



Post-Paris Agreement: A World of Peak Oil Demand?

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The Paris Agreement: A reminder

1	Mitigation	<ul style="list-style-type: none">• Keep global temperatures "well below" 2.0°C above pre-industrial times• Limit greenhouse gas emissions to a level that trees, soil and oceans can absorb naturally by 2100
2	Transparency	<ul style="list-style-type: none">• Review each country's contribution to cutting emissions every five years
3	Adaptation	<ul style="list-style-type: none">• Strengthen societies' ability to deal with the impacts of climate change• Provide continued support to help developing countries adapt
4	Loss and damage	<ul style="list-style-type: none">• Recognise the importance of the loss and damage associated with climate change and implement preventative measures
5	Support	<ul style="list-style-type: none">• Rich countries will aid poorer nations by providing "climate finance" ...• ...helping them to adapt to climate change and switch to renewables

Projections for *Peak oil demand* vary widely

It is more valuable to study underlying trends



"Oil (demand) peaks between 94 mb/d and 103 mb/d in 2030."

— *World Energy Council: Scenarios 2016*



"Our assessment of the impact of the Nationally Determined Contributions made as part of the Paris Agreement, are insufficient to bring about a peak in oil demand prior to 2040. "

— *IEA World Energy Outlook 2016*



"Oil demand will peak around 2020"

— *Carbon Tracker – Stranded Asset Danger Zone*



2017



2020



2030



2040



2040 +



" Oil remains the world's primary energy source through 2040, meeting about one-third of demand "

— *XOM The Outlook for Energy: A View to 2040*



"Oil demand may start to decline during the mid-2040s. But it might peak much sooner or later."

— *BP Energy Outlook 2017*

A potential demand peak will be shaped by four drivers

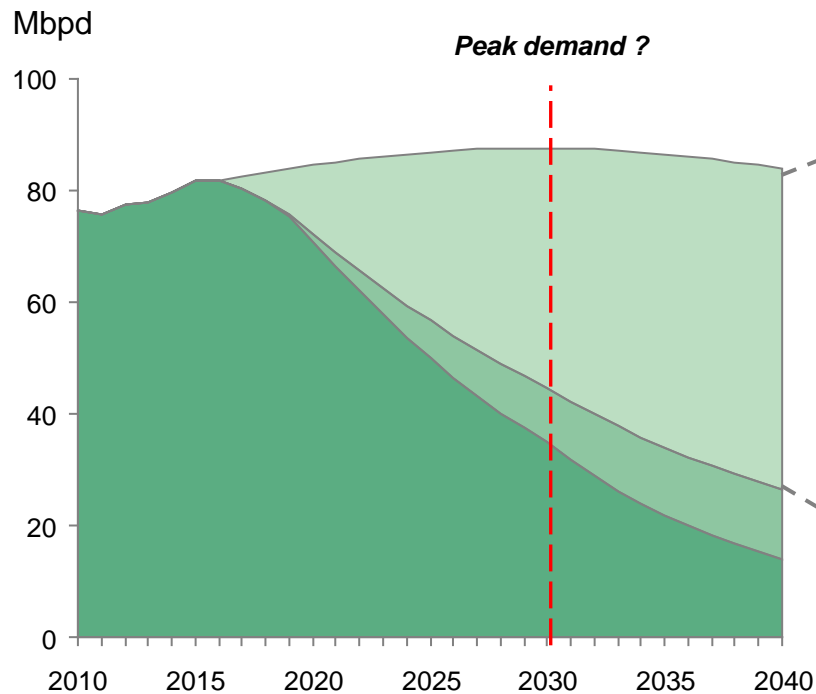
The blend of drivers increases uncertainty around the pace of change

1	Economics	<ul style="list-style-type: none">• How long can we rely on competitively priced oil supplies?• How fast will costs of alternatives decline?
2	Legislation	<ul style="list-style-type: none">• What legislation will be implemented, and where?• How concrete will its impact be?
3	Technology	<ul style="list-style-type: none">• Will substitution be evolutionary or violent and disruptive?• How fast can low carbon solutions scale up globally?
4	Applications	<ul style="list-style-type: none">• How fast will oil substitutes penetrate?• Will new product applications emerge that will create demand?

Even in a world of peak demand, we will continue to need substantial oil investments

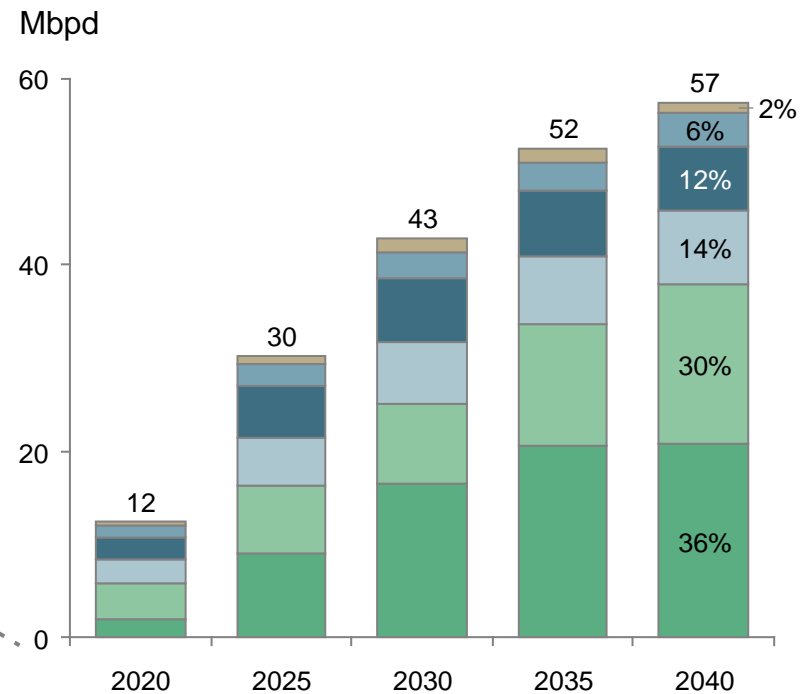
Illustrative

Oil production forecast
-under most pessimistic scenario-



- New production
- Already producing @ 85 price scenario
- Already producing @ 50 price scenario

New production volumes
-by type of play-



- Oil sands
- Offshore shelf
- Offshore midwater
- Shale/Tight oil
- Offshore deepwater
- Other Onshore

How are NOCs and IOCs reacting to an emerging prospect of peak oil demand?

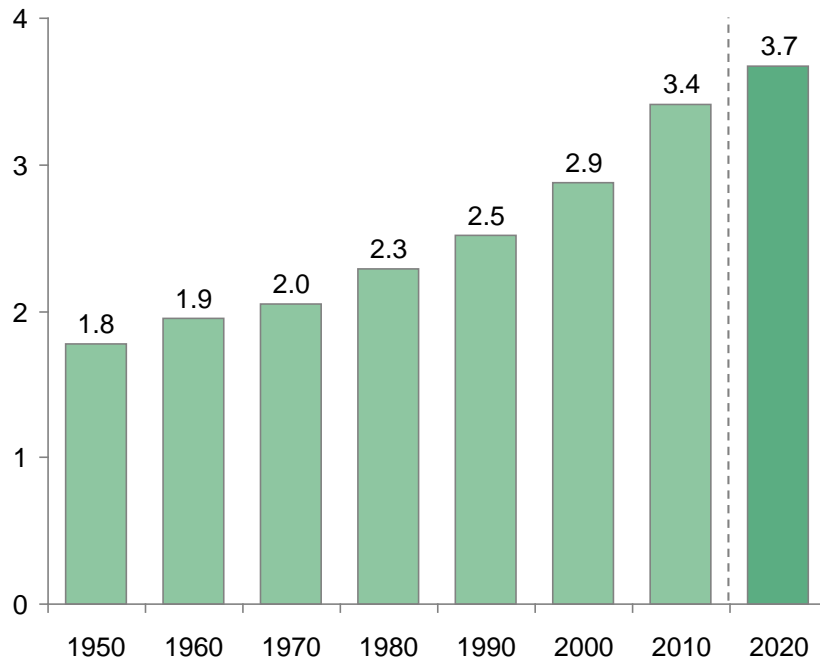
	Large NOCs	IOCs
Strategy	<ul style="list-style-type: none">• Maintain focus on market share• Maintain focus on large, low cost oil resources	<ul style="list-style-type: none">• Focus on returns• Reconsider exposure to complex, high cost resources
Portfolio	<ul style="list-style-type: none">• Integrate Downstream• Increase gas exposure	<ul style="list-style-type: none">• Expand beyond hydrocarbons• Increase gas weighting
Industry Structure	<ul style="list-style-type: none">• Partnerships and alliances• Diversifying risks by granting access via IPOs and reforms	<ul style="list-style-type: none">• Scale up through M&A, <i>or...</i>• Fragment into efficient, specialized units

NOCs continue to diversify

Not only geographically, but also in types of project

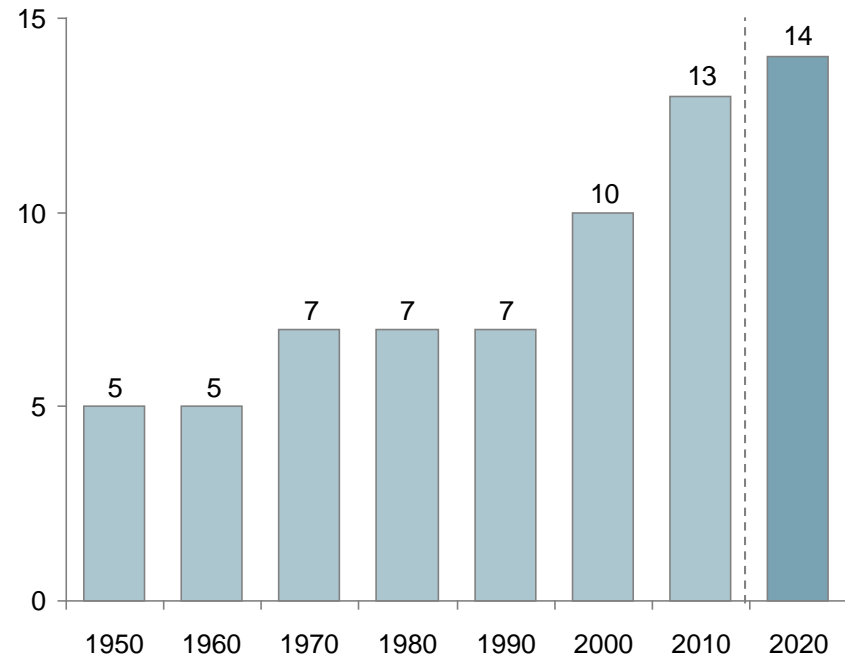
NOCs have long been increasing their geographical reach...

Countries



...but more recently have diversified the range of plays from which they produce

types of Play



Note: Asset types: Conventional onshore, self, deepwater, ultra-deepwater, Arctic shelf and deepwater, Oil sands, Extra heavy oil, Tight liquid plays, Shale oil plays, Shale gas plays, Tight gas, Coalbed Methane.

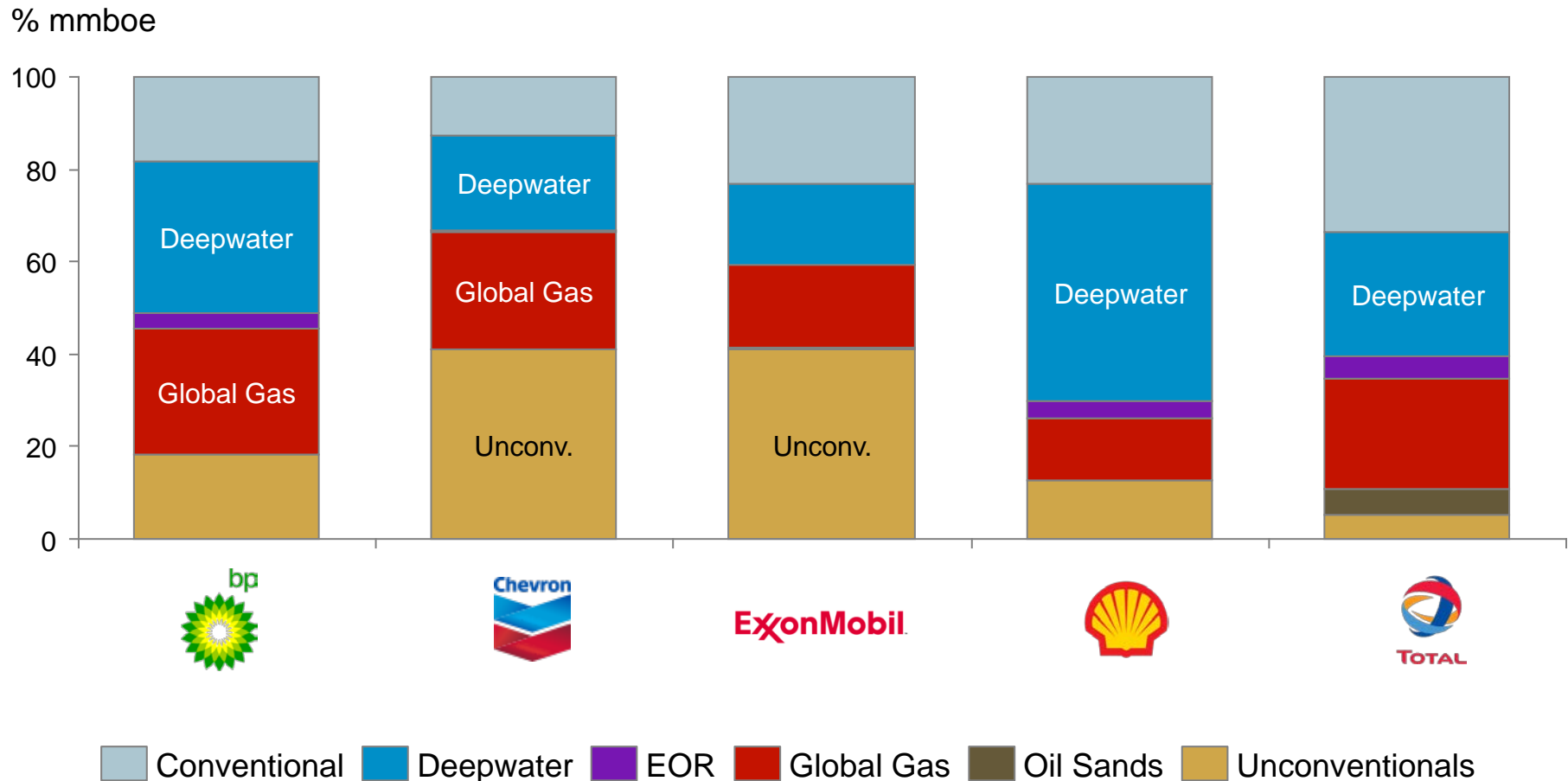
Source: Rystad Energy, BCG Analysis

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IOCs are starting to look more different from one another

Taking increasingly different views on resource types and their oil vs. gas balance

New source volumes planned onstream 2017 - 2025



Questions for us to discuss

- 1 Will the Paris Agreement lead to peak demand?**
 - ...or will cost effective carbon management technologies secure a long-term future for oil in the energy mix?
 - ... and will demand increase from non-transport sources?
- 2 To what extent are oil companies and governments at risk of stranded reserves?**
 - ...and what does that imply for physical and financial energy market interactions?
- 3 How might the responses of NOCs and IOCs differ in such an environment?**
- 4 Is conventional oil better or worse positioned to compete with unconventional resources in an oil market anticipating declining demand?**



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