Advancing energy outlook comparability:
objectives, questions, progress

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Background

- Since the **Cancún Ministerial Declaration of 2010**, the IEA, IEF and OPEC collaborate to promote a better understanding of the **key short, medium, and long term drivers of energy supply and demand**.

- **Joint work to harmonise basic concepts** improves the energy dialogue by making outlooks more comparable and the variety of insights that shape distinct energy outlooks more transparent.

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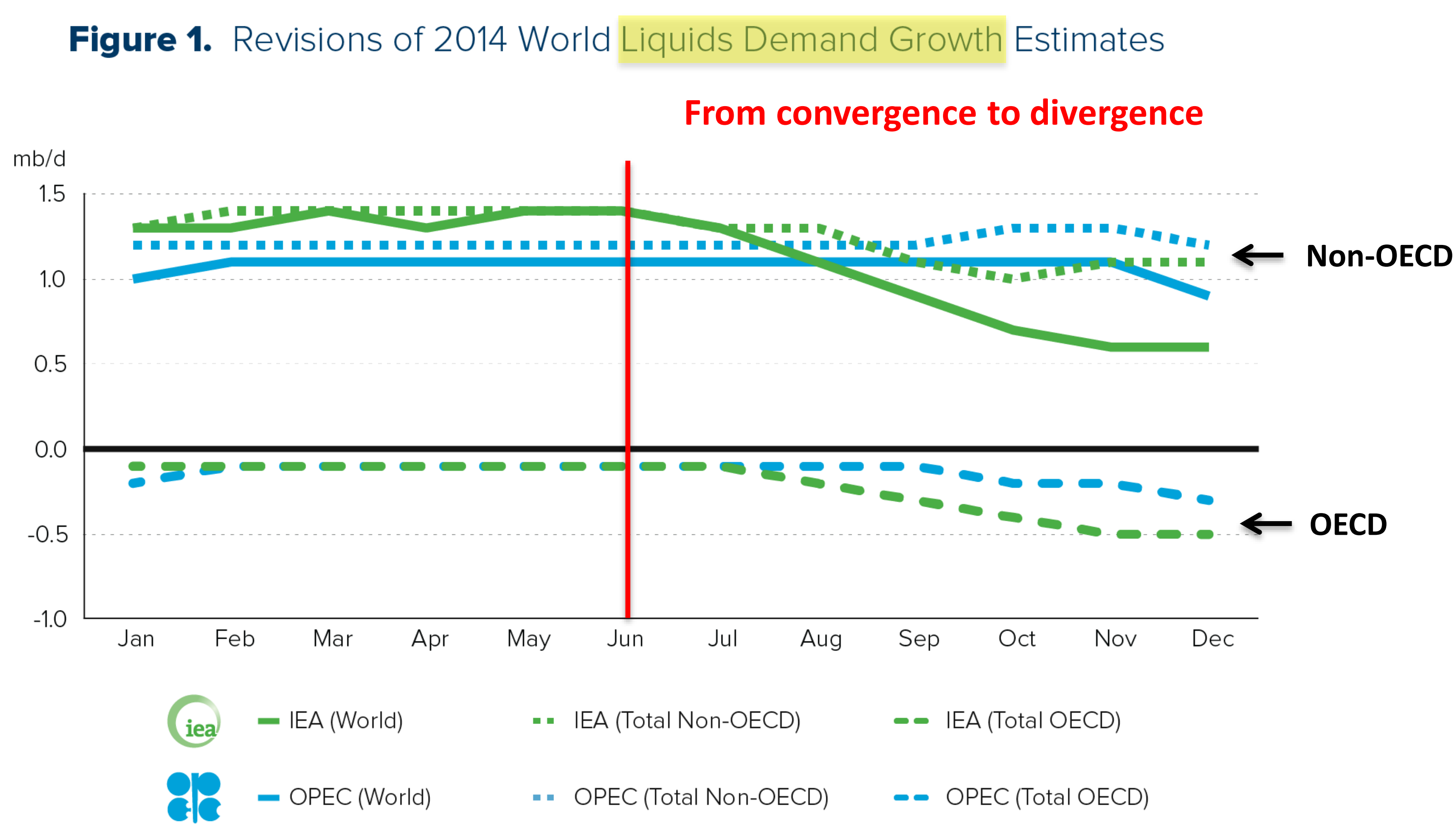
Question 1

What happened to energy outlooks in 2014?

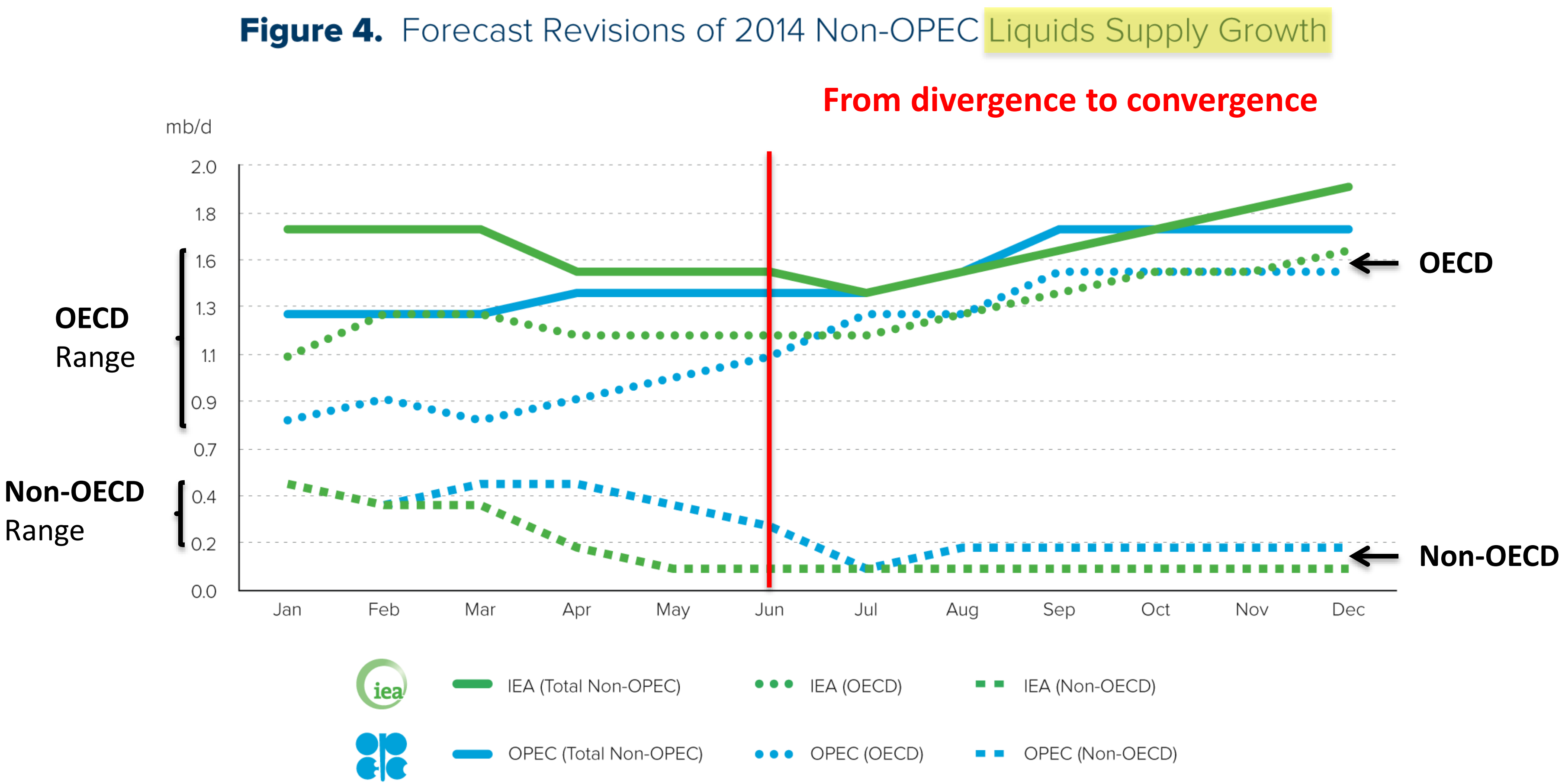
Few imagined in June 2014 that a pronounced price fall was about to follow

Source	Price per barrel expected at end of 2014
IEA	\$128 - \$147
B of A Merrill Lynch	Increase \$40-50
Morgan Stanley	Increase \$35-70
DMS Funds	\$150-160
Today Online	\$140 +
Again Capital	\$125 +
Japan's Astmax Investment	\$125-120
WSJ Market Watch	\$200
Capital Economics	\$140 +

Demand estimates for both the IEA and OPEC were stable until June, when expectations began to change



Supply estimates for both the IEA and OPEC converged by the second half of the year

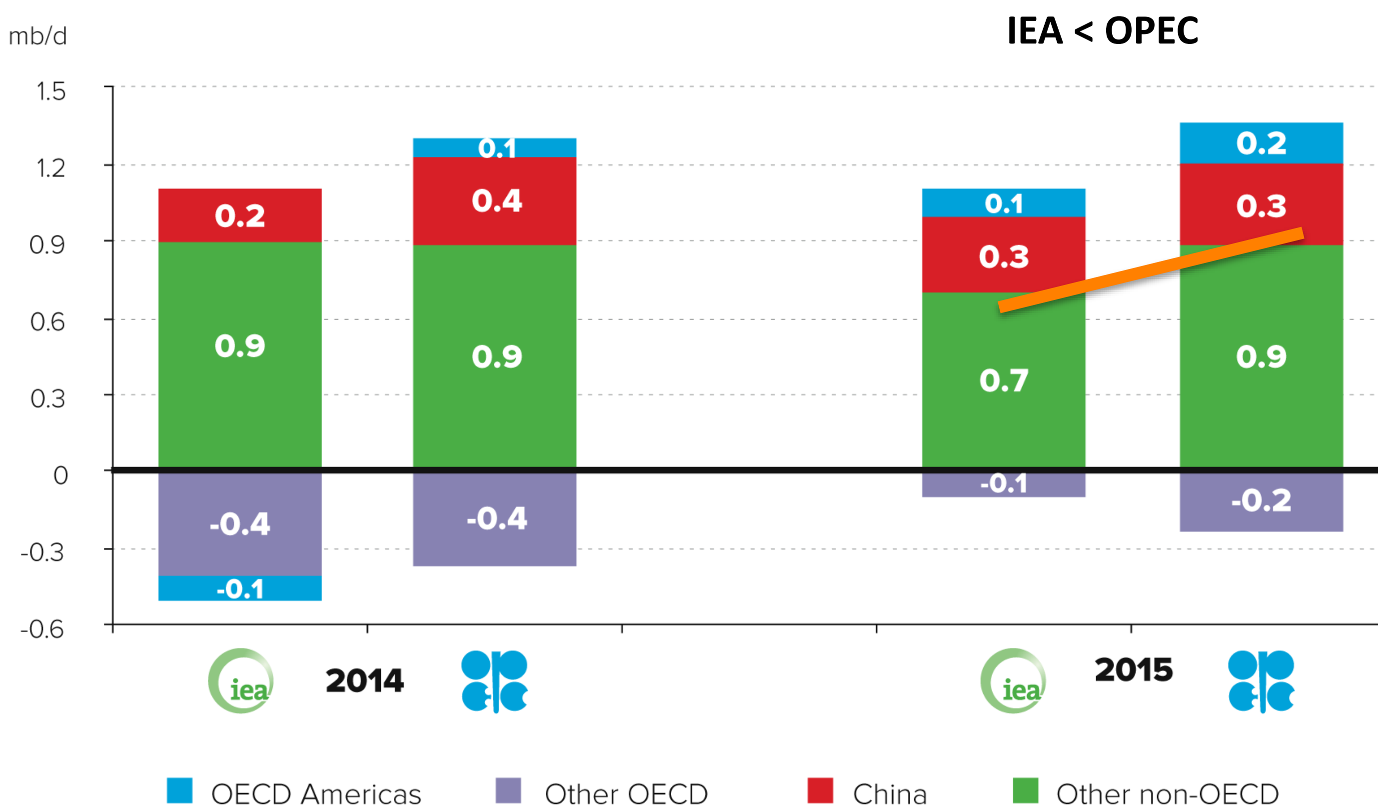


Question 2

What can we expect for 2015?

Both the IEA and OPEC expect Non-OECD demand to increase while OECD demand remains flat, but their demand estimates differ by 20%

Figure 3. Short-term Liquids Demand Annual Growth

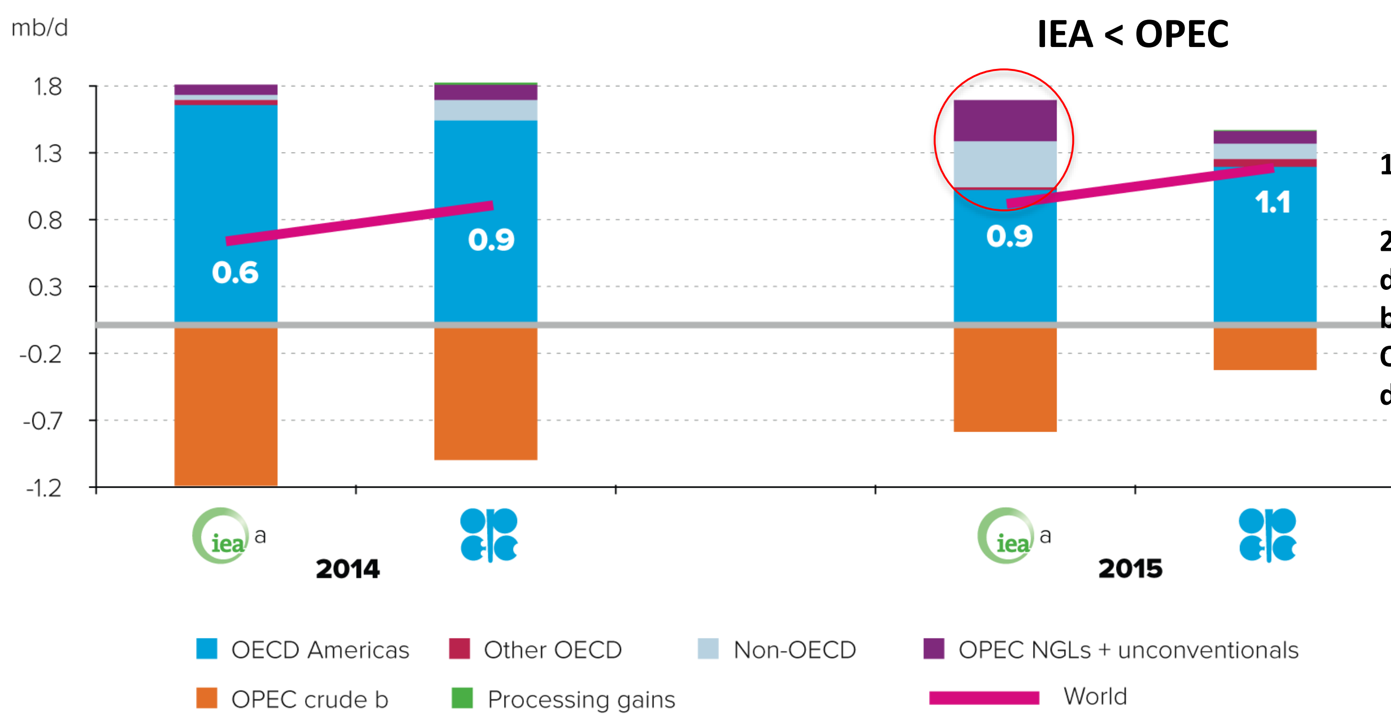


1.2 vs. 1 mb/d:

200,000 barrels difference between IEA and OPEC in net demand growth

The IEA estimates supply growth to be lower and more geographically dispersed than OPEC does

Figure 6. Short-term Liquids Supply Net Annual Growth Forecasts



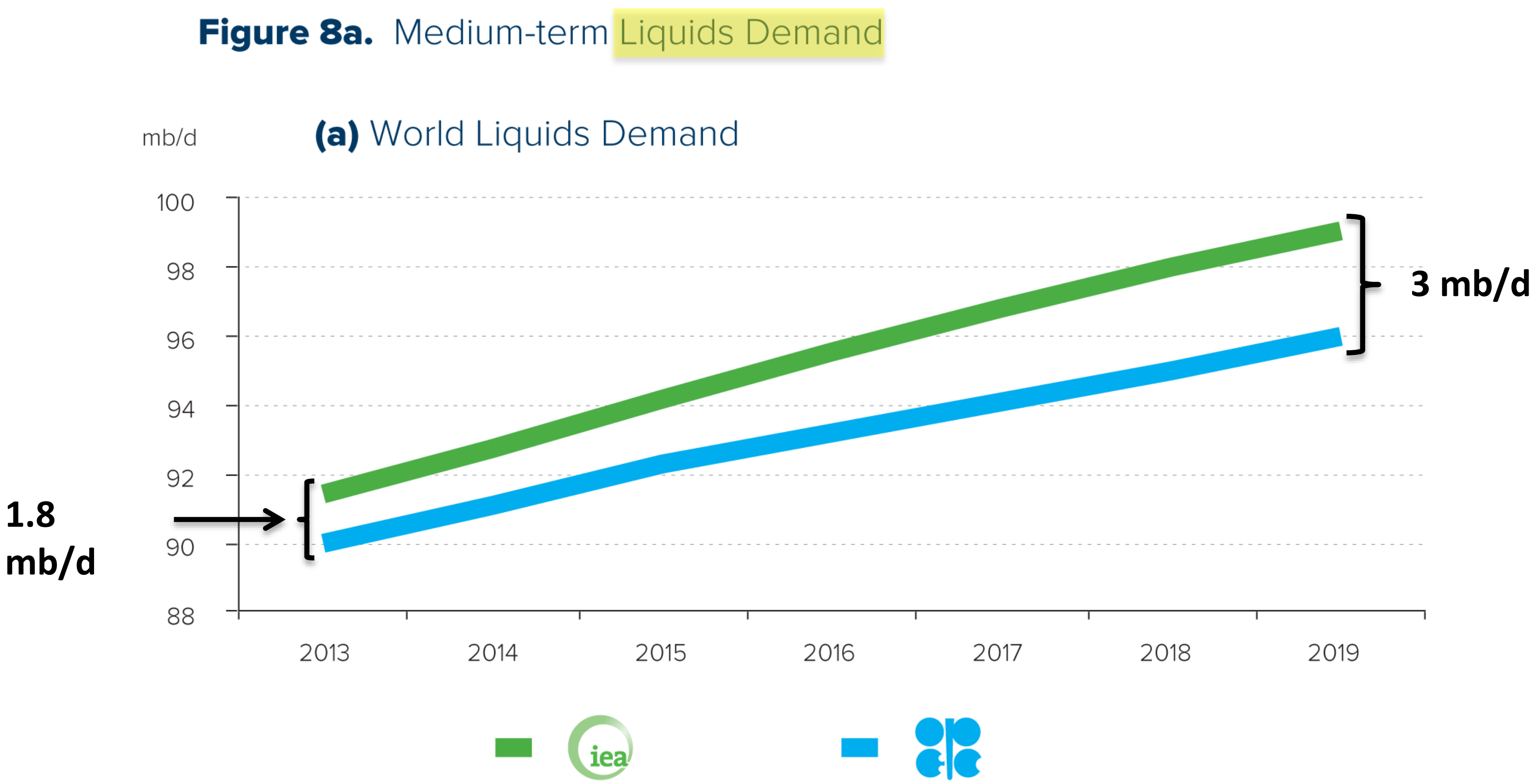
1.1 vs. 0.9 mb/d:

200,000 barrels difference between IEA and OPEC in net demand growth

Question 3

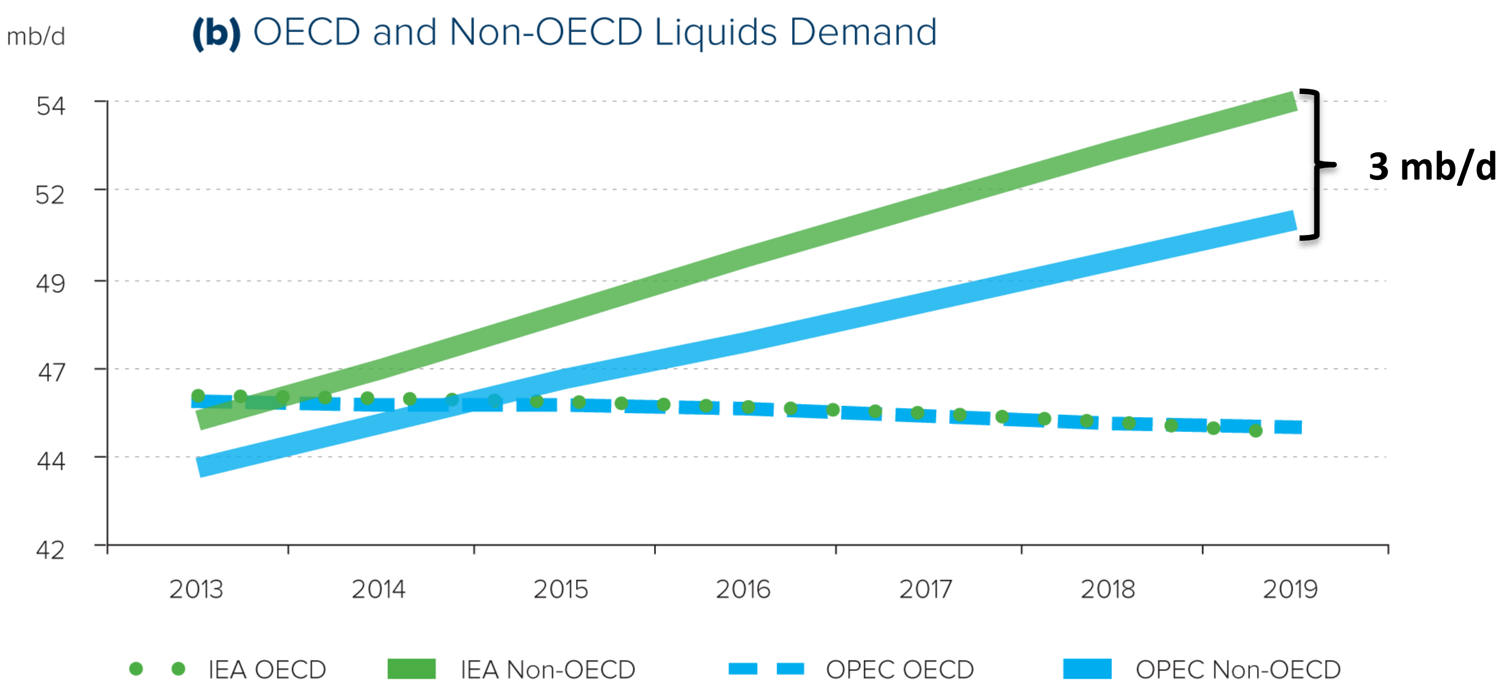
What can we expect for the next five years?

IEA demand estimates are 3 mb/d above those of OPEC for 2019



Demand differences between OPEC and the IEA result mainly from estimates for Non-OECD countries

Figure 8b. Medium-term Liquids Demand



OPEC and the IEA project the same aggregate supply increase (6.6 mb/d) but from different sources and with alternative production trajectories:

- *OPEC projects a much stronger decline in unconventional output after 2016*
- *Both organizations estimate Latin America to play an important role*

Figure 10a. Medium-term Non-OPEC Liquids Supply Annual Growth

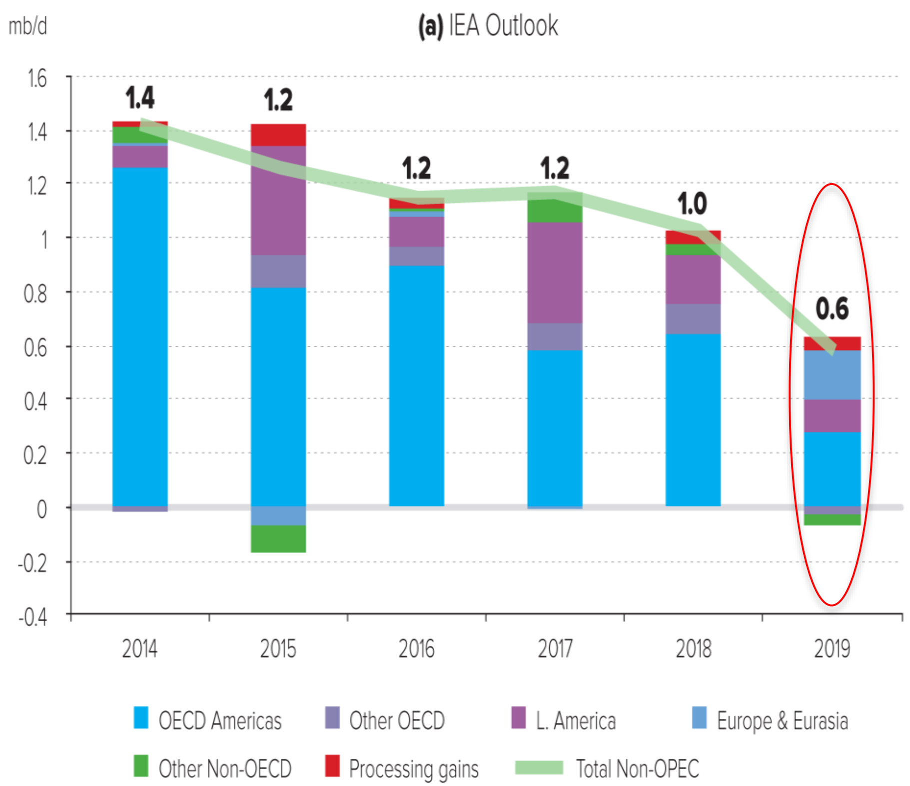
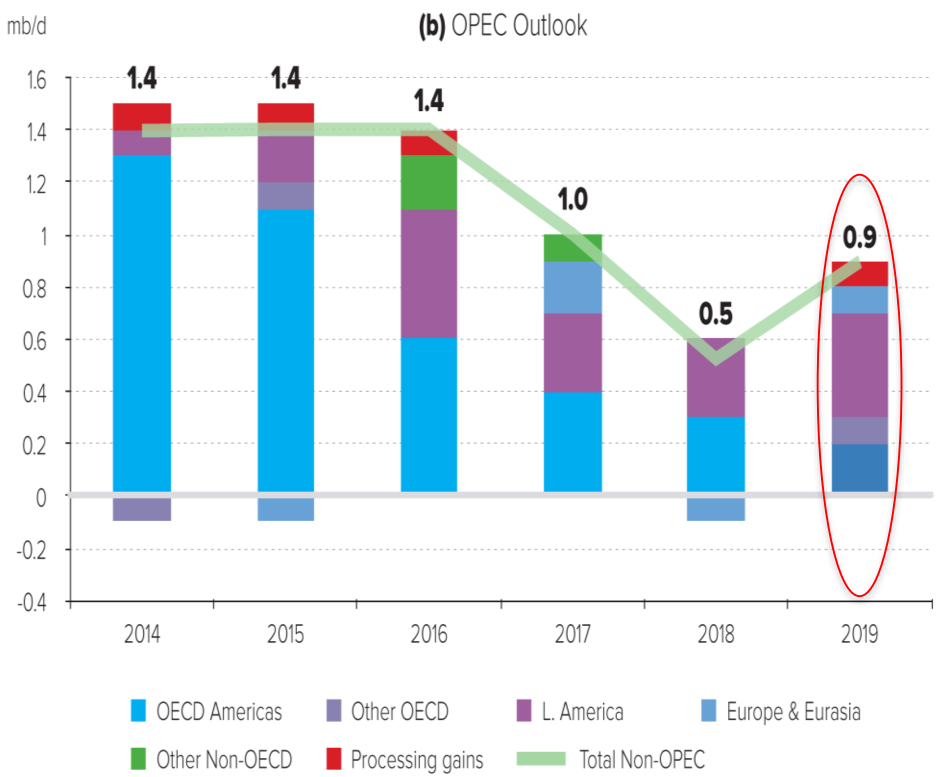


Figure 10b. Medium-term Non-OPEC Liquids Supply Annual Growth

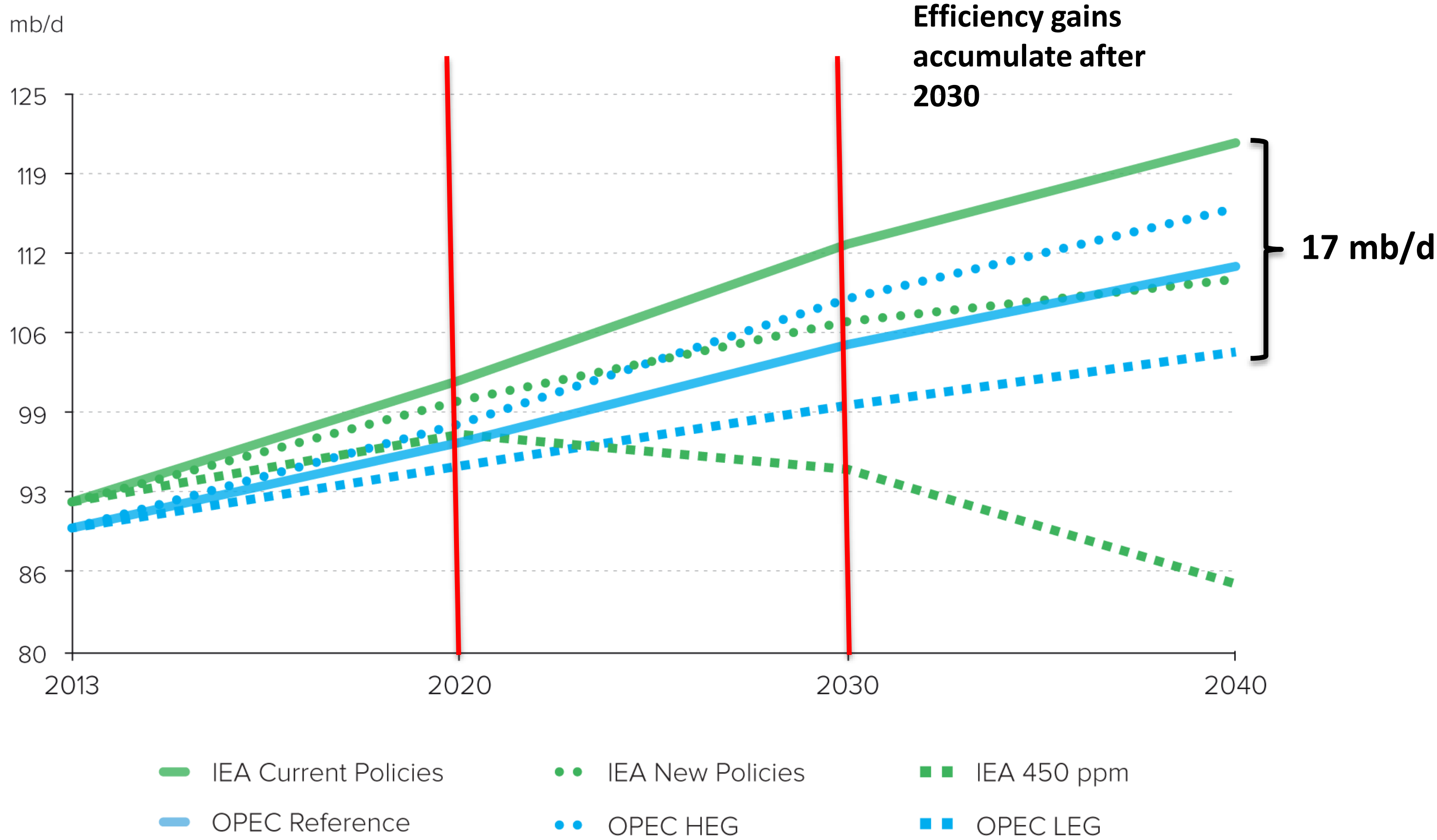


Question 4

What is the long-term view?

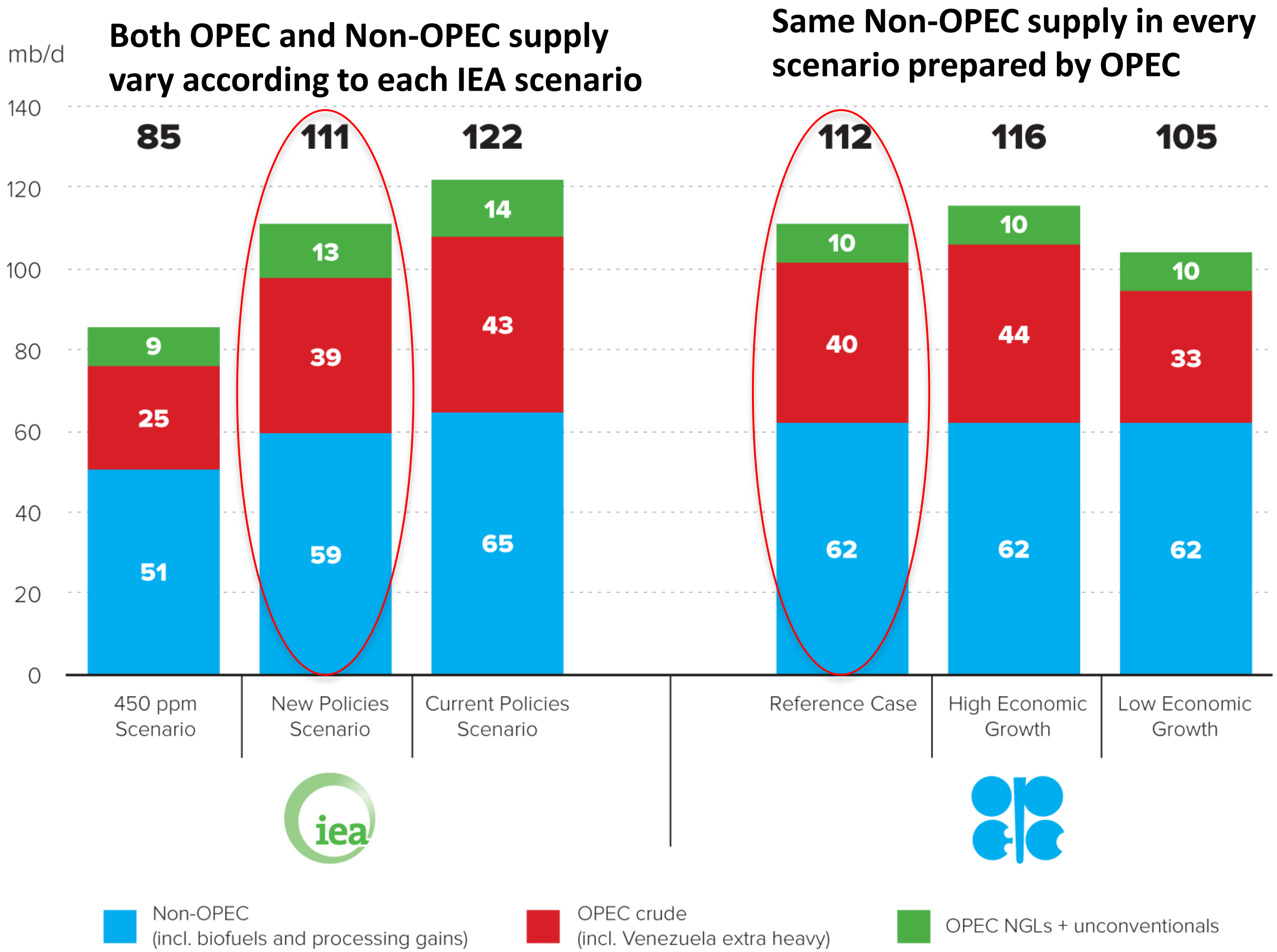
Demand estimates between OPEC and the IEA can vary significantly depending on assumptions about regional economic growth, technological change, and policies

Figure 16. World Liquids Demand Projections in Various Scenarios



OPEC sees its crude making up for the demand not covered by Non-OPEC output; the IEA sees more variation in both OPEC and Non-OPEC output

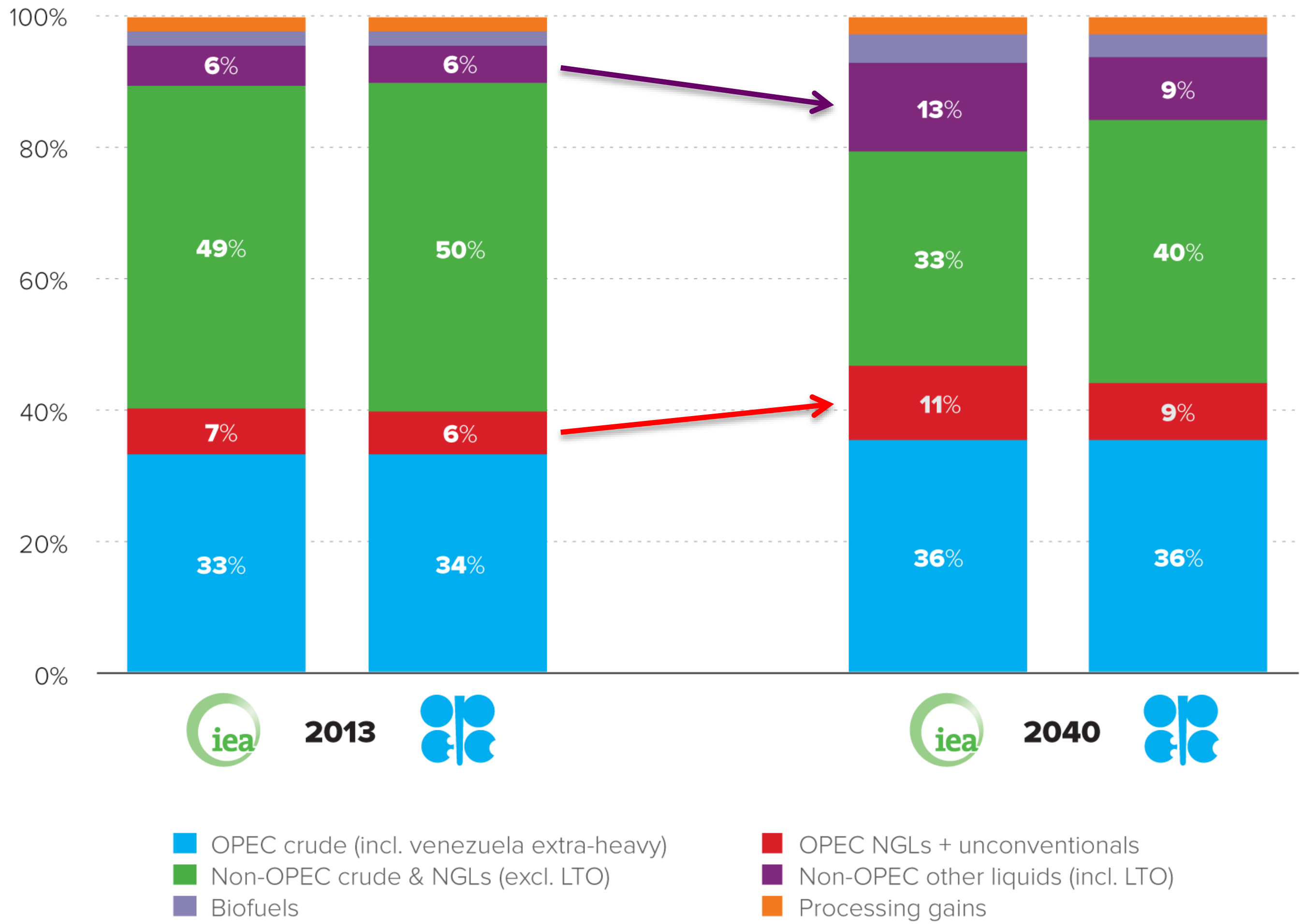
Figure 20. Shares of Liquids Supply by Types in 2013 and Outlook for 2040



	Central scenarios (mb/d)		
Supply origin	OPEC	IEA	OPEC-IEA
OPEC	50	52	-2
Non-OPEC	62	59	+3
Total	112	111	1

The share of unconventionals in total oil supply by 2040:
From 13 to 24% or from 12 to 18%?

Figure 19. Shares of Liquids Supply by Types in 2013 and Outlook for 2040

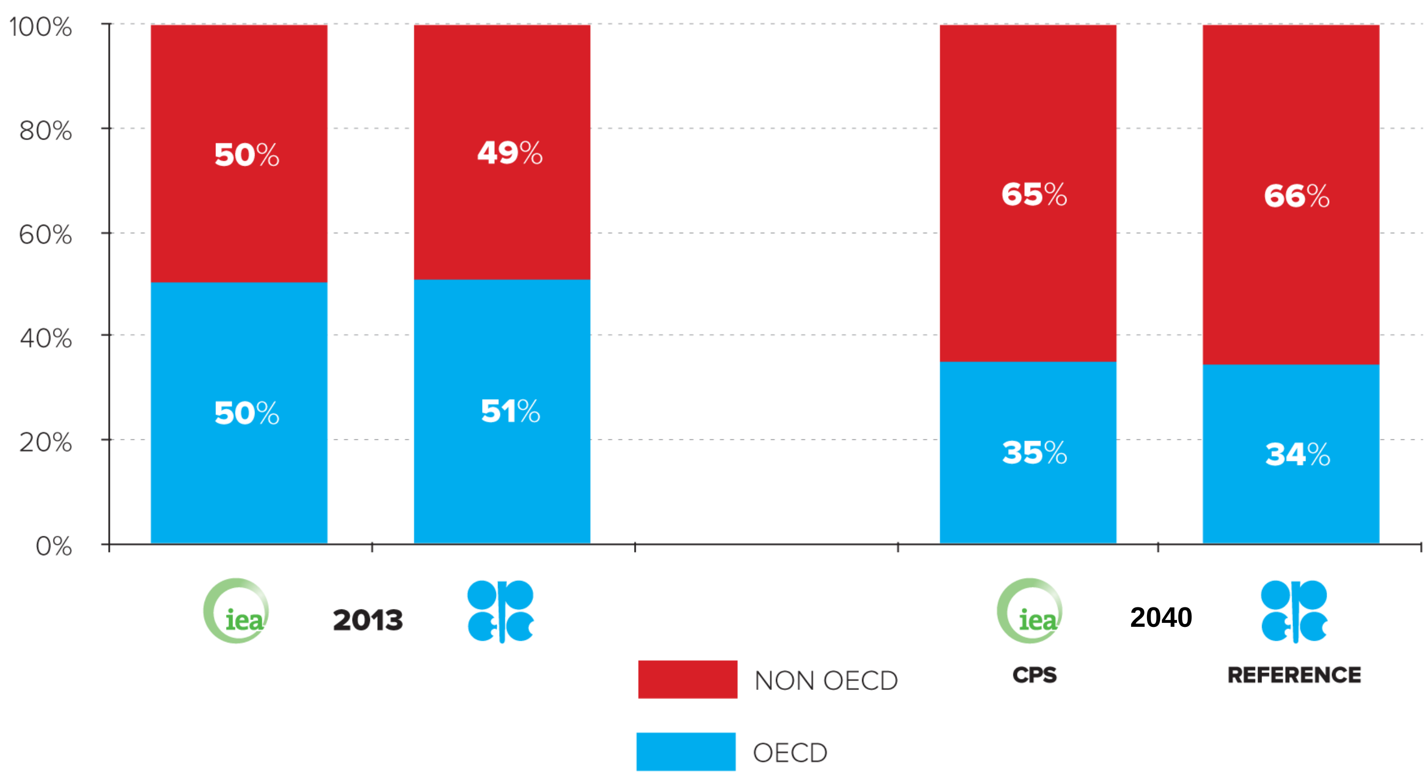


Question 5

What assumptions support the long-term view?

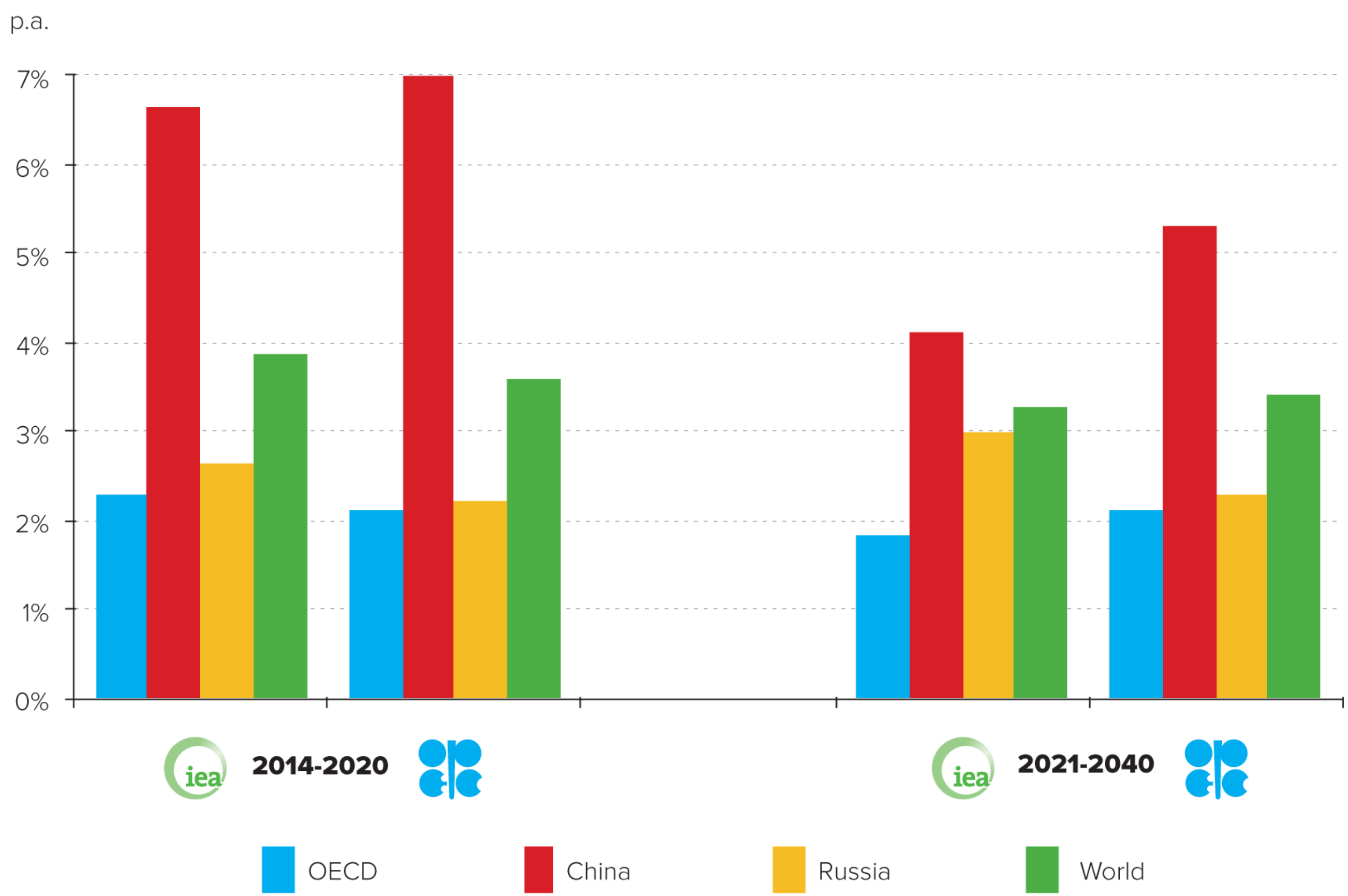
Consensus: Non-OECD demand will be the largest share of global oil demand

Figure 17. OECD and Non-OECD Shares of Liquids Demand in 2013 and Outlook for 2040



Same global GDP growth assumptions but different regional estimates

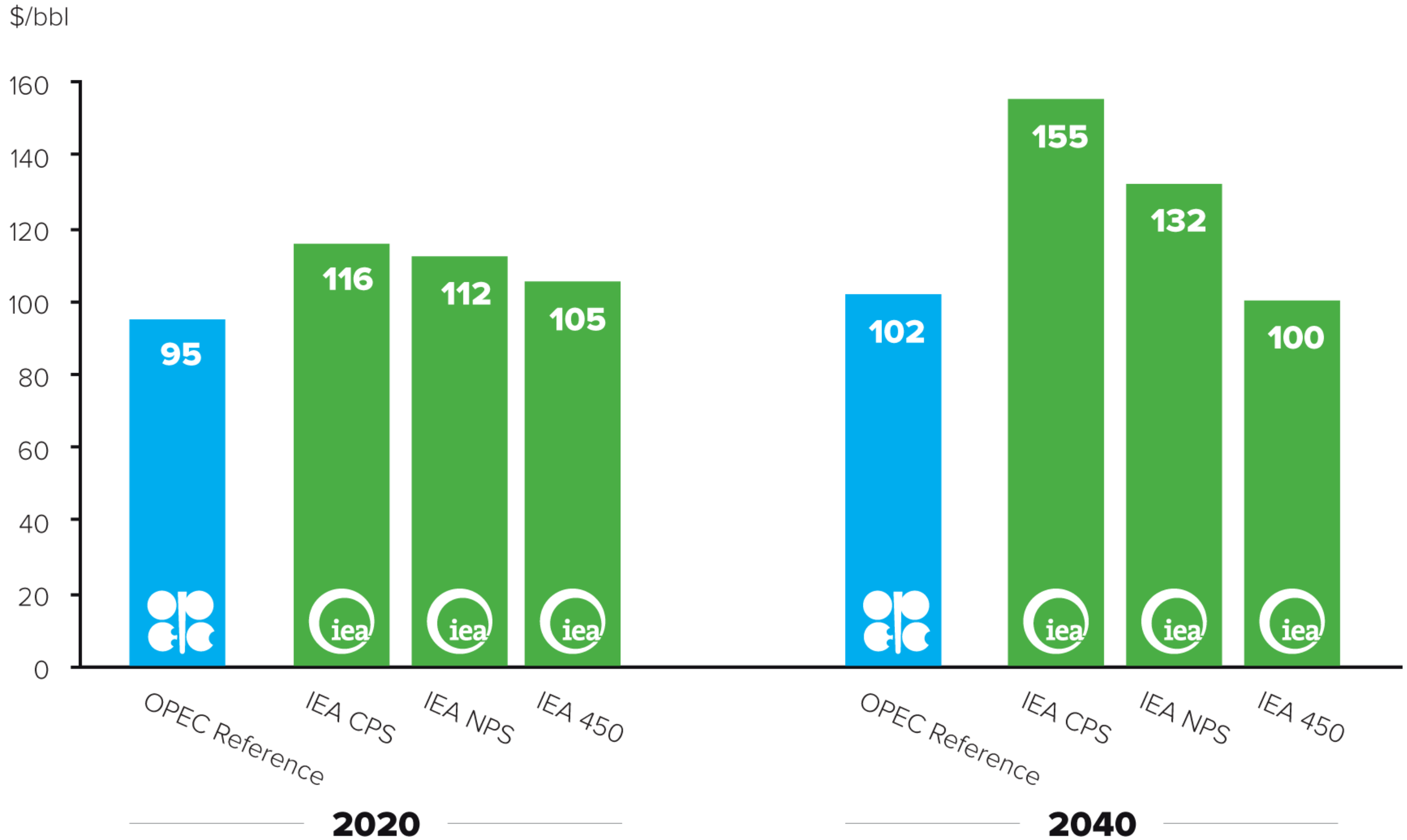
Figure 12. Long-term GDP Growth Assumptions for Selected Regions



Contrasting oil price assumptions even with similar demand projections:

•*$155 vs. $102 in a world that is expected to require 111-112 mb/d*

Figure 13. Long-Term Oil Price Assumptions (real 2013 US$)



Policy assumptions: a focus on efficiency

- The IEA includes demand-side (efficiency) regulations for Dubai, Qatar and Saudi Arabia
- OPEC includes greater detail in its China, India and EU efficiency policies and, unlike the IEA, sees US crude export ban retained
- OPEC refers to Mexico's policy reform and South Korea's energy plan.

IEA WEO2014: Highlighted Policies	OPEC WOO2014: Highlighted Policies
Only for New Policies Scenario	
CHINA: National Action Plan on Prevention and Control of Air Pollution	National Action Plan on Prevention and Control of Air Pollution (2013 – 2017) Energy-related policies in 12th Five-Year Plan Local car sales control (car license limits)
DUBAI: New building codes	
EU: 2030 climate and energy targets announced by the European Commission	2030 climate and energy targets announced by the European Commission Amendment to biofuel target which restrict crop-based biofuels below 6%
INDIA: Corporate Average Fuel Consumption standards	Corporate Average Fuel Consumption standards Energy related policies in 12th and 13th Five-Year-Plans
JAPAN: Strategic Energy Plan which includes reactivation of some nuclear power plants	Strategic Energy Plan which includes reactivation of some nuclear power plants
MEXICO	Energy Reform Bill introduced in December 2013
QATAR: Efficiency standards for air conditioners	
SAUDI ARABIA: Fuel-economy labelling for new cars and for imported vehicles	
SOUTH KOREA	Second Basic Energy Plan 2014-2035
US: Clean Power Plan with the aim of cutting power sector CO2 emissions 30% by 2030 relative to 2005 levels	Phase-2 CAFE standards for heavy-duty vehicles Crude oil export ban retained

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Achievements

1. **Projection period time frames**
2. **Historical baseline data**
1. **Biofuels and biomass classification**
2. **Disaggregation of LTO by region and NGL from crude**
3. **Unconventional oil**

Opportunities

1. Historical baseline data
2. Biofuels classification
3. Natural Gas Liquids
4. Categorisation of bunker fuels
5. Comparability of scenarios

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