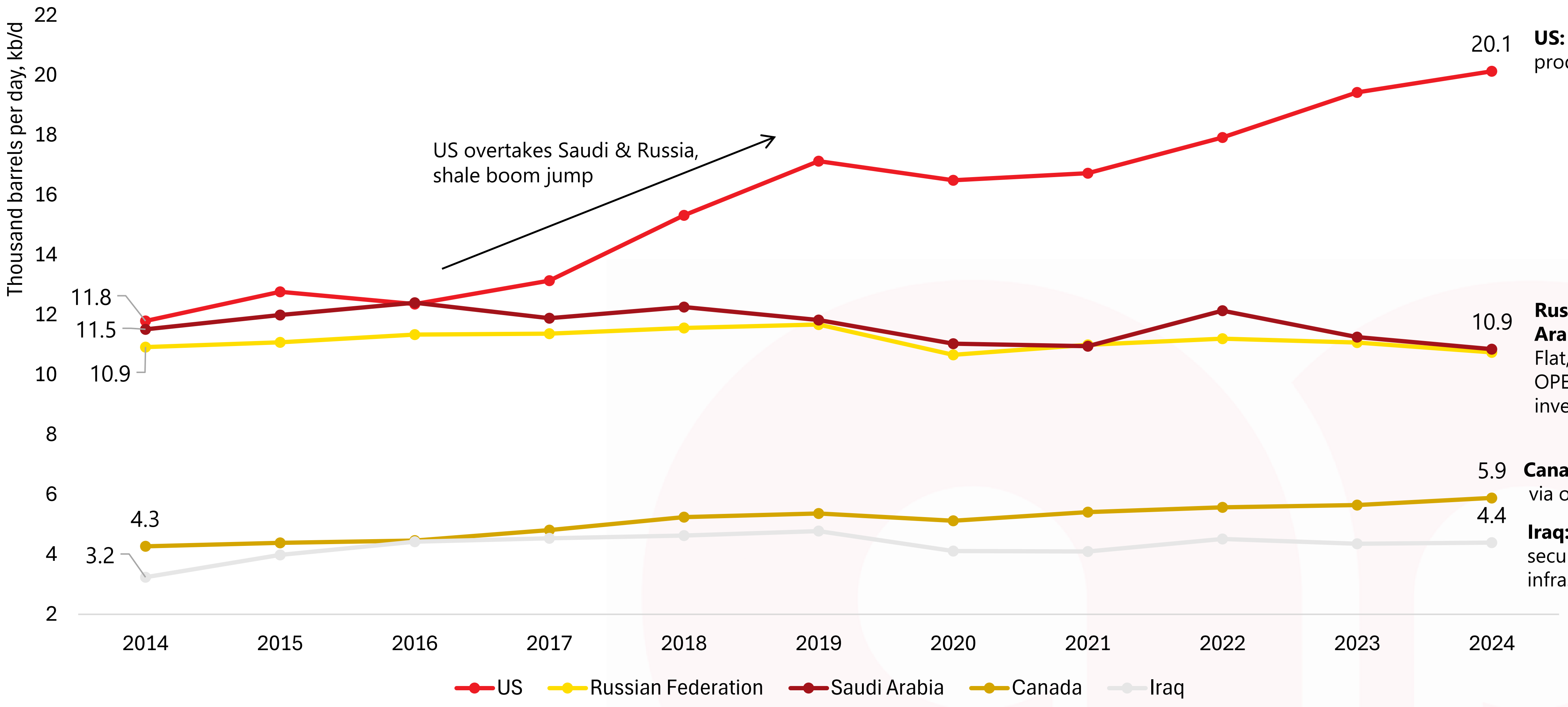


US: emerges as top oil producer

Russia& Saudi Arabia: Flat, constrained by OPEC+ quotas & investment cycles.

Canada: Steady growth via oil sands

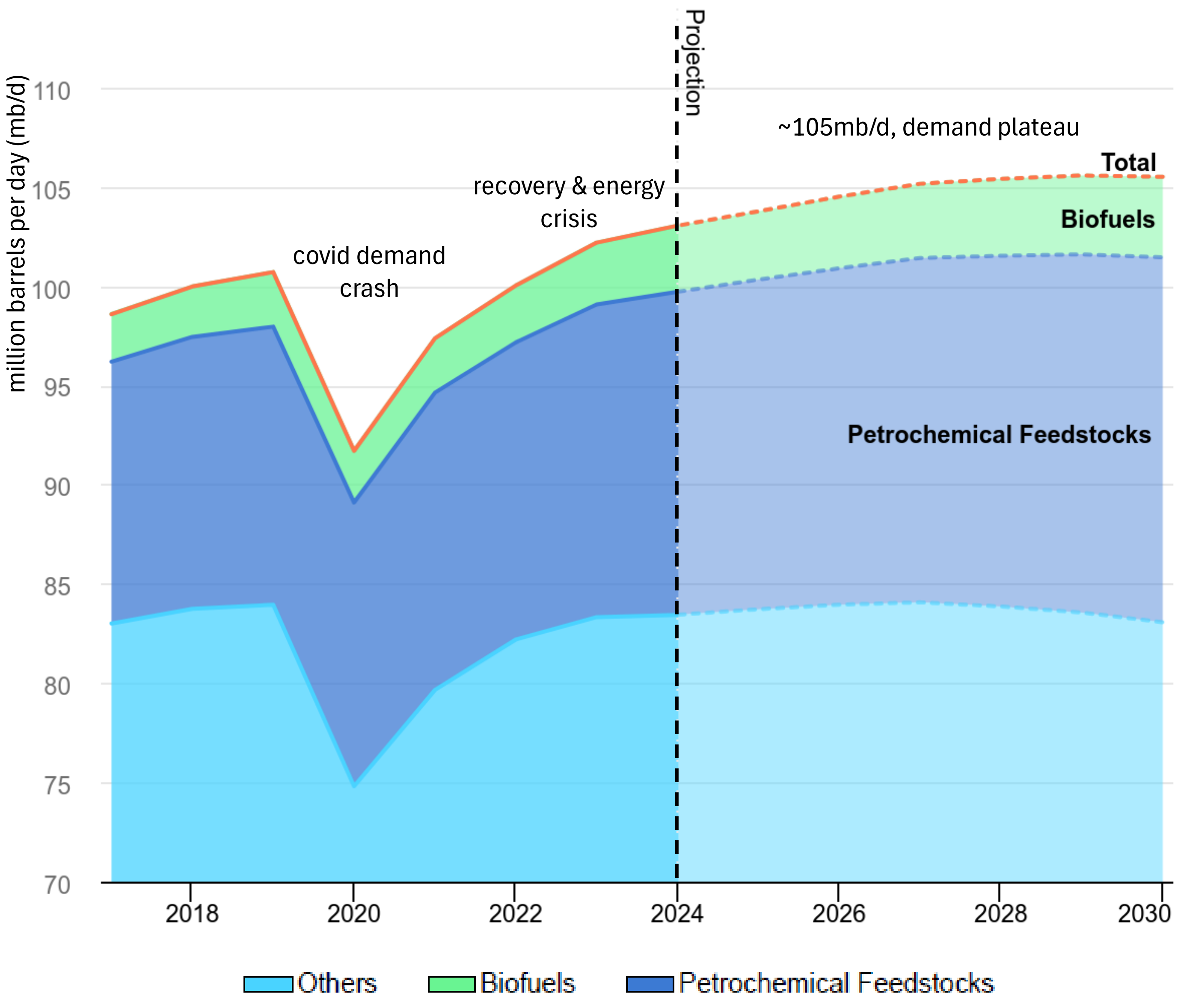
Iraq: Limited by security and infrastructure.

Source: Statistical Review of World Energy 2025, AmInvestment Bank

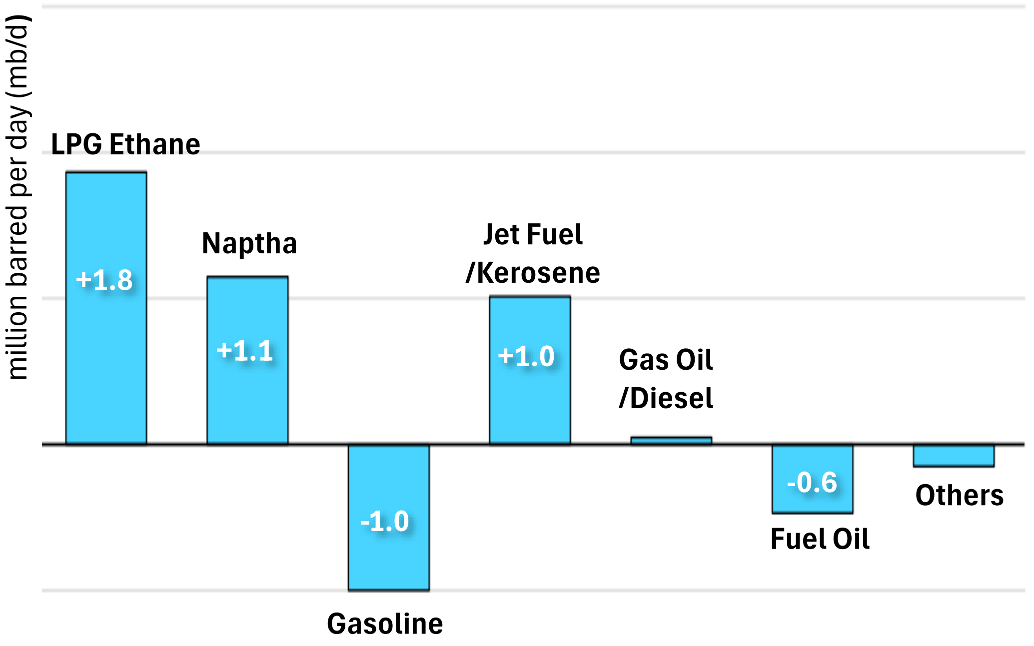
Global oil demand near plateau

AmInvestment Bank

Global oil demand forecast, 2017-2030



Growth in world oil demand by product 2024-2030



Petrochemicals & aviation partially offset road fuel decline - demand plateaus

Source: IEA (2025), Global oil demand forecast, 2017-2030, AmInvestment Bank

Supply growth dominated by a surge in NGLs, led by the US and Saudi Arabia

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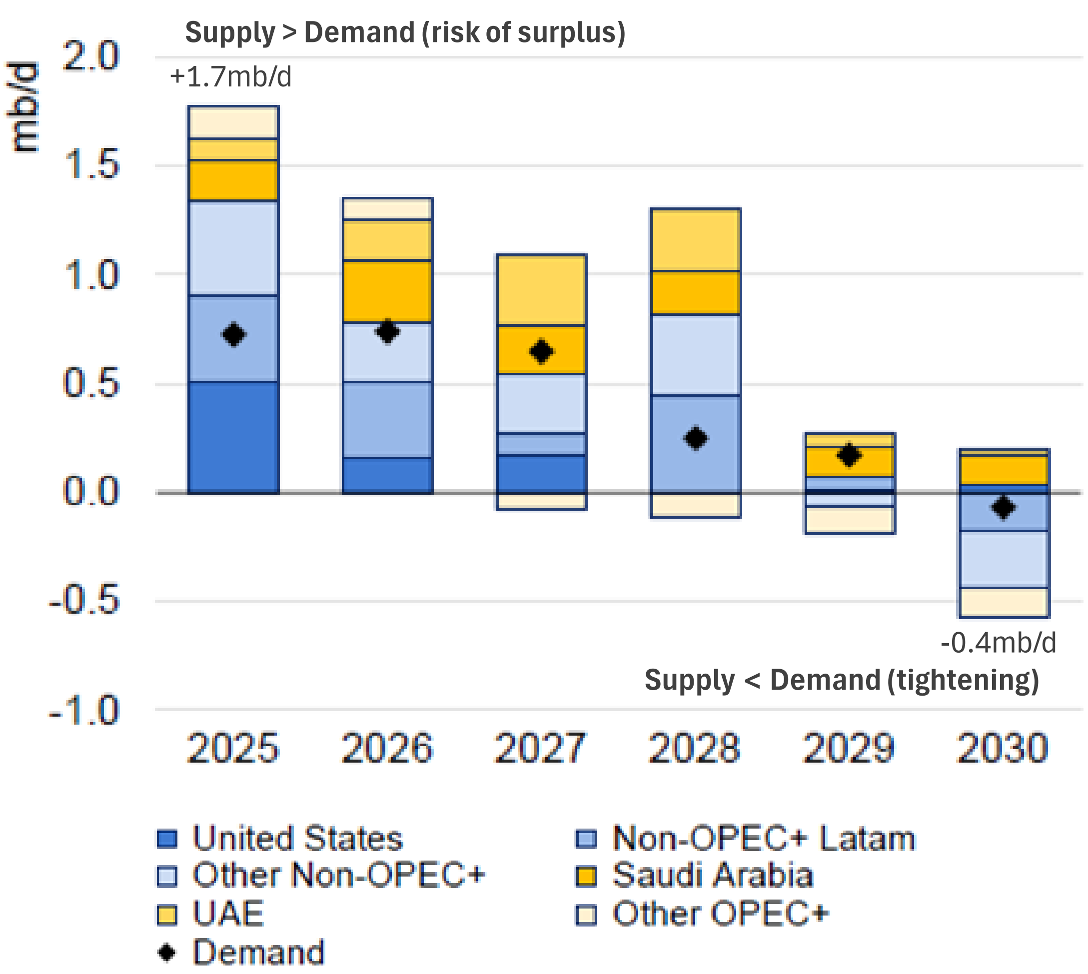
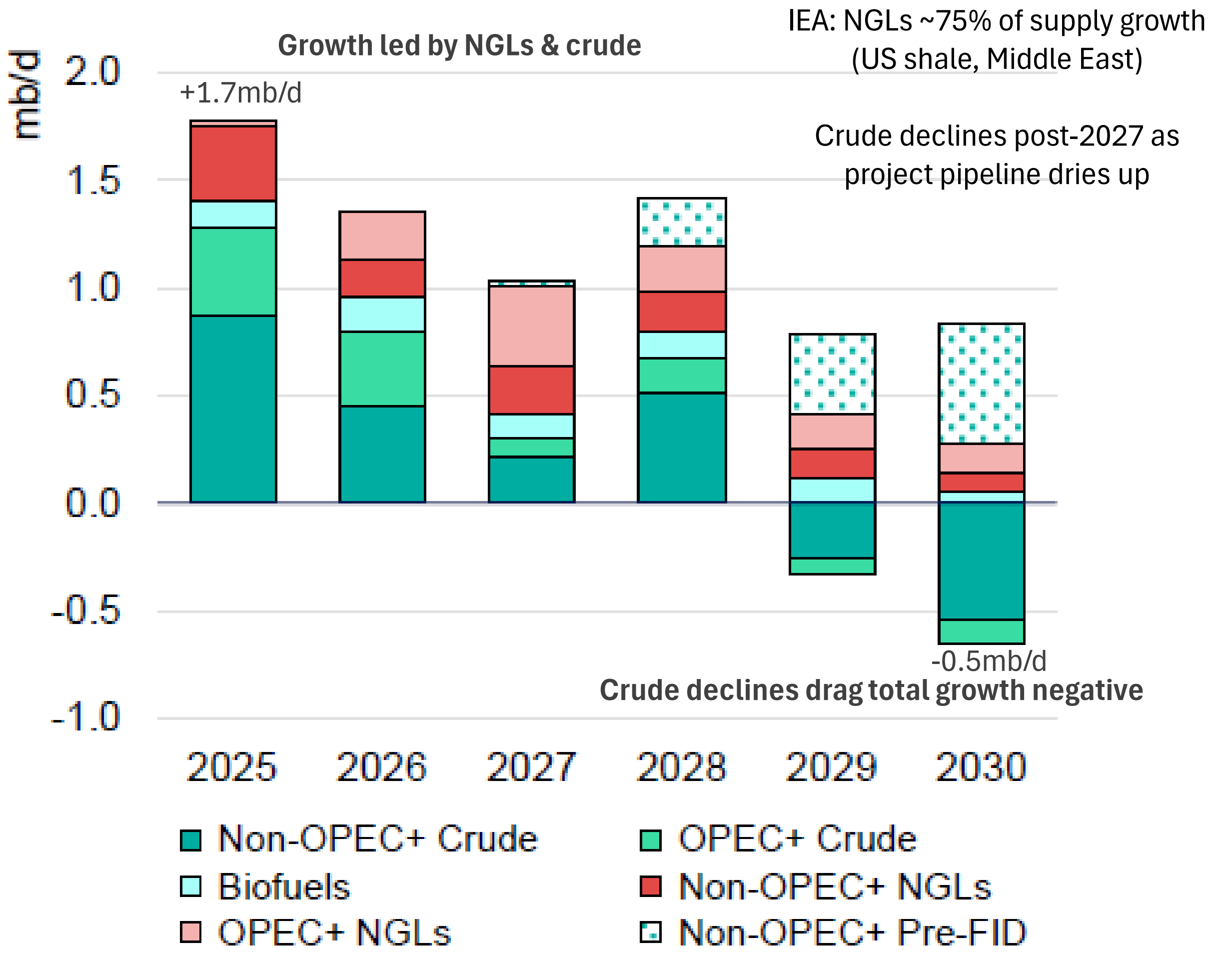
Capacity Growth vs Demand, 2025–2030



Capacity Growth by Fuel Type, 2025–2030



Source: IEA (2025), Global oil demand forecast, 2017-2030, AmInvestment bank

Capex rebounded post-Covid, yet below 2015 peak

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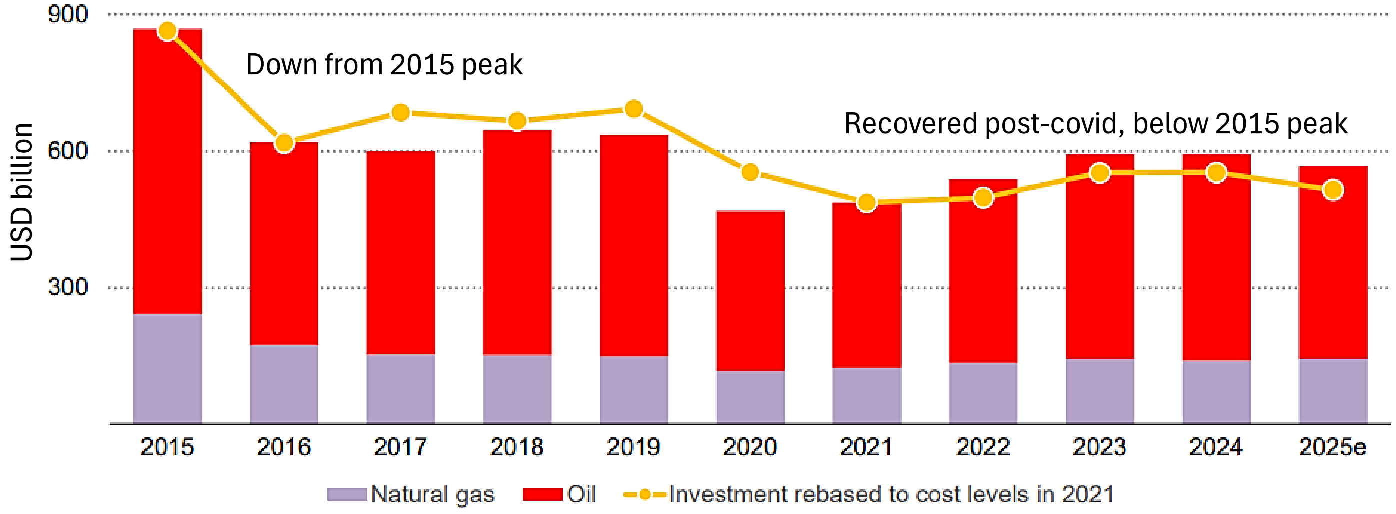
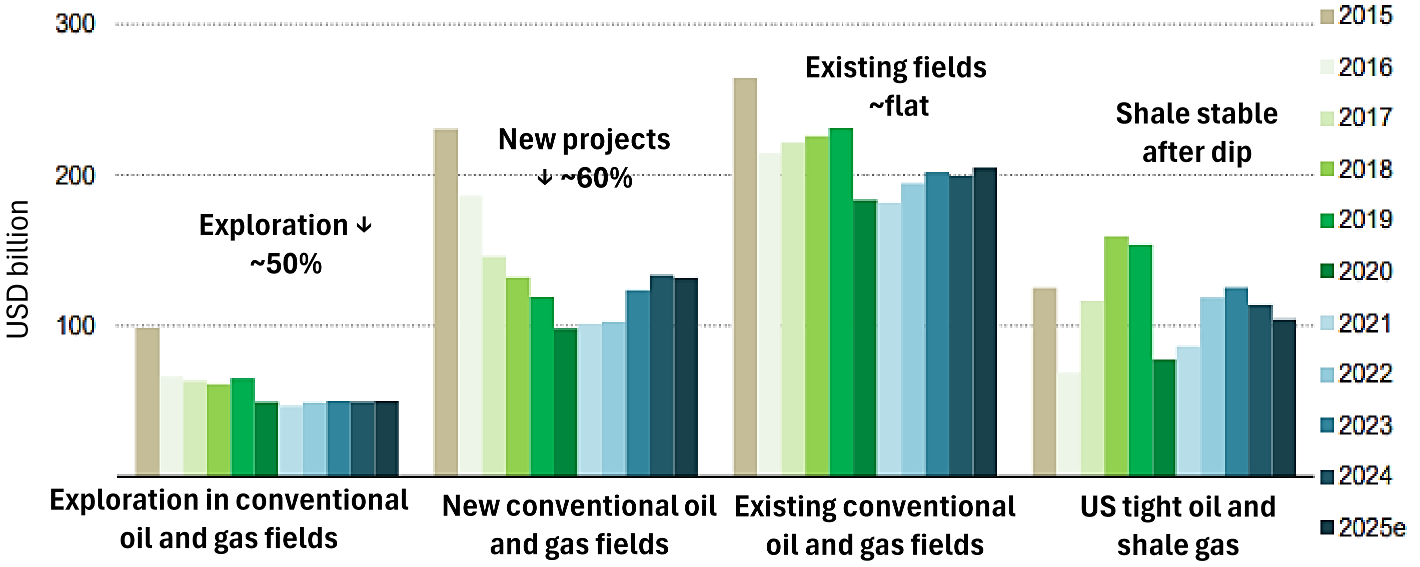
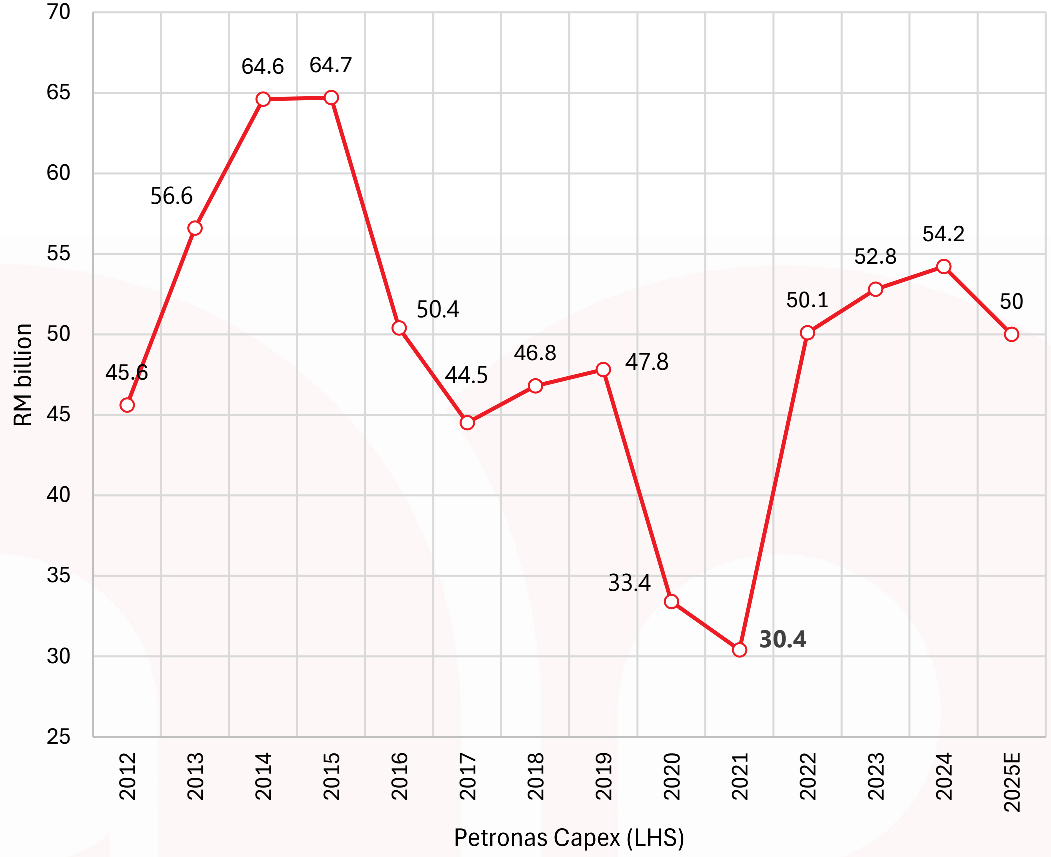
Upstream oil & gas investment in real terms and rebased to 2021 cost levels, 2015-2025



Upstream oil & gas capital expenditure by activity and field type, 2015-2025



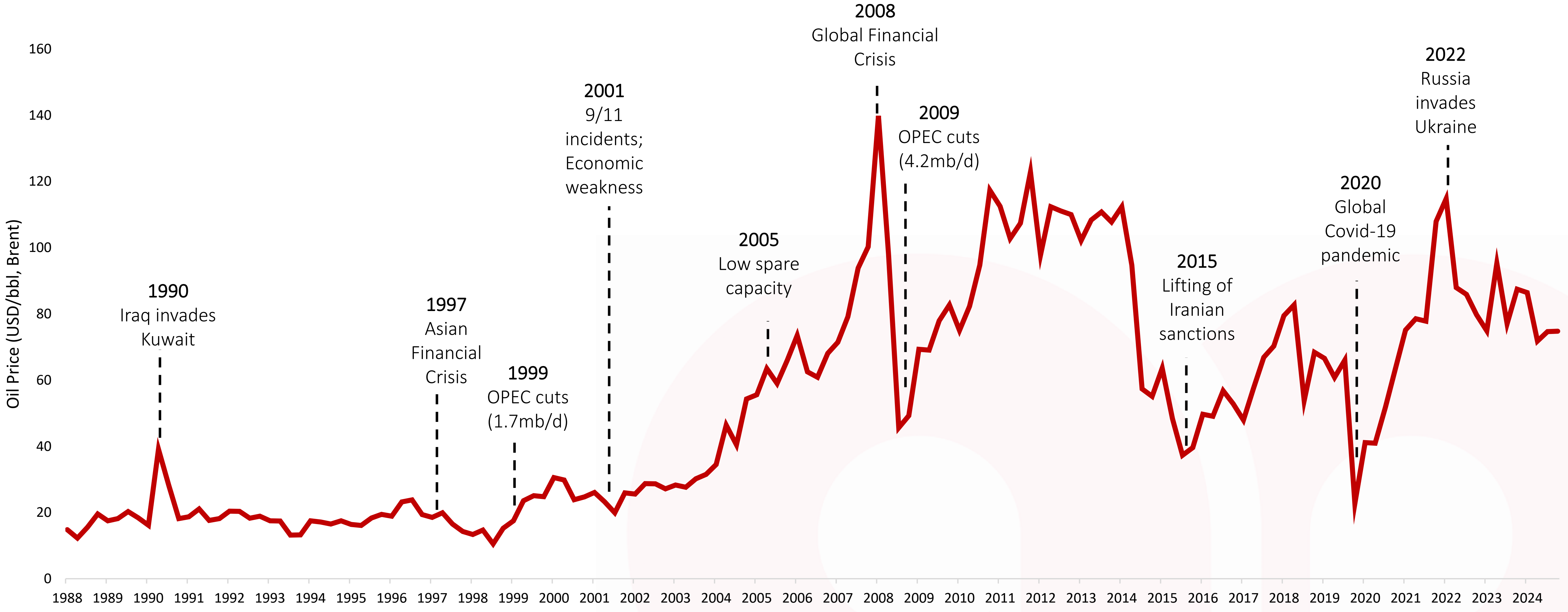
Petronas capital expenditure



Source: IEA World Energy Investment 2024, Petronas, AmInvestment Bank

Oil prices react to geopolitical and economic events

AmInvestment Bank

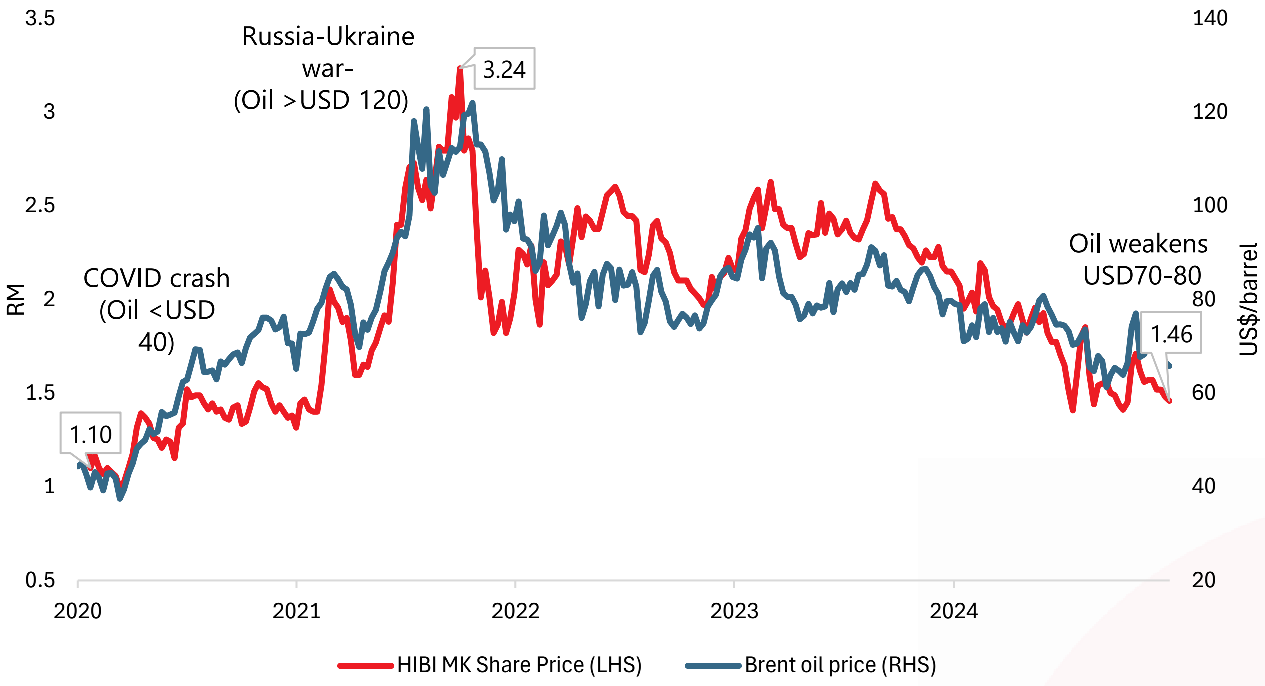


Source: EIA, AmInvestment Bank

Listed oil upstream Player

Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
Exploration & Production (E&P)			
Hibiscus Petroleum		First SPAC in SEA Pure E&P player in Malaysia Balanced Portfolio (51% Oil: 49% Gas) Operational Area: Malaysia, UK, Vietnam, Brunei	1.08

Valuing Exploration & Production company

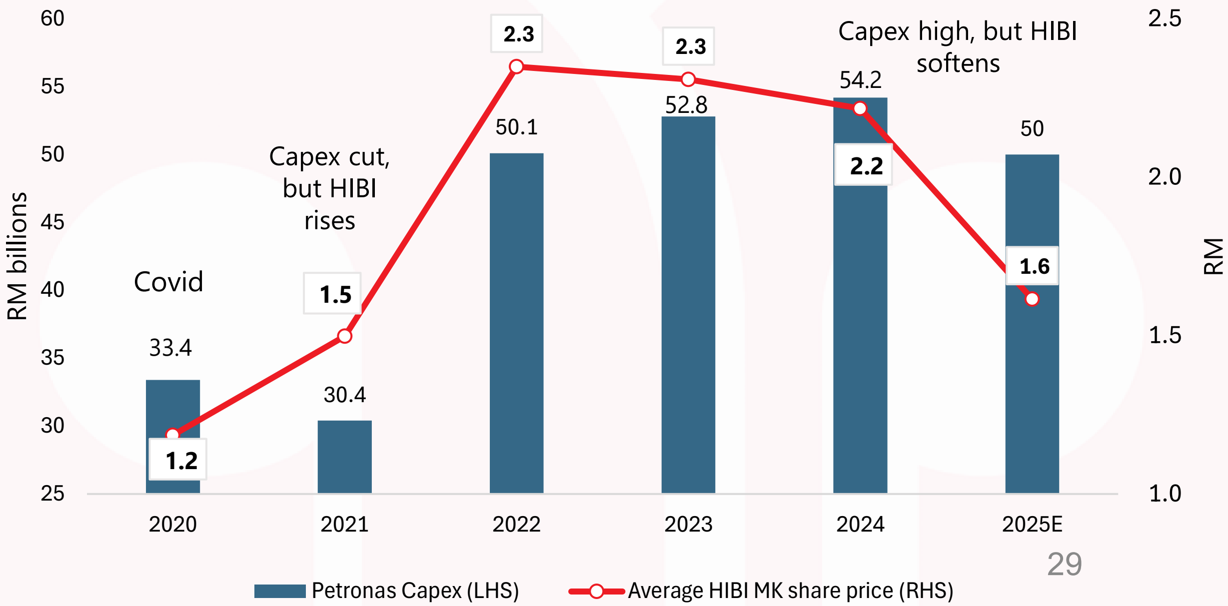


HIBI is a high-beta proxy for Brent oil

- Useful as a geared play during oil upcycles.
- The 2021 rally and 2024 decline highlight strong oil-dependency.
- Divergences (2022–2023) suggest times when company fundamentals (production, acquisitions, dividends) insulated it from crude weakness.
- Current levels (~RM1.5 with Brent ~USD 70) are back near pre-2021 baseline, indicating a potential re-rating only if oil stabilises higher.

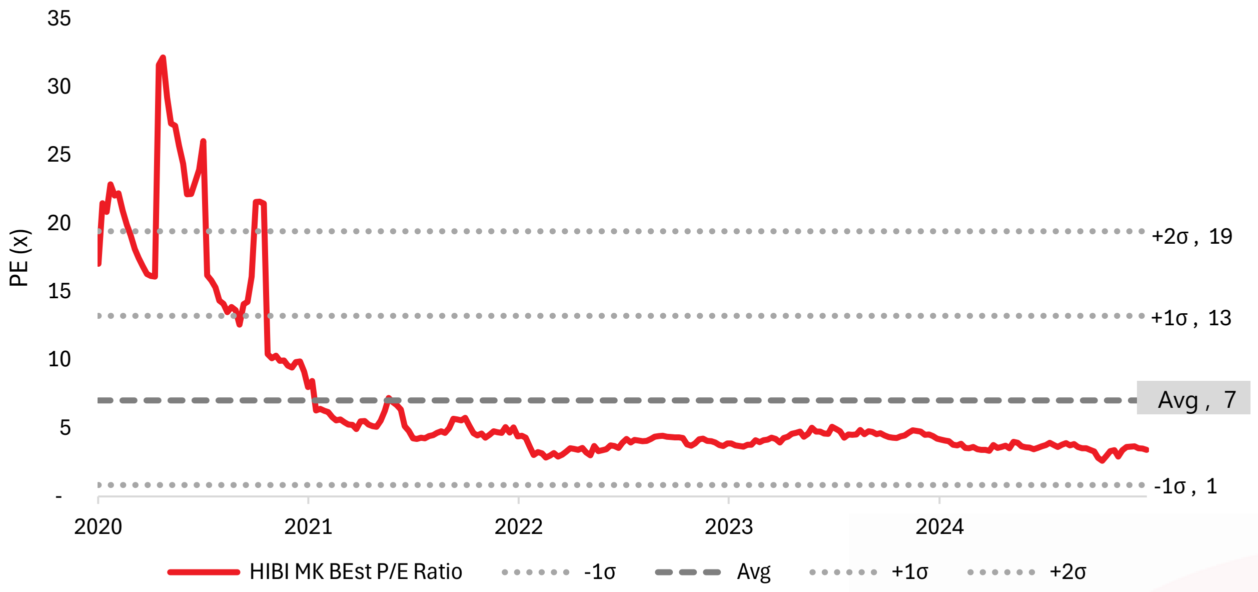
HIBI is oil-driven, not Petronas Capex-driven

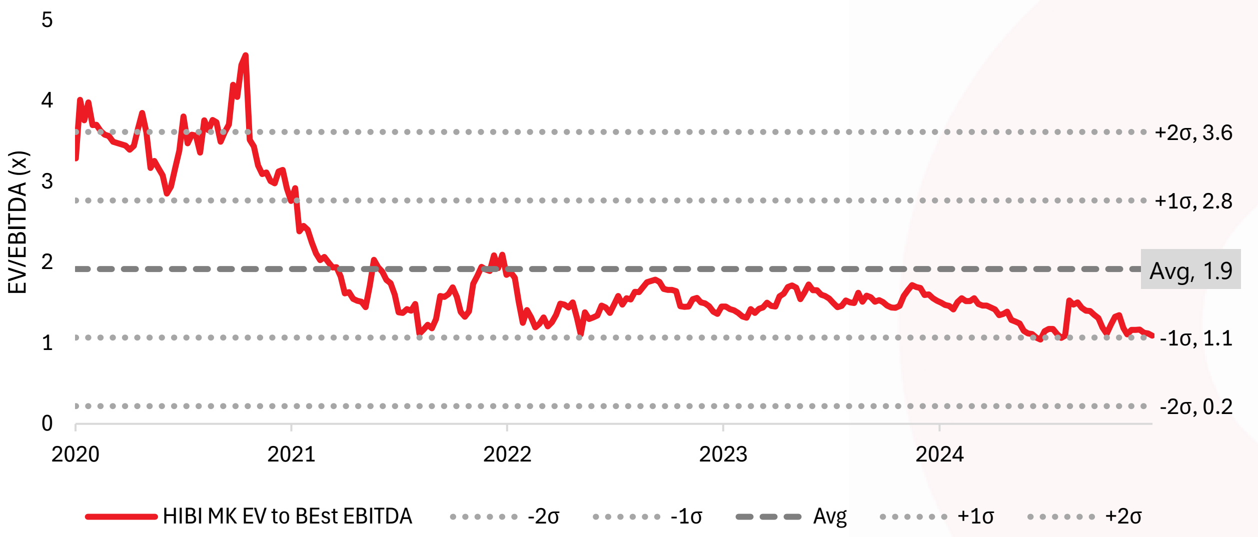
- Petronas' capex provides a sector backdrop, but HIBI as an upstream producer remains **price-leveraged**



Source: Bloomberg, AmInvestment Bank

Valuing Exploration & Production company





HIBI P/E De-rated Sharply, Now Below 1σ, EV/EBITDA at cyclical lows.

- Both multiples (P/E & EV/EBITDA) are trading near –1σ to trough bands.
- De-rated from 2020–21 highs, showing loss of investor confidence.
- At current levels → stock looks cheap vs history, but sentiment tied to oil price recovery.

NAV anchors fair value

- Long-term valuation still driven by reserves & production profiles (not visible in chart, but base anchor).

Key valuation risks:

- Commodity price sensitivity, reserve replacement pace, and fiscal/regulatory shifts.

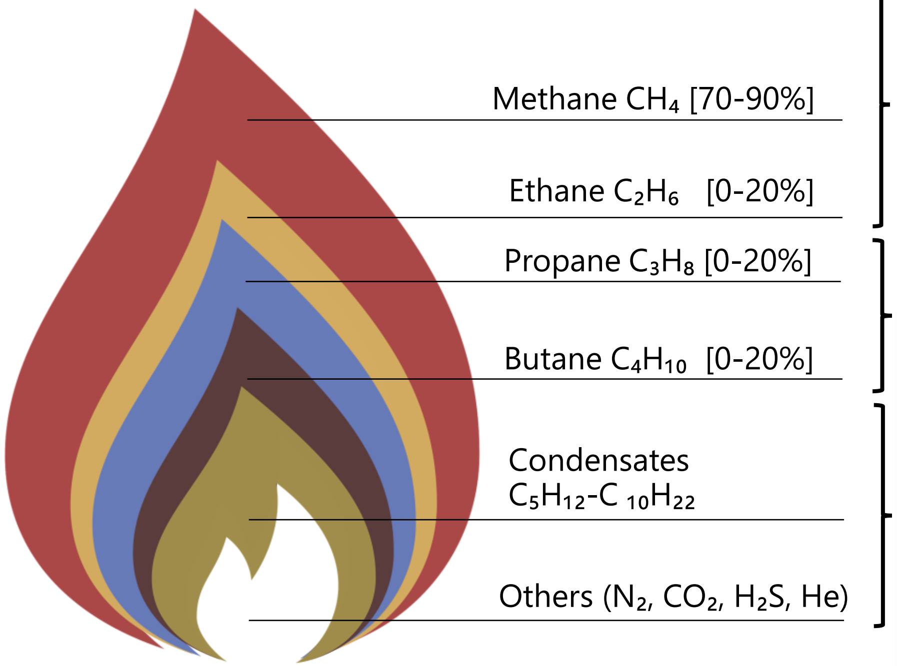
Source: Bloomberg, AmInvestment Bank

Gas

What’s in Gas?

AmInvestment Bank

Natural gas is a hydrocarbon gas mixture used for power, heating, and feedstock. It is the cleanest fossil fuel, producing ~40% less CO_2 than coal



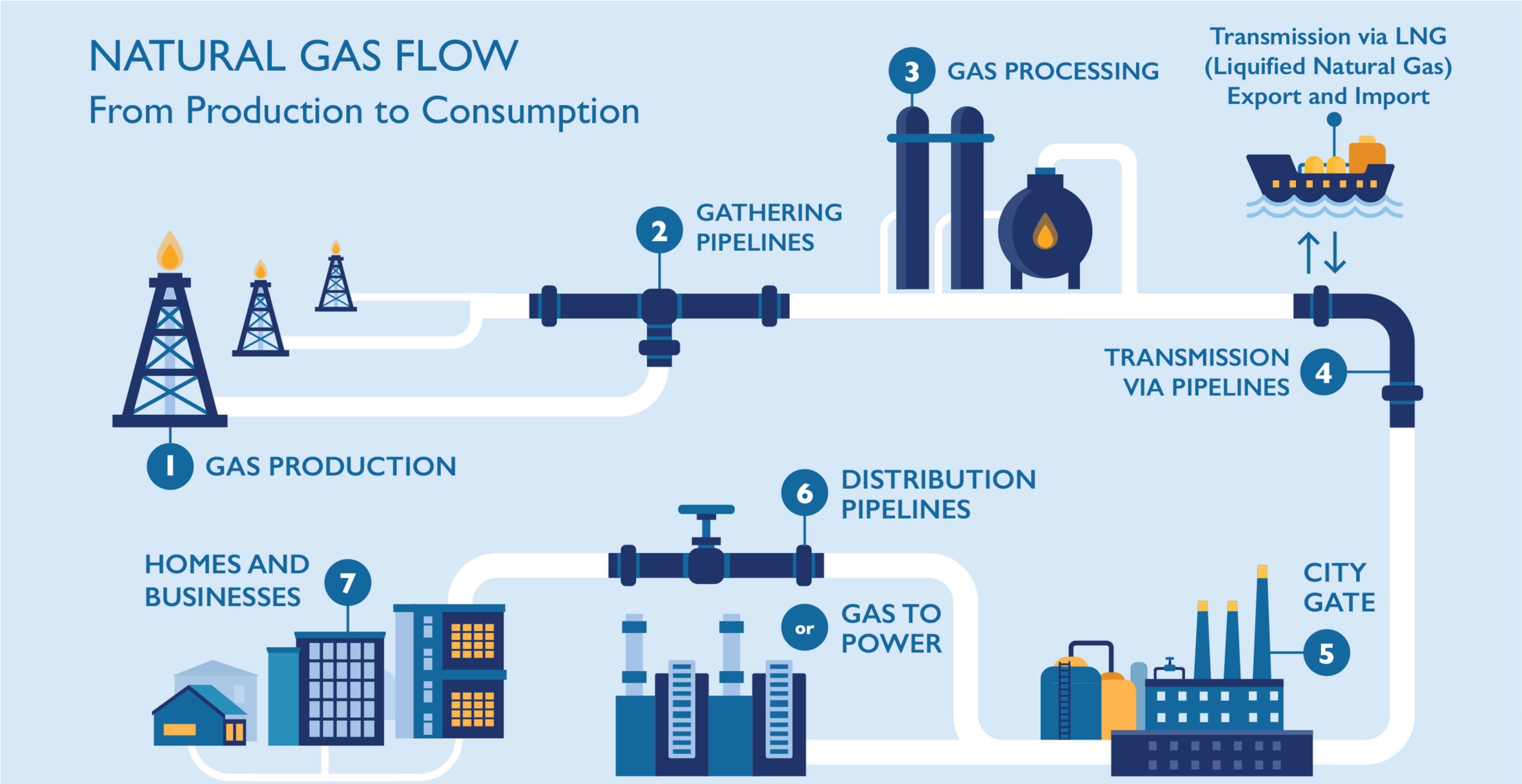
🌎 *Gas = 40% less CO_2 than coal*

Gas Processing Plant, Kerteh

Market Segment	Pricing Mechanism	Notes
Domestic (Peninsular)	Regulated (via IBR)	Subsidized; reviewed periodically
LNG Exports	Oil-linked (JCC/Brent)	Dominant pricing model; long-term contracts
Spot LNG Exports	JKM/hub-linked (growing)	~15–20% of LNG exports

From Gas Well to End-User: The Natural Gas Journey

AmInvestment Bank



Source: National Association of Regulatory Utility Comissioners

Evolution of Malaysia's Gas Industry

AmInvestment Bank

Developing Natural Gas (1970 – 1990s)

Secure Natural Gas Supply (2000 –2015)

Market Liberalization and Deepwater Exploration (2016 – Current)

1984
PGU 1 & GPP1 commissioned

1991
PGU 2 (GPP 2–4) operational.

1998
PGU 3 launched, commissioning of GPP 5–6.

2002
First natural gas delivered through PM3 CAA)

West Natuna (import) begins.

2005
First natural gas delivered via Malaysia–Thailand JDA.

2013
First LN imported into Peninsular Malaysia → RGT 1 commissioned.

2016
Gas Supply Act amended (TPA**)**

2022
Pegaga field (Sarawak) started up
adds ~550 MMSCFD supply for LNG exports

2024
TotalEnergies acquires SapuraOMV stake → secures Jerun gas field & strengthens upstream control

2025
SSGP (Lawas–Bintulu section) scheduled for decommissioning due to safety issues

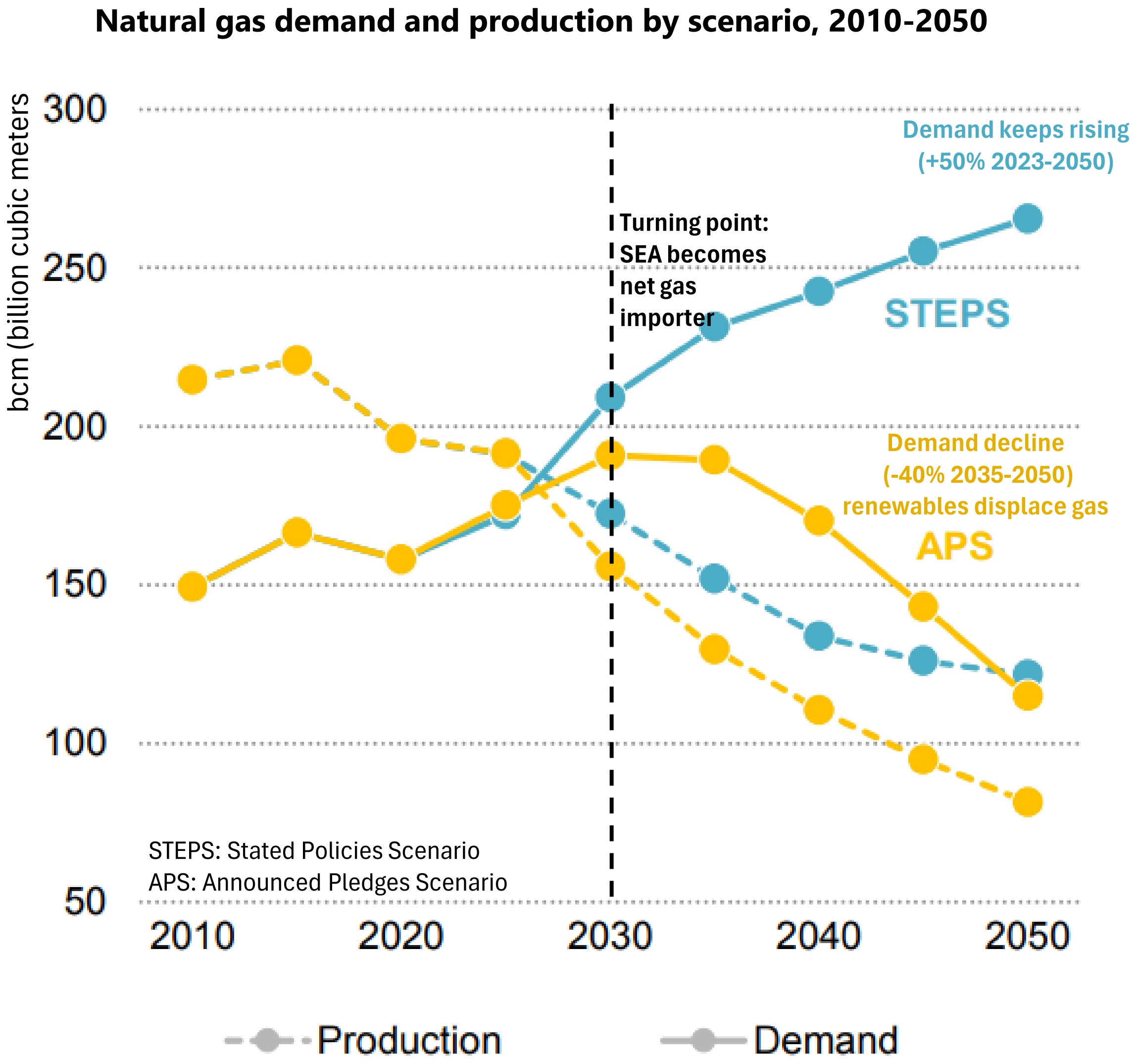
Apr 2025
Putra Heights pipeline explosion in Selangor

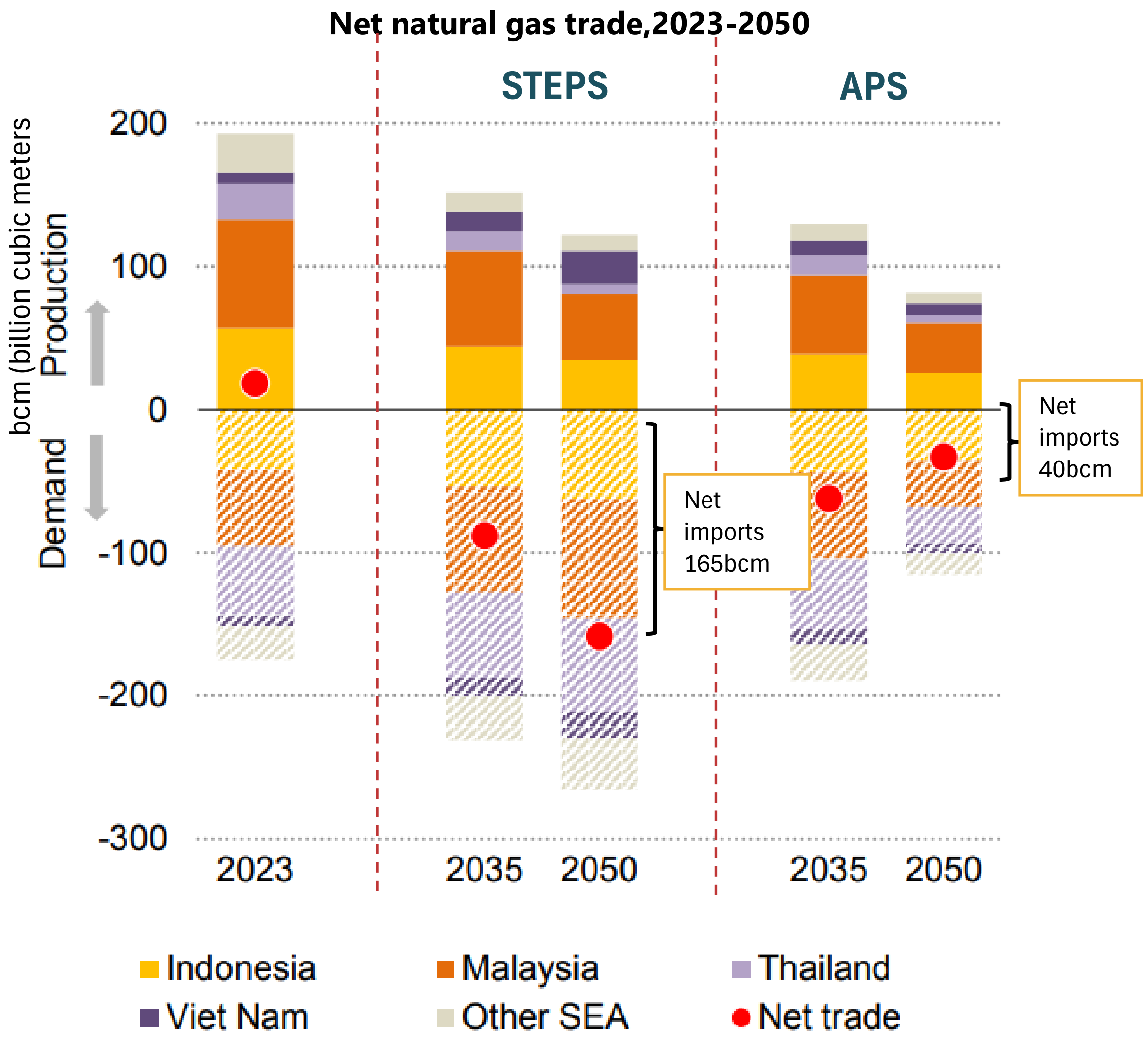
PGU: Peninsular Gas Utilisation
GPP: Gas Processing Plant
CAA: Commercial Arrangement Area
JDA: Joint Development Area
LNG: Liquefied Natural Gas
RGT: Regasification Terminal
SSGP: Sabah–Sarawak Gas Pipeline

Source: Petronas Gas Annual Report, AmInvestment Bank

Southeast Asia's gas sector is at a crossroads as natural gas demand soon starts to exceed domestic production

AmInvestment Bank





Southeast Asia shifts from self-sufficient in 2023 → net importer under all scenarios.
STEPS drives heavy LNG dependence, while APS slows demand but cannot avoid imports."

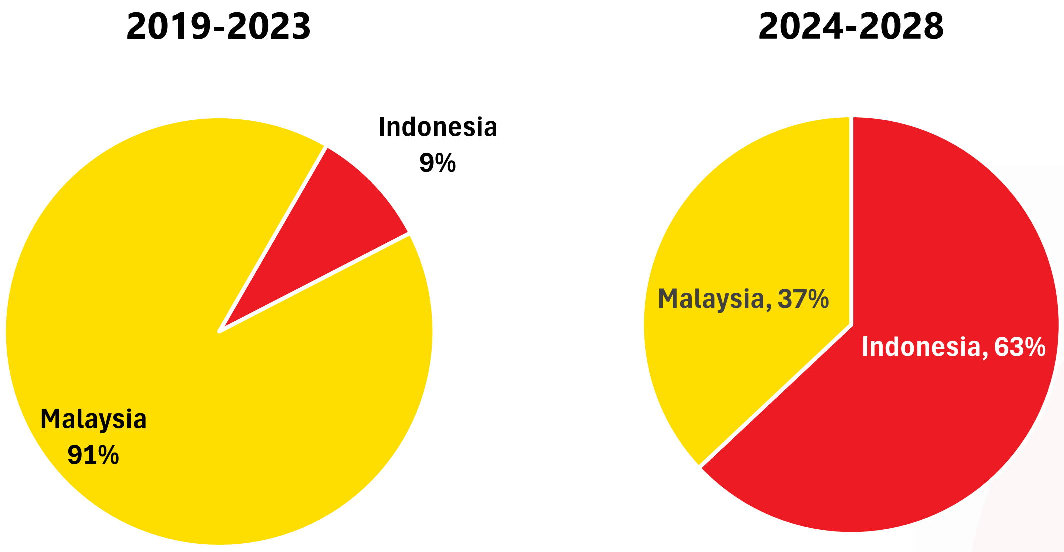
Source: IEA Southeast Asia Energy Outlook 2024, AmInvestment Bank

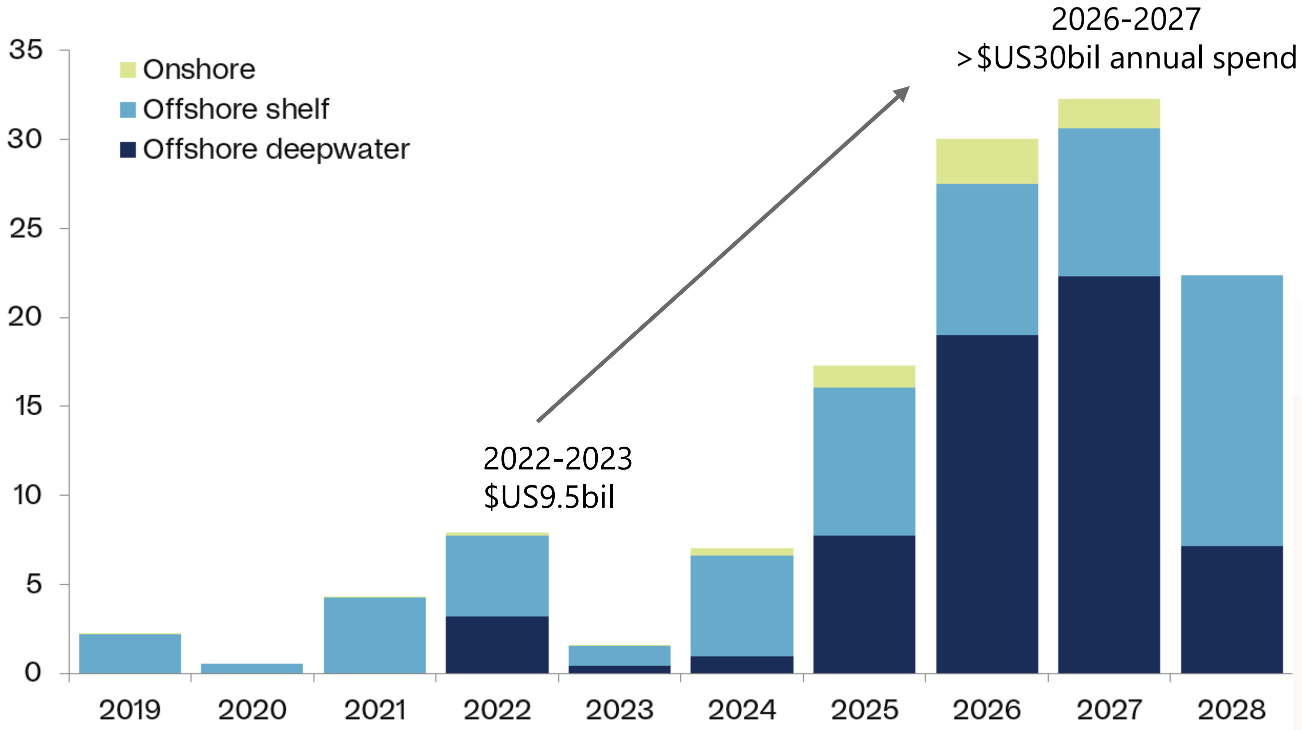
Big investment wave by 2028

AmInvestment Bank

Sanctioned Gas Investment in Southeast Asia

Final investment decision (%) , 2019-2028





Leadership shift from Malaysia → Indonesia to dominate (63%), driven by deepwater

Growth is fueled by **deepwater developments**, recent gas discoveries in **Indonesia and Malaysia**, and rising optimism around **carbon capture and storage (CCS)** deployment.

Source: Rystad Energy, AmInvestment Bank

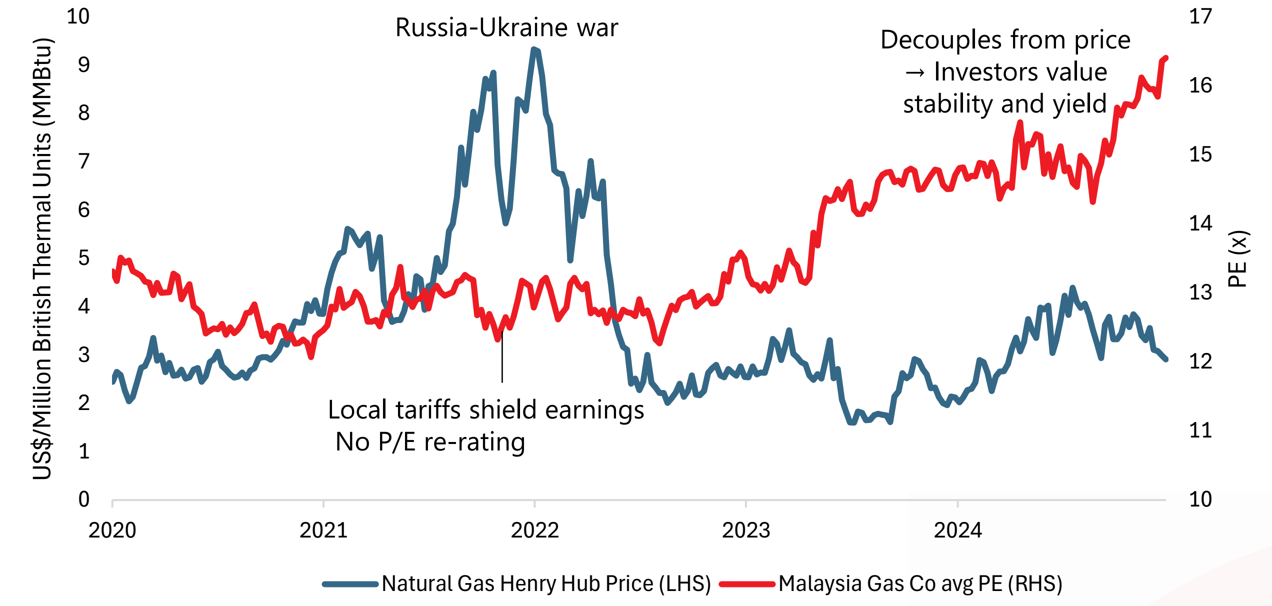
Listed gas companies

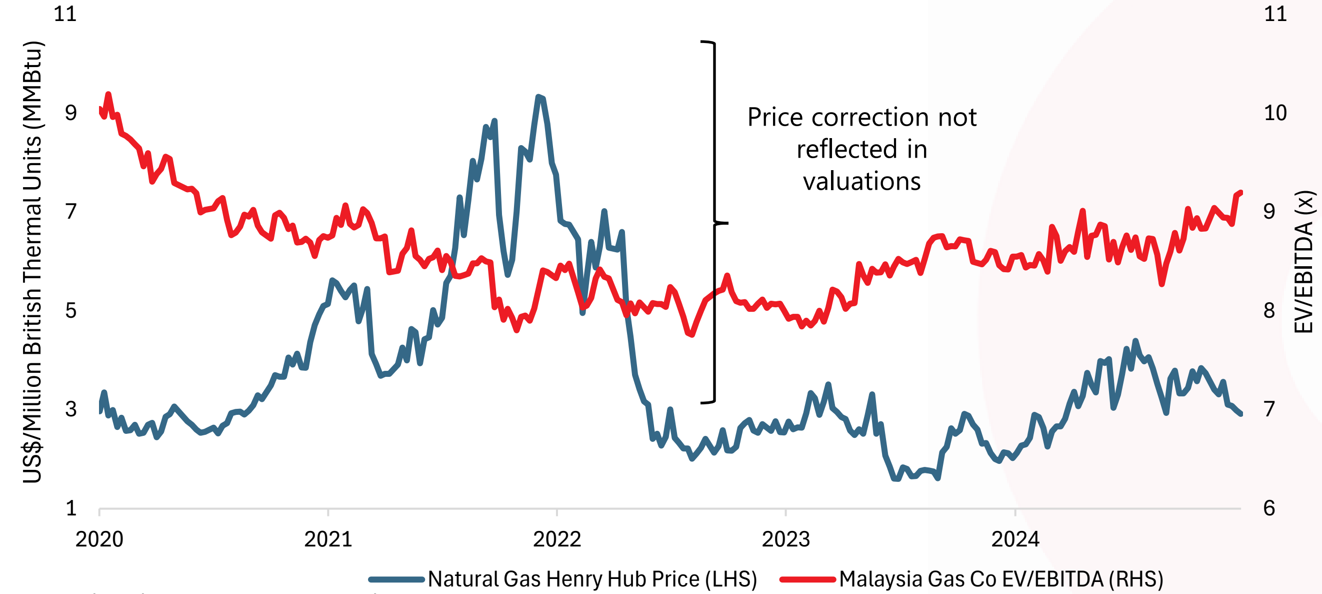
Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
Petronas Gas		Key Assets: ◆GPPs in Kertih & Gebeng (combined ~2,000 mmscfd capacity) ◆Gas Transmission Pipeline Network (2,600 km, Peninsular Gas Utilisation) ◆Utilities (steam, industrial gases, electricity supply in Kertih & Gebeng) ◆Regasification Terminals: Pengerang (3.5 mtpa) and Sungai Udang, Melaka (3.8 mtpa)	35.02
Gas Malaysia		◆Gas Distribution Pipeline: >2,700 km across Peninsular Malaysia ◆Supplies over 900 industrial customers, 16,000 commercial, 1 million residential users	5.44

Source: Companies latest annual report, AmInvestment Bank

Valuing gas companies

AmInvestment Bank





Source: Bloomberg, AmInvestment Bank

Malaysia Gas Valuations Decouple from Commodity Cycles

Natural gas prices remain volatile, but valuation multiples have de-linked and rerated upwards

A shift from commodity sensitivity to structural fundamentals and regulated returns.

Similarly, Malaysian gas companies trade on stable EV/EBITDA multiples, largely insulated from natural gas price volatility

Valuing gas companies

AmInvestment Bank

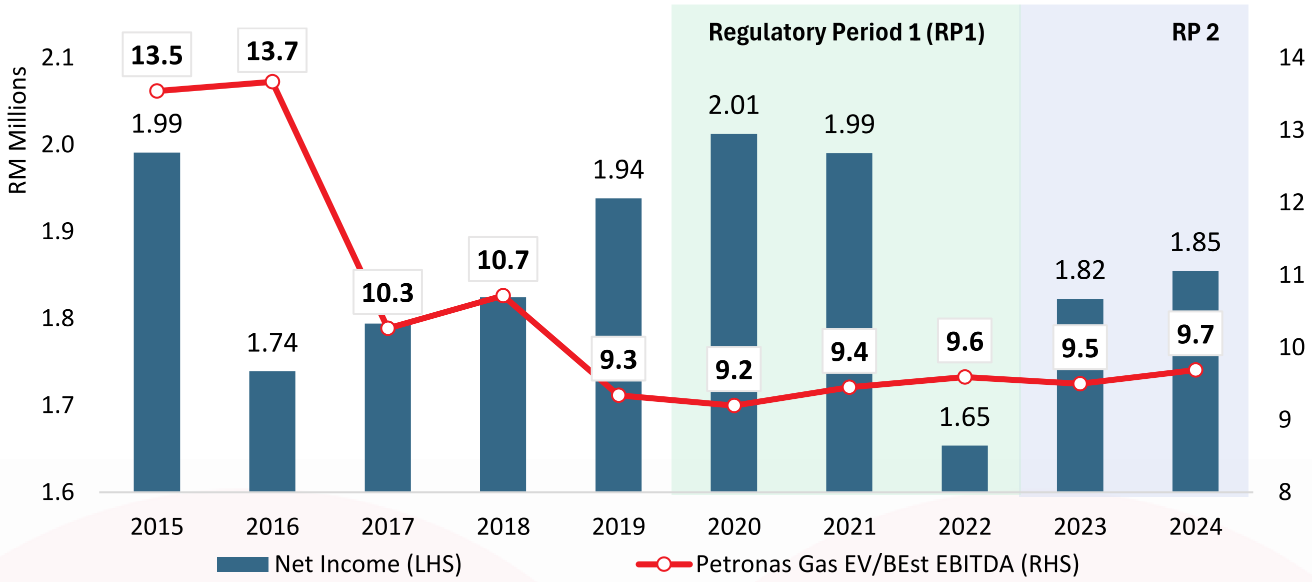
Rather, valuation are driven by sentiment and earnings expectations

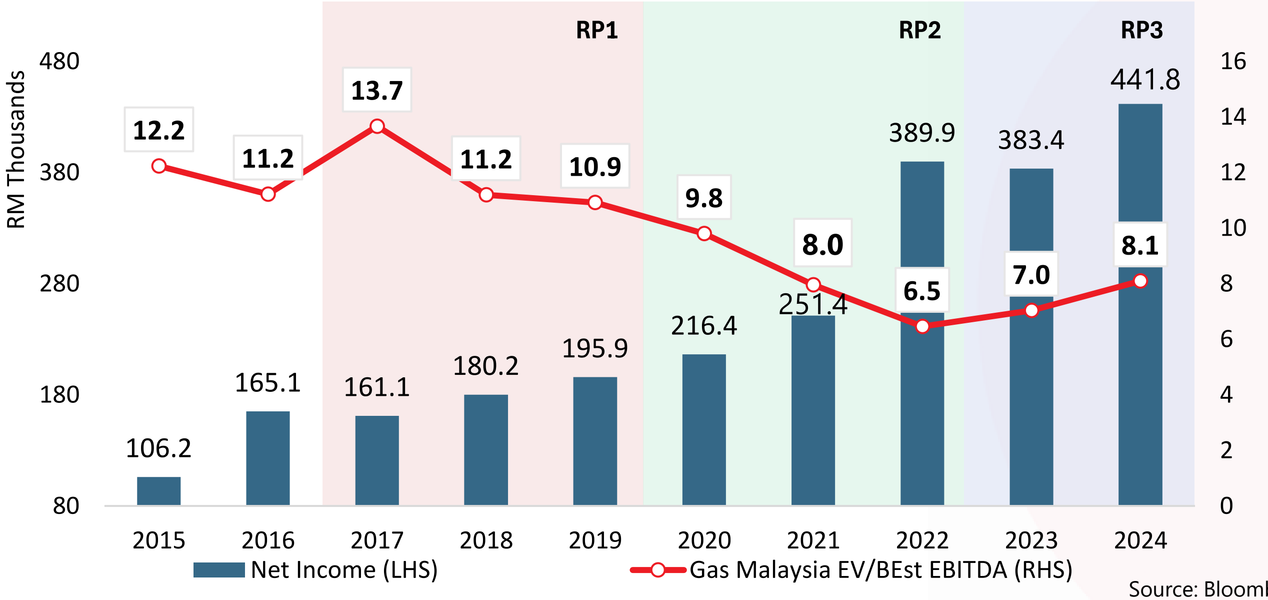
Earnings steady at RM1.7–2.0bn a year since 2015, thanks to the Incentive Based Framework (IBR) framework.

Valuation reset – EV/EBITDA de-rated from ~13–14x (2015–16) to ~9–10x after 2017.

Seen as a bond proxy – reliable dividends, but limited share price re-rating.

Solid cash flows + defensive positioning = low risk, stable yield.





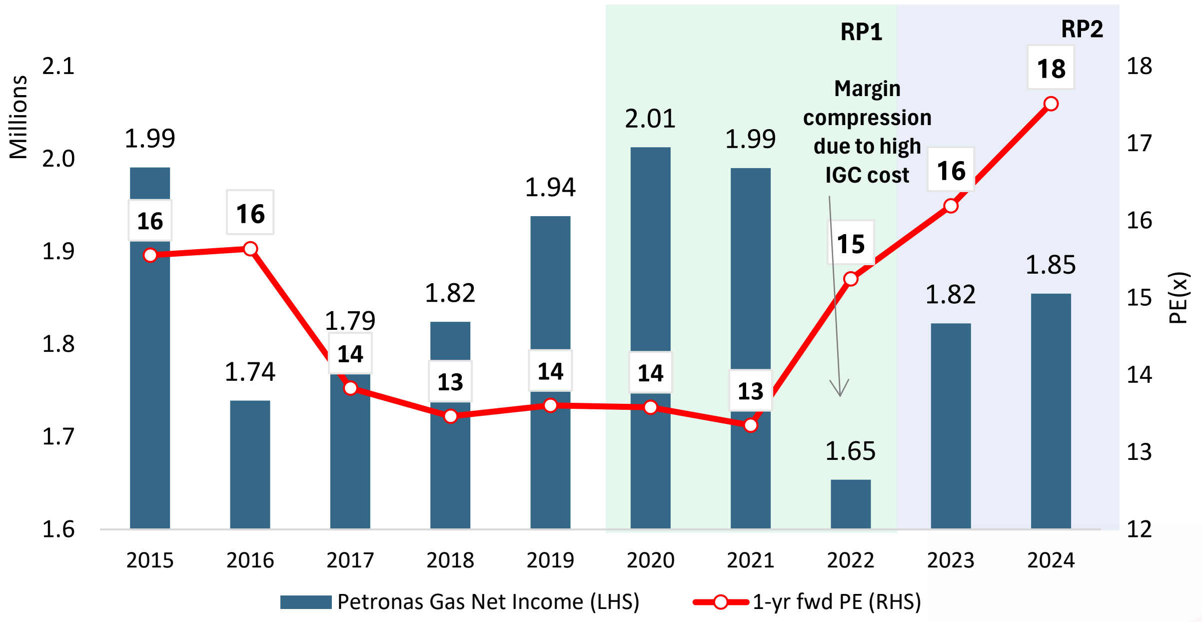
Net income up ~4x (2015–2024) → from RM106m to RM442m, driven by volumes + tariff step-ups across RP1–RP3.

EV/EBITDA de-rated from ~13x (2015–17) → 6–8x in RP2–RP3.

Despite record profitability, valuation multiples capped due to regulated utility profile.

Source: Bloomberg, AmInvestment Bank

Valuing gas companies

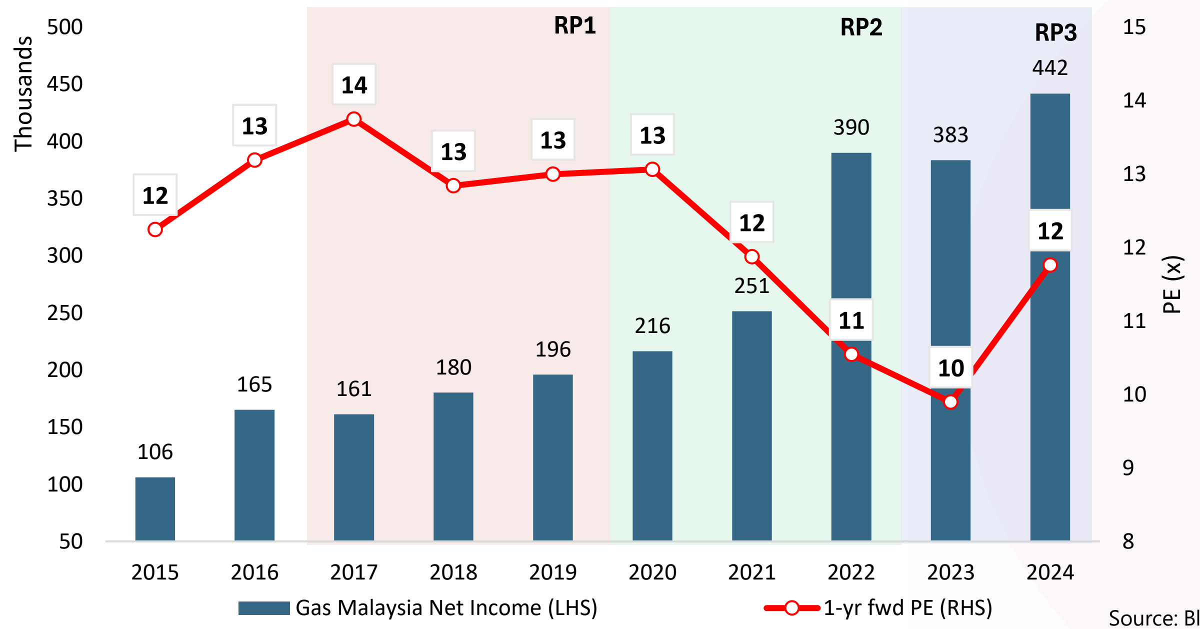


PE ratio moves inversely to earnings

Traded consistently in the 13–14x range, only re-rating to ~16–18x in 2023–24 with earnings recovery.

When PetGas earnings weakened, investors awarded it a *higher multiple* because of its regulated, defensive profile.

When earnings were steady but uninspiring, the market compressed multiples.



PE compressed despite earnings growth

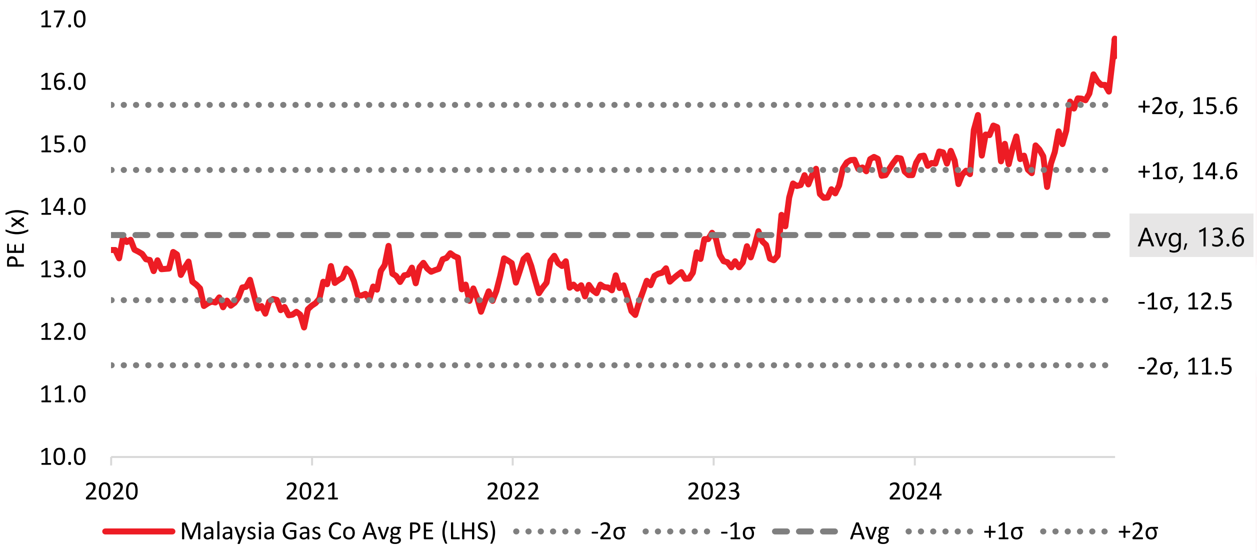
P/E trend: Compressed from ~14x (2017) to ~10–12x (2022–24).

Message: Despite strong earnings growth, P/E multiples de-rated — showing the market prices in capped upside under IBR.

Gas Malaysia's PE compressed because the market viewed its earnings surge as **regulated, temporary, and defensive in nature** — not deserving of a "growth stock" multiple. Only after consistent delivery did investors rerate it modestly in 2024.

Source: Bloomberg, AmInvestment Bank

Valuing gas companies



Approach & Multiples

EV/EBITDA: De-rated from ~10x (2020) to ~8x (2022), modest recovery to ~9–9.5x in 2024–25. Anchored by IBR, limiting upside despite record earnings.

P/E : Fell to ~12x in 2021–22, re-rated to ~15–16x recently. Shows volatility and inflation at troughs, so used only as a secondary check.

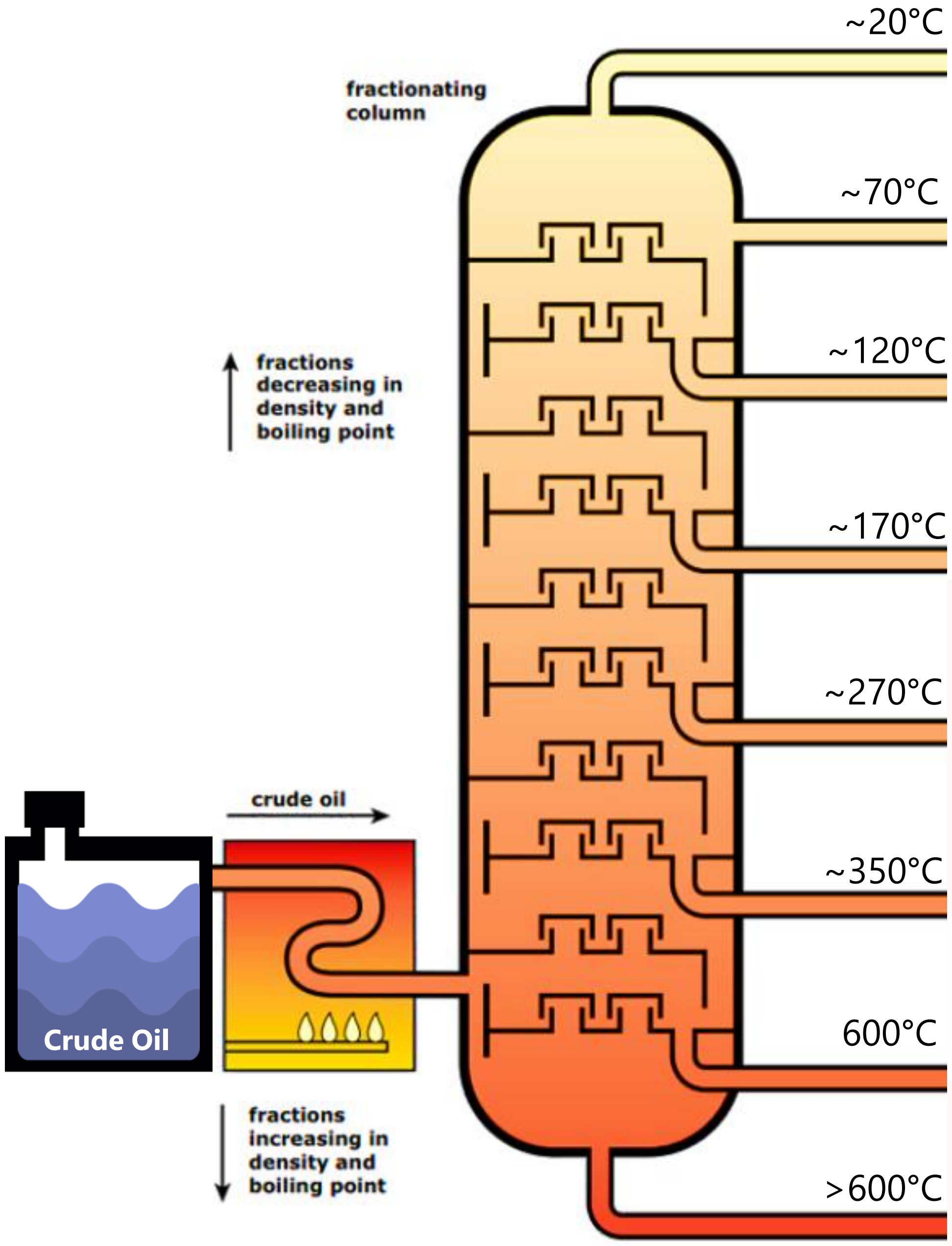
Valuation mix: For gas distributors like GMB, EV/EBITDA is the primary benchmark, while DCF/NAV capture long-term cash flows.

Sector fundamentals: Demand growth (clean energy vs coal), tariff adjustments, and regulation remain the main valuation drivers.

Petrochemicals

Refining 101: Turning crude into products

AmInvestment Bank



Liquefied petroleum gas
- C3–C4 (Propane, Butane)

Chemicals, feedstock
- C5–C6 (used for petrochemicals → ethylene, aromatics)

Gasoline
- C5–C12 (high-octane blends)

Jet fuel, paraffin oil
- C8–C16

Diesel
- C12–C20

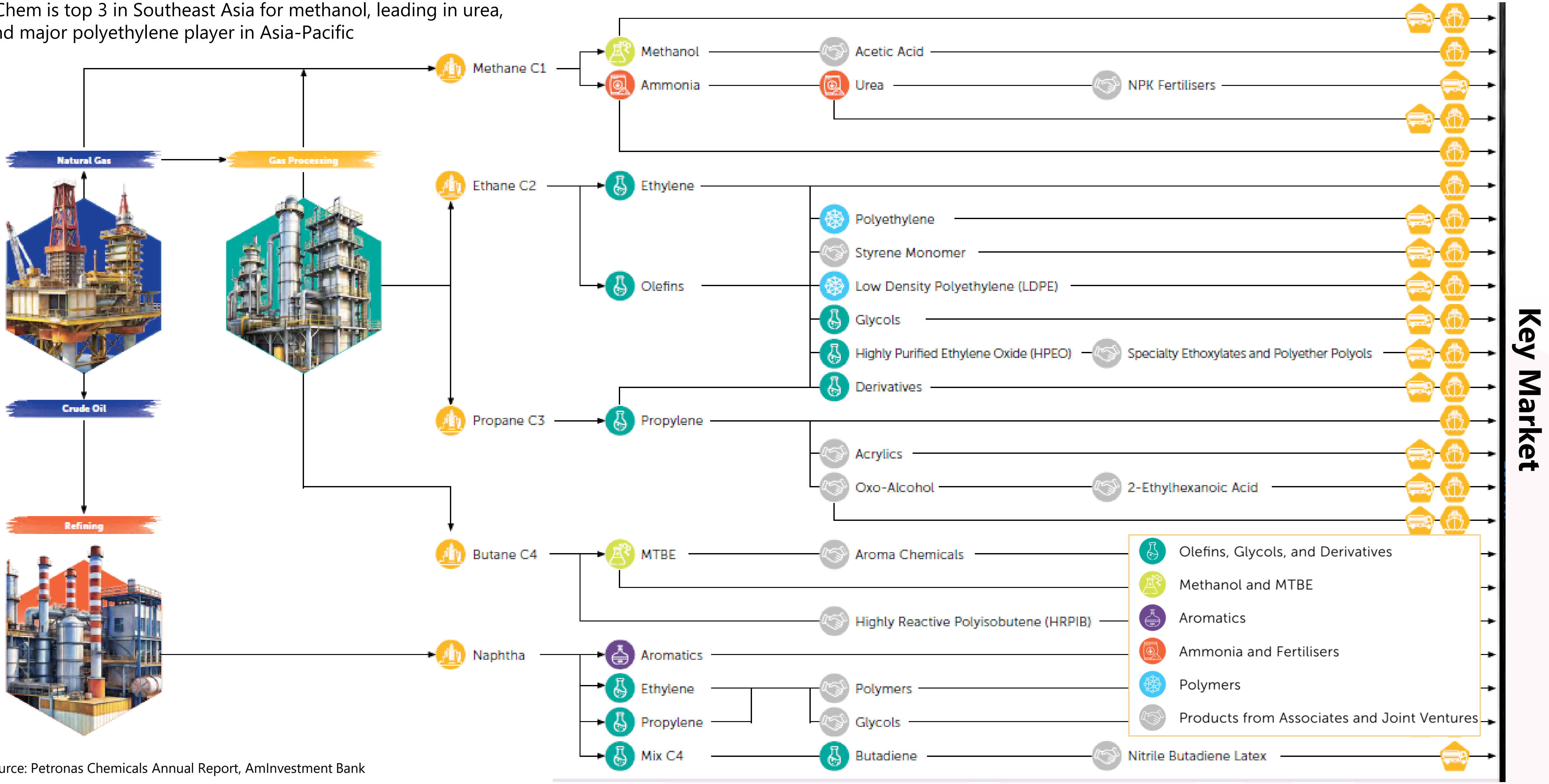
Lubricants, waxes, polishes
- C20–30+

Heavy fuel oil
- C20–C70

Bitumen, asphalt
- C70+

Petronas Chemicals Value Chain (1/2)

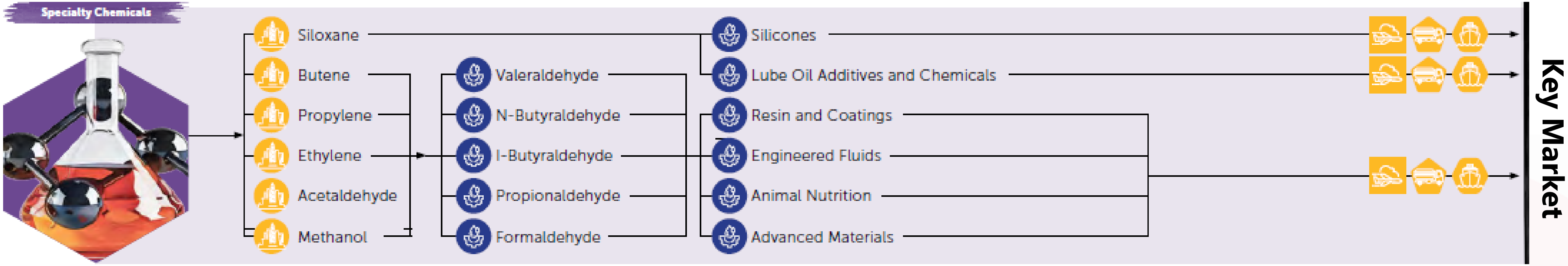
PChem is top 3 in Southeast Asia for methanol, leading in urea, and major polyethylene player in Asia-Pacific



Source: Petronas Chemicals Annual Report, AmInvestment Bank

Petronas Chemicals Value Chain (2/2)

AmInvestment Bank



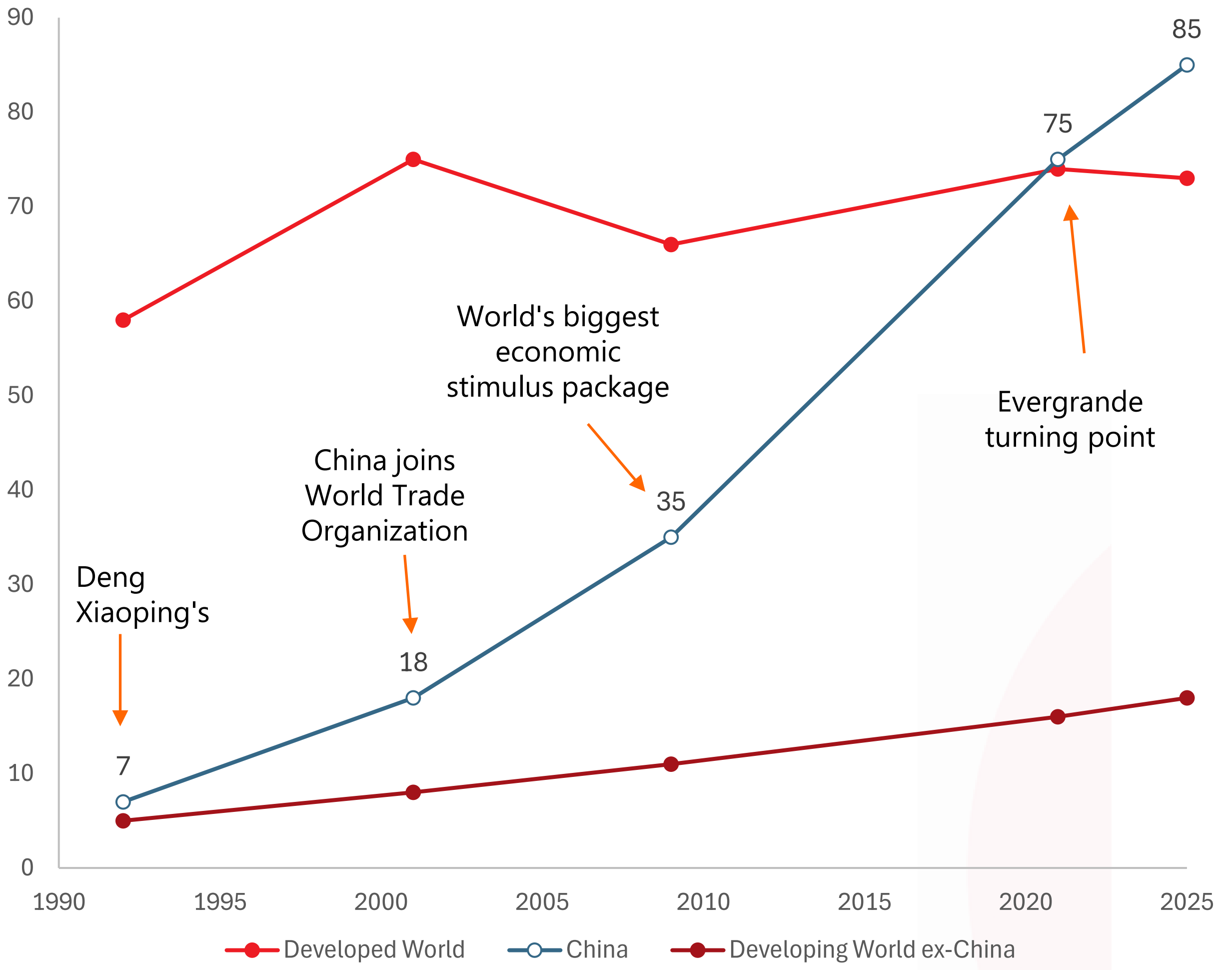
Legend

- Resource
- Air
- Land
- Sea
- Specialty Chemicals

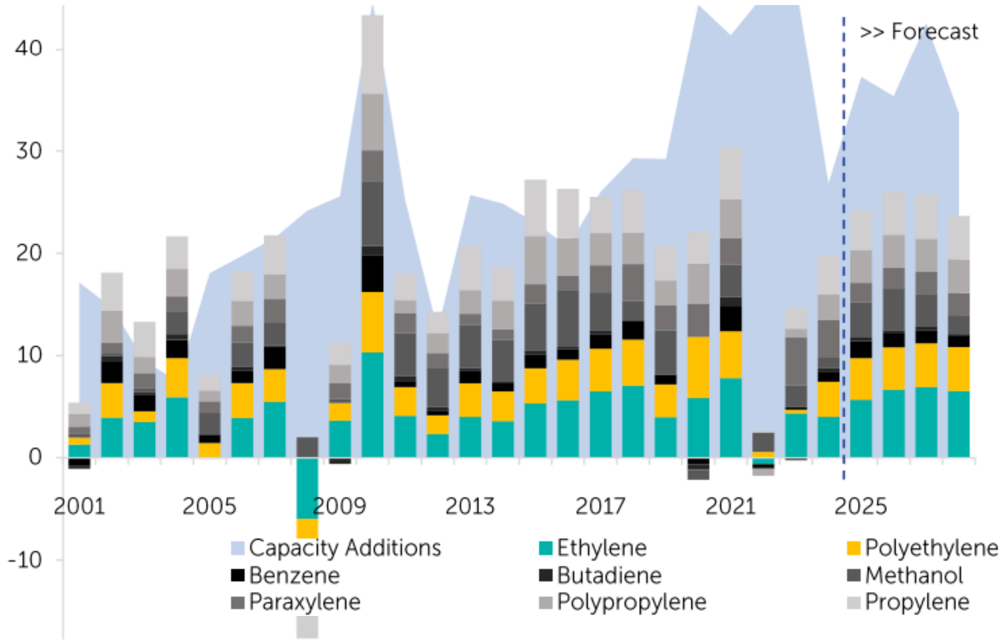
Source: Petronas Chemicals Annual Report, AmInvestment Bank

End of Chemicals Supercycle, Deep Downturn amid Oversupply

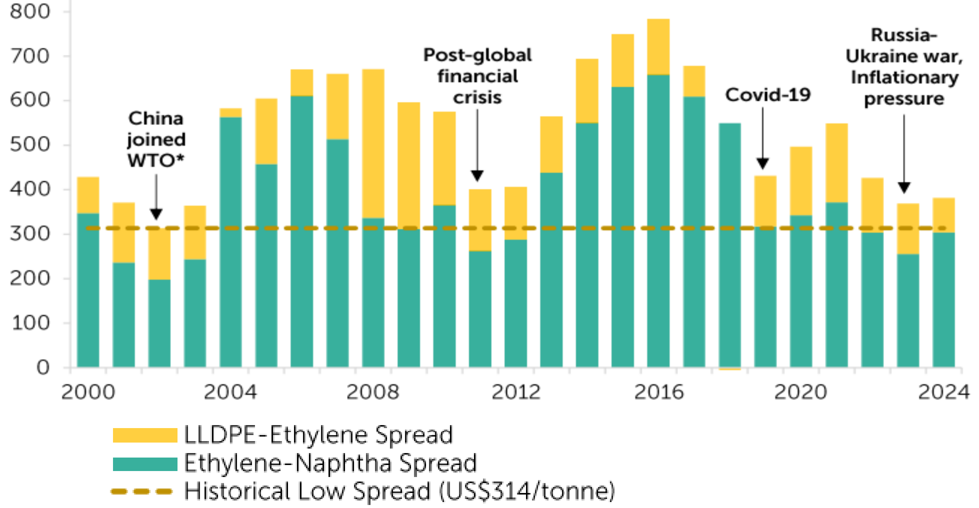
AmInvestment Bank



Global Petrochemicals demand growth & capacity addition (mil TPA)



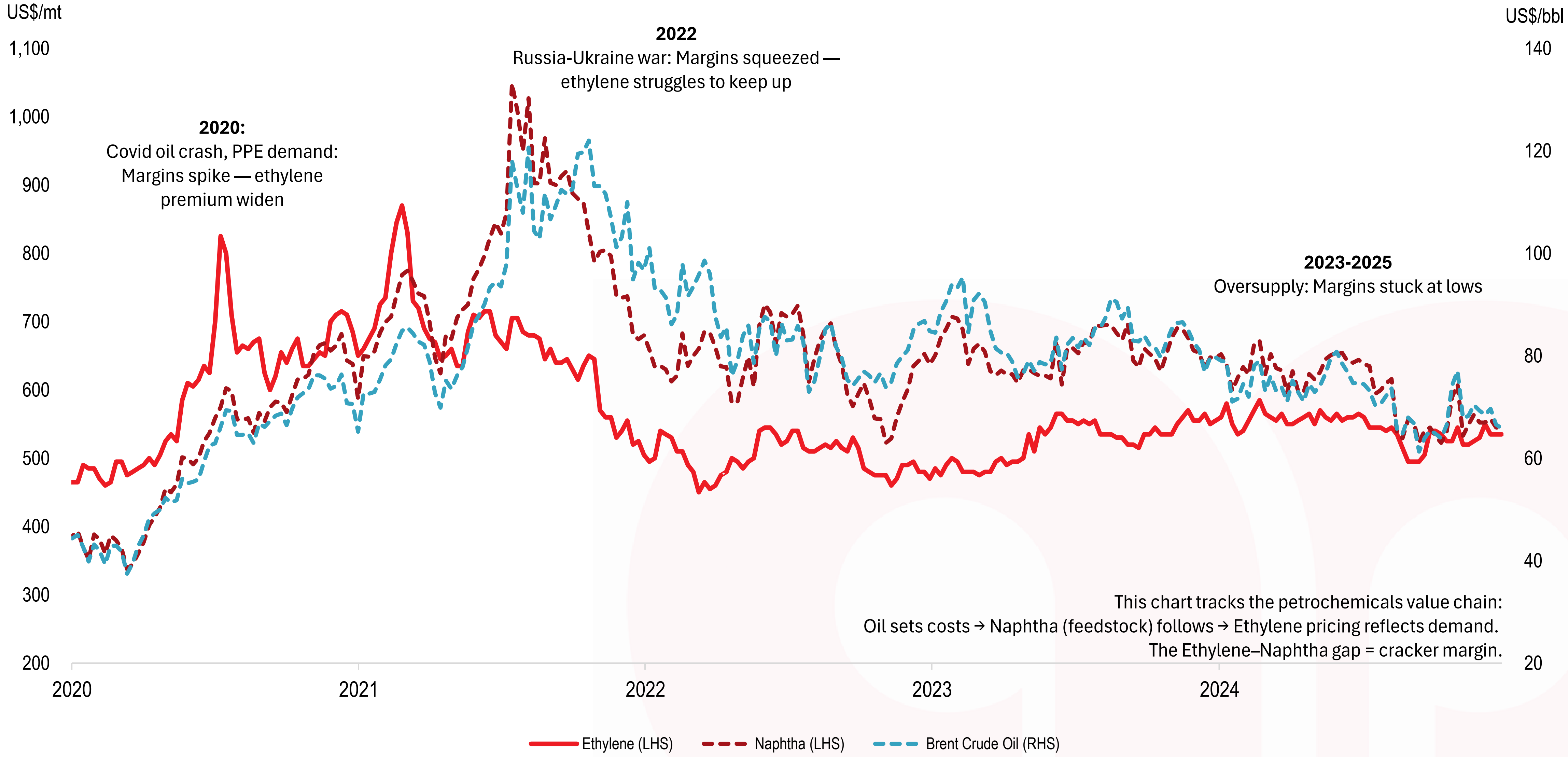
Southeast Asia petrochemicals spread ($US/tonne)



Source: ICIS, Petronas Chemicals Slides,AmInvestment Bank

Crude-to-Chemicals margin: Ethylene premium over naphtha narrows

AmInvestment Bank



Source: Bloomberg, AmInvestment Bank

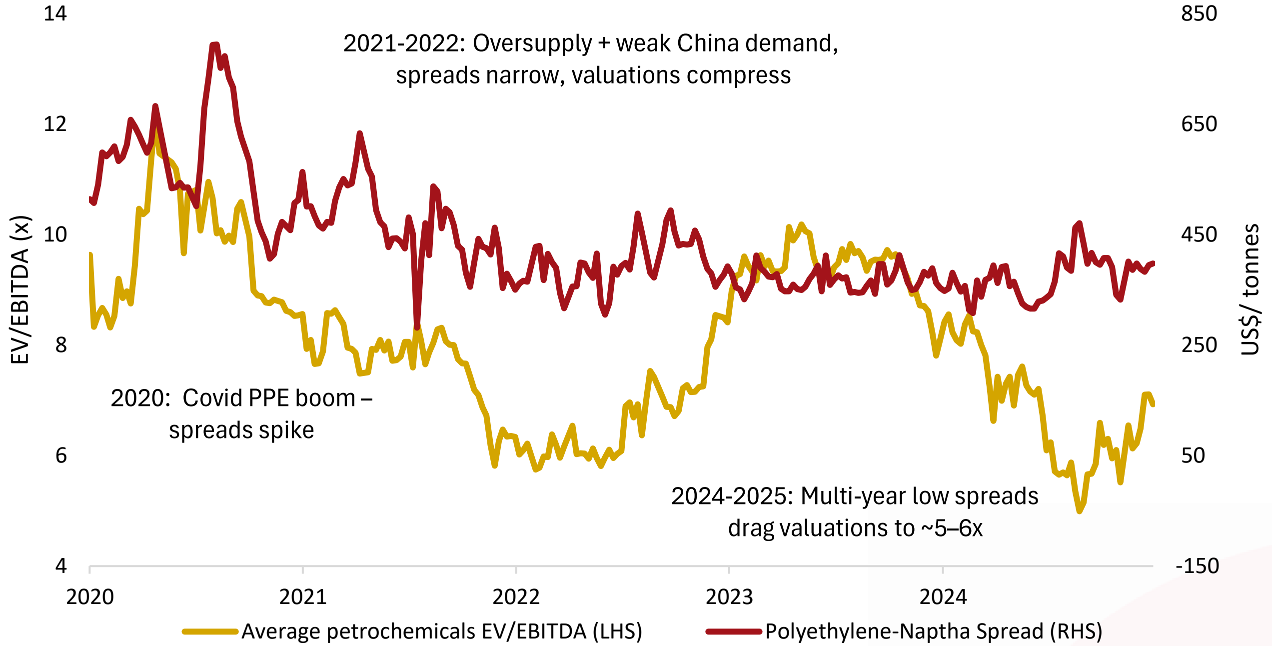
Listed petrochemicals player

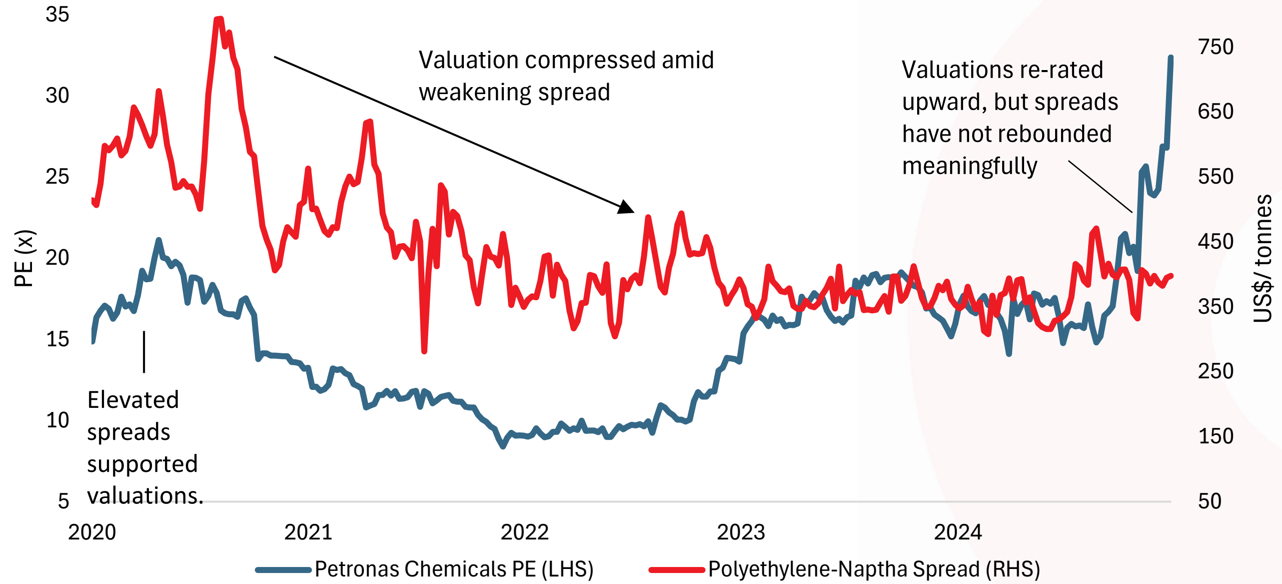
Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
	Petrochemicals		
Petronas Chemicals Group		◆Production capacity: 16.8mil TPA ◆Sales Volume: 10.4mil MT ◆Key Markets (% of sales): SEA ex Malaysia: 39% Malaysia: 17%	27.1
Lotte Chemical Titan		◆Production capacity: 3.6mil TPA ◆Sales Volume: 1.5mil MT ◆Key Markets (% of sales): Malaysia: 35% Indonesia: 35% SEA ex Malaysia: 16% Others (China, Northeast Asia, India): 14%	1.2

Source: Companies latest annual report, AmInvestment Bank

Valuing petrochemicals

AmInvestment Bank





Source: Bloomberg, AmInvestment Bank

*Excluded LCTITAN avoids distortions from negative earnings

Spreads drive valuations

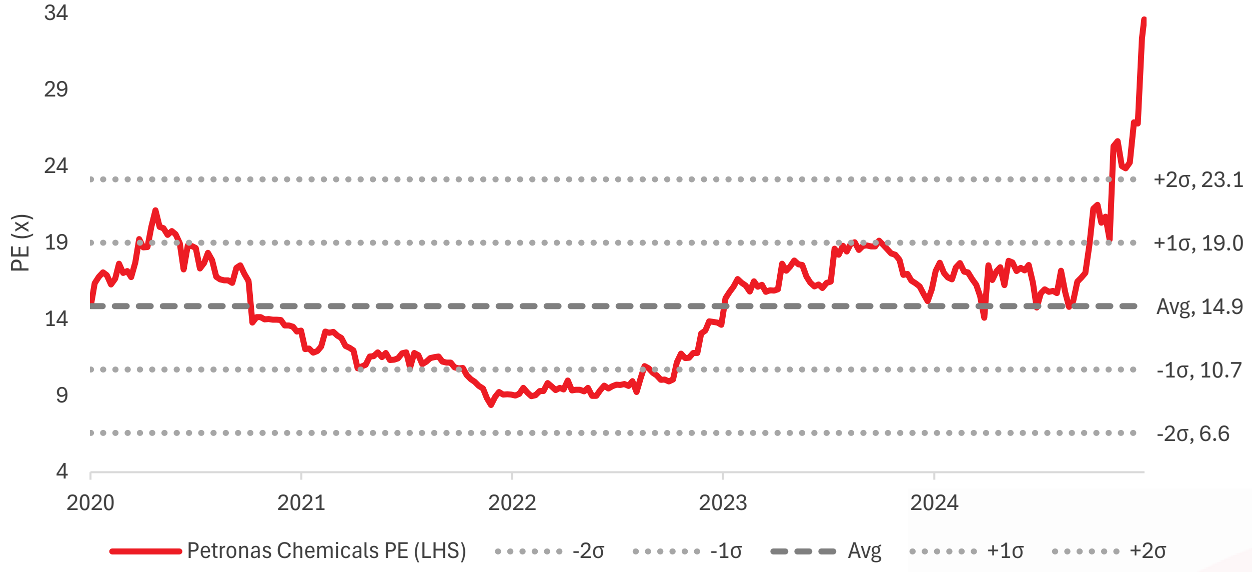
Charts show EV/EBITDA and P/E multiples compressing when spreads weakened (2022–24), and modest re-rating in 2025 despite flat margins.

Preferred anchors

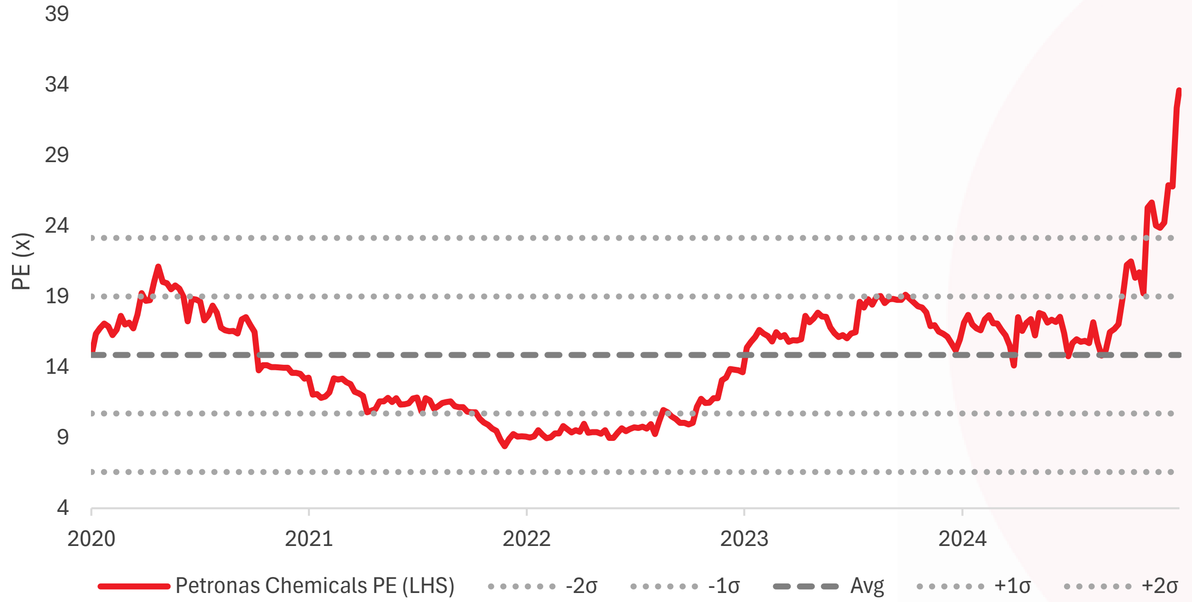
EV/EBITDA better capture cycle positioning than P/E alone, consistent with the left-hand patterns.

Valuing petrochemicals

AmInvestment Bank



*Excluded LCTITAN avoids distortions from negative earnings



P/E multiples (top chart): P/E inflated to 15–16x in 2023–24 even while earnings were weak — a clear denominator effect. This shows why P/E can mislead at cycle troughs.

EV/EBITDA multiples (bottom chart): Compressed to ~6–7x in 2022, modest recovery since, but still below long-term average (~10–11x).

Takeaway: For petrochemicals, EV/EBITDA is the cleaner cycle anchor, while P/E is used only as a cross-check.

Intrinsic methods matter: DCF and DDM provide stability when market multiples disconnect from spreads (e.g., 2023–25 re-rating).

Sector fundamentals: Valuations remain tied to feedstock costs, demand growth, and cycle timing — as seen in the spread–multiple relationship.

Source: Bloomberg, AmInvestment Bank

Oilfield services

How Oil Services Make Money?

They provide **technical services, equipment, and expertise** to oil & gas companies (like Petronas, Shell, Exxon). Key activities include:

Drilling services

Drill rigs, drill bits, directional drilling

Well services

Well logging, cementing, fracking

Subsea/Offshore support

Subsea installation, Remote Operated Vehicles (ROVs), FPSO maintenance

Production support

Enhanced oil recovery (EOR), artificial lift systems

Seismic & geological

Reservoir mapping, 3D seismic surveys

Maintenance & turnaround

Hook-up & commissioning, topside maintenance

Although they work **across all the phases**, oil service firms make the most money when **upstream production is booming**.

Source: Google Images, AmInvestment Bank

Listed oilfield services companies (1/5)

AmInvestment Bank

Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
Offshore Support Vessels / Marine Logistics			
Keyfield International	Marine Offshore Support Services, 100%	◆Order Book: RM744.2mil ◆Assets: 8 AWB, 2 AHTS, 1 PSV, 1 Work Barge, 1 Cable Laying Barge ◆Presence: Malaysia, Saudi Arabia	1.44
Coastal Contracts	Vessel Chartering Services, 69% Shipbuilding and Ship Repair Services, 31%	◆Vessel chartering asset - 1 TC7 liftboat ◆Shipbuilding - 6 OSVs under construction ◆New Portfolio: Hospitality & Renewable ◆Presence: Malaysia, Saudi Arabia	0.73
Lianson Fleet Group	Marine Offshore Support Services, 100%	◆Order Book: RM320.8mil ◆Asset: 22 Active OSVs.36 Marine Transport ◆> 30 Years Experience in OSV ◆Presence: Malaysia (79% of revenue) & Brunei (21%)	0.63

Source: Companies latest annual report, AmInvestment Bank

Listed oilfield services companies (3/5)

AmInvestment Bank

Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
Offshore Support Vessels / Marine Logistics			
Perdana Petroleum	Marine Offshore Support Services, 100%	◆Order Book: RM800mil ◆Subsidiary of Dayang Enterprise ◆Average fleet age of 14 years 8 AHTS, 5 work barge, 1 AWB ◆Presence: East Malaysia (81% of contracts), Penisular Malaysia (18%), Songkhla (1%)	0.39
Marine & General	Marine Logistics – Upstream, 76% Marine Logistics – Downstream, 24%	Upstream - Jasa Merin (Malaysia) ◆Asset: 20 AHTS, 2 SSV ◆Presence: Malaysia Downstream - Jasa Merin (Labuan), M&G Tankers ◆Asset:DWT chemical vessel,1 x CPP tankers ◆Presence: Southeast Asia	0.19
Alam Maritim Resources	Subsea, 66% Offshore Support Vessel, 33% Others, 10%	◆PN17 status ◆Order Book: Rm1.52mil ◆Sold 4 vessels in FY24 to repay sukukholder	0.05

Source: Companies latest annual report, AmInvestment Bank

Listed oilfield services companies (2/5)

AmInvestment Bank

Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
Hook-up, Commissioning, Maintenance (HUC,MCM) & Brownfield			
Dayang Enterprise Holdings	Offshore Topside Maintenance , 64%; Marine Offshore Support Services, 36%	◆Outstanding order book: RM5.1bil ◆Key Assets: 24 marine vessels ◆Clients: Petronas Carigali), PTTEP, Roc Oil, Enquest, Mubadala, and JX Nippon.	1.98
Vantris Energy (prev. Sapura Energy)	Drilling, 49%; Engineering & Construction (E&C), 31%; Ops & Maintenance (O&M), 20%	◆Outstanding order book: RM7.0bil ◆Key Markets: China, Australia, USA, Western Africa, Middle East	0.74
Petra Energy	Services (HUC, MCM), 50%; Offshore support Vessel, 50%	◆Key Assets: 4 AWB, 1 AHTS, 2 Work Barge, 1 MOPU ◆Clients: Petronas Carigali, PETROS ◆Key Markets: Malaysia (Sarawak & Sabah)	0.37

Source: Companies latest annual report, AmInvestment Bank

Listed oilfield services companies (4/5)

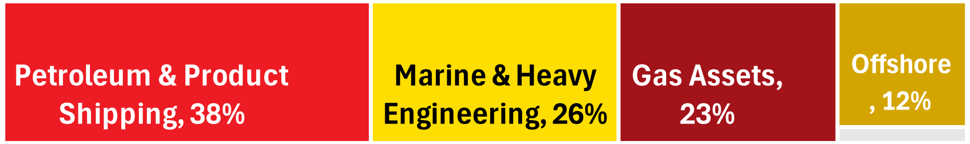
AmInvestment Bank

Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
EPCC, Fabrication & Process Equipment			
Dialog Group		◆Key assets: Pengerang Deepwater Terminals (PIT, PT2, PLNG2, DTL5) ◆Key markets: Malaysia + regional energy hubs	8.58
Steel Hawk		◆Clients: Heavily dependent on Petronas Carigali	0.25
T7 Global		◆Order Book: RM4.5bil ◆Clients: Petronas Carigali, Exxonmobil, EnQuest ◆Key Assets: MOPU, plug-and-abandonment units, industrial system	0.23

Source: Companies latest annual report, AmInvestment Bank

Listed oilfield services companies (5/5)

AmInvestment Bank

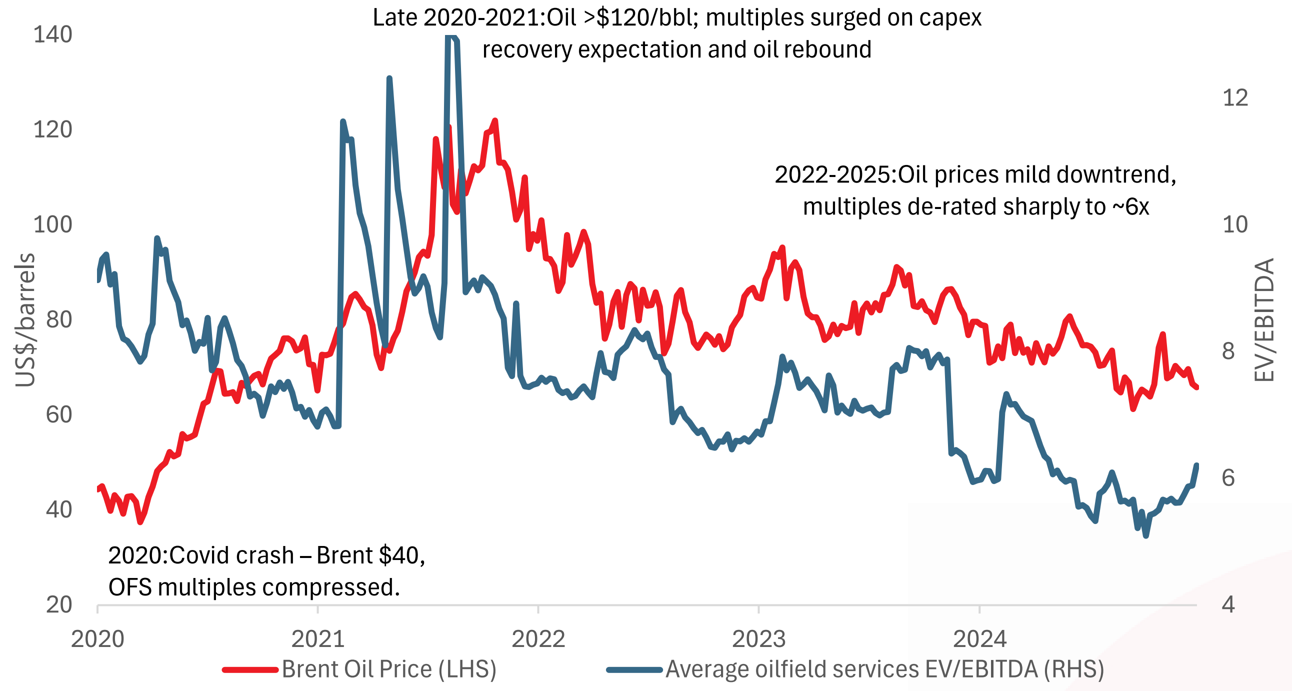
Companies	Segment Revenue Contribution (%)	Background	Market Cap (RMbil)
	FPSO & Offshore Production / Oil Gas Shipping		
MISC		◆Key Assets Ship: LNG Carriers (LNGCs) - 27x Very Large Ethane Carriers (VLECs)- 6x LNG Bunker Vessel (LBV) -1x Floating Storage Units (FSUs) - 2x Petroleum and Product Tankers - 58x ◆Offshore Floating: FPSO - 6x FSO - 5x Semi-FPS - 1x ◆Offshore Key Market: South America, West Africa, and the Asia-Pacific	34.19
Yinson Holdings		◆Orderbook: RM94.1bil (next 25 years) 10 FPSOs/FSOs (8 operational, 2 under construction) ◆Key FPSO projects (Maria Quiteria, Atlanta, Agogo) ◆Key Market: Brazil and West Africa	5.57
Bumi Armada		◆Orderbook: RM10.1bil ◆Key Assets: 7 FPSOs (3-owned, 4 jointly-owned), 1 LNG FSU, 2 Subsea Vessels ◆Key Market: United Kingdom, Angola,	3.02

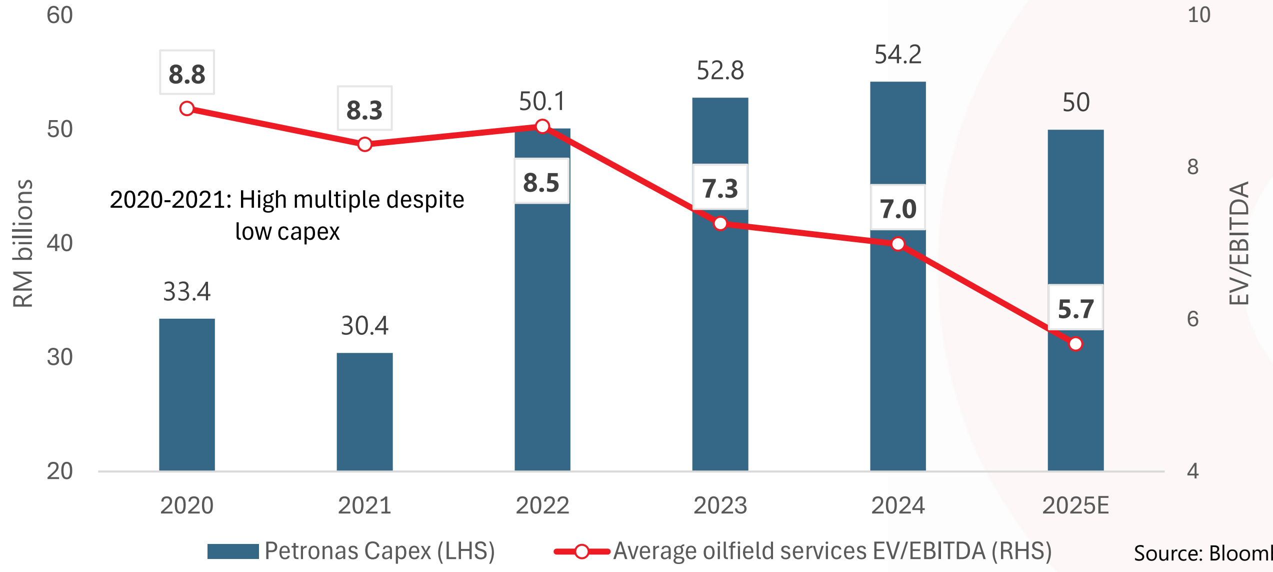
Source: Companies latest annual report, AmInvestment Bank

Abbreviation

Abbreviation	Full Name	Abbreviation	Full Name
HUC	Hook-Up & Commissioning	**VLEC**	Very Large Ethane Carrier
MCM	Maintenance, Construction & Modification	**LBV**	LNG Bunker Vessel
O&M	Operations & Maintenance	**FSU**	Floating Storage Unit
E&C	Engineering & Construction	**SC**	Subsea Construction
AWB	Accommodation Work Barge	**EPCC**	Engineering, Procurement, Construction & Commissioning
AHTS	Anchor Handling Tug Supply (Vessel)	**I&M**	Inspection & Maintenance
PSV	Platform Supply Vessel	**IPS**	Integrated Production Services
MOPU	Mobile Offshore Production Unit	**DWT**	Deadweight Tonnage (ship capacity measure)
OSV(s)	Offshore Support Vessel(s)	**CPP**	Condensate Processing Plant
TC	Time Charter	**PN17**	Practice Note 17 (Bursa Malaysia classification for financially distressed
FPSO	Floating Production Storage & Offloading	**PIT**	Pengerang Independent Terminals (Phase 1, storage facilities for crude oil &
FSO	Floating Storage & Offloading	**PT2**	Pengerang Terminals (Two) — Phase 2 expansion (additional storage & marine
Semi-FPS	Semi-Submersible Floating Production System	**PLNG2**	Pengerang LNG (Two) Sdn Bhd — LNG regasification terminal (Petronas Gas
LNG	Liquefied Natural Gas	**DTL5**	Dialog Terminals Langsat 5 — storage terminal at Tanjung Langsat, Johor
LNGC	LNG Carrier		

Valuing oilfield services





EV/EBITDA tracks Brent with a lag

Correlation holds in direction
Multiples rise when oil rises, fall when oil falls.

But timing diverges
Valuations peaked earlier (2021) and have de-rated faster than Brent since 2022, reflecting investor caution on capex sustainability.

Post-2022 consolidation
Multiples settled into a 6–8x band, anchored to EBITDA delivery rather than oil spikes.

By 2025, weaker oil reinforced derating, bringing valuations closer to mid-cycle norms.

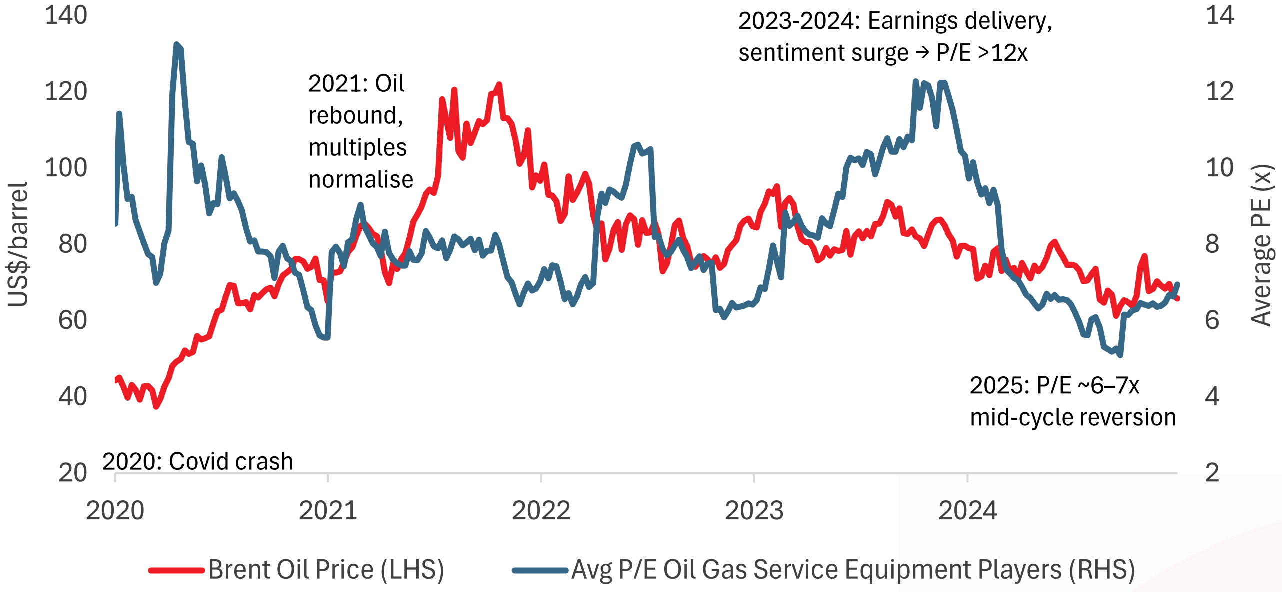
Capex vs. valuations
Despite Petronas capex staying >RM50b, multiples slid from 8–9x to ~6x, showing markets price in sustainability and risk of cuts.

Takeaway
Investor expectations on cycle durability, not absolute oil or capex levels.

Source: Bloomberg, AmInvestment Bank

Valuing oilfield services

AmInvestment Bank



High oil did not mean higher multiples, and moderate oil still supported re-rating

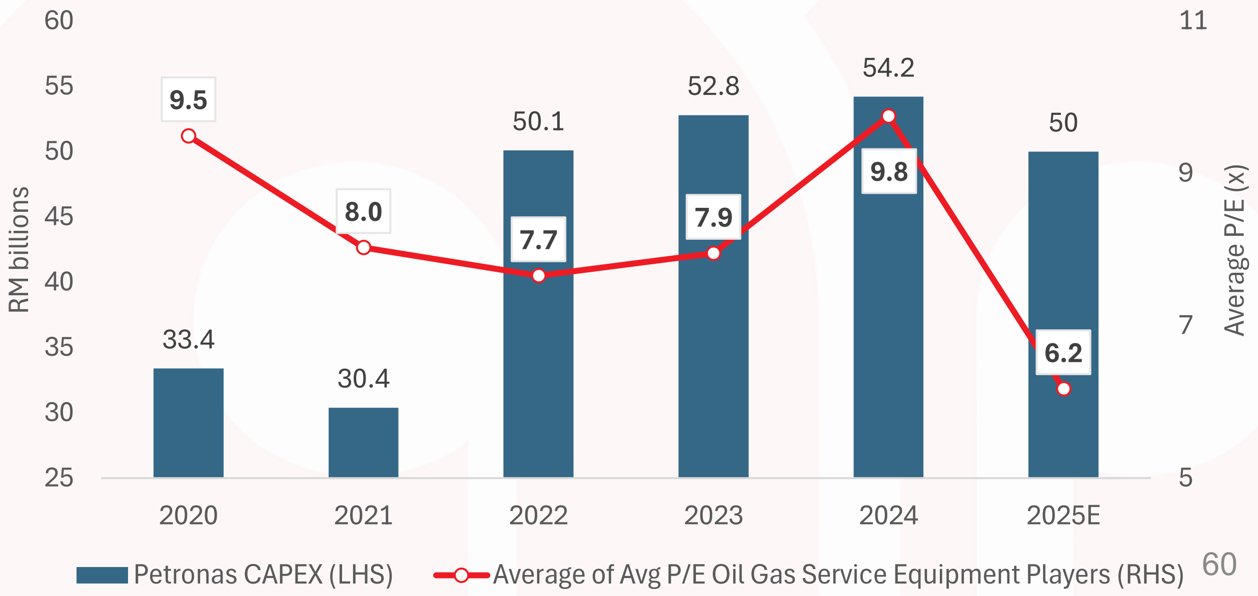
2020 to early 2021, valuations tracked Brent closely. Since 2022, the link weakened as investors priced in capex discipline and cycle risks.

Despite high capex, weaker oil reinforced cautious sentiment, pulling P/E multiples down to ~6x — showing that valuations move more on expectations than absolute oil levels.

Oilfield services valuations move ahead of CAPEX cycles.

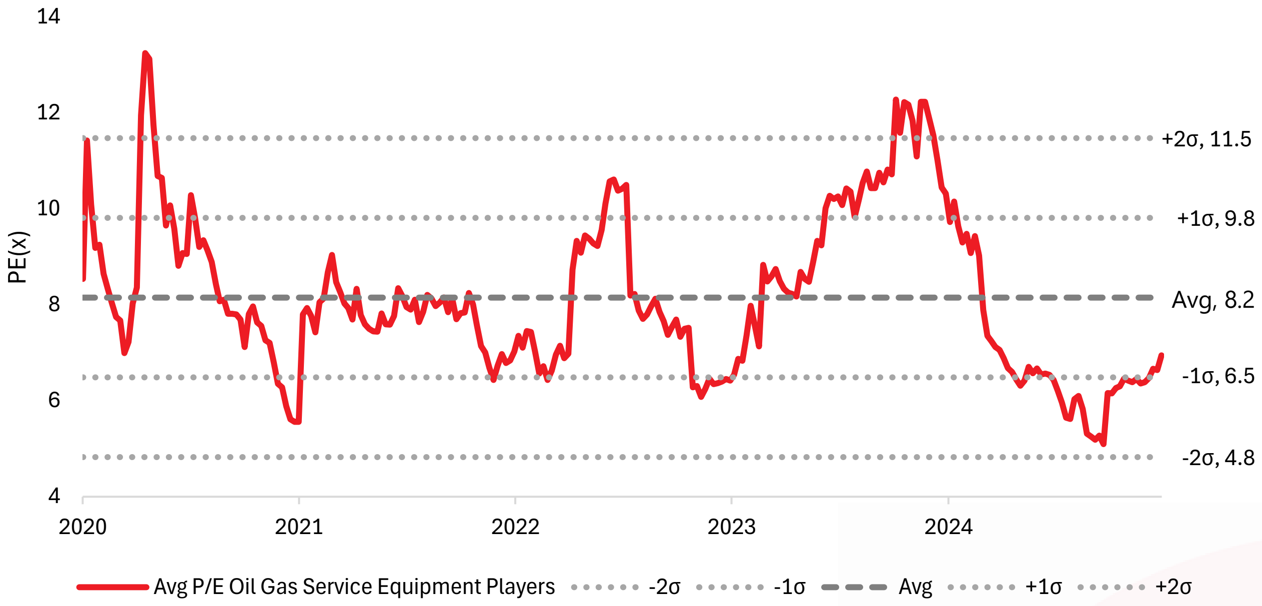
Multiples peak early on recovery optimism, then compress as earnings are delivered.

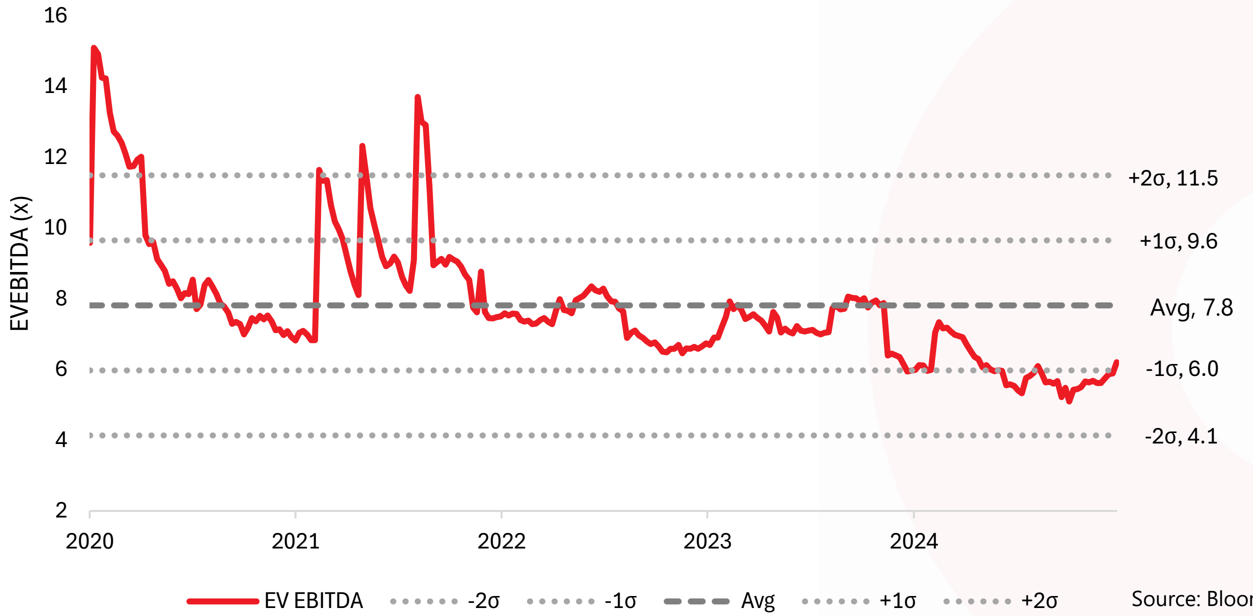
In 2025E, capex remains high, but P/E de-rated, reflecting market caution on future earnings momentum and sustainability of spend.



Source: Bloomberg, AmInvestment Bank

Valuing oilfield services





Valuation Approaches

P/E multiples: Highly cyclical; spiked above 12x in 2021–22 recovery, compressed to ~6–7x in 2024 as earnings caught up.

EV/EBITDA multiples: Fell steadily from ~14x (2020) to ~6–7x (2024), now anchored at mid-cycle range.

Interpretation: Investors reward OFS early in upcycles (multiple expansion), then normalise valuations once contracts convert to earnings.

DCF / FCFF: Rarely used as primary in research due to volatility in contract wins but can be a cross-check.

Sector Fundamentals

- Margin compression from low-cycle contracts
- Project awards recovering from low base

Other Key Factors Influencing Valuation

- Contract Wins / Order Book Visibility
- Utilisation & Day Rates (for vessel-based OFS)
- Margins & Cost
- Balance Sheet & Gearing
- Contract Mix

Source: Bloomberg, AmInvestment Bank

Key trends & risks

Global: Key Forces Driving Oil Politics & Prices

AmInvestment Bank

Volatility Drivers

- OPEC+ Policy Shifts
- Geopolitics
- Sanctions & Trade Restrictions
- Strategic Reserves
- Extreme Weather
- Global Economic Cycles

Structural Shifts

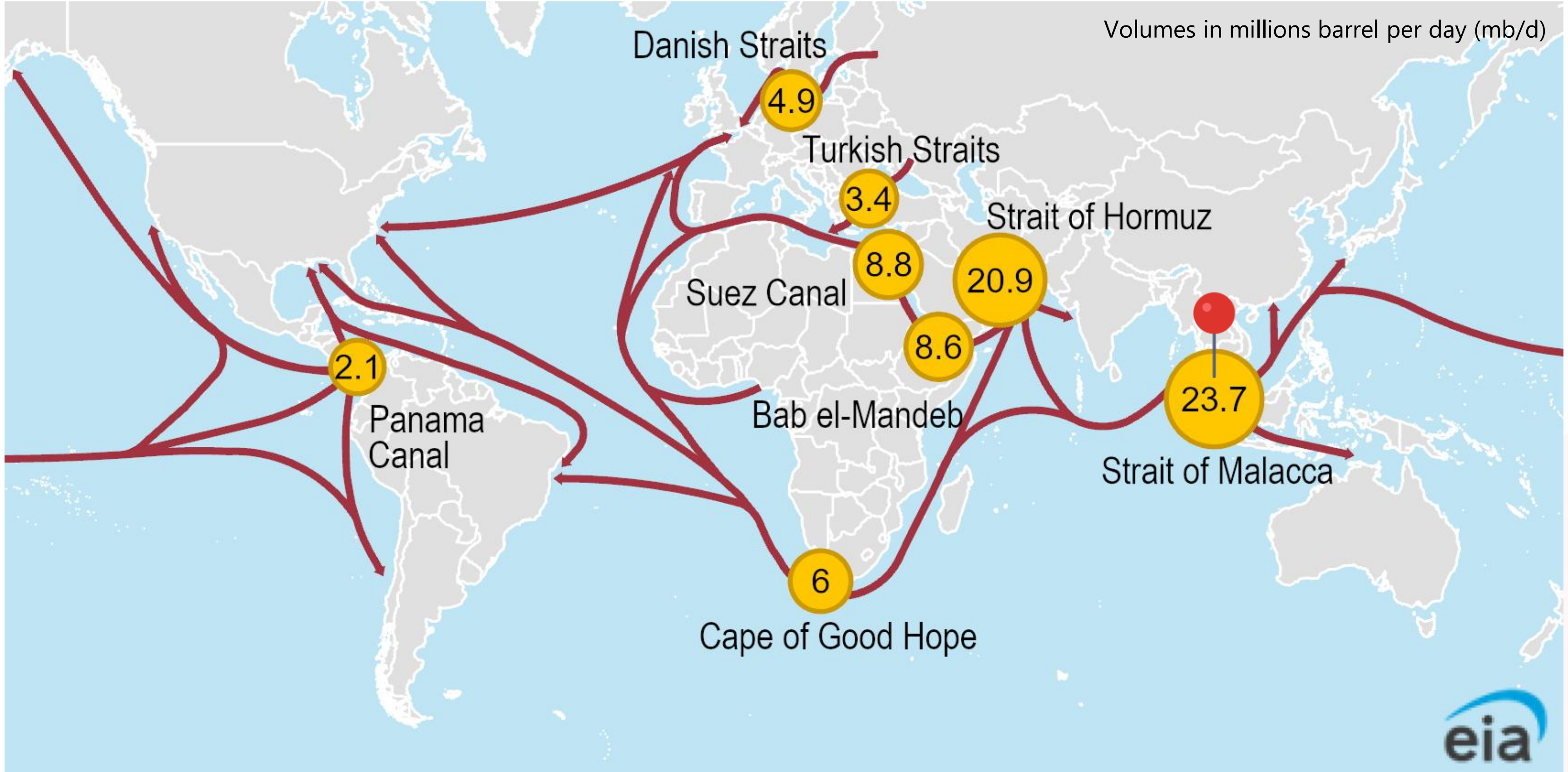
- Energy Transition & Climate Policies
- Oil Nationalism
- Trade Flows
- Shale Revolution & Underinvestment
- Petrodollar Revaluation

Source: Flaticons, AmInvestment Bank

Strait of Malacca, world's most important strategic chokepoints

AmInvestment Bank

Volume of crude oil and petroleum liquids transported through world chokepoints in 2023



Any disruption at Malacca would force costly diversions via the Lombok/Makassar—

adds ~1,500–2,500 nautical miles

extending voyage times and raising shipping costs.

Percentage volume of crude oil and petroleum liquids transported (%)

Source: Energy International Administration (EIA), AmInvestment Bank

Domestic: Petronas–Petros Saga
From Federal Control to Shared Autonomy

AmInvestment Bank

1969

Emergency declare

Sarawak's OMO (1958) remains in force.

2011

Emergency annulled;
Sarawak reasserts OMO rights.

2018

PETROS launched;

State licensing mandated for all O&G players.

2019

Sarawak imposes 5% SST;
sues PETRONAS

Petronas to pay inbound revenue to PETROS → RM2.96b settlement.

2020

PETROS consolidates gas distribution; launches LPG cylinders.

2021

Signs Heads of Agreement (HOA) with Petronas Dagangan for Sarawak LPG

Begins first exploration venture (SK437).

2023

Issues first carbon storage license;

Begins first onshore drilling at SK433.

2025

PETROS recognized as sole aggregator

Joint framework with PETRONAS

First piped gas to homes since 1982.

PETROS
Petroleum Sarawak Berhad

Roots of the clash

Constitutional & Legal Framework

- PDA 1974 → PETRONAS control; states 5% cash.
- Sarawak DGO 2016 → PETROS empowered to regulate.
- MA63 → backdrop for jurisdiction debates.

Source: TheEdge, Petros. Petronas, AmInvestment Bank

Consequences

- Project timing delays (exploration, maintenance).
- Dividend drag ≤11% if aggregation shifts.
- FDI / credit sentiment watch.
- Sabah exploring similar autonomy.
- Sarawak leverage via gas under MA63 fiscal terms.
- Local content boost (pipelines, hydrogen, petchem).

What to watch next?

- Final PETRONAS–PETROS framework (gas pricing, licence fees, wheeling).
- Miri Crude Oil Terminal licence outcome & any penalties.
- LNG contracts (MLNG, Timi, Rosmari–Marjoram): delivery flexibility vs state rules
- National energy reform bill to align PDA & DGO.

AmInvestment Bank

THANK YOU