

GEOIndia 2022 – PCCE Courses – PCCE #15

# Geopolitics & Price Uncertainty

**Energy Security, Russia-Ukraine and the path ahead**

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Upstream Companies and Transactions

October 2022

## Agenda

1. How is the geopolitics of energy playing out right now – 0930-1100hrs
2. What will be the path forward in the near to medium term? – 1130-1330hrs
3. What factors are driving company behavior (special focus on NOCs) – 1430-1530hrs
4. What strategies are being adopted to meet the Energy Transition needs?  
AND  
Conclusion and discussion – 1545-1630hrs

# 1. How is the geopolitics of energy playing out right now – 0930-1100hrs

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## Key oil market messages: The six factors that will shape the oil price environment

- **The coming 5 December 2022 and 5 February 2023 EU bans on Russian crude oil and products hold potential for greater disruption than currently implied by the oil futures market.** Ironically, both Russia and the Group of Seven (G7) want to keep Russian oil flowing to the global market outside of Europe. Yet, the G7 price cap—and opposition to it—and EU maritime service bans pose nontrivial risks of significant supply perturbations. Our base case assumes cuts in Russian oil exports that range from 0.5 MMb/d to 1.5 MMb/d. There is a risk of other supply being impacted as well.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **Chinese oil demand is critical to the future oil price path.** Mainland China has been the main growth engine of world oil demand for two decades. Yet rolling COVID-19 lockdowns have kept oil demand below year-earlier levels for most of 2022. This is a key reason for the oil price decline since June. If Chinese demand growth remains negative, it could sustain downward pressure on prices. Our base case, however, assumes a recovery in Chinese oil demand growth in late 2022 and through 2023.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **OPEC+ cannot increase production quickly, but it can cut output immediately.** This means OPEC+ can readily defend an oil price level if it chooses to do so. But it could do little to thwart a price spike amid a large supply disruption or demand increase.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **US crude oil production growth is a major component of the world's supply growth.** The counterpart to Chinese demand on the supply side is US production. US output growth so far this year has been slower than expected, but we maintain our view that US crude oil growth will accelerate later this year and in 2023. Year-on-year gains, in our base case, are 600,000 b/d in fourth quarter 2022 and 1.1 MMb/d for full-year 2023. If US growth disappoints, there are few other sources, and perhaps none, that could replace it.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **Government intervention by the European Union, the United States, Russia, and others could prove pivotal.** Russia is not a passive actor as it seeks to punish those who sanction it. How the European Union adheres to its Russian oil bans, or modifies them, is crucial in the months ahead. And how vigorously the United States spearheads the G7 price cap, uses the Strategic Petroleum Reserve (SPR), and imposes other sanctions will also shape the contours of the market. And mainland China and India are not passive observers.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

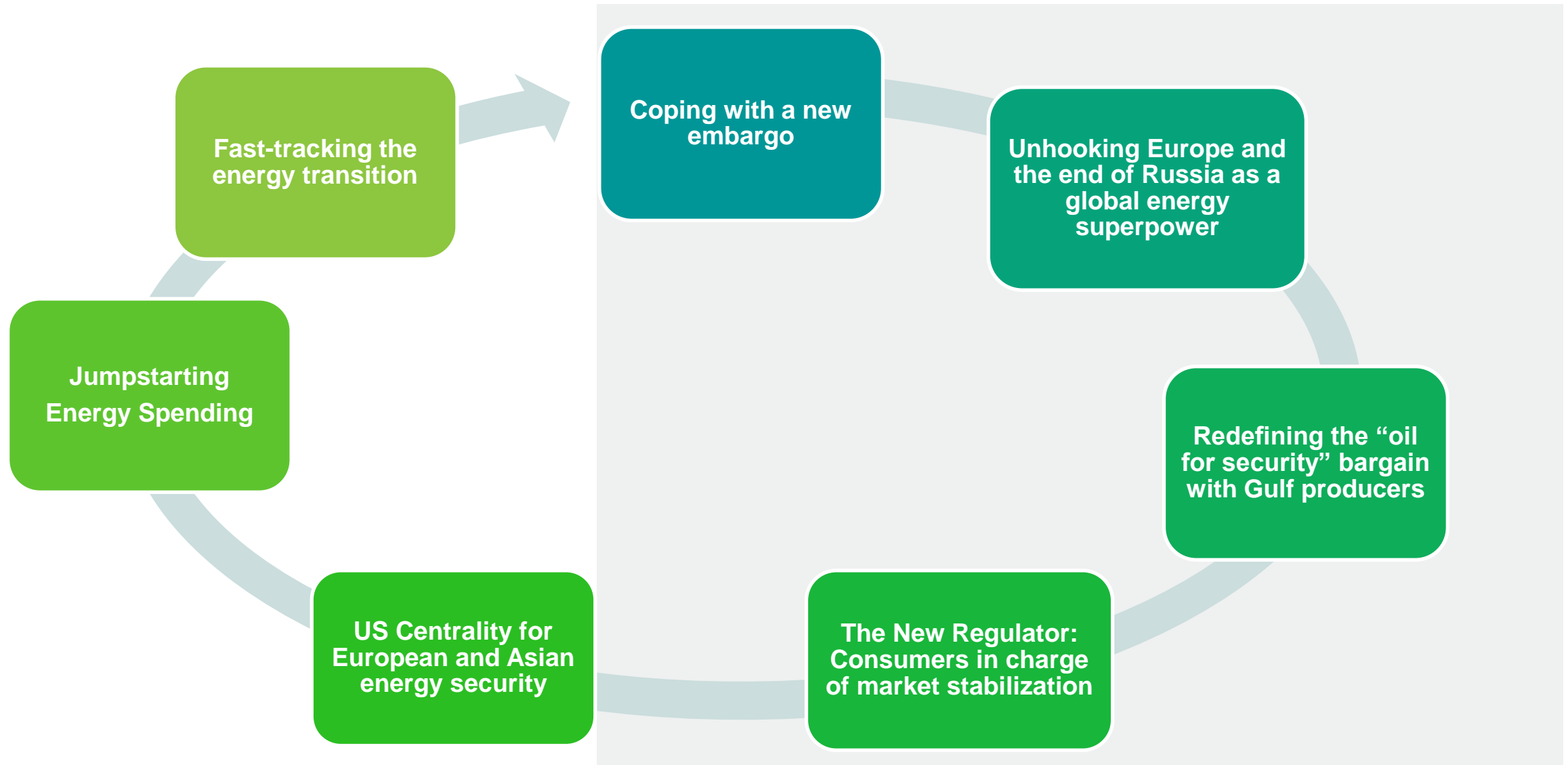


## Key oil market messages: The six factors that will shape the oil price environment

- **There is a wide range of price outcomes amid exceptional uncertainty.** Our base-case crude oil price outlook, called “Inbounds,” assumes demand remains below global production capacity, but uncertainty about Russian oil flows and thin spare capacity generally keep Dated Brent oil prices around \$90–110/bbl for the rest of this year and in 2023. There are, of course, possible developments that could lead to large swings of surplus or deficit—and prices—beyond what we already expect. If demand growth continues to weaken, prices could fall to \$70/bbl.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

# Energy Geopolitics Upended: Ripple Effects Are Entering a Feedback Loop



# Extraordinary times: Russia-Ukraine shakes core tenets of energy markets

Bringing great  
power politics into  
energy

Role of values

Economic Impact

- Inflation
- Recession
- Systemic impact of financial sanctions

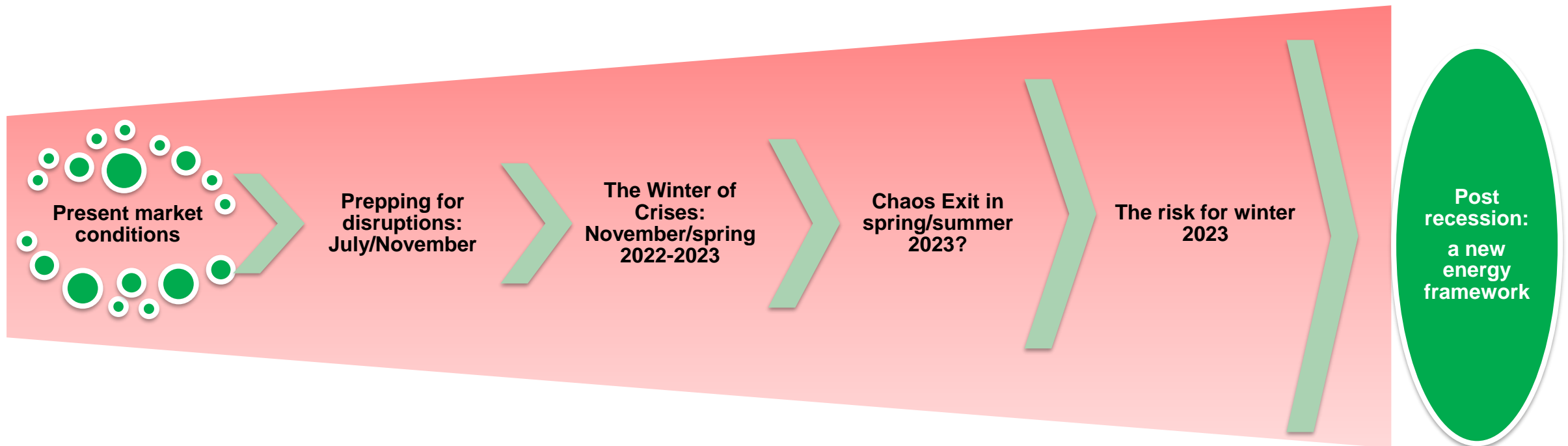
Disintegration of  
Russia from Europe

Commodity Shock

- Global oil market
- Global gas market
- Grains

Energy Transition  
versus Energy  
Security

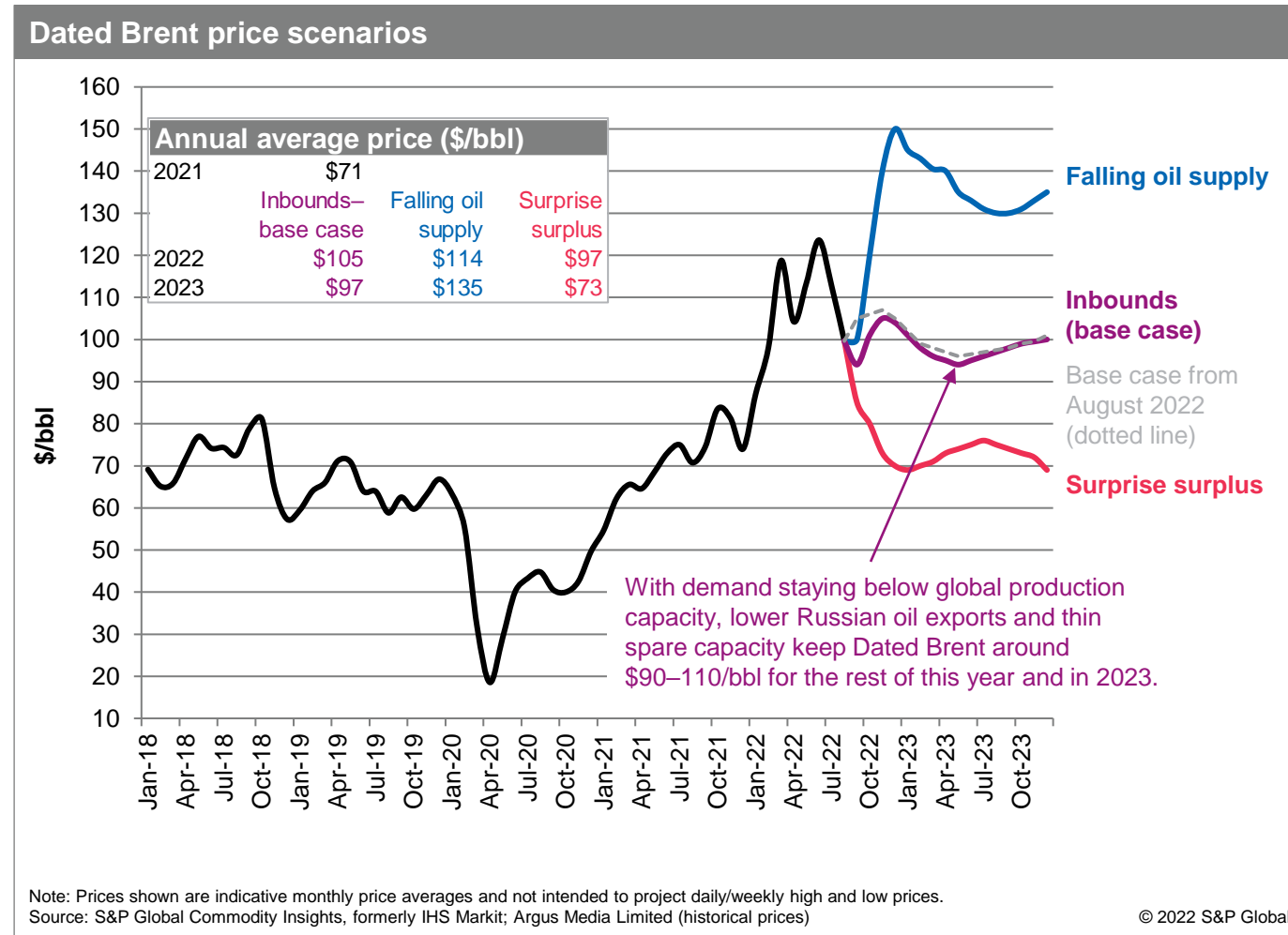
# Chaos in oil and gas markets: The difficult winter of 2022-2023



## 2. What will be the path forward in the near to medium term? – 1130-1330hrs

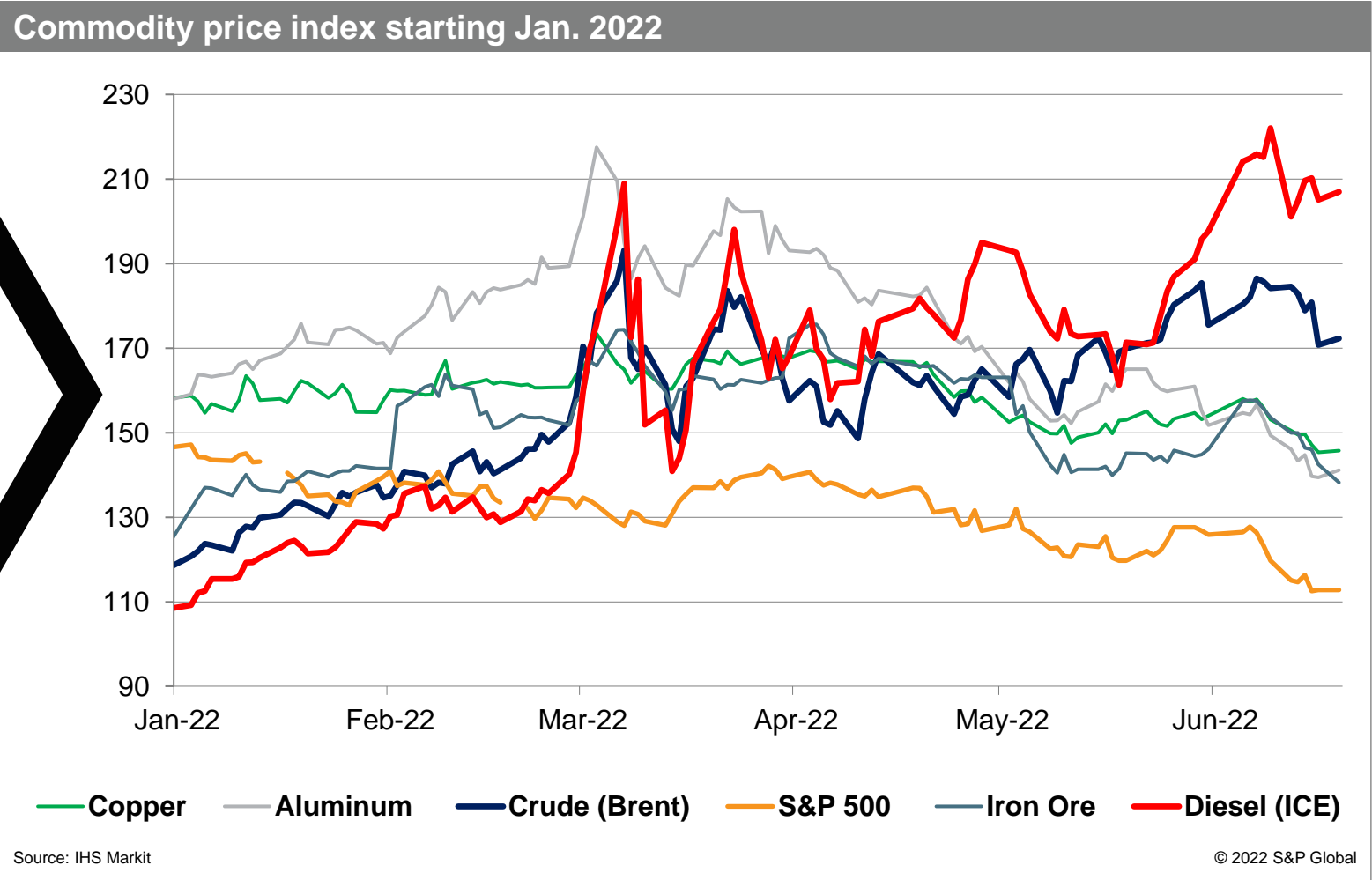
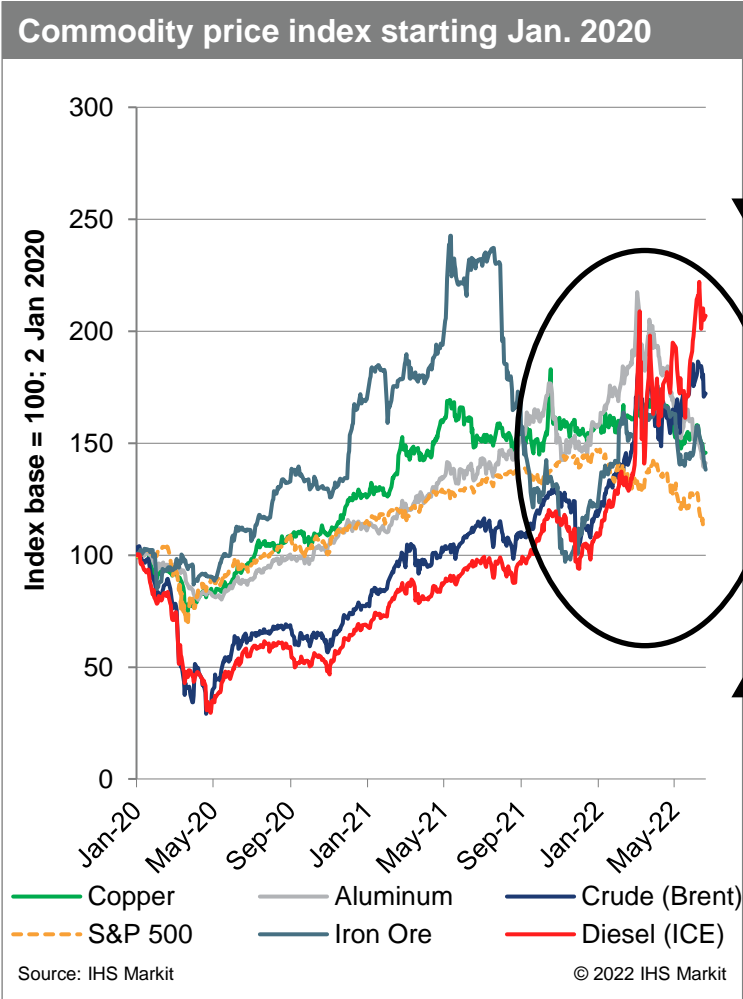
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# Exceptional uncertainty means a wide range of price outcomes

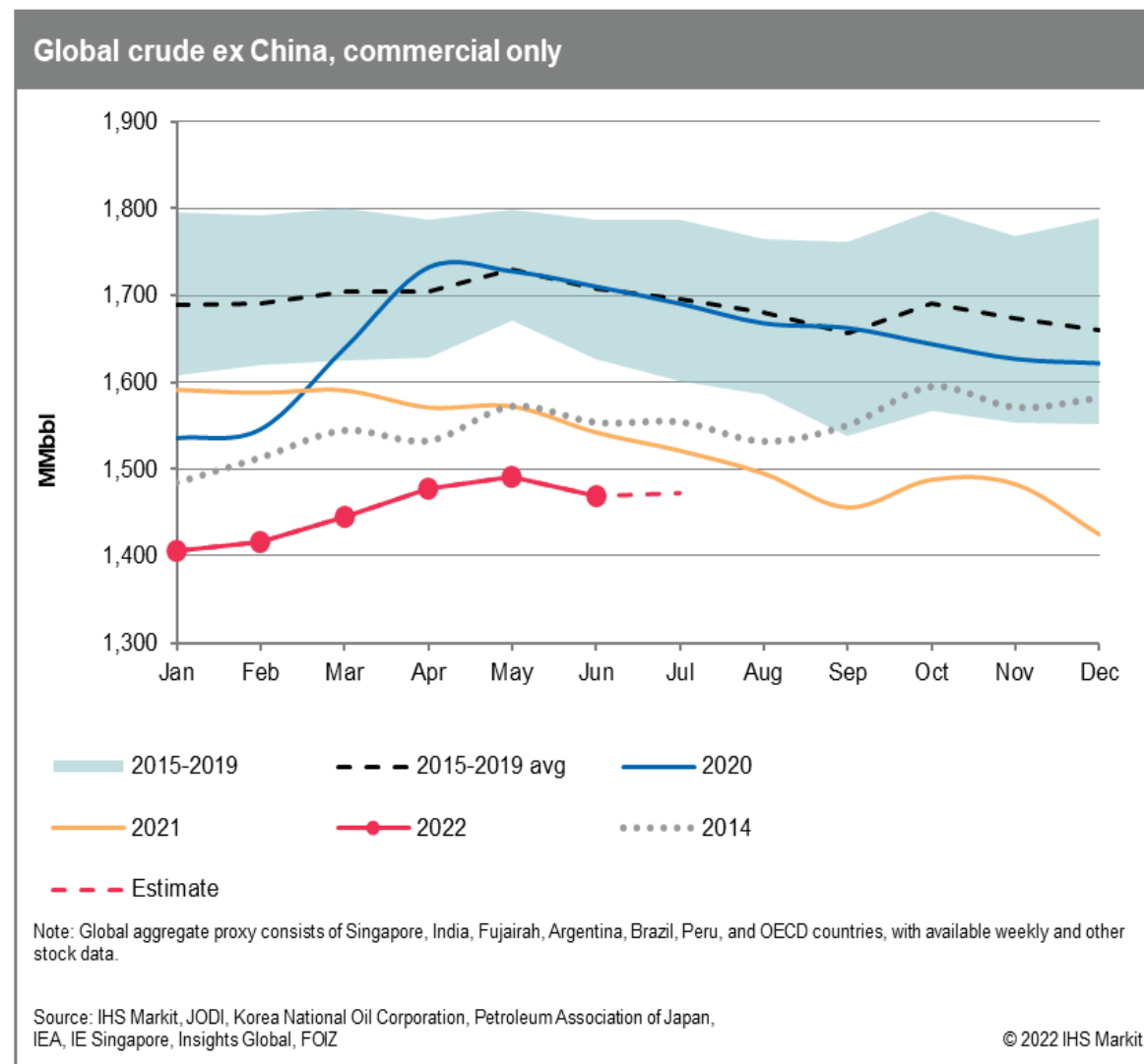
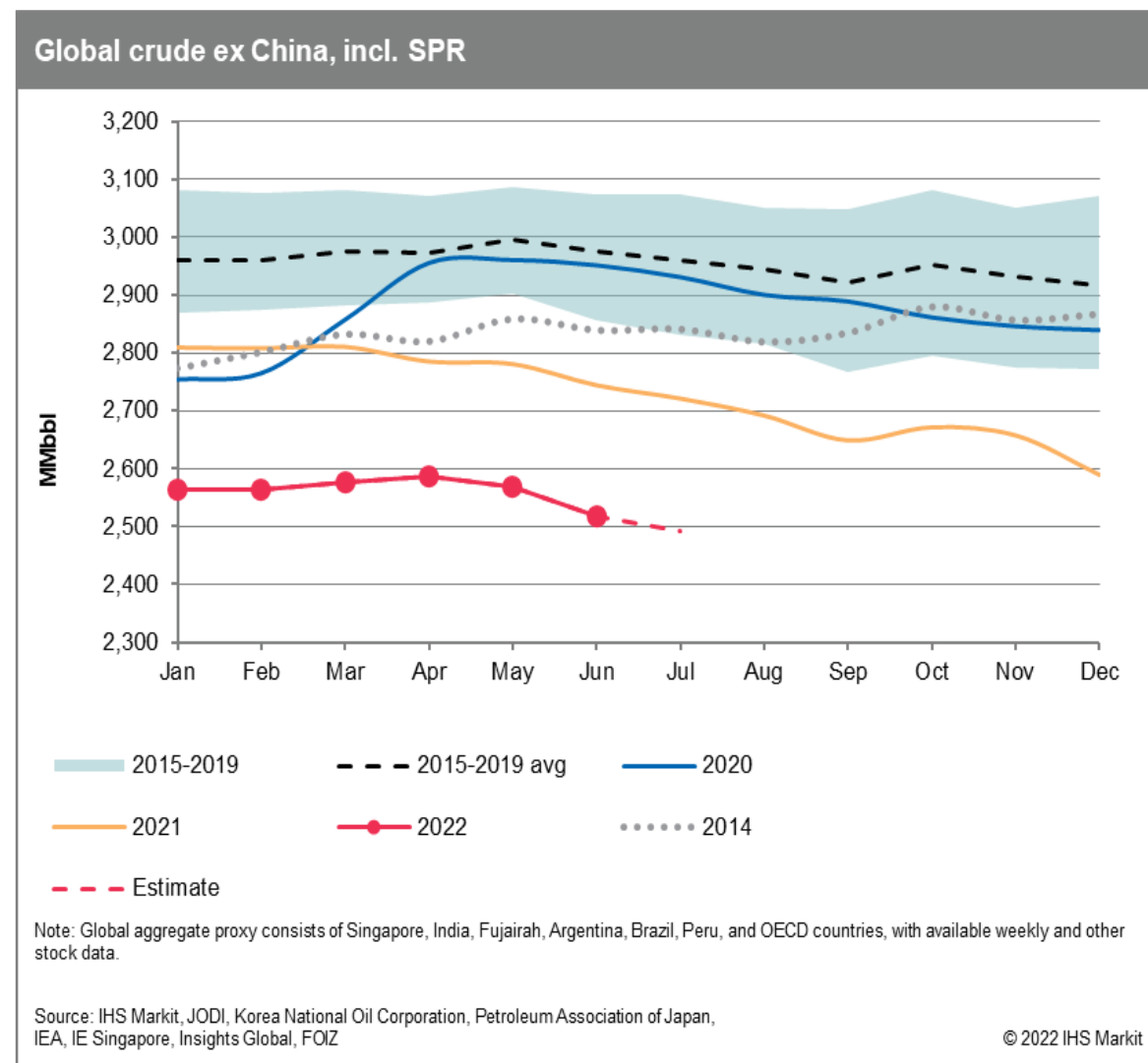


- **Inbounds (base case).** Demand stays below global production capacity. Russian oil exports are cut 0.5–1.5 MMb/d.
  - World oil demand growth is 2.3 MMb/d in 2023. Mainland China accounts for 40% of this.
  - Immediate spare production capacity remains tight at 0.5–1.5 MMb/d.
  - In 2022–23 Iranian output is at 2.6 MMb/d, and Libya produces 0.7 MMb/d.
  - US production grows and is near 1 MMb/d in 2023.
  - Commercial oil inventories build in 2023.
- **Falling oil supply.** About 2–4 MMb/d of Russian oil exports are lost. Spare capacity is outstripped by demand. UK/EU sanctions hold. Chinese oil demand recovers rapidly.
  - Russian production falls to 7–9 MMb/d as EU sanctions hit hard.
  - Chinese oil demand recovers faster than expected.
  - Strategic and commercial inventories fall.
  - Global production is unresponsive to high prices.
- **Surprise surplus.** Demand is weak, OPEC+ makes cuts, and inventory is higher.
  - Economic downturn, COVID-19 outbreaks, and resulting lockdowns in mainland China undermine global demand growth.

# Oil breaks up and away from commodity basket



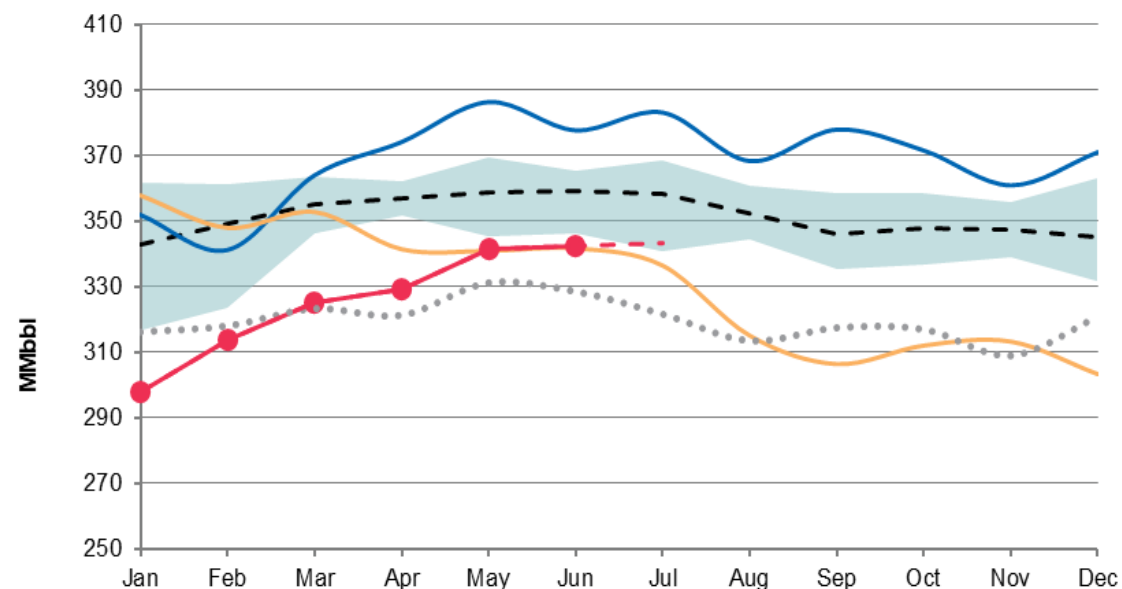
# Strategic Stocks to the Rescue in Q2 2022, but could be reaching limits





# US SPR Helps Europe

OECD Europe commercial crude stocks



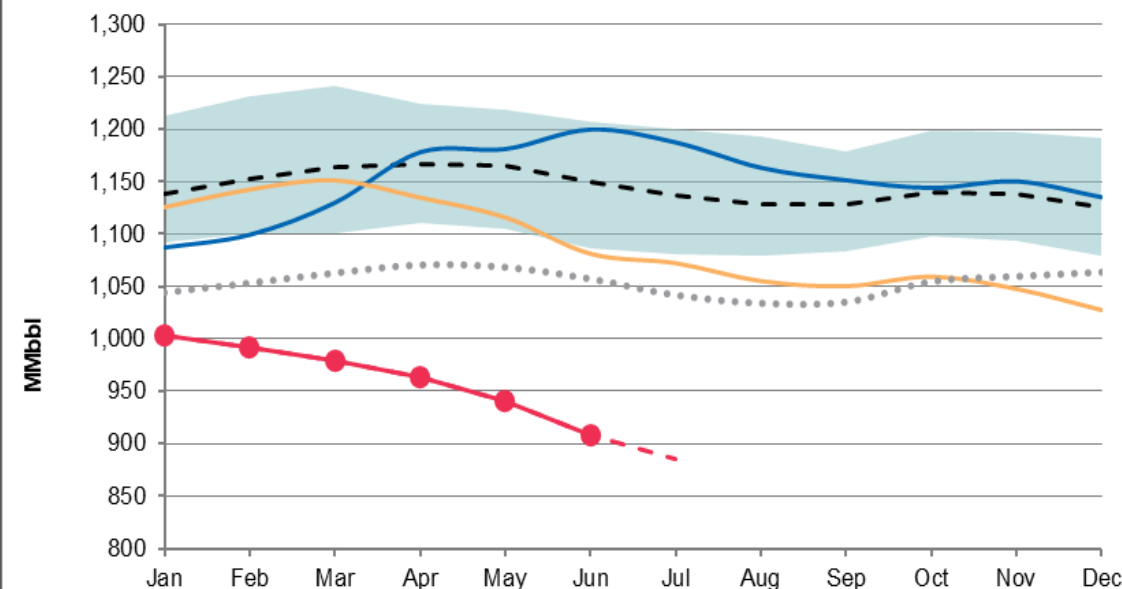
■ 2015-2019    --- 2015-2019 avg    — 2020  
— 2021    —●— 2022    ..... 2014  
--- Estimate

Note: Global aggregate proxy consists of Singapore, India, Fujairah, Argentina, Brazil, Peru, and OECD countries, with available weekly and other stock data.

Source: IHS Markit, JODI, Korea National Oil Corporation, Petroleum Association of Japan, IEA, IE Singapore, Insights Global, FOIZ

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US total crude stocks (commercial and SPR)



■ 2015-2019    --- 2015-2019 avg    — 2020  
— 2021    —●— 2022    ..... 2014  
--- Estimate

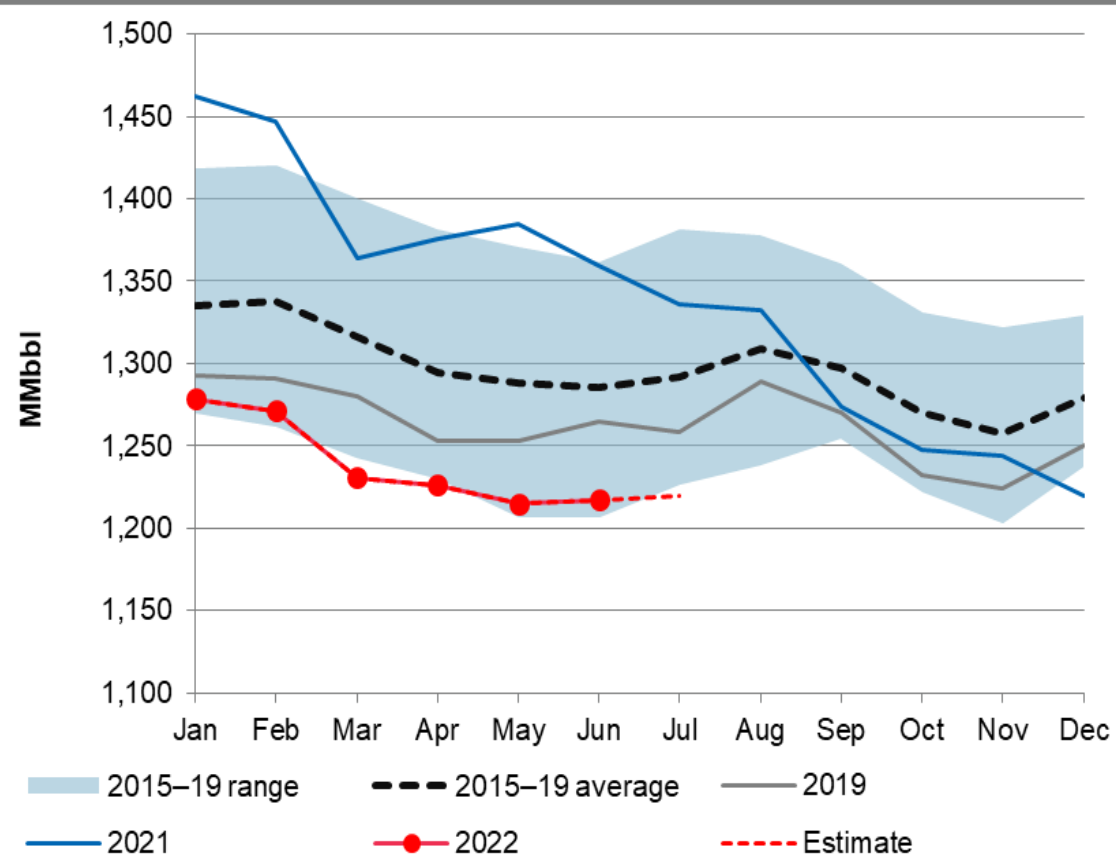
Note: Global aggregate proxy consists of Singapore, India, Fujairah, Argentina, Brazil, Peru, and OECD countries, with available weekly and other stock data.

Source: IHS Markit, JODI, Korea National Oil Corporation, Petroleum Association of Japan, IEA, IE Singapore, Insights Global, FOIZ

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# Product markets at the heart of market dislocation

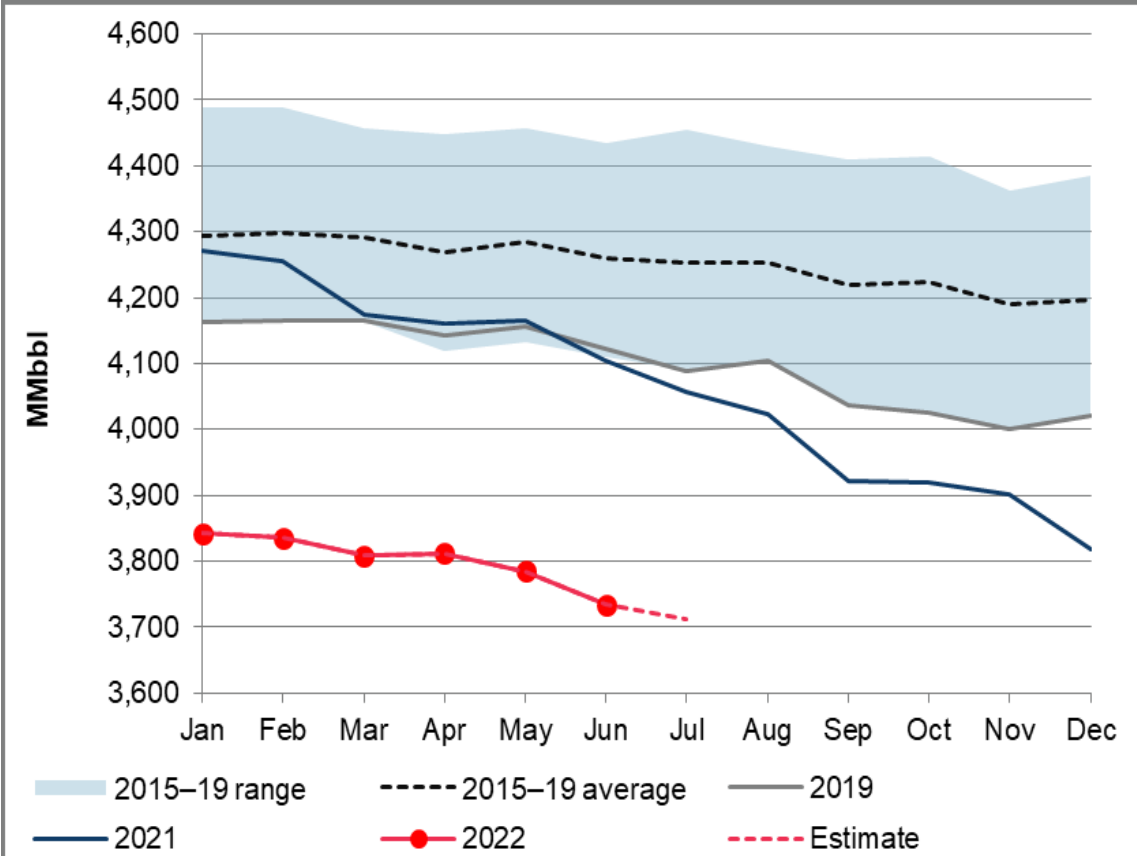
Total global product stocks (naphtha/gasoline/diesel/jet/resid)



Note: Global aggregate proxy consists of Singapore, India, Fujairah, Argentina, Brazil, Peru, and OECD countries, with available weekly and other stock data.  
Source: IHS Markit, JODI, Korea National Oil Corporation, Petroleum Association of Japan, IEA, IE Singapore, Insights Global, FOIZ

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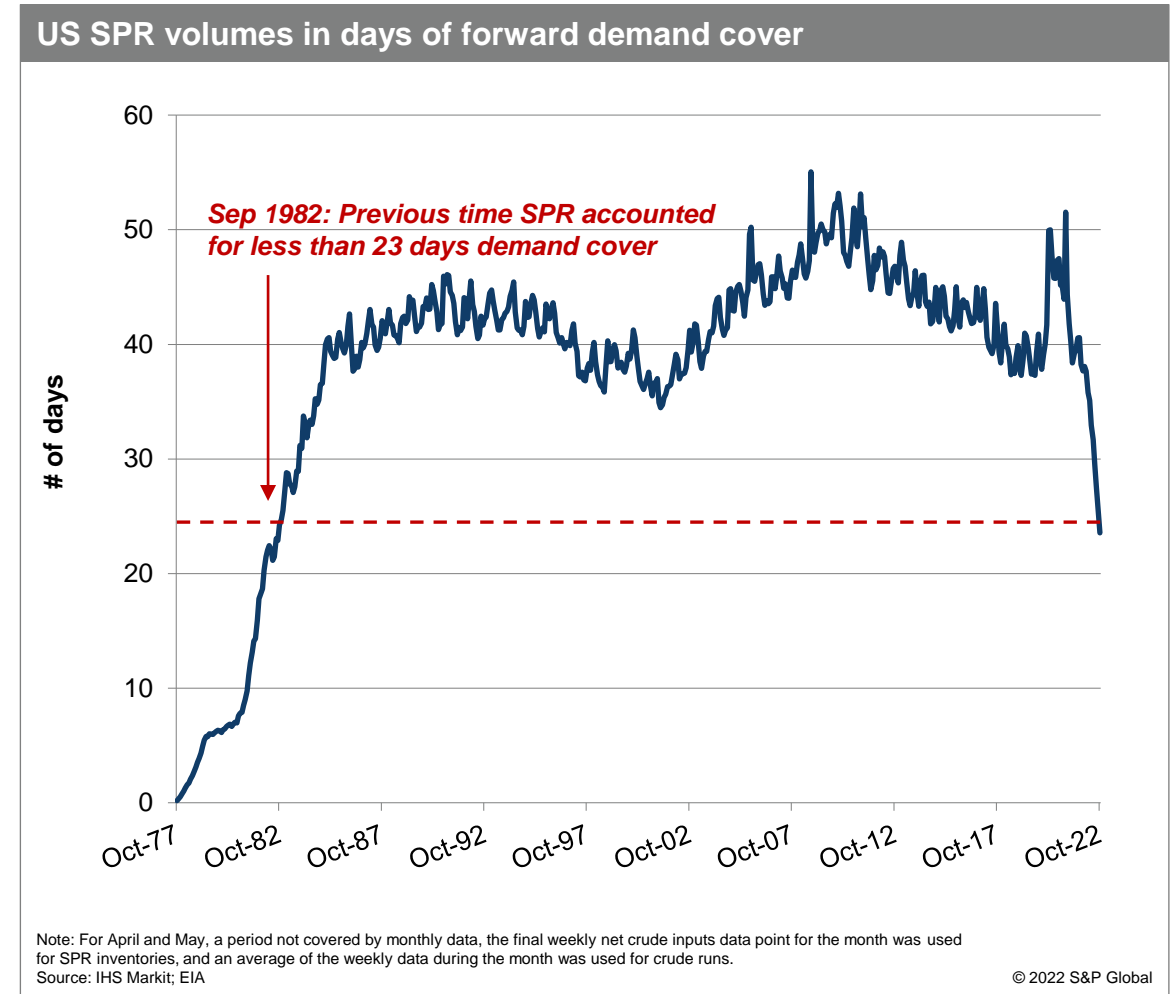
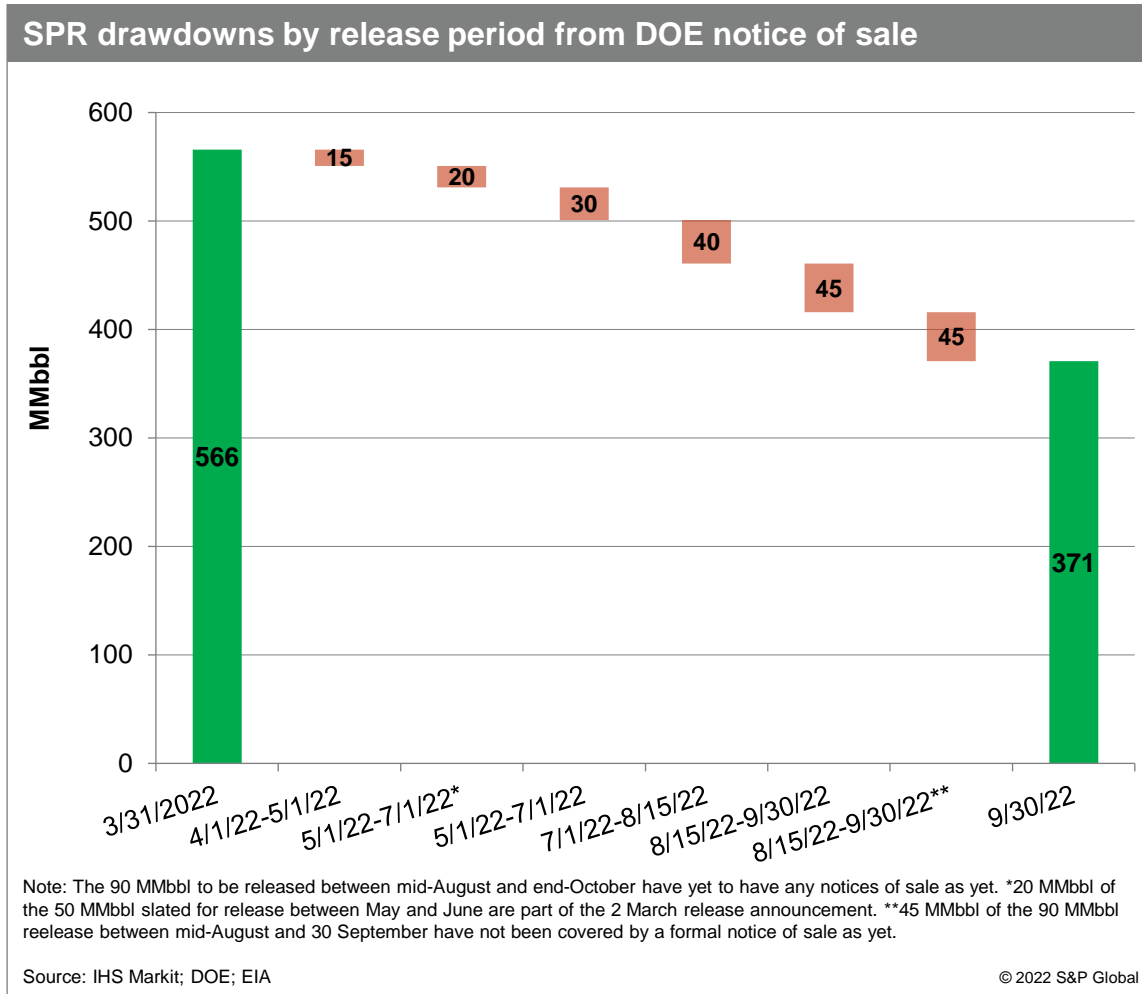
Total global oil stocks (crude, products, spr, ex-China)



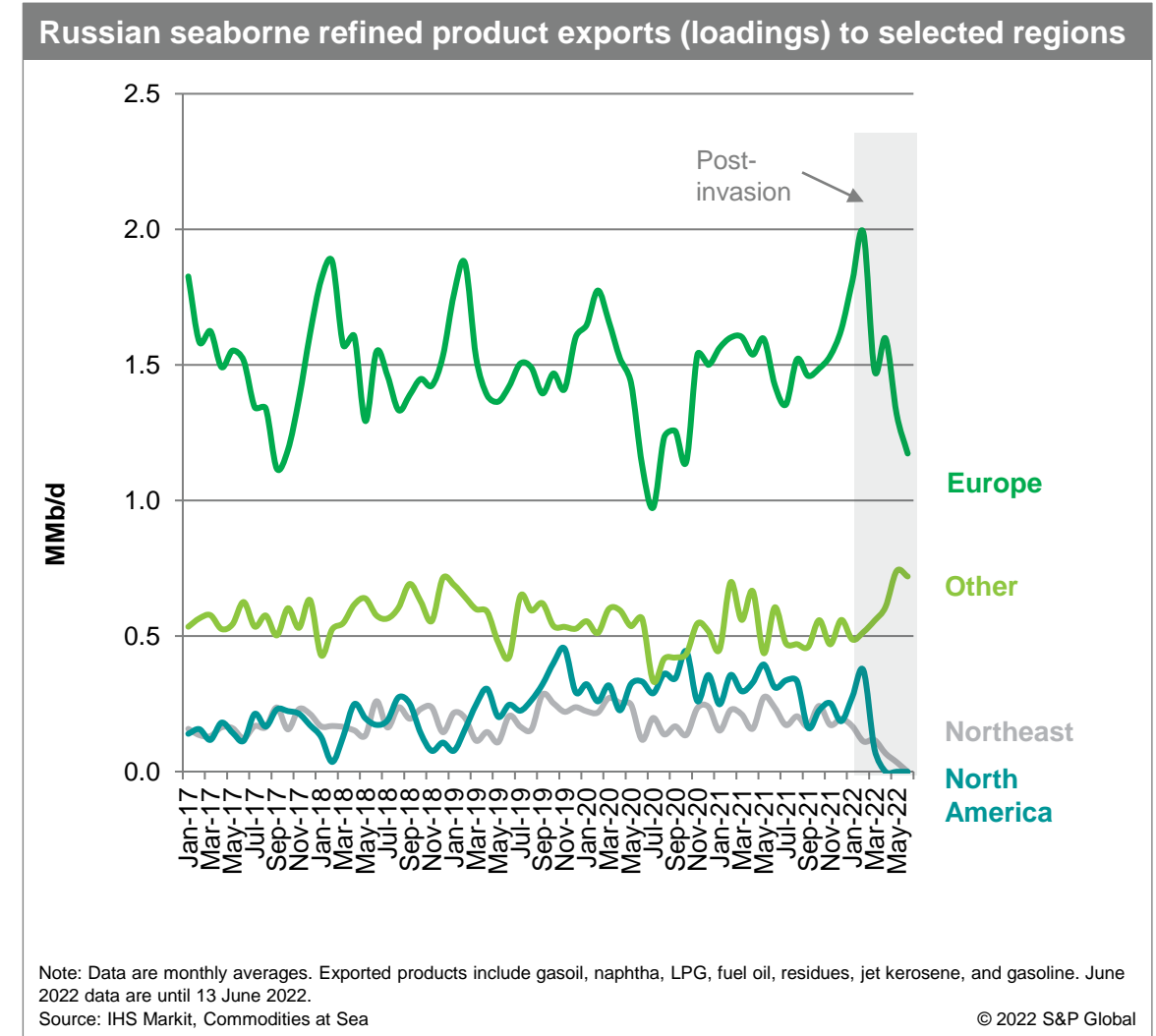
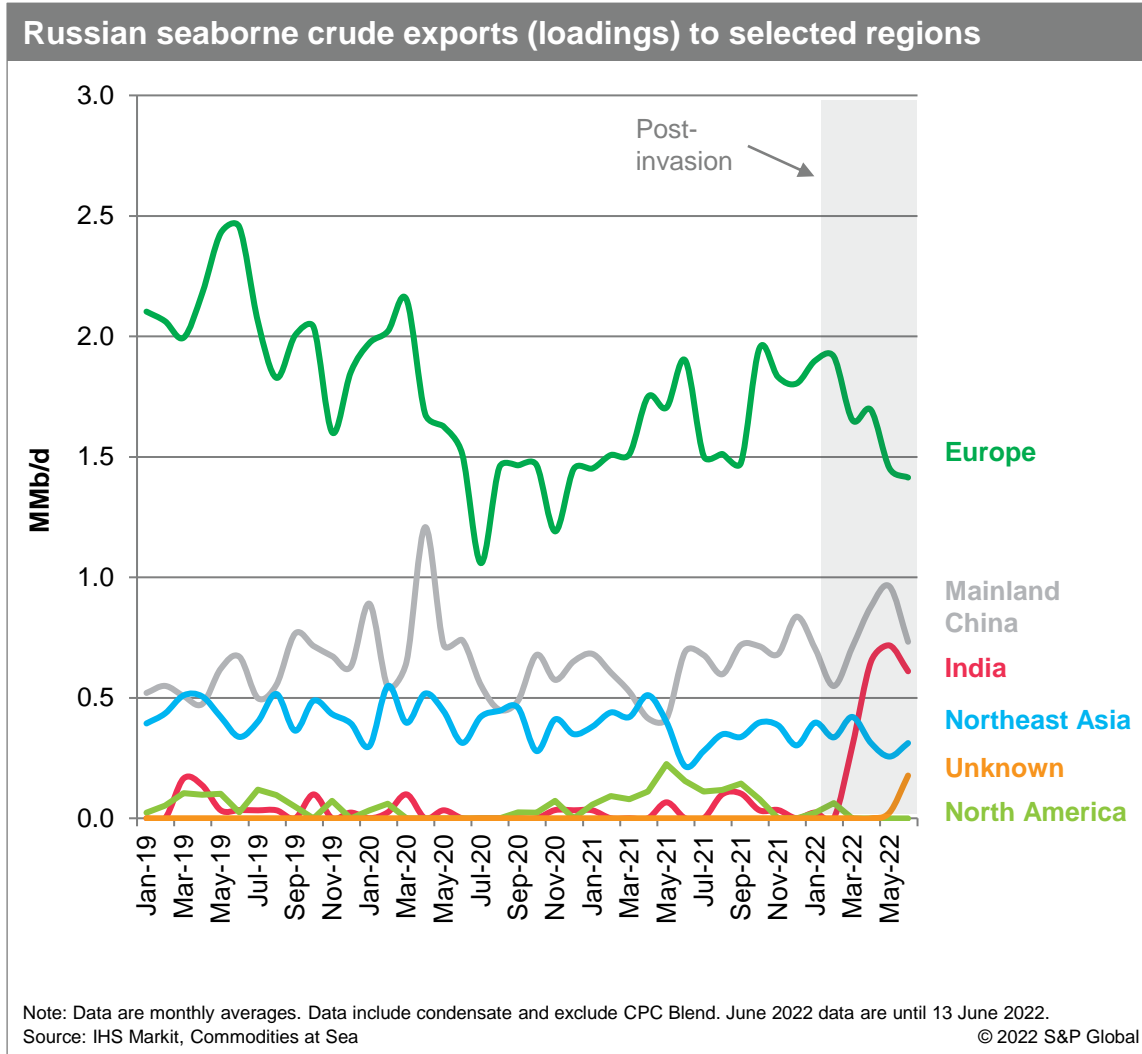
Note: Global aggregate proxy consists of Singapore, India, Fujairah, Argentina, Brazil, Peru, and OECD countries, with available weekly and other stock data.  
Source: IHS Markit, JODI, Korea National Oil Corporation, Petroleum Association of Japan, IEA, IE Singapore, Insights Global, FOIZ

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# US sets up SPR releases of 180 MMbbl in just six months, major part of the 300 MMbbl total release from OECD to cover projected loss in Russian output



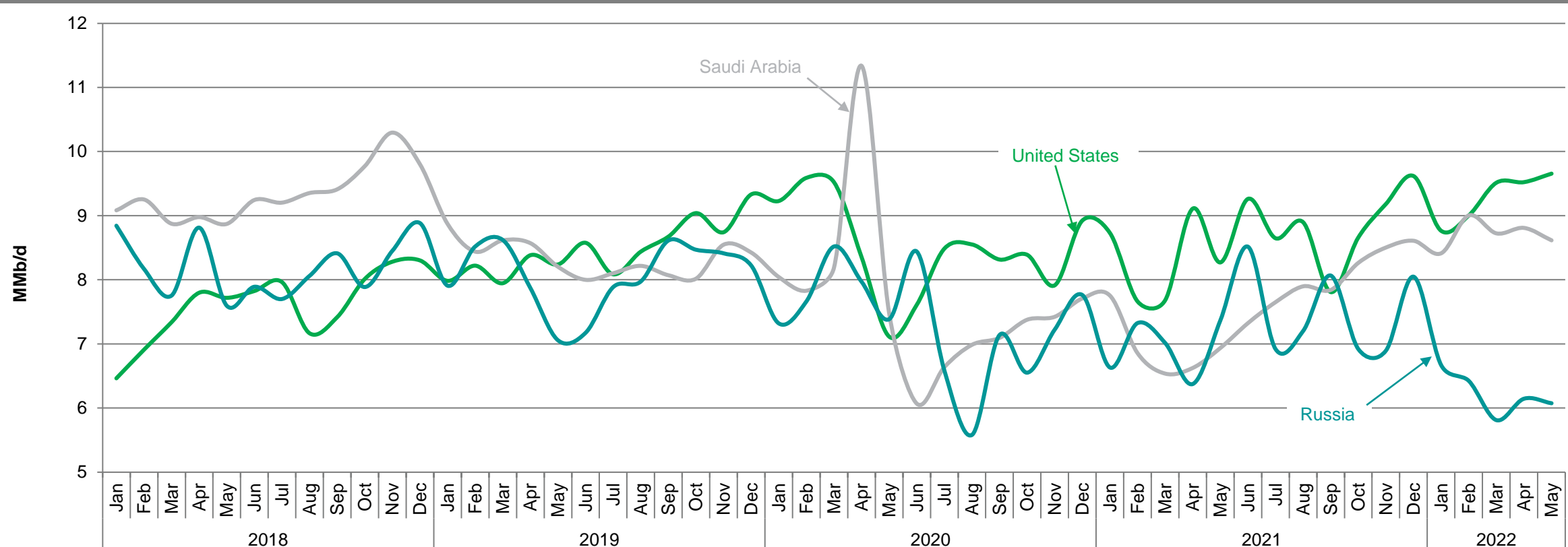
# Russian export trends, crude and products



# The changing face of energy security

US becomes top oil exporter, crude and products combined

Monthly oil exports by Saudi Arabia, the United States, and Russia

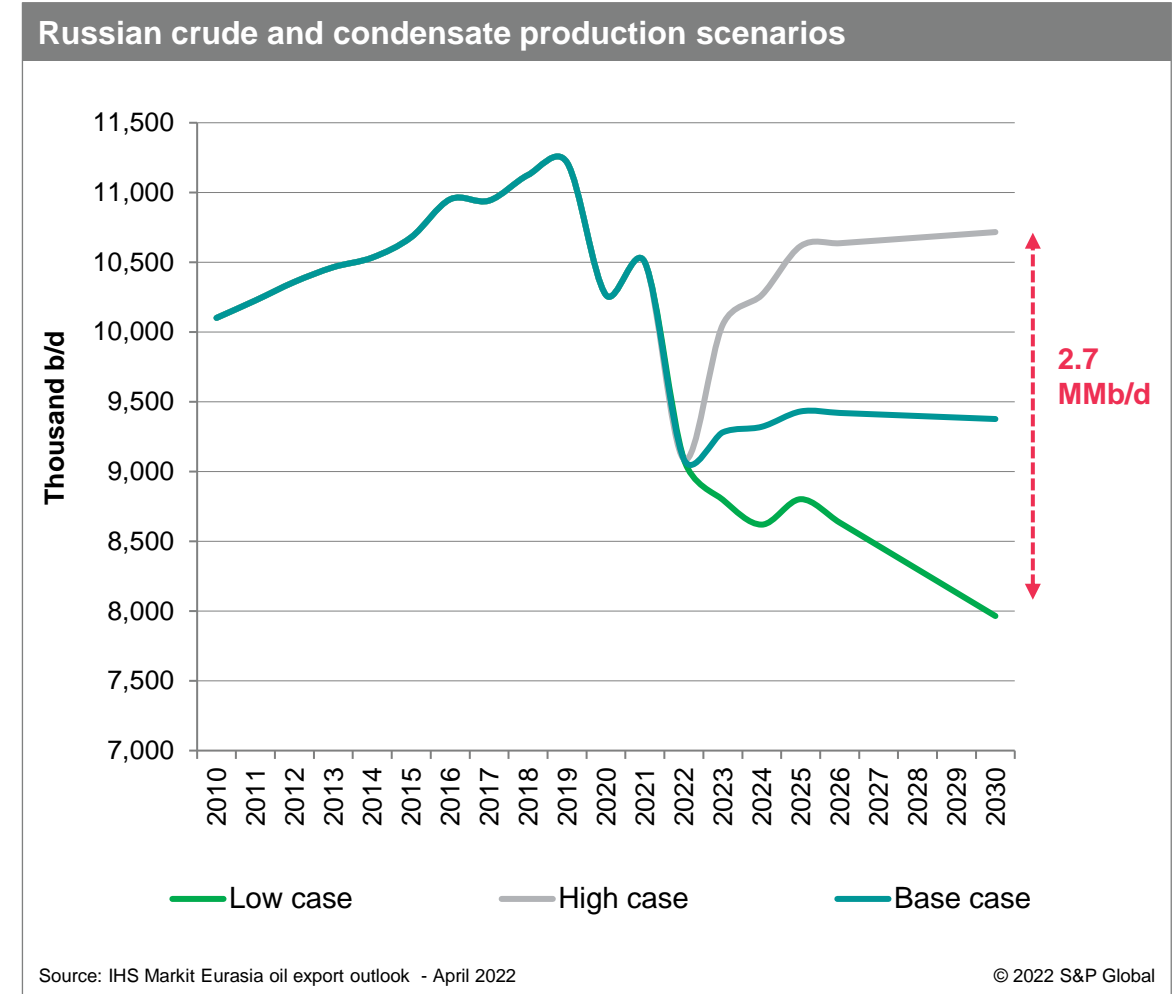
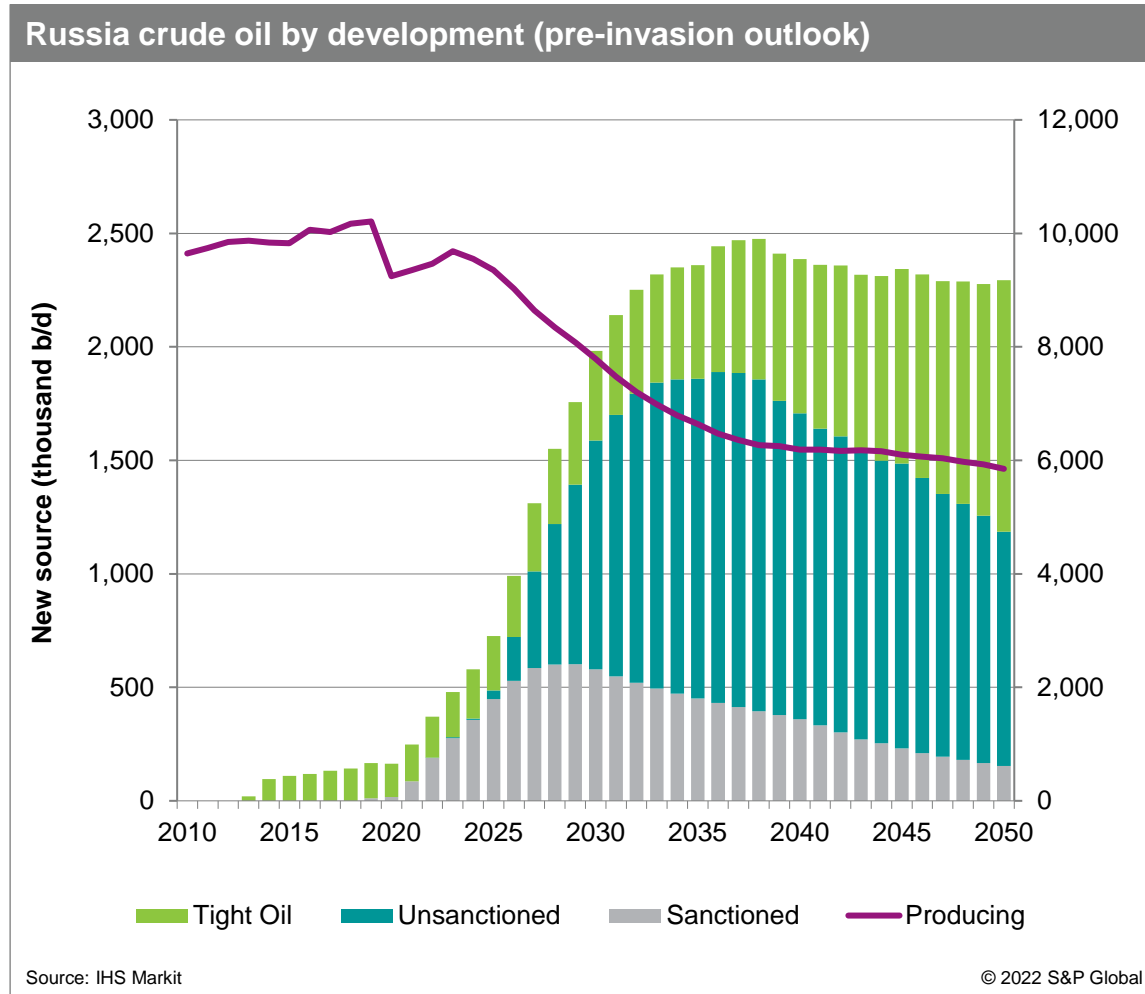


Note: Oil exports include crude oil, condensate, refined products, LPG, and other liquids.  
Source: IHS Markit, Joint Organisations Data Initiative, Commodities at Sea

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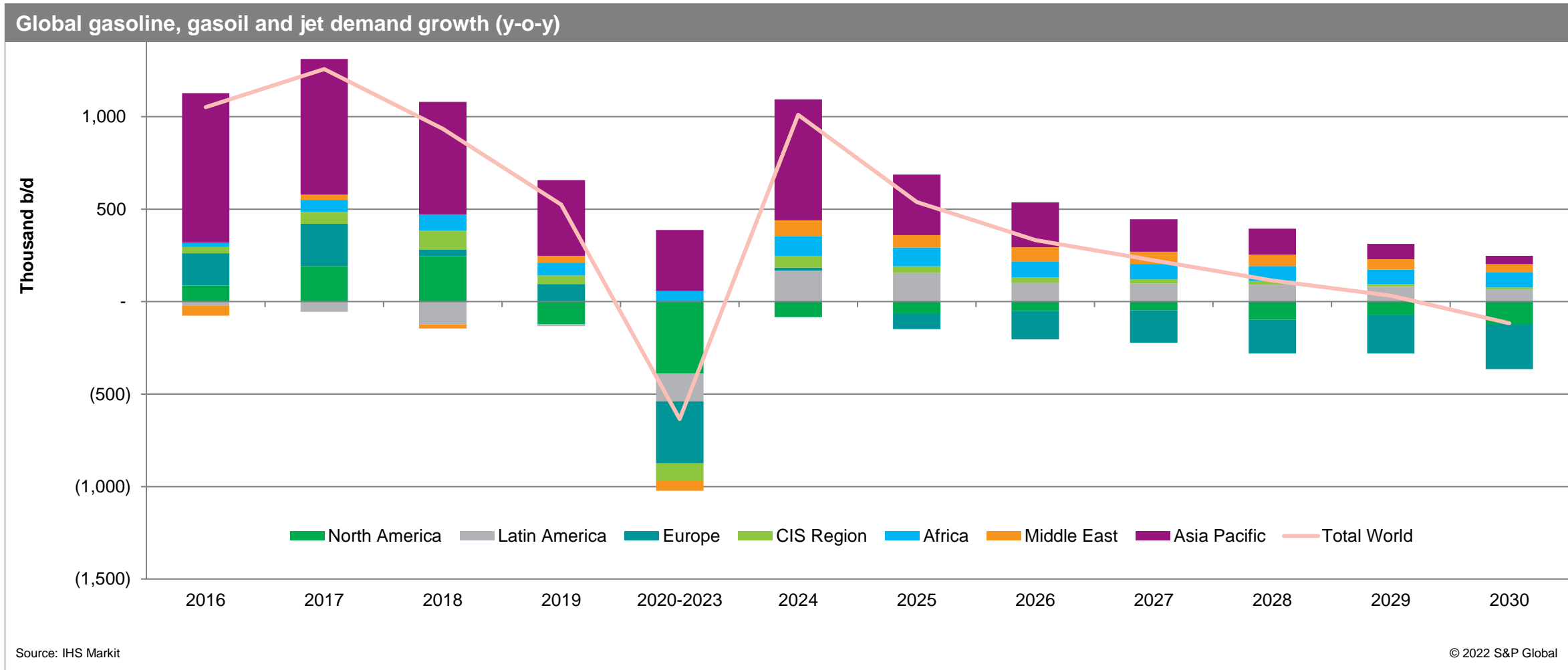
# The billion-barrel question: How big a hole in global oil markets will Russia create in the long-term?

Too early to issue a verdict on the future of Russian oil but protracted isolation could spur multi-year erosion in output

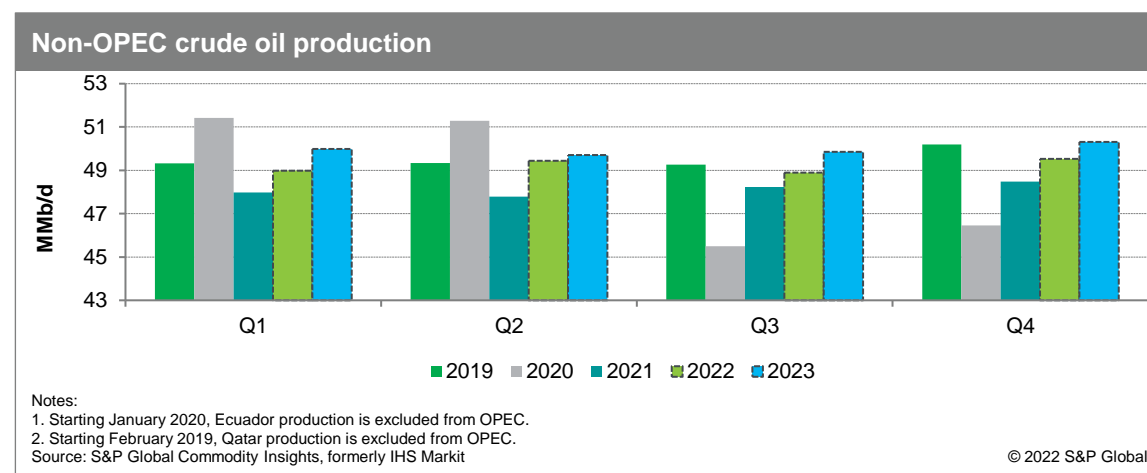
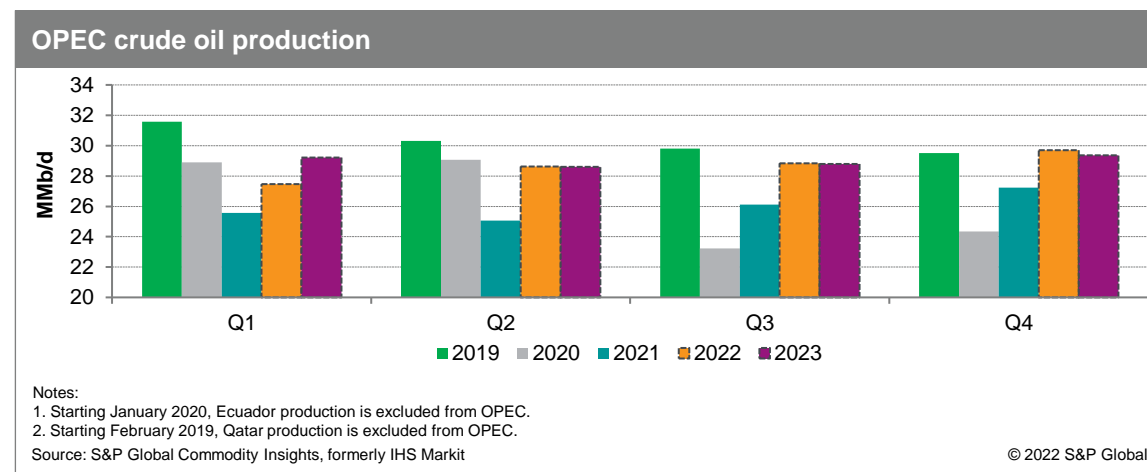
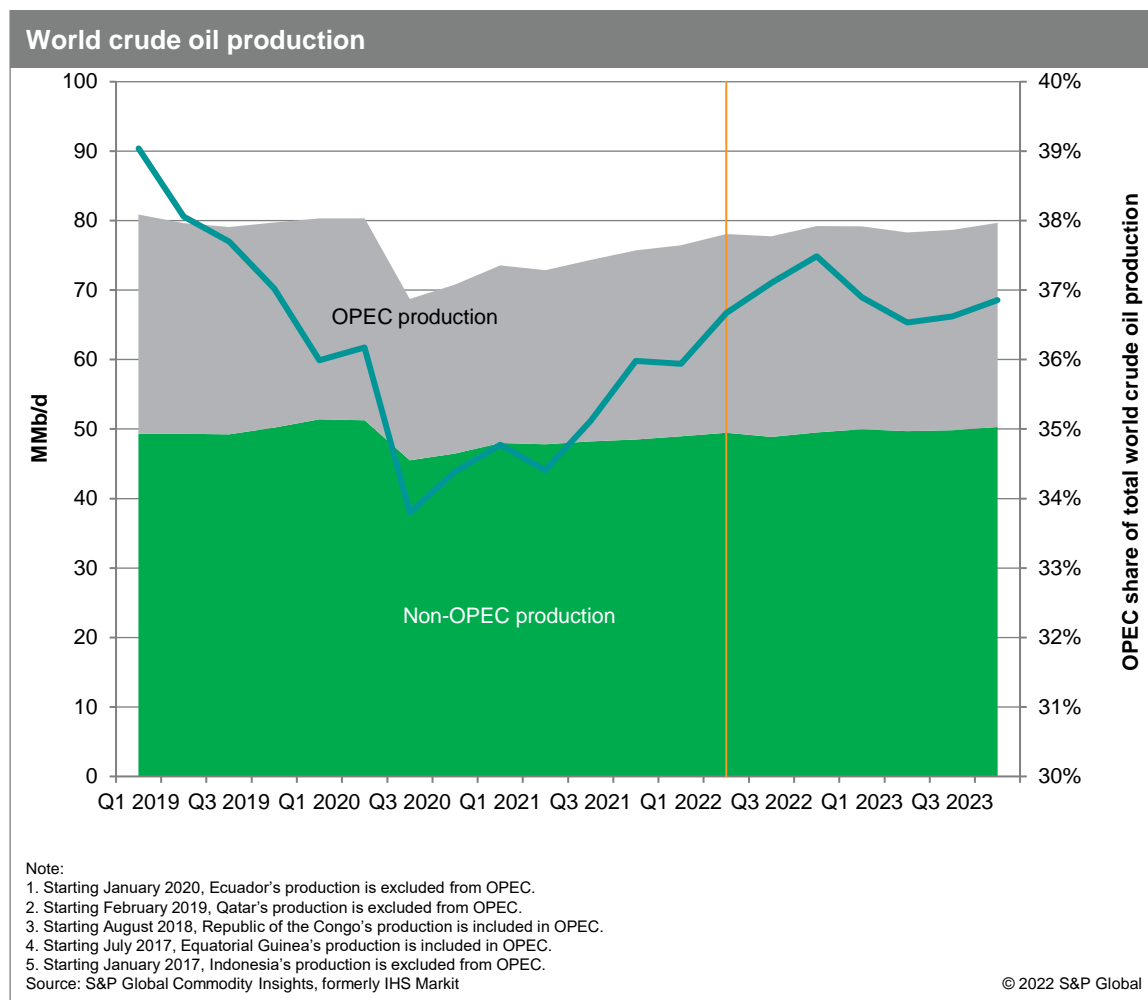


# Waiting for the demand twilight: Russia crisis hastens transition

The growth treadmill will eventually slow and potentially faster than anticipated but not fast enough to single-handedly loosen product markets



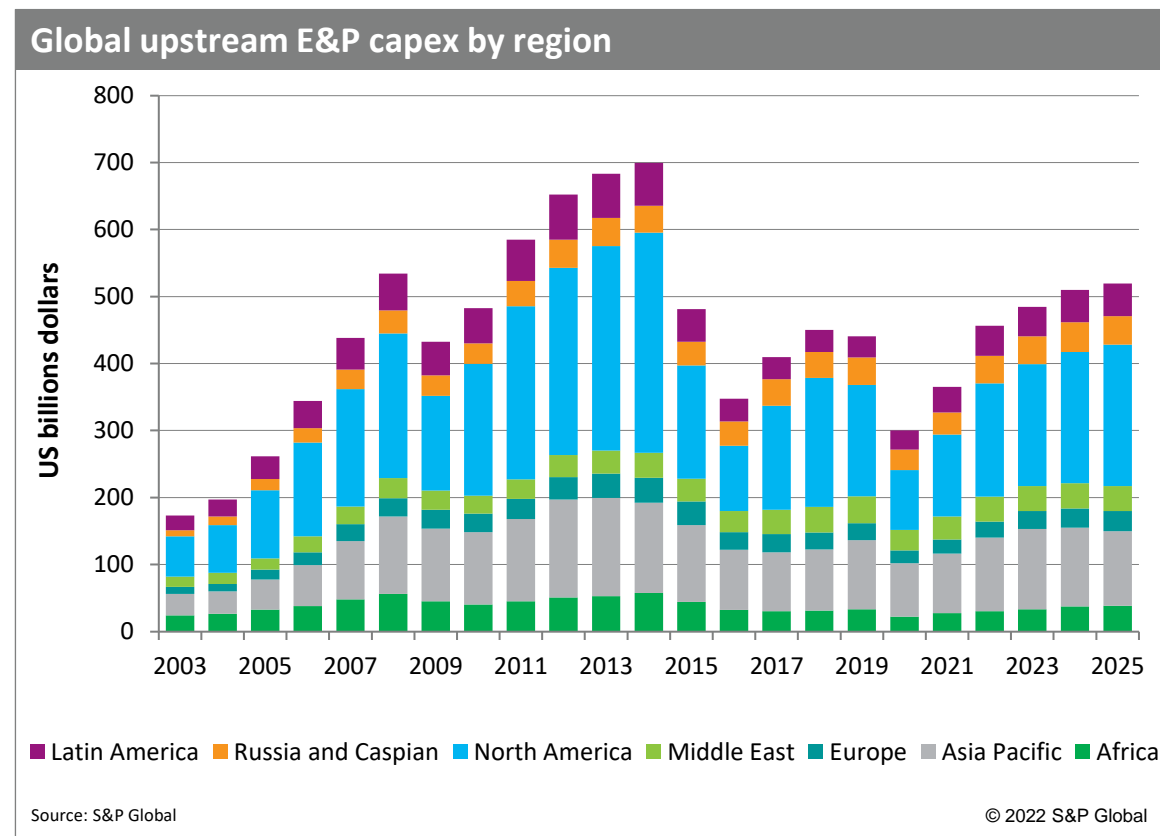
# The United States is poised to replace OPEC as the driver of world crude supply growth in 2023, while Russia will lose 1.2 MMb/d of output



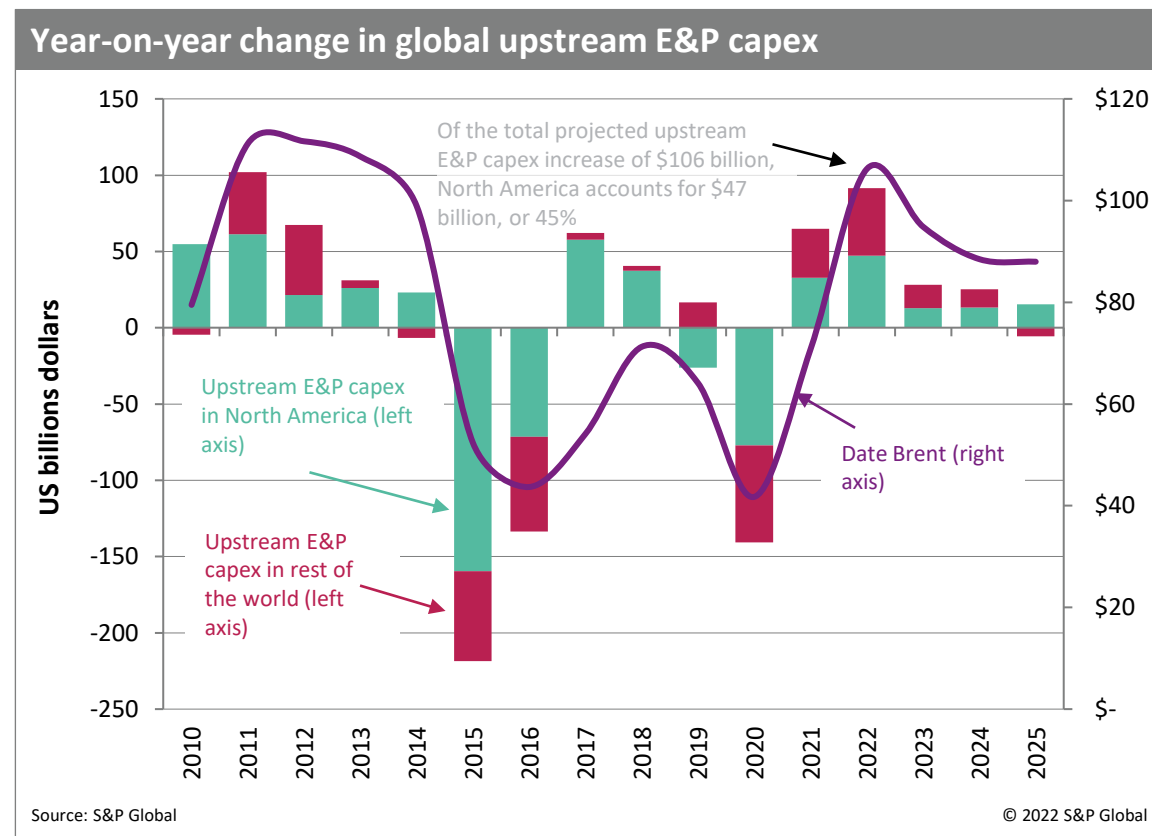


# Has the overconfidence in energy transition led to high energy prices?

Upstream under-investment (2015-2021) is one of the underlying root causes for the current high oil prices



Higher oil prices and a renewed focus on energy security are expected to jump-start global upstream capex spending. This should result in more FIDs, higher US onshore spending, and more international upstream activity.



The roadmap ahead for global oil supply clearly depends on the US upstream, which has the greatest potential to deliver incremental barrels. Historically, increases in oil prices have been followed by increases in upstream oil spending.

### 3. What factors are driving company behaviour (special focus on NOCs) – 1430-1530hrs

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# The E&P industry is facing competing priorities...all at the same time



Policymakers want hydrocarbons in the short-term but not the long-term – misaligned goals?



Can companies manage a dual portfolio of a traditional hydrocarbon business and new energies?



Global alignment or fractures emerging between stakeholders vested in delivering the energy transition?

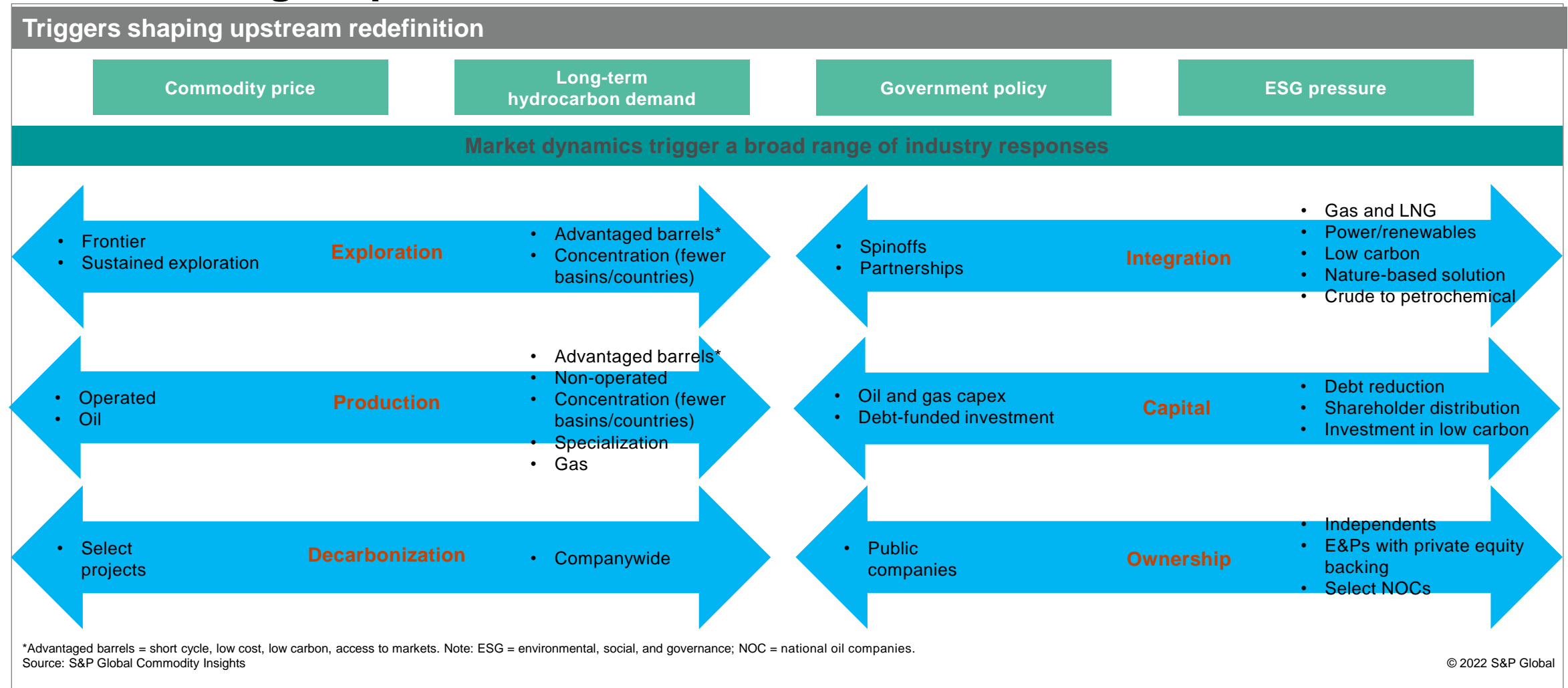


CCUS now seen as essential for decarbonization – but how to reduce costs, scale projects, invest in emerging technologies and build new commercialization models?



Which low carbon technologies will emerge as winners? Or is it an ‘all of the above’ approach?

# Upstream will need to redefine itself due to a multitude of issues, which will drive differing responses



# Strategies to achieve net zero fall in three broad categories: **Fix it (decarbonize assets); Dilute it (portfolio mix); Shift it (asset mix)**

## Advantaged Barrels

- Invest in basins that meet dual objectives of increased profitability and reduced emissions

## Build a low-carbon portfolio

- Increase share of organic capital spending towards low-carbon investments

## CVC, M&A & Partnerships

- Accelerate and build a competitive advantage via the corporate venture capital approach, build partnerships/alliances and M&A

## Remove / Offset

- Invest in CCS/CCUS as a pathway to decarbonize upstream operations and hard-to-abate sectors

## New Financing Models

- Old money (higher cost of capital) for new energy initiatives is not sustainable. Companies exploring a range of options.

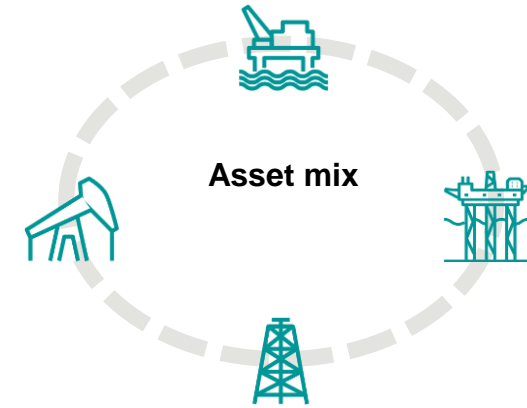
# The pursuit of 'net zero' for NOCs is extremely challenging with fewer strategies available as compared to IOCs

## Oil and gas industry strategies to achieve net zero

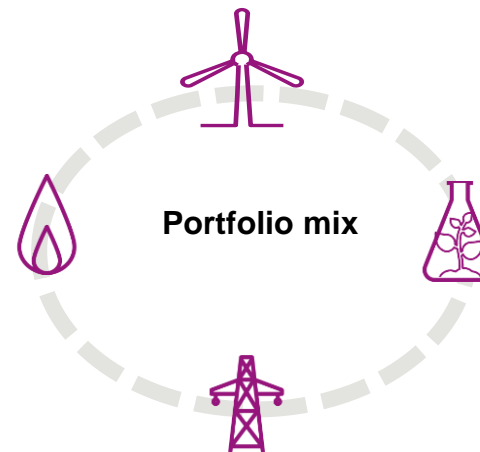
✓ **Fix it:** scrutinizing the asset base for decarbonization opportunities and investing in technologies to lower emissions



? **Shift it:** reprioritizing the assets in the portfolio based on a GHG intensity basis



? **Dilute it:** investing in alternative business lines to reduce corporate GHG intensity through transition

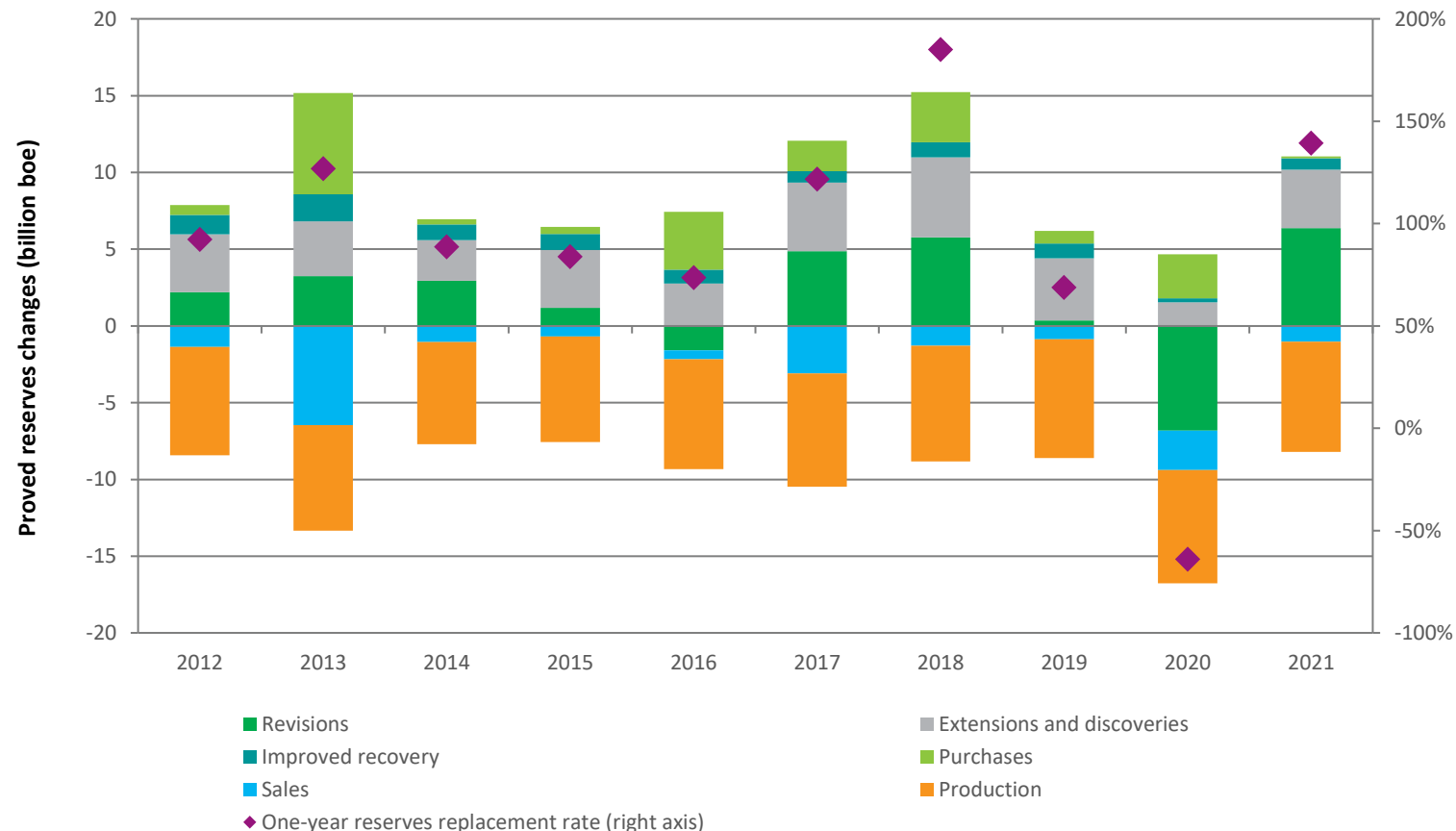


Source: S&P Global Commodity Insights

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# Reserve replacement trends remain volatile, largely as a result of commodity price fluctuations

Global integrated oil companies: Proved reserves replacement trends



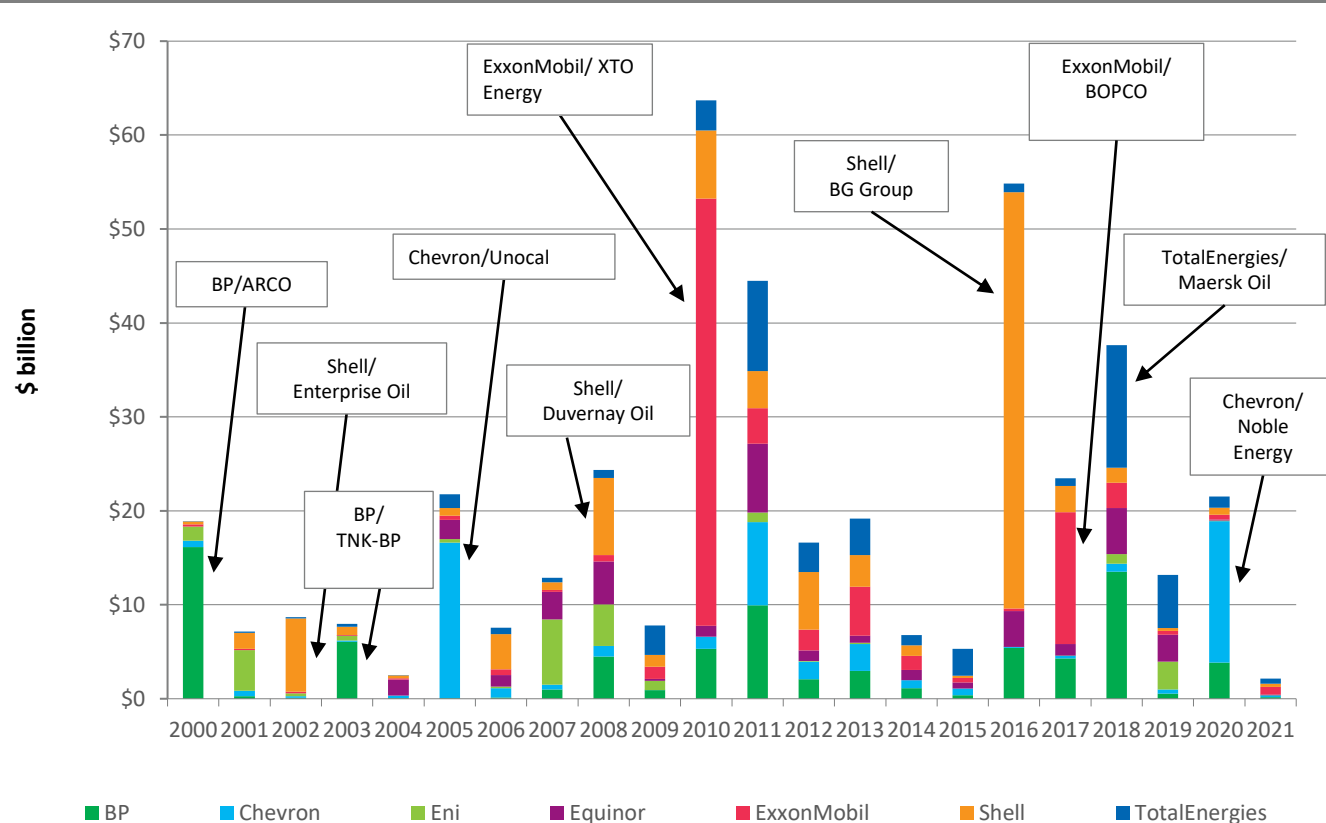
Source: S&P Global Upstream Companies & Transactions

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- For the peer group, the total reserves replacement rate (including purchases and sales of proved reserves) in 2021 amounted to 139: largely involved price recovery–related revisions;
- Looking ahead, Russian divestments will have a significant impact on the replacement picture for the group in 2022, albeit to varying degrees. BP's Rosneft exit will have the largest effect.
- Consolidation within the group and/or bolt-on acquisitions could help reduce the industry's cost structure and reposition portfolios, but energy transition efforts have diverted attention and funds away from upstream-focused M&A

# Upstream acquisition costs incurred in 2021 reached their lowest level since prior to 2000

Global integrated oil companies: Upstream acquisition costs incurred



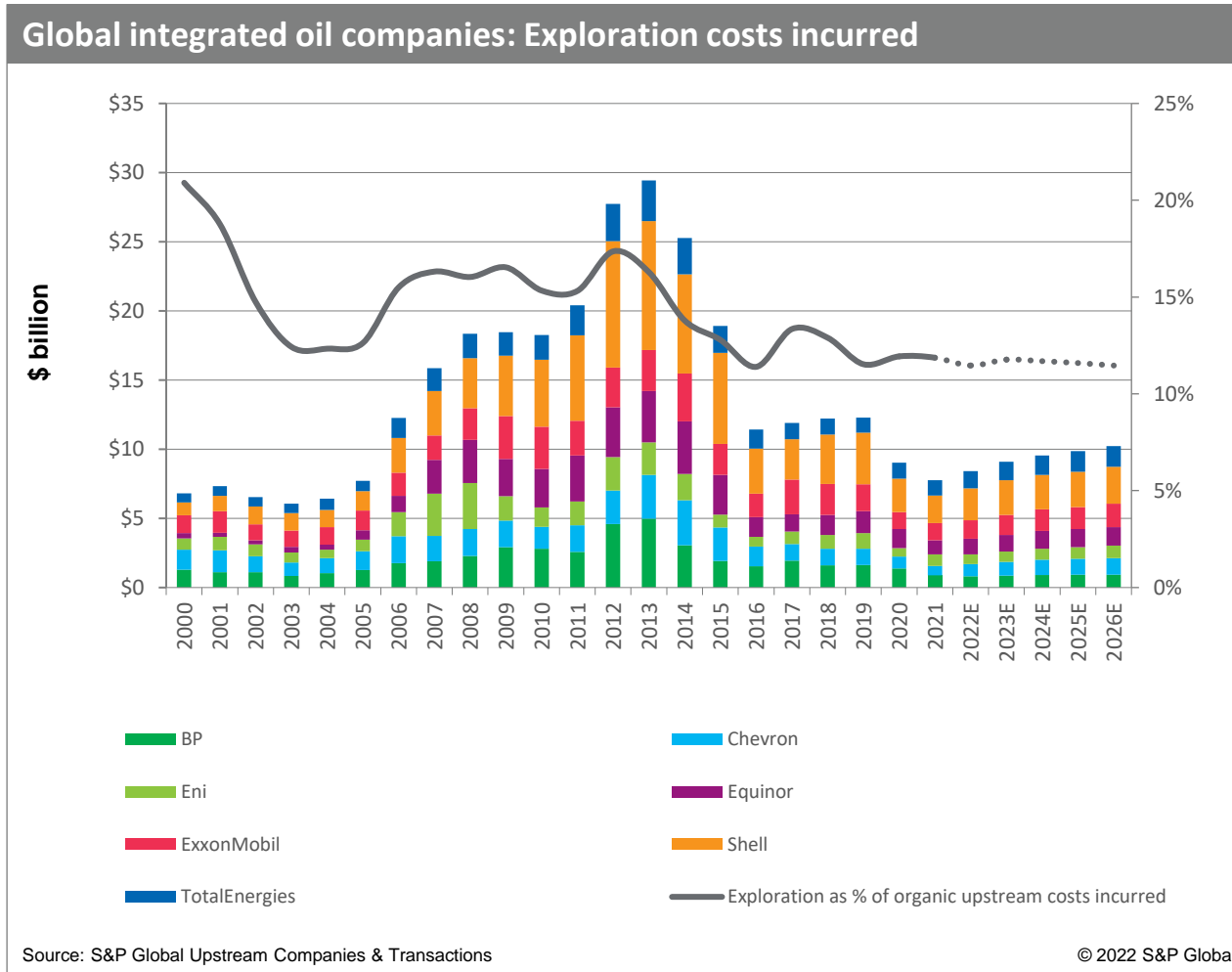
Note: Data based on company-reported upstream proved and unproved acquisition costs incurred. Annotations reflect corporate upstream-focused acquisitions of more than \$5 billion.  
Source: S&P Global Upstream Companies & Transactions

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- Total upstream acquisition costs incurred among the peer group (on an as-reported basis) amounted to only \$2.1 billion in 2021.
- Upstream M&A activity among this group is expected to remain subdued going forward, although transaction value is expected to increase in 2022, particularly with various deals announced in late 2021 (including participation by Shell and TotalEnergies in Brazil's 2nd Transfer of Rights licensing round in December 2021).
- Future deal activity is expected to be centered on supplementing portfolios within core operating areas, amid an ongoing focus on portfolio specialization, generating scale, and reducing carbon intensity.
- Recent JV formations by BP (with Eni in Angola and CNPC in Iraq) have highlighted this trend, with these transactions aimed at increasing operational efficiencies and generating synergies.

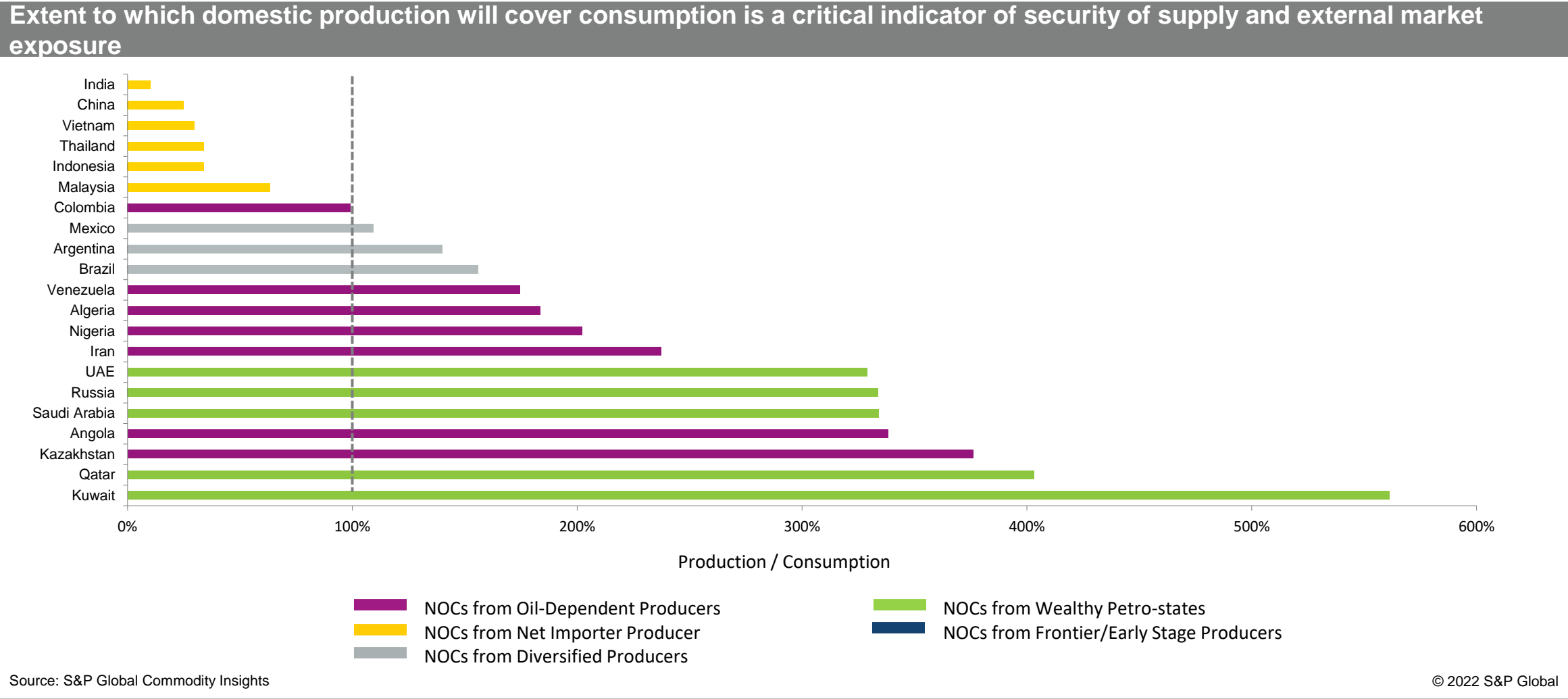


# Exploration spending for the peer group declined again in 2021, reaching its lowest level since 2005

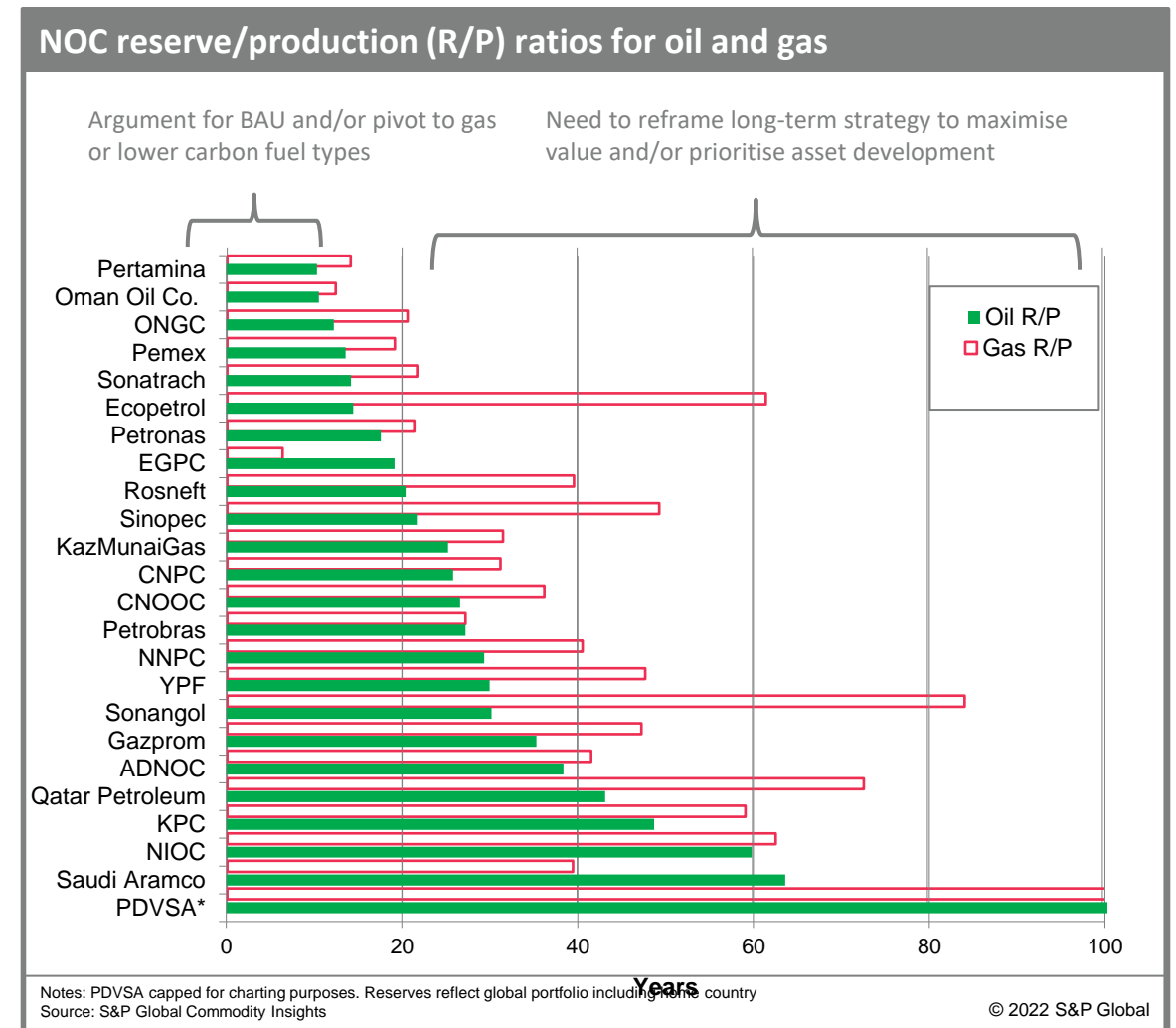
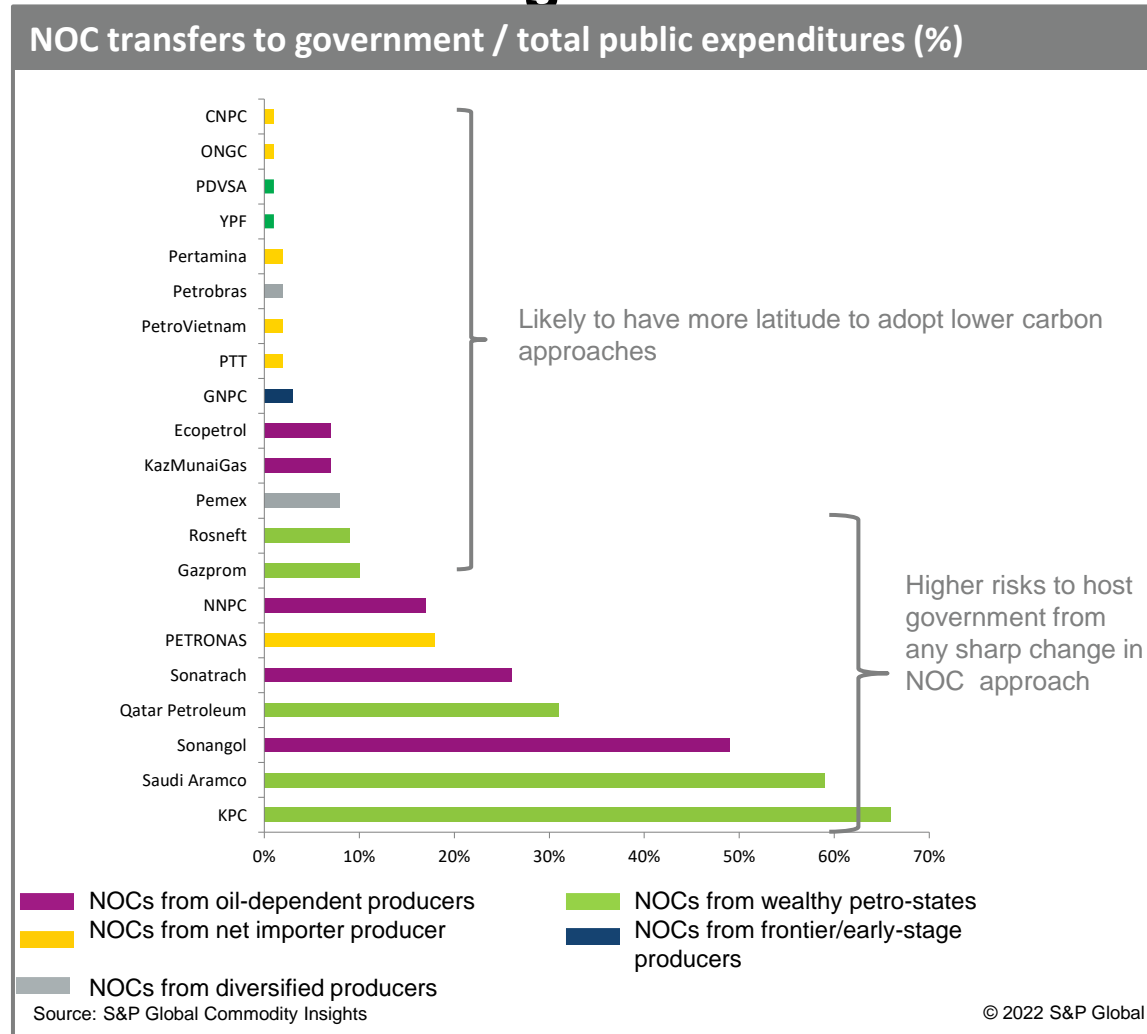


- Total exploration spending in 2021 was 74% lower than the peak in 2013, falling from nearly \$30 billion to \$7.8 billion during this time. An array of cyclical and structural factors have weighed on exploration activity, including:
  - An emphasis on shorter-cycle opportunities, with faster payback periods;
  - A shift in exploration toward near-field, infrastructure-led, and more mature opportunities, encompassing lower drilling and development risk and reduced capex commitments; and
  - A mismatch between long-lead time activities and growing uncertainty around the pace and scale of the energy transition.
- Looking ahead, S&P Global is currently forecasting that exploration capex will reverse course in 2022, and rise by 8% year on year. This growth is expected to continue at a modest level going forward, with total spending rising to just over \$10 billion by 2026—representing a 6% compound annual growth rate from 2021 levels.

# NOCs: Importance of energy transition for NOCs is weakened, when energy security is of much higher concern...

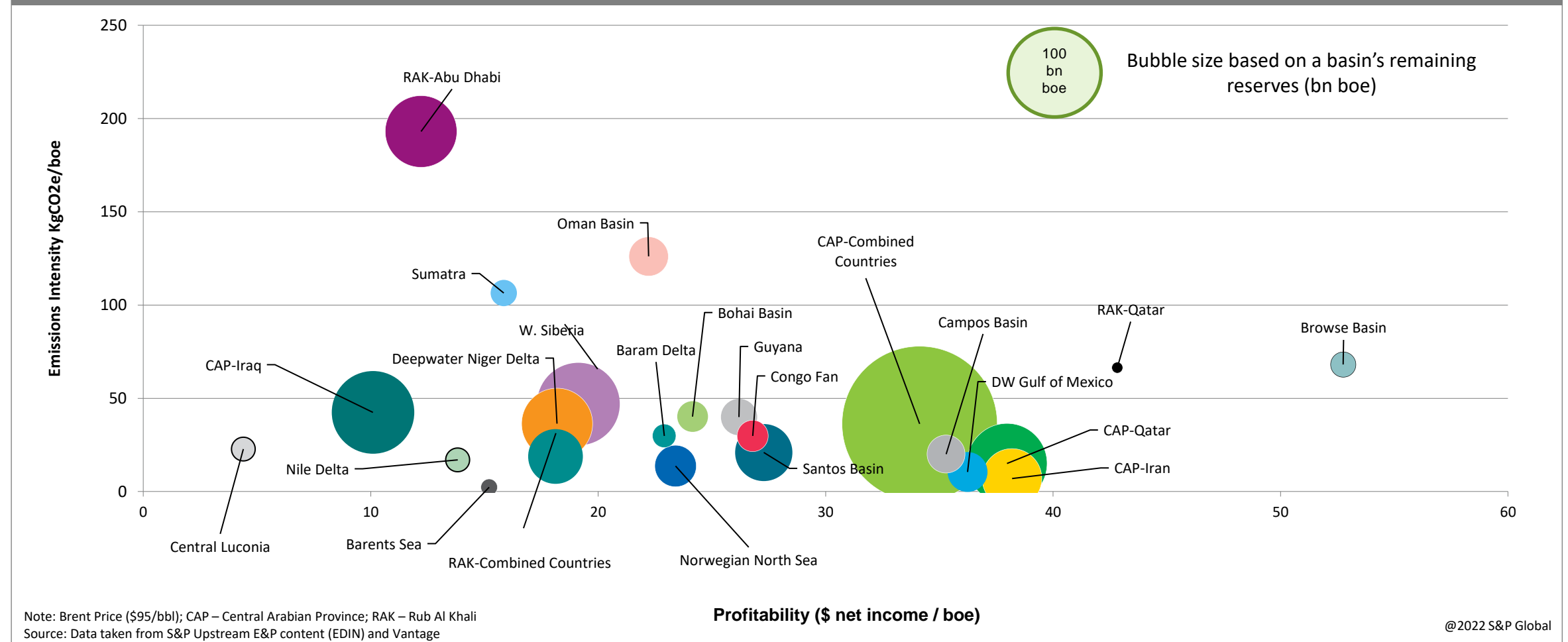


# ...with revenue transfers to host government and overall (R/P) ratio also key factors for strategic shifts



# Profitability is not the sole investment criteria – it must now include emissions intensity; Complexity increases when factoring in scale/access

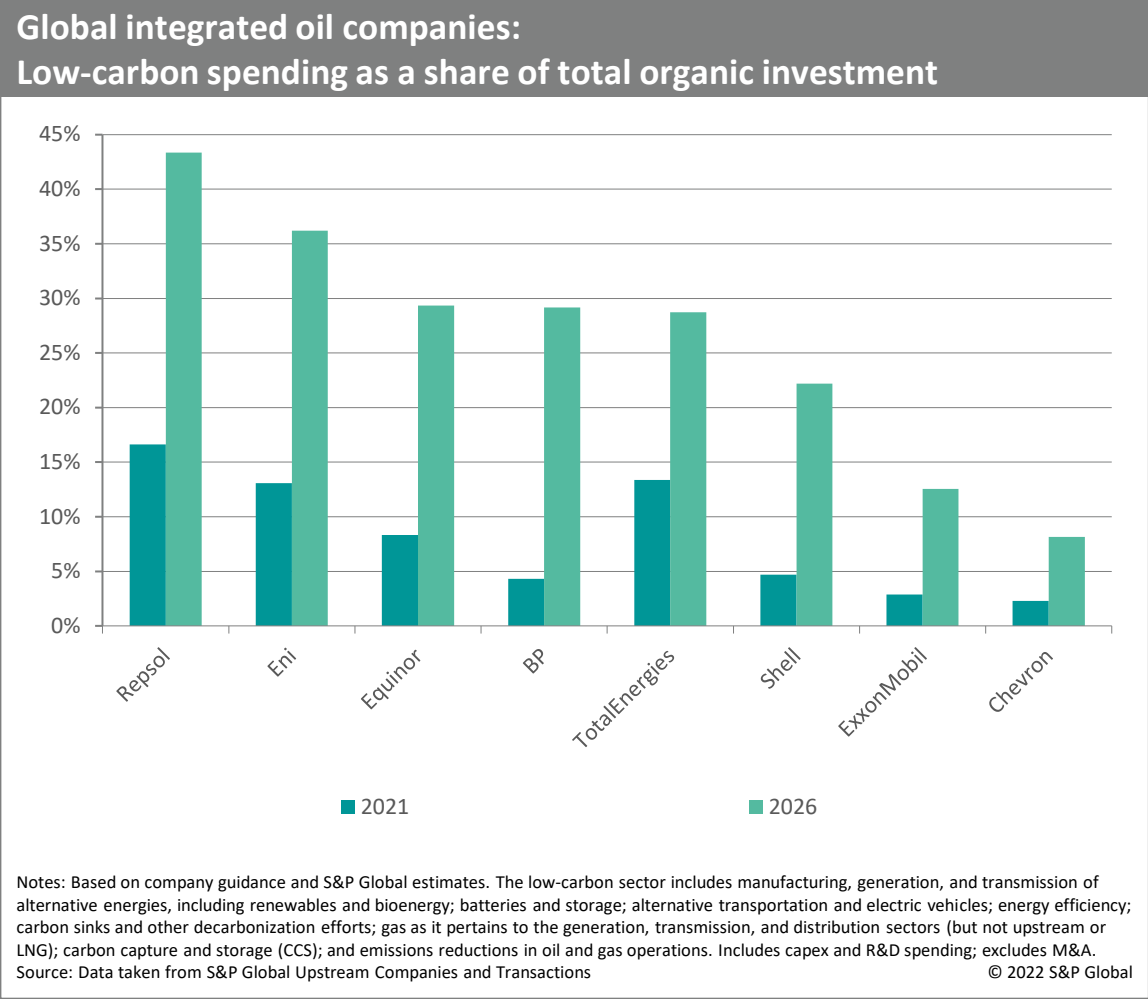
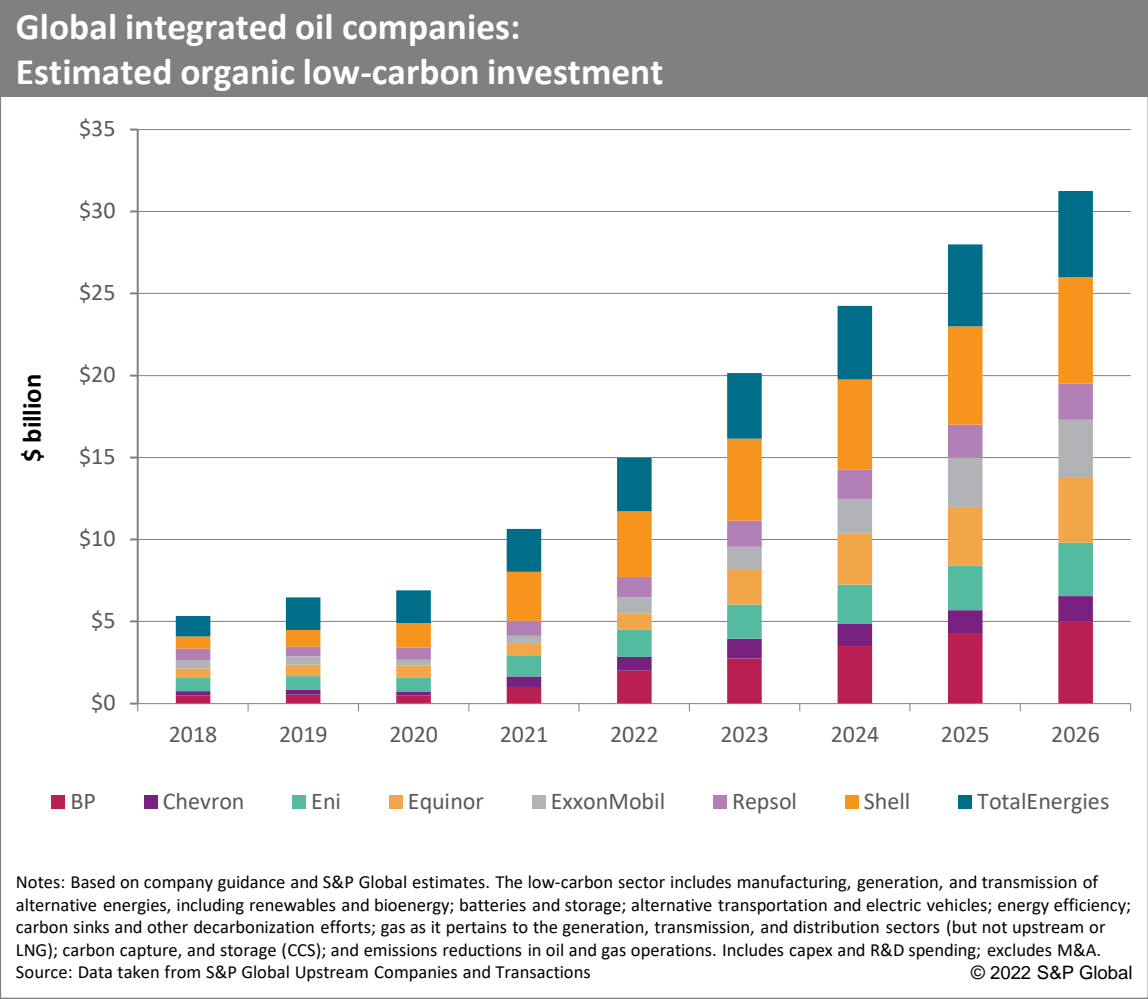
Emissions intensity versus profitability and remaining resources for a selection of global basins



## 4. What strategies are being adopted to meet the Energy Transition needs? AND Conclusion / Group Discussion – 1545-1630hrs

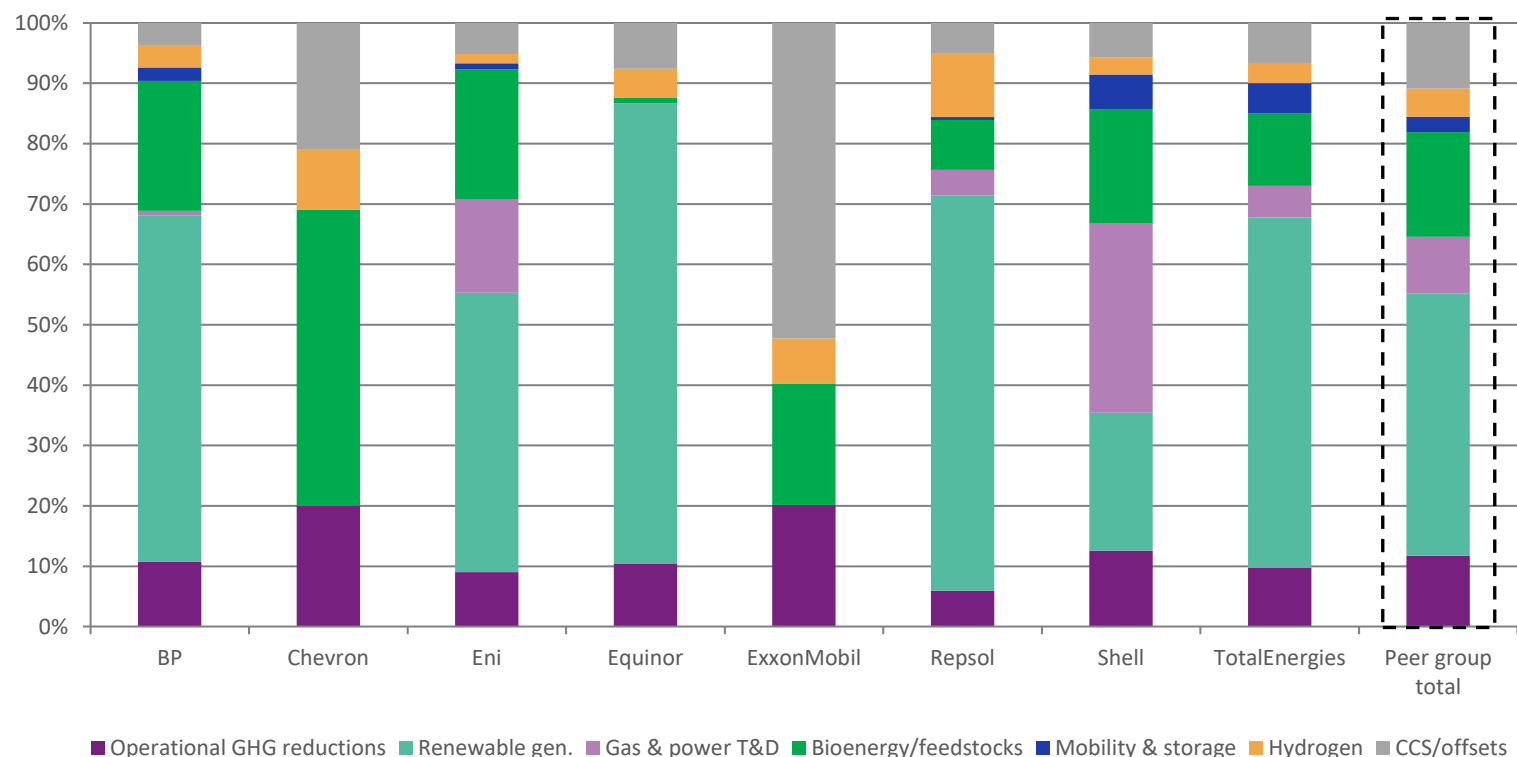
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# While share of low-carbon spending is increasing, Upstream E&P still drives the lion share of spending



# Renewable power generation and increasing presence further down the value-chain are the primary focus areas at present

Global integrated oil companies: Share of organic low-carbon spending by segment (2021–25)

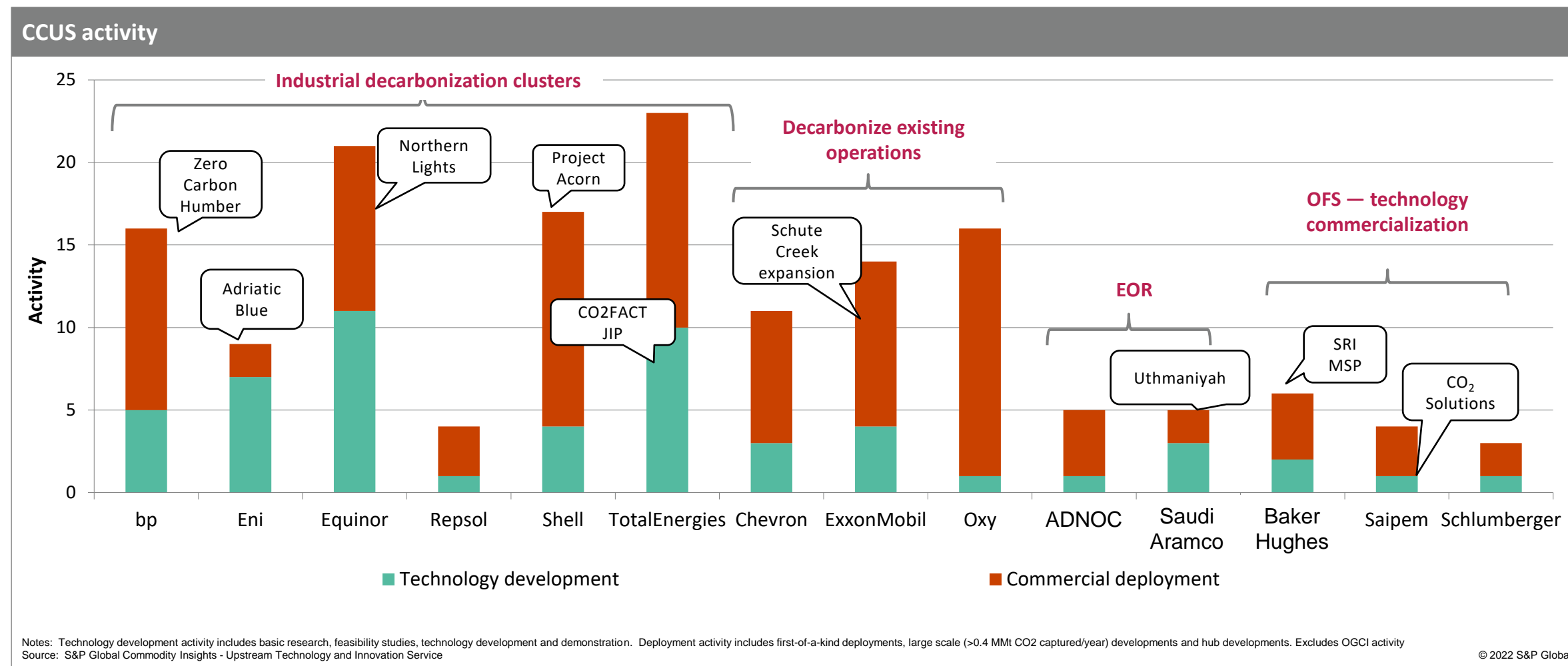


Note: Operational greenhouse gas (GHG) emissions reduction excludes carbon capture and storage (CCS). Renewable generation segment involves utility-scale projects and excludes projects used to power own operations. T&D=transmission and distribution. Excludes spending on acquisitions and venture capital investments.  
Source: Data taken from S&P Global Upstream Companies and Transactions

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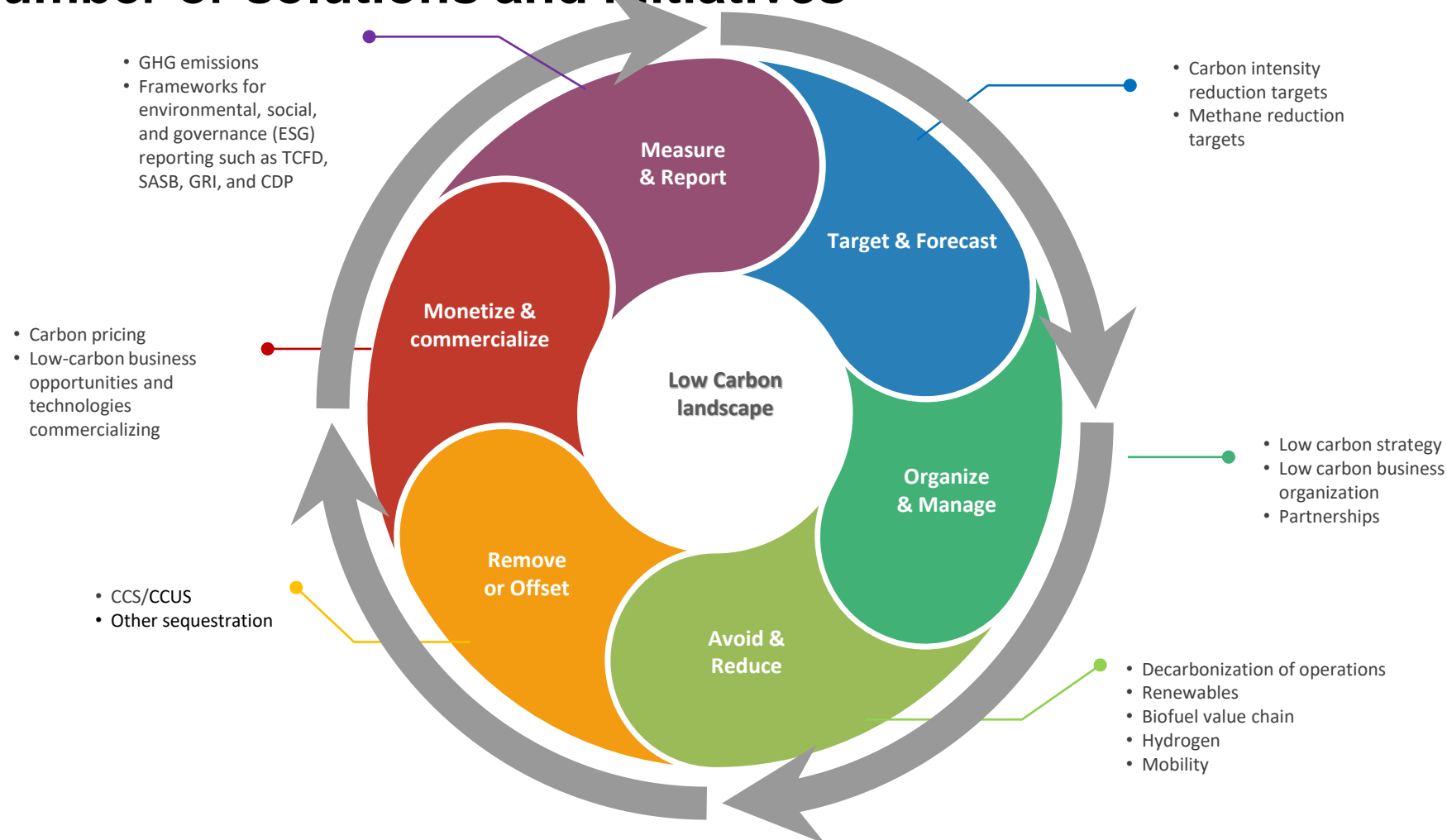
- European GIOC's spent 5-15% of organic spend towards low-carbon in 2021. This will rise to 20-40% by 2026 for this peer group.
- For the Europe-based integrated oil companies, there is aggressive growth targets for renewable generation capacity from several members of the group:
  - BP:** 50 GW of net developed renewables capacity by 2030 (compared with 4.4 GW in 2021)
  - Eni:** Over 15 GW of net installed renewables capacity by 2030, and 60 GW by 2050 (vs. 1.1 GW in 2021)
  - Equinor:** Equity installed renewable generation capacity of 12–16 GW by 2030, up from 0.7 GW in 2021
  - Repsol:** 6 GW and 20 GW of equity installed renewable capacity by 2025 and 2030, respectively (compared with 1.5 GW in 2021)
  - TotalEnergies:** 35 GW of gross installed renewables capacity by 2025, with an ambition to reach 100 GW by 2030, compared with 10.3 GW in 2021
  - Total Peer Group:** 18GW in 2021 to 200 GW by 2030

# Can CCUS play a key role in decarbonization? If forecast CCUS capacity by 2025 is considered, it will only represent 0.2% of global emissions



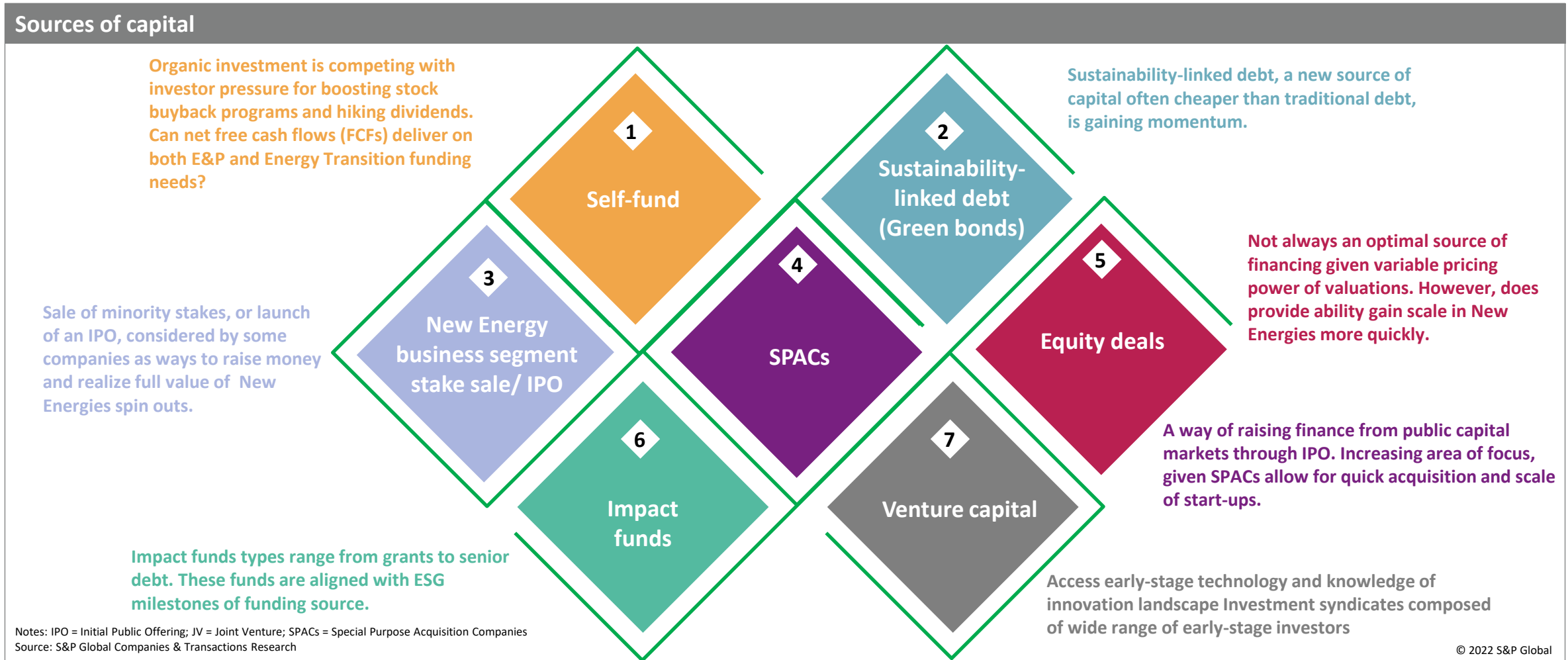


# For companies across the board, the low-carbon landscape is spread across a broad number of solutions and initiatives

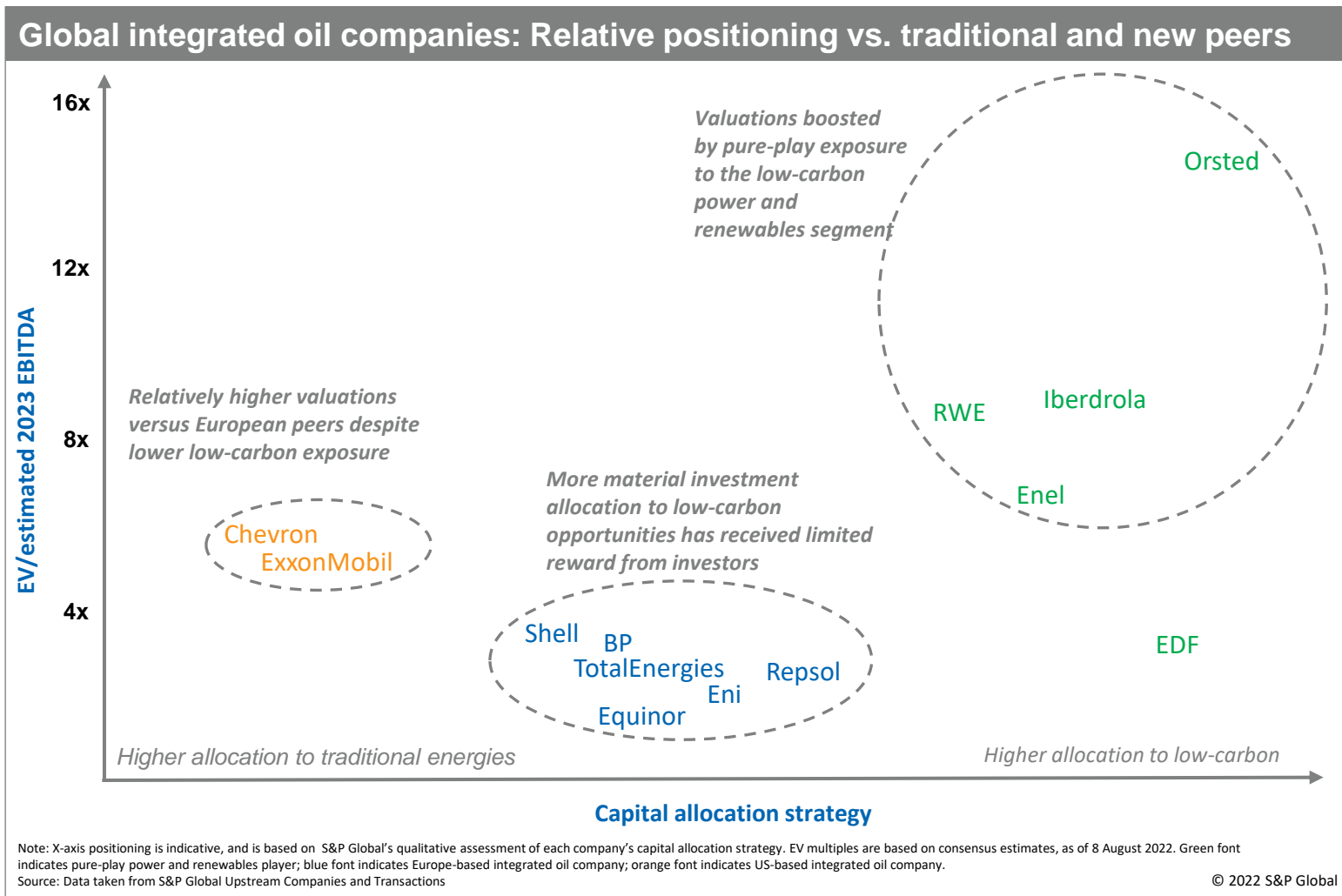


Note: TCFD = Task Force on Climate-related Financial Disclosures; SASB = Sustainability Accounting Standards Board; GRI = Global Reporting Initiative. CDP = Customer Data Platform

# To fund the Energy Transition, oil and gas companies are exploring a range of new financing approaches



# For peer groups vested in accelerating their Energy Transition efforts, investors will seek strategy clarity, ability to execute and materiality



- Despite an average 43% share price, the European GIOC continues to trade at a significant valuation discount to the pure-play low-carbon power & renewables companies.
- Most importantly, the Europe-based GIOC trade at lower multiples than their US-based peers, despite significantly more advanced low-carbon portfolios and strategies.
- We believe three key elements will be key for rewarding performance:
  - Clarity around strategy
  - Demonstrate execution
  - Deliver scale and returns that match the historical E&P business

# Energy transition approach often mimics historical oil and gas strategy

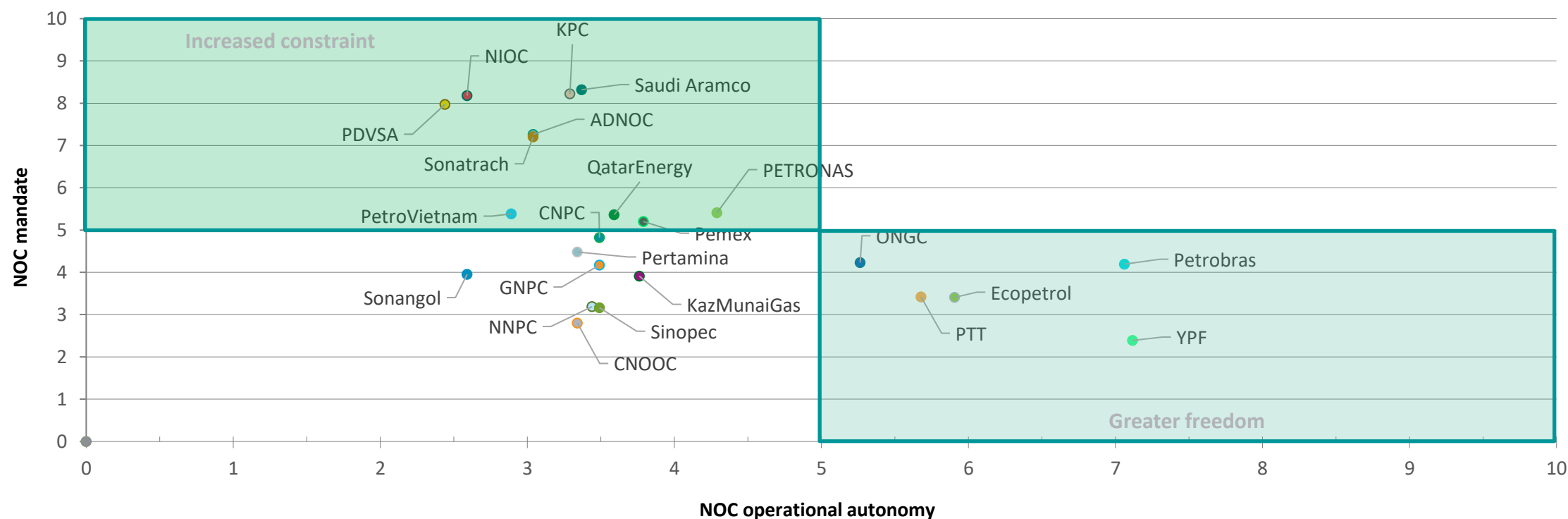
GIOCs: Strategy comparisons			
	Oil and gas		New Energies
<b>Equinor</b>	Deepwater development specialist/narrow focus	➤➤➤➤➤	Offshore wind development specialist/narrow focus
<b>Eni</b>	Discover resources and divest stakes to finance further development	➤➤➤➤➤	Planning to sell stake in renewables businesses
<b>TotalEnergies</b>	Medium-to-large asset acquisitions	➤➤➤➤➤	Most active low-carbon acquirer
<b>Shell</b>	Emphasis on integration/downstream/markets and trading	➤➤➤➤➤	Focus on downstream/trading (mobility/customers/markets) over renewables generation

Source: S&P Global

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# For NOCs, the pace of energy transition will be highly dependent on mandates placed by the state and operational autonomy

## NOCs: Importance to state



Source: S&P Global Oil & Gas Risk Service

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### Operational Autonomy

Role of non-state shareholders; Management independence;  
Domestic constraints

### NOC Mandate

Revenue generator; Domestic energy provider; Foreign policy tool; Resource  
stewardship; Social role; Employer and economic champion

## Key oil market messages: The six factors that will shape the oil price environment

- **The coming 5 December 2022 and 5 February 2023 EU bans on Russian crude oil and products hold potential for greater disruption than currently implied by the oil futures market.** Ironically, both Russia and the Group of Seven (G7) want to keep Russian oil flowing to the global market outside of Europe. Yet, the G7 price cap—and opposition to it—and EU maritime service bans pose nontrivial risks of significant supply perturbations. Our base case assumes cuts in Russian oil exports that range from 0.5 MMb/d to 1.5 MMb/d. There is a risk of other supply being impacted as well.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **Chinese oil demand is critical to the future oil price path.** Mainland China has been the main growth engine of world oil demand for two decades. Yet rolling COVID-19 lockdowns have kept oil demand below year-earlier levels for most of 2022. This is a key reason for the oil price decline since June. If Chinese demand growth remains negative, it could sustain downward pressure on prices. Our base case, however, assumes a recovery in Chinese oil demand growth in late 2022 and through 2023.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## Key oil market messages: The six factors that will shape the oil price environment

- **OPEC+ cannot increase production quickly, but it can cut output immediately.** This means OPEC+ can readily defend an oil price level if it chooses to do so. But it could do little to thwart a price spike amid a large supply disruption or demand increase.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.



## Key oil market messages: The six factors that will shape the oil price environment

- **US crude oil production growth is a major component of the world's supply growth.** The counterpart to Chinese demand on the supply side is US production. US output growth so far this year has been slower than expected, but we maintain our view that US crude oil growth will accelerate later this year and in 2023. Year-on-year gains, in our base case, are 600,000 b/d in fourth quarter 2022 and 1.1 MMb/d for full-year 2023. If US growth disappoints, there are few other sources, and perhaps none, that could replace it.

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## Key oil market messages: The six factors that will shape the oil price environment

- **Government intervention by the European Union, the United States, Russia, and others could prove pivotal.** Russia is not a passive actor as it seeks to punish those who sanction it. How the European Union adheres to its Russian oil bans, or modifies them, is crucial in the months ahead. And how vigorously the United States spearheads the G7 price cap, uses the Strategic Petroleum Reserve (SPR), and imposes other sanctions will also shape the contours of the market. And mainland China and India are not passive observers.

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## Key oil market messages: The six factors that will shape the oil price environment

- **There is a wide range of price outcomes amid exceptional uncertainty.** Our base-case crude oil price outlook, called “Inbounds,” assumes demand remains below global production capacity, but uncertainty about Russian oil flows and thin spare capacity generally keep Dated Brent oil prices around \$90–110/bbl for the rest of this year and in 2023. There are, of course, possible developments that could lead to large swings of surplus or deficit—and prices—beyond what we already expect. If demand growth continues to weaken, prices could fall to \$70/bbl.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

# Group Discussion

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## **For the student in you...” what is the path to becoming a great student of energy affairs?”**

- The ‘day-to-day’ reading list:
- ET Energy + Bloomberg Quint. Their India energy coverage will keep you going for your day to day
- Financial Times - <https://www.ft.com/> - for a global view
- The Wall Street Journal - <https://www.wsj.com/> - for a global + US view
- OPEC MOMR - [https://www.opec.org/opec\\_web/en/publications/338.htm](https://www.opec.org/opec_web/en/publications/338.htm) - Certainly the OPEC view of the world markets is a critical component for any student of energy affairs. While you can read the full report if you wish, in my view, the first few pages of their ‘monthly view’ comprising of the ‘Oil Market Highlights’ and a ‘Featured Article’ are enough.

## For the student in you...” what is the path to becoming a great student of energy affairs?” (continued)

- OIES - <https://www.oxfordenergy.org/>  
OIES research is critical reading on global energy affairs and has articles on current issues affecting the energy markets, as well as issues emerging now that have long term implications for energy affairs.
- CGEP - <https://www.energypolicy.columbia.edu/> - great resource for a US-centric but also global view.
- EIA Country Briefs - <https://www.eia.gov/international/analysis/country/> - Top class quick-reads for understanding a country’s energy sector. They cover almost every country that you may ever need to reference. Great reading for our Company Strategy team workflows.
- Special mention  
[https://www.eia.gov/international/content/analysis/special\\_topics/World\\_Oil\\_Transit\\_Chokepoints/wotc.pdf](https://www.eia.gov/international/content/analysis/special_topics/World_Oil_Transit_Chokepoints/wotc.pdf)

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## **For the student in you...” what is the path to becoming a great student of energy affairs?” (continued)**

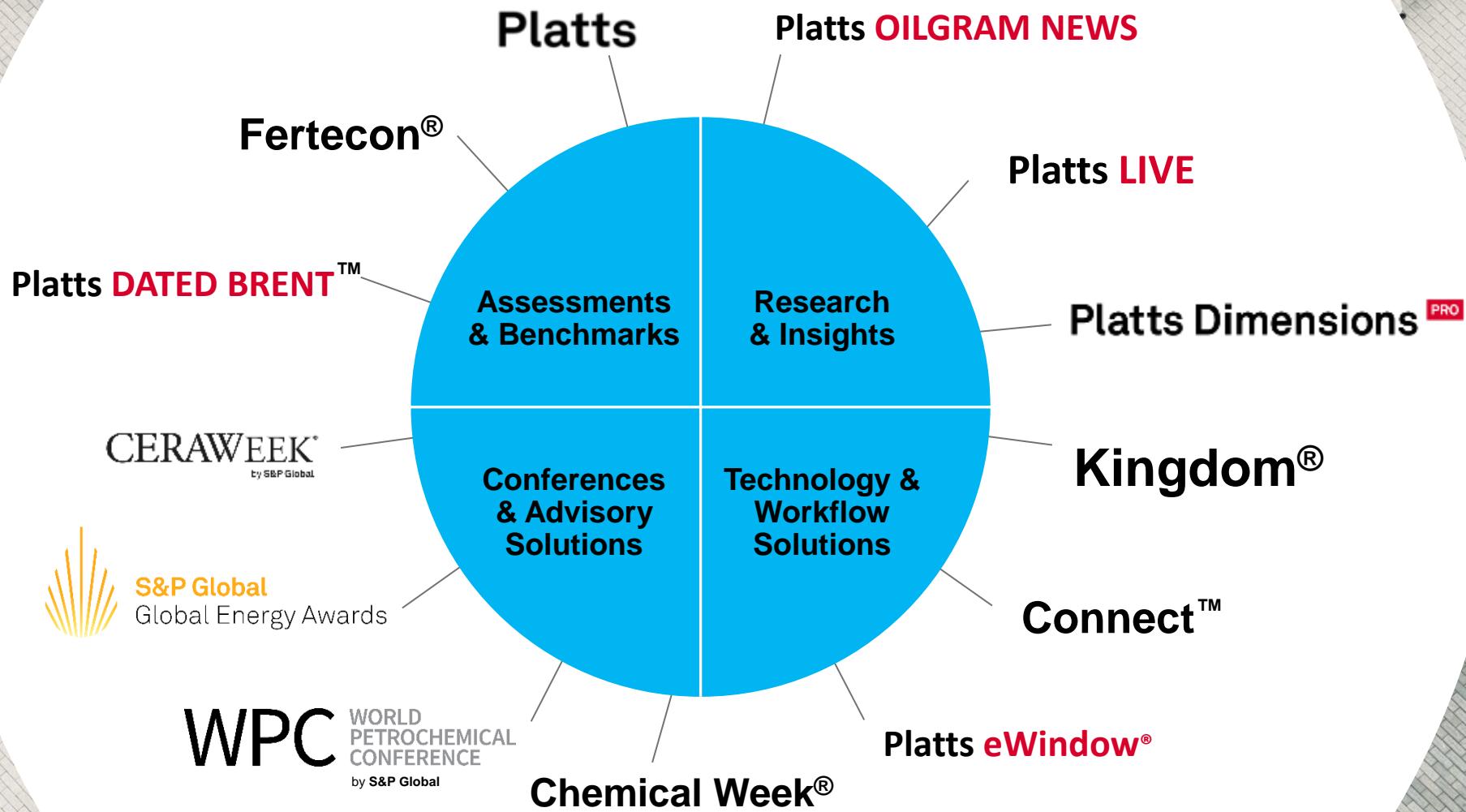
- 1) BP Stat Review - <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html>. The Bhagvad Gita of global energy statistics. I must have referenced them a thousand times throughout university! Most people peruse the excel downloads, but the report itself is fantastic reading.
- 2) BP Energy Outlook - <https://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html>.
- 3) EIA Country Briefs - <https://www.eia.gov/international/analysis/country/> - Top class quick-reads for understanding a country’s energy sector. They cover almost every country that you may ever need to reference. Great reading for our Company Strategy team workflows.  
Special mention - This report - [https://www.eia.gov/international/content/analysis/special\\_topics/World\\_Oil\\_Transit\\_Chokepoints/wotc.pdf](https://www.eia.gov/international/content/analysis/special_topics/World_Oil_Transit_Chokepoints/wotc.pdf) - is my all-time favourite read.

Note: Economies included in the G7 grouping are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Union.

## **For the student in you...” what is the path to becoming a great student of energy affairs?” (continued)**

- 1) Annual reports! I cannot emphasise this enough. Some of the deepest reading you will do is by reading the most boring material out there - Annual reports!
- 2) Academic journals like Foreign Policy, Foreign Affairs, International Affairs, Energy Policy.





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