

HOW DOES COVID-19 CHANGE THE OIL OUTLOOK?

9 June, 2020



AGENDA

Energy transitions

- Slower than you think
- Fossil fuel still the main source to supply growing energy consumption
- Oil can be the first energy source to be squeezed out from the energy mix

Pre-Covid oil market fundamentals

- U.S. shale production potential unforeseen
- Passenger car fuel demand disruption expected due to alternative drivetrains
- Jet, petrochemicals and freight transport more difficult to substitute

After Covid-19

- Short-term investment spending slashed under pressure from the collapse in oil prices and demand
- Demand outlook hit by reduced aviation
- Time of strategic reassessment and risk repricing

ENERGY TRANSITIONS

WHAT EXACTLY DO WE MEAN UNDER ENERGY TRANSITION?



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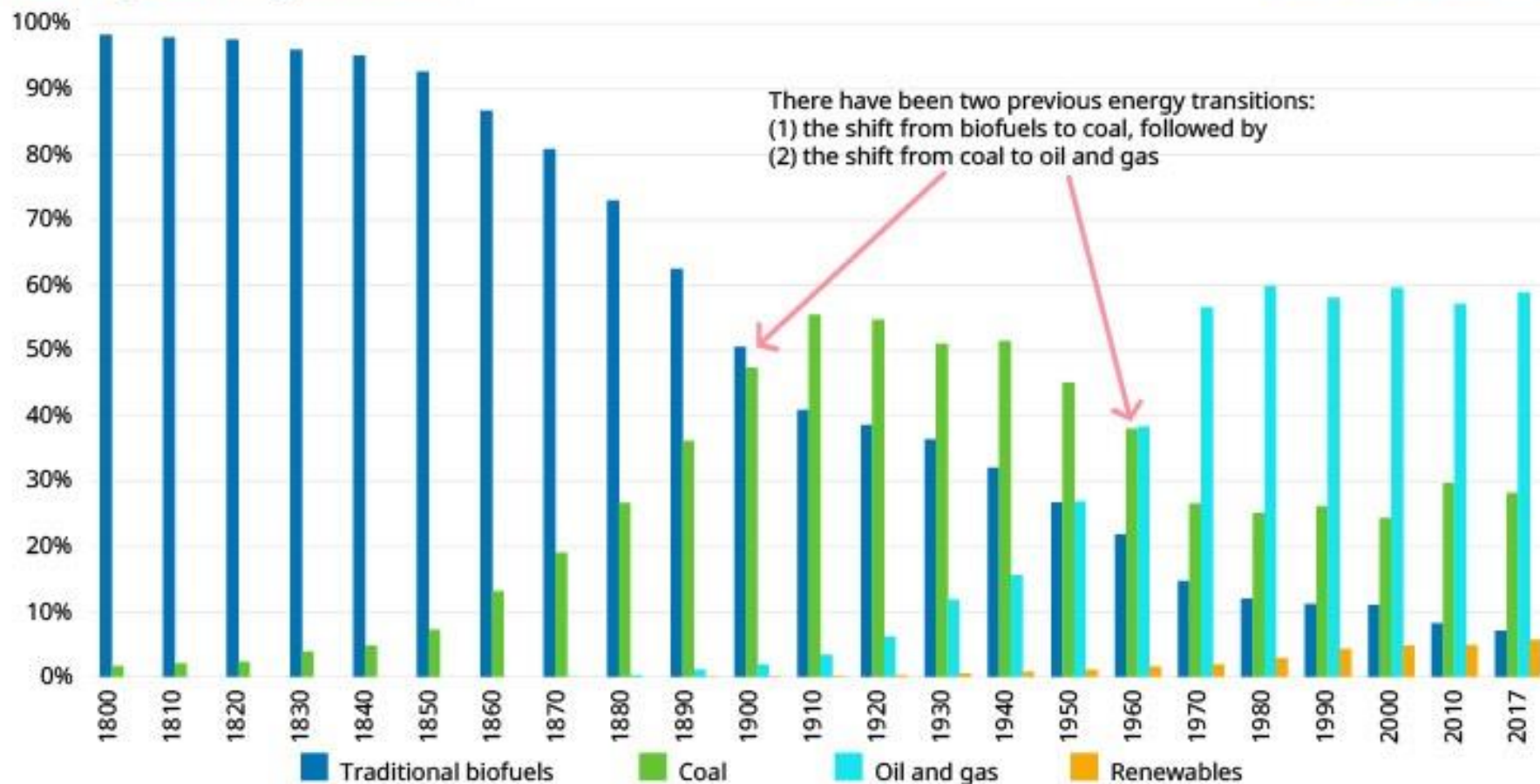
THE GENERAL PUBLIC VIEW



WHERE DO WE STAND IN REALITY?

Change in global primary energy consumption
Share of global energy consumed

Schroders



Source: BP, Our World in Data, Schroders, as of January 2019.

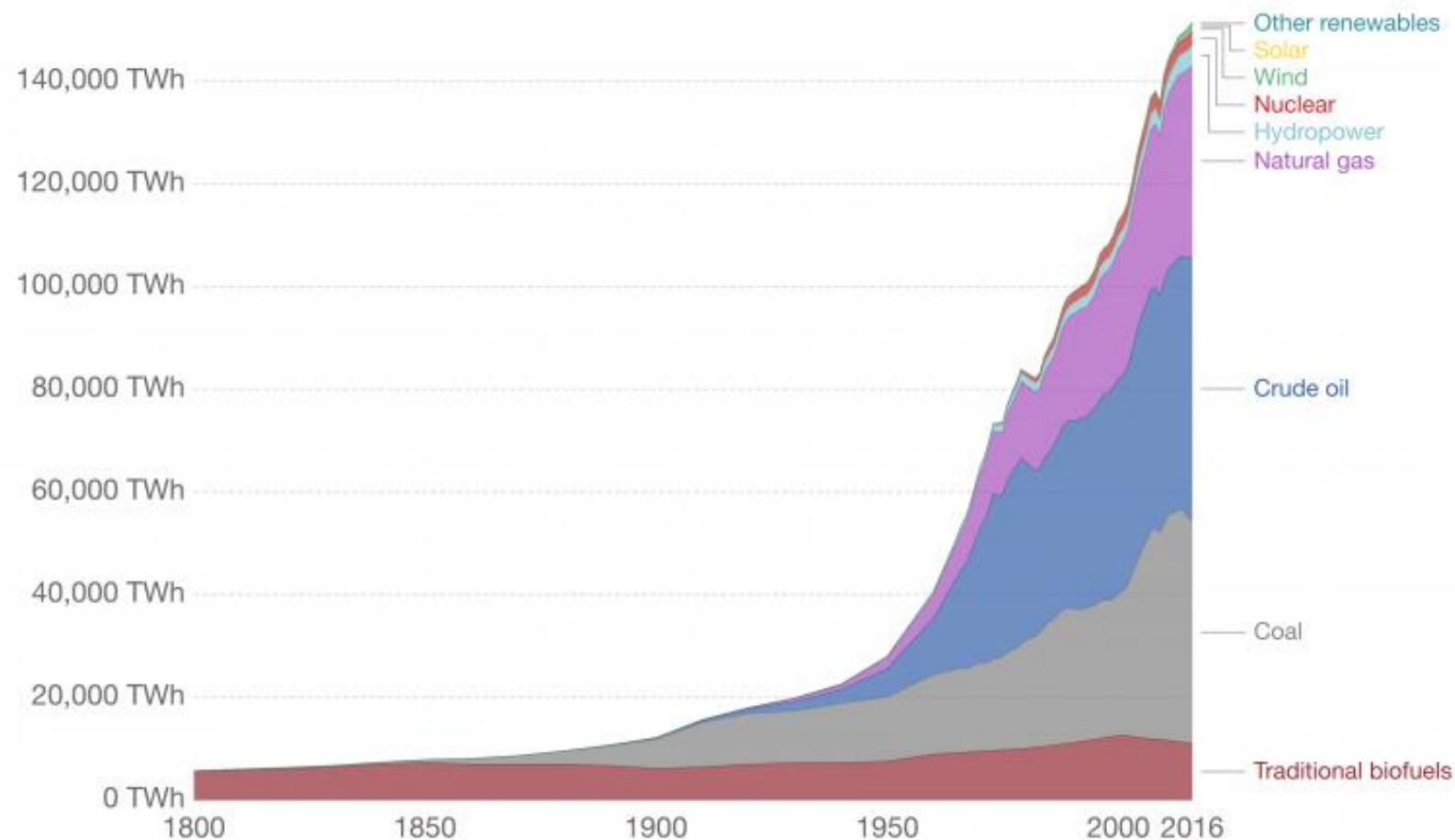
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RELATIVE VS. ABSOLUTE FIGURES: FOSSIL FUEL CONSUMPTION MORE IMPORTANT THAN EVER

Global Primary Energy Consumption, World

Global primary energy consumption, measured in terawatt-hours (TWh) per year. Here 'other renewables' are renewable technologies not including solar, wind, hydropower and traditional biofuels.

Our World
in Data

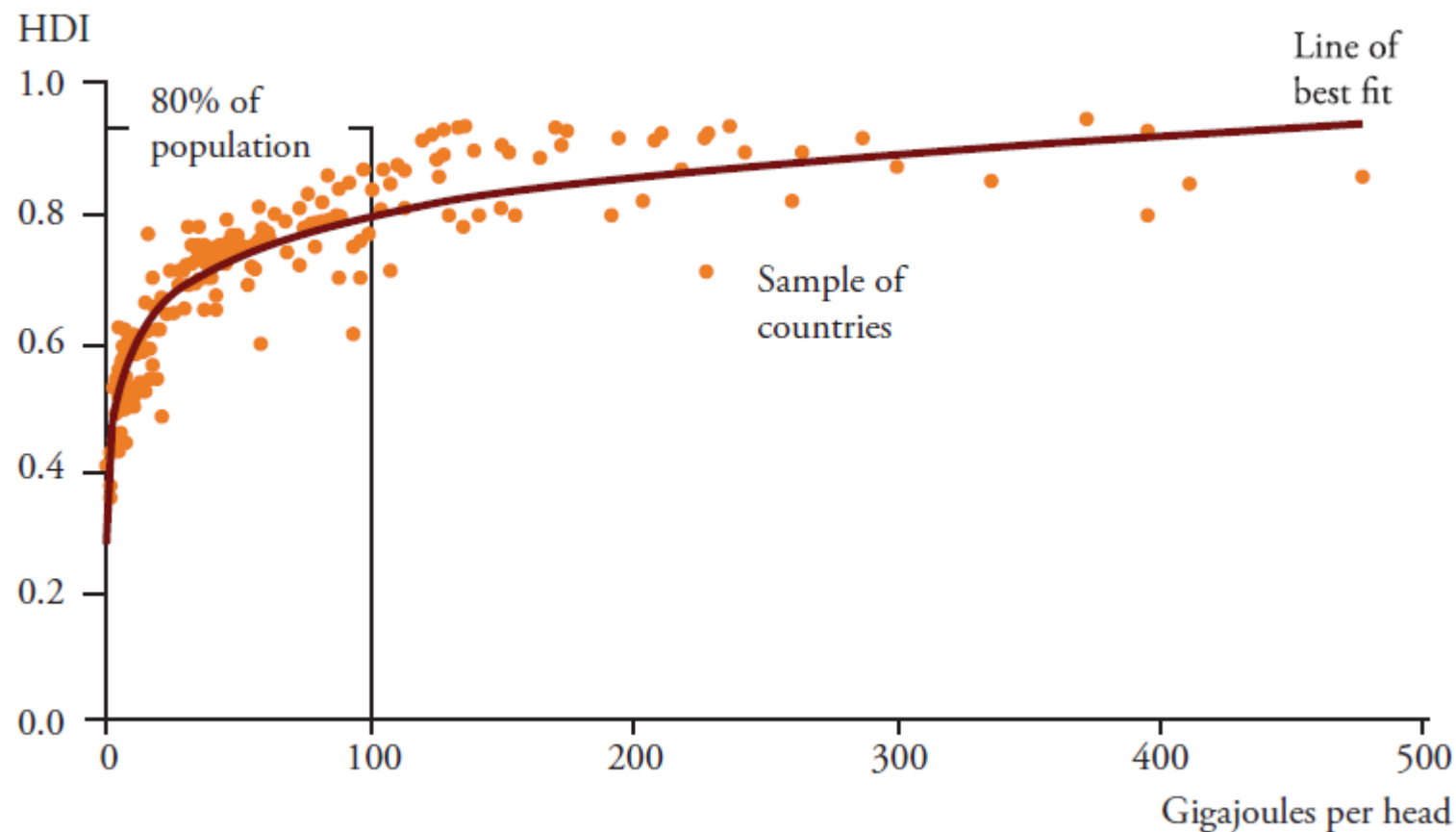


Source: Vaclav Smil (2017) and BP Statistical Review of World Energy

OurWorldInData.org • CC BY-SA

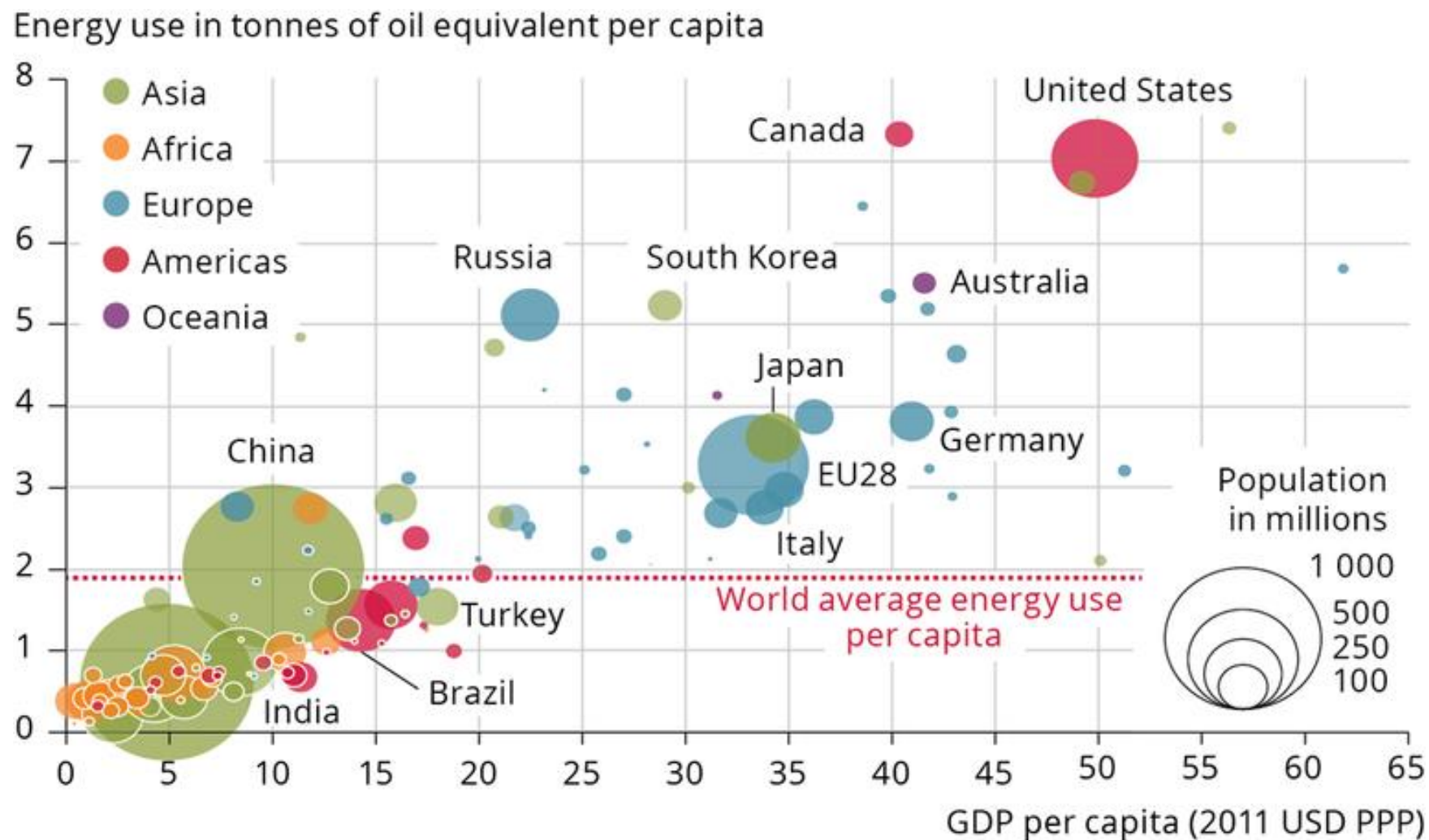
THE HIGHER THE HUMAN DEVELOPMENT INDEX, THE MORE ENERGY THE SOCIETY CONSUMES

Human development index and energy consumption per head, 2017



Source: United Nations, 2018.

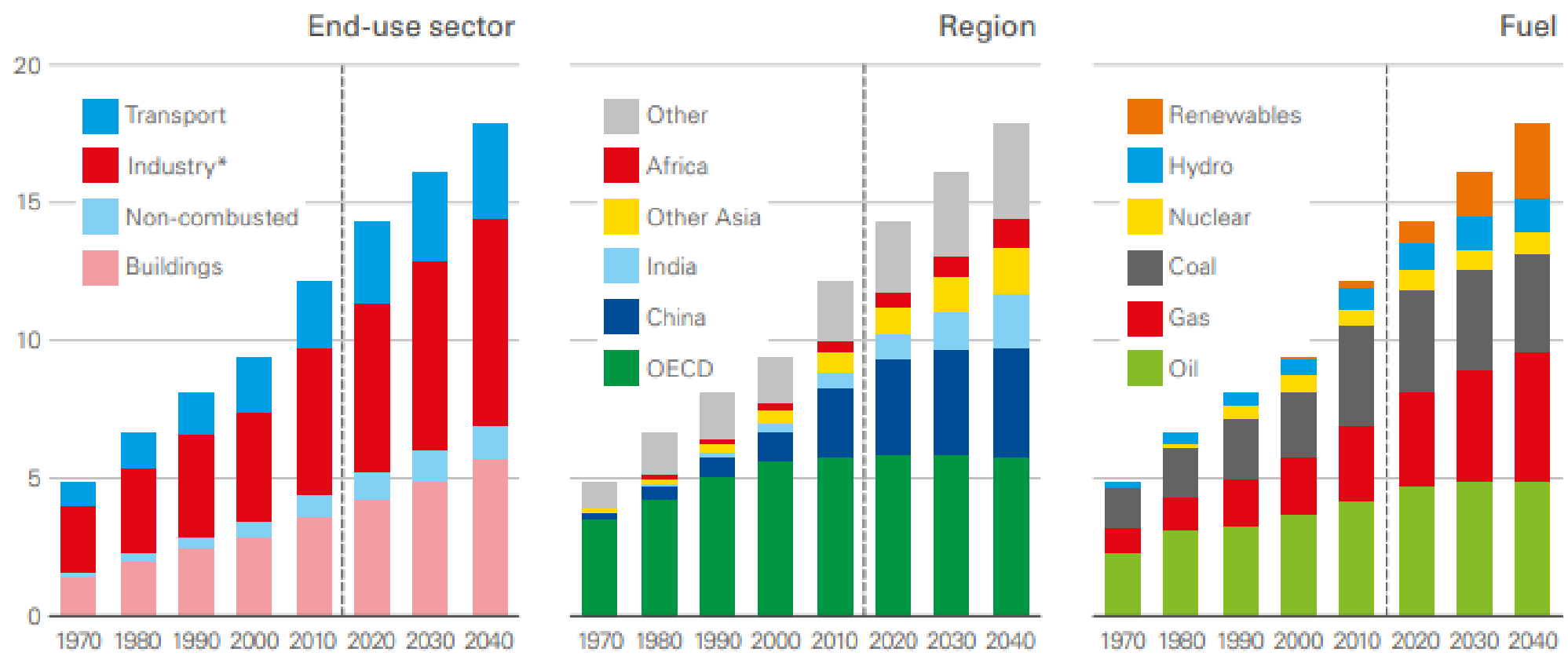
ECONOMIC GROWTH HAS MEANT HIGHER ENERGY CONSUMPTION IN THE PAST



PRE-COVID PROJECTIONS EXPECTED GLOBAL ENERGY DEMAND TO GROW, ALTHOUGH AT A SIGNIFICANTLY SLOWER RATE THAN IN THE LAST 20 YEARS

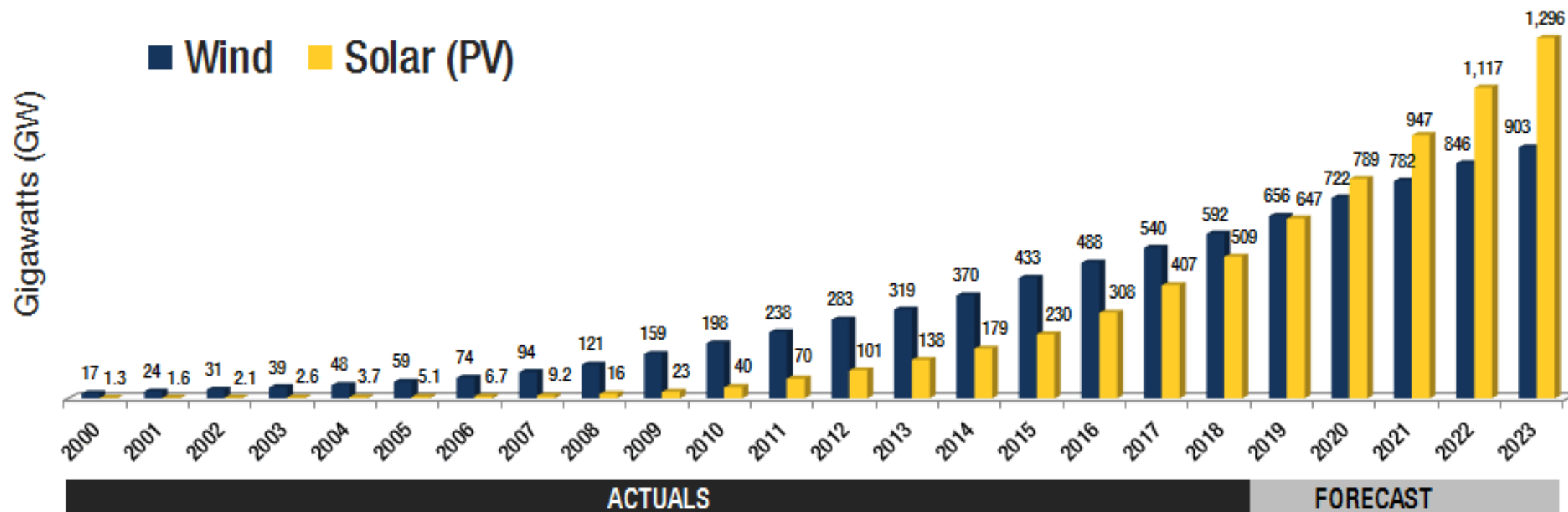
Primary energy demand

Billion toe



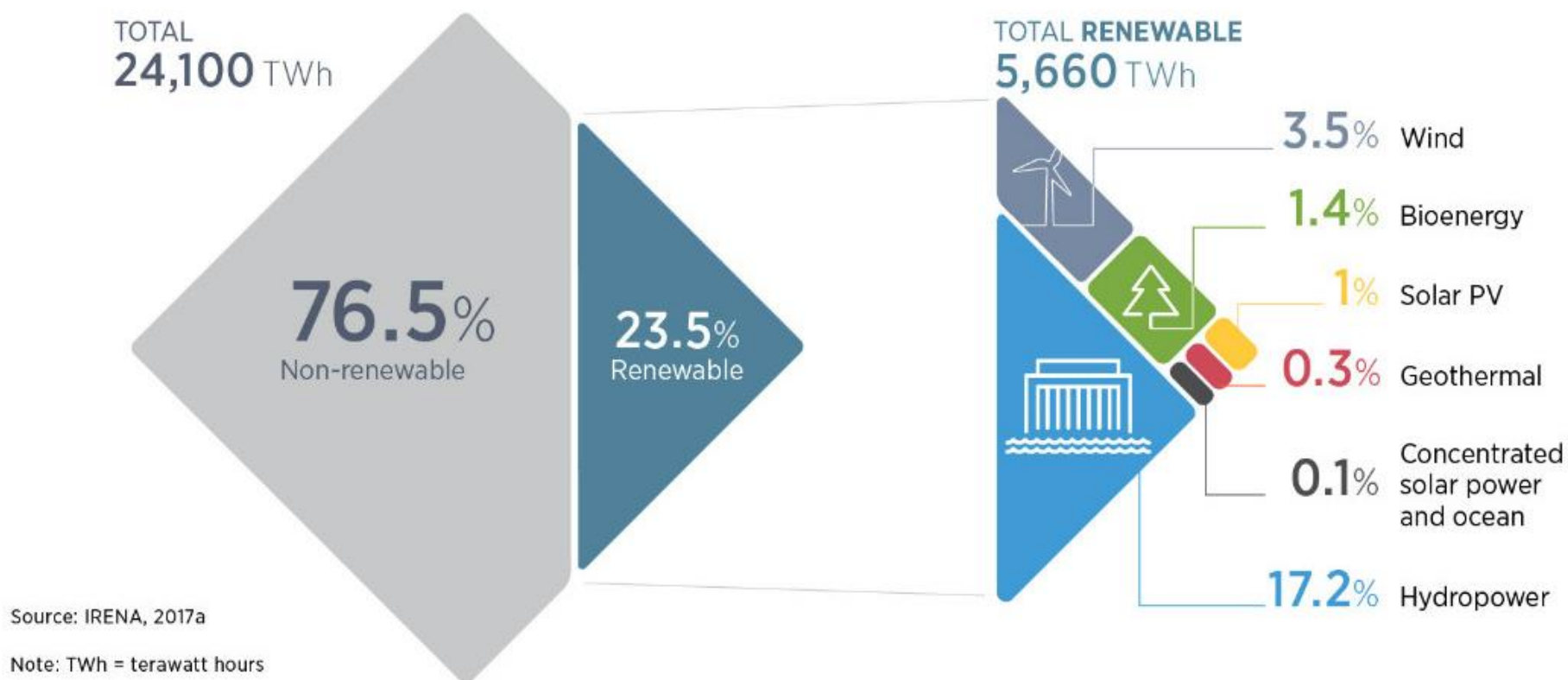
*Industry excludes non-combusted use of fuels

GLOBAL WIND AND SOLAR CAPACITY IS ON A STEADY RISE



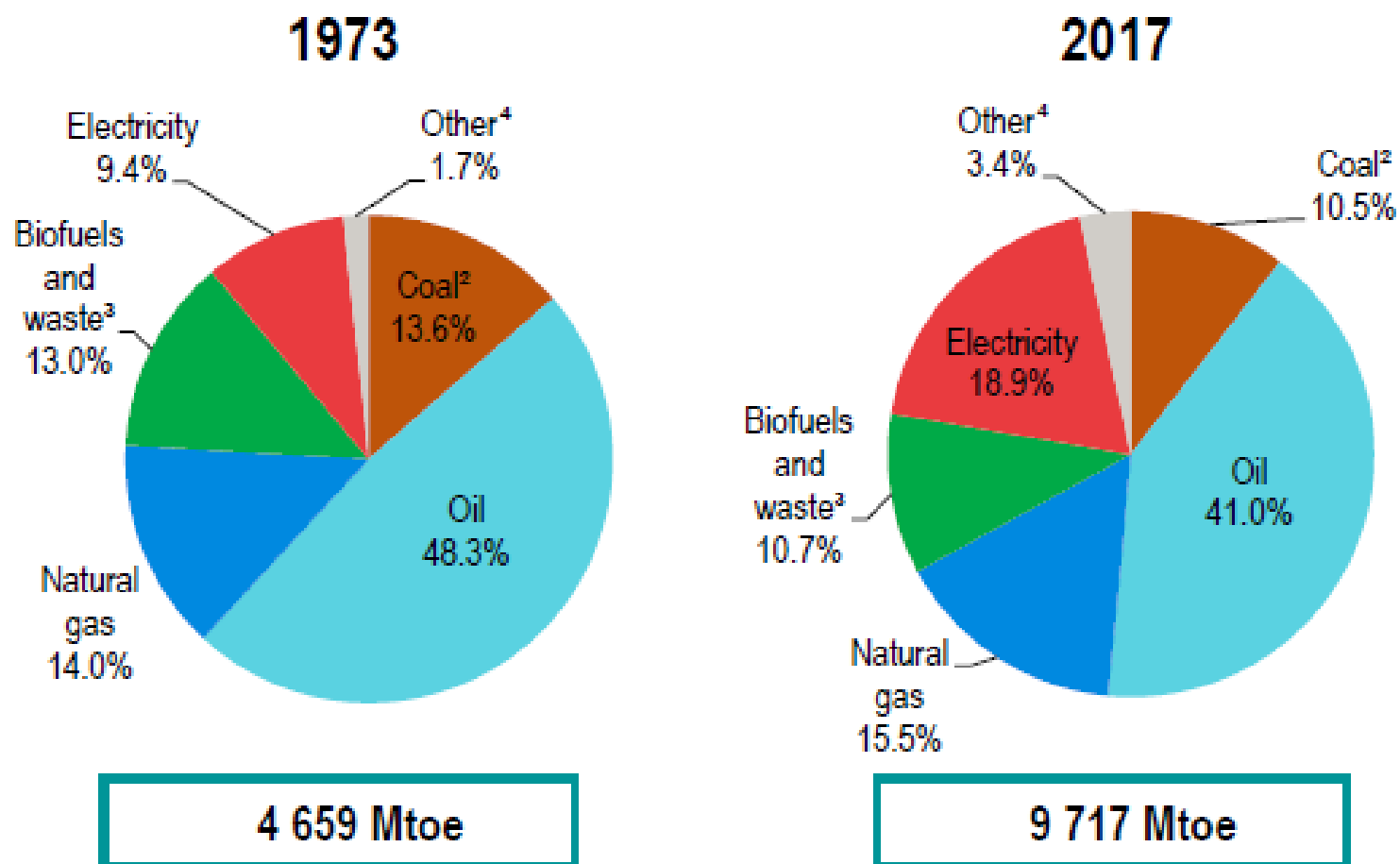
STILL WIND AND SOLAR CONTRIBUTION TO REPORTED RENEWABLE ENERGY REMAINS MINISCULE

Power generation mix (only part of the total energy!)



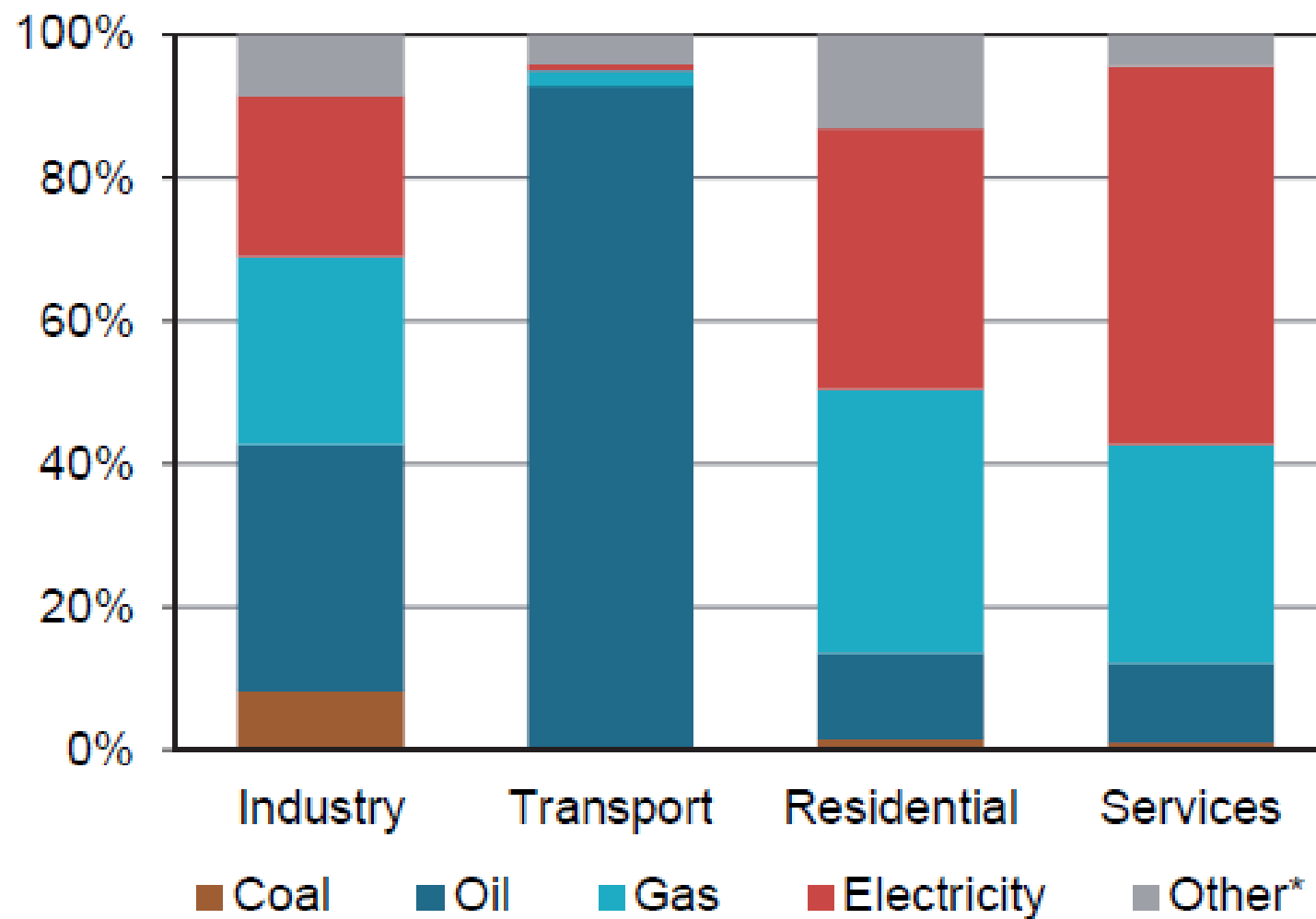
FURTHER SUBSTANTIAL ELECTRIFICATION IS NEEDED TO SUPPORT RENEWABLES

World total final consumption by source



WHY THE CURRENT ENERGY TRANSITION CAN BE DIFFERENT?

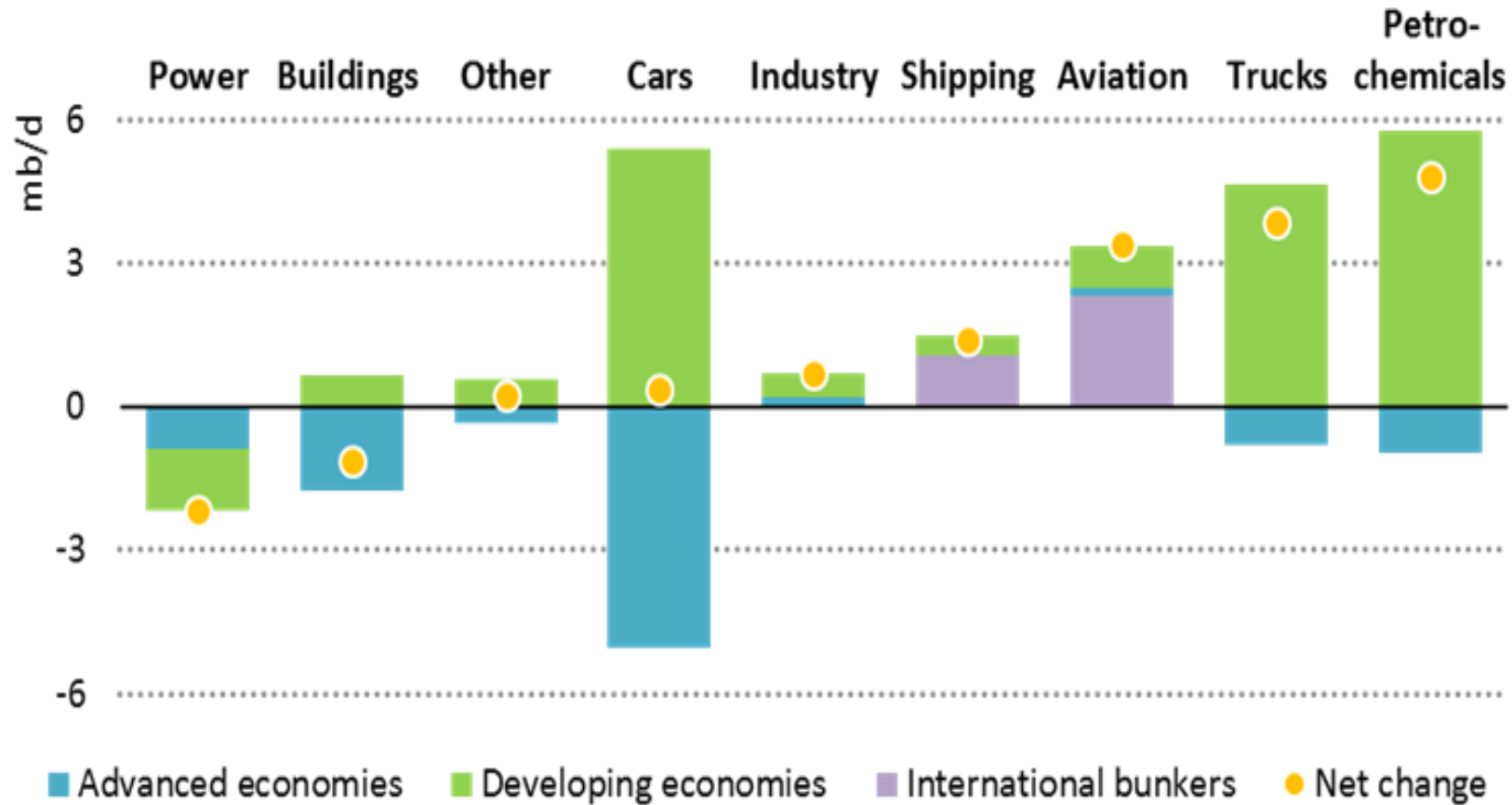
Total final consumption by sector (shares by energy source, 2014)



PRE-COVID OIL MARKET FUNDAMENTALS

OIL WILL BE MORE AND MORE SUBSTITUTED

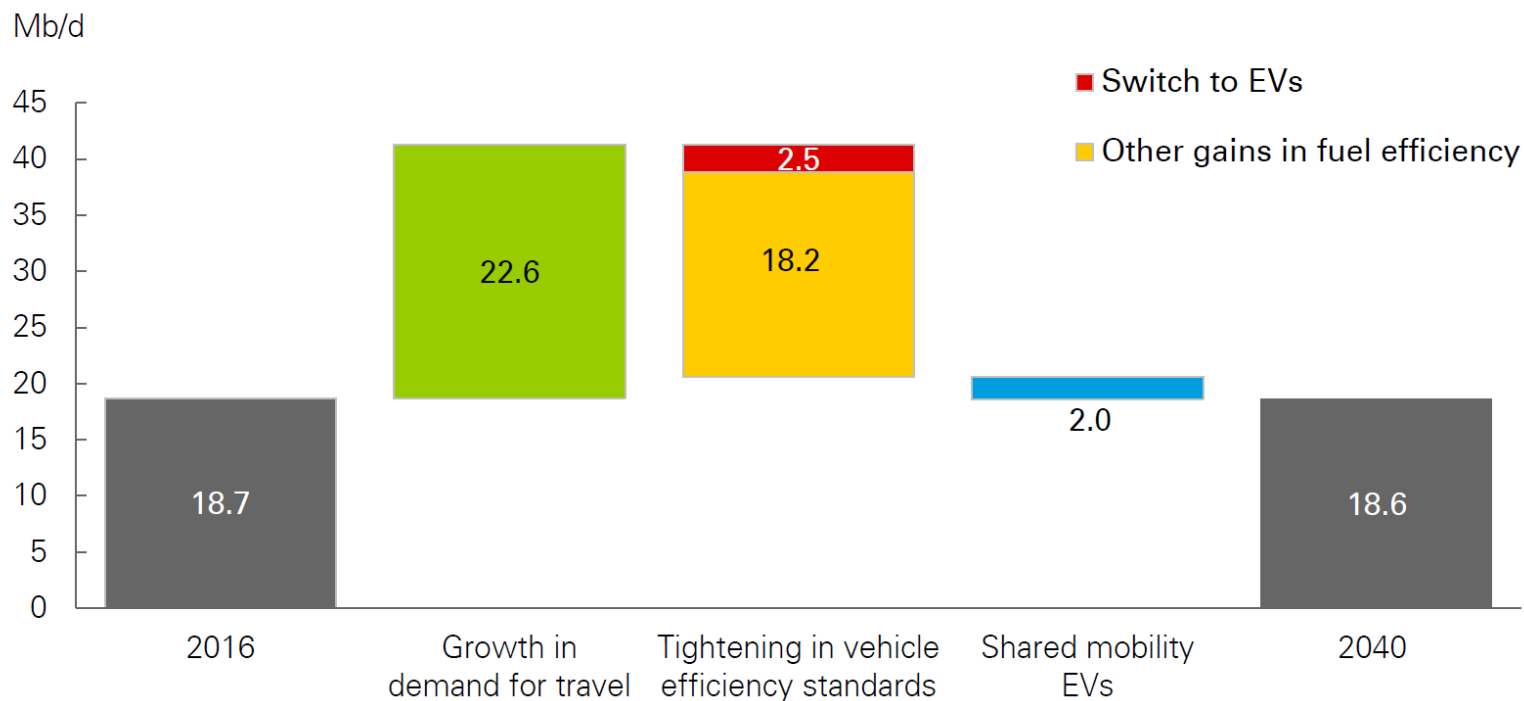
Change in oil demand (2017-2040)



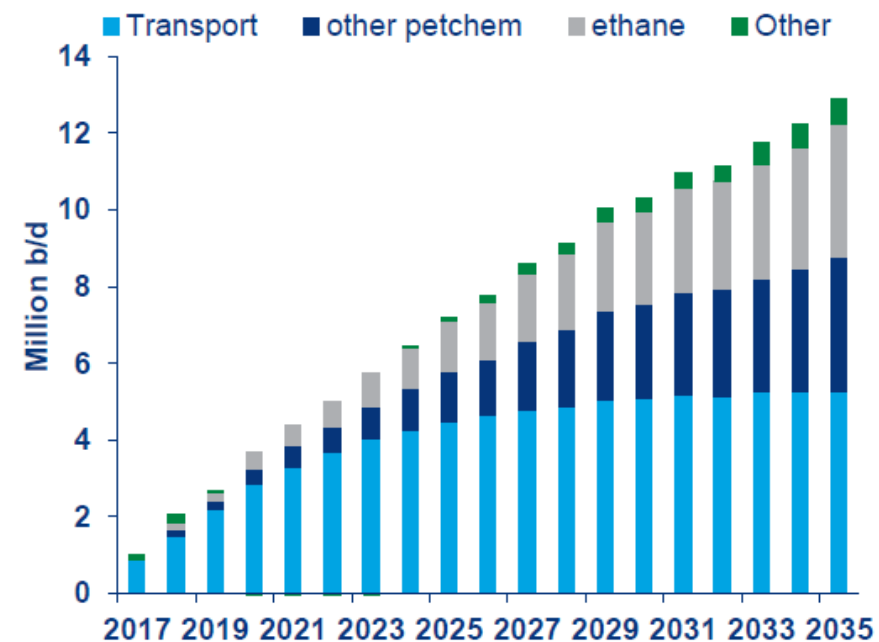
FUEL DEMAND DISRUPTION AHEAD

OIL DEMAND GROWTH TO SHIFT TO PETROCHEMICALS AWAY FROM MOTOR FUELS

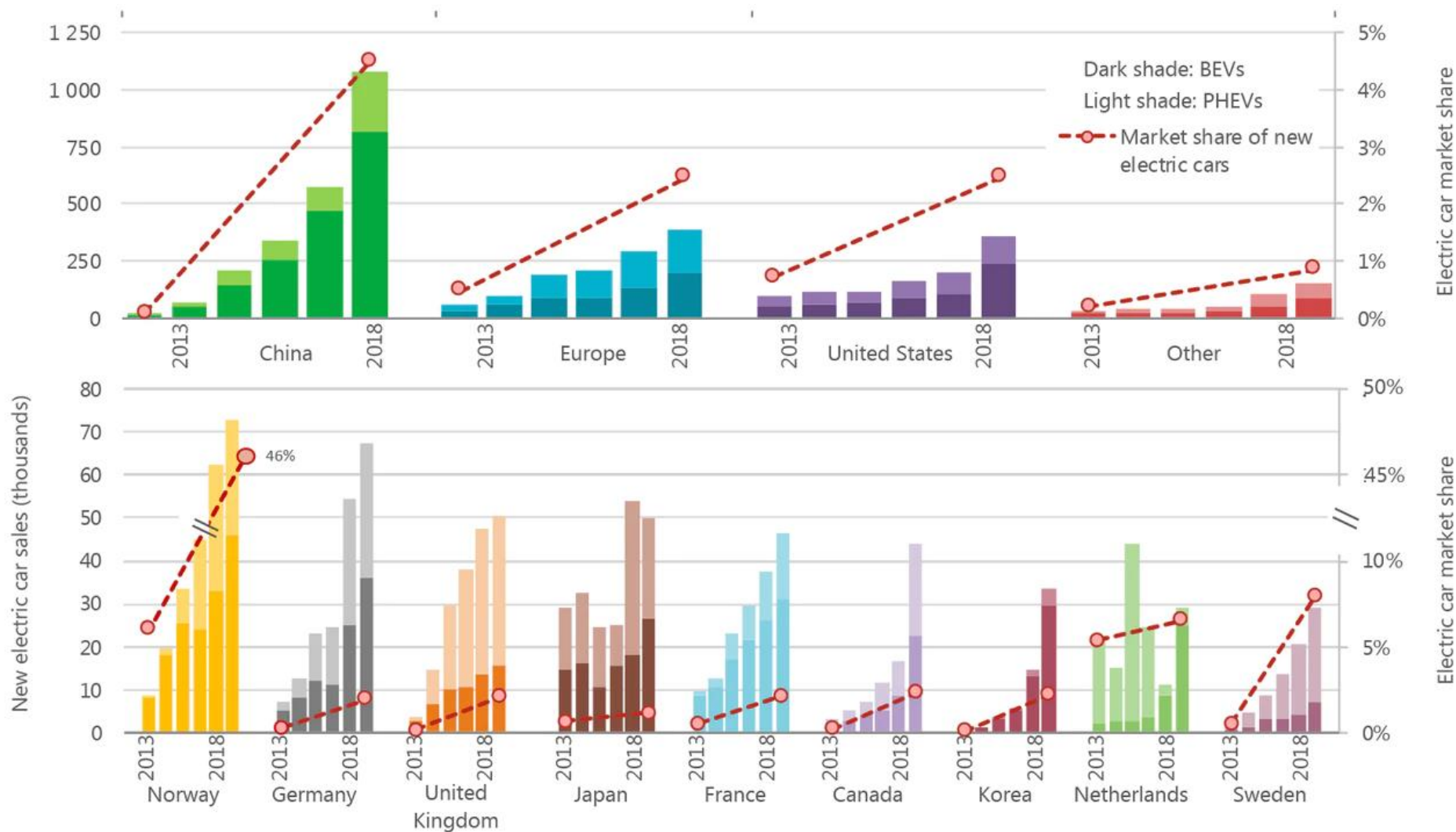
Changes in liquids demand from cars: 2016-2040



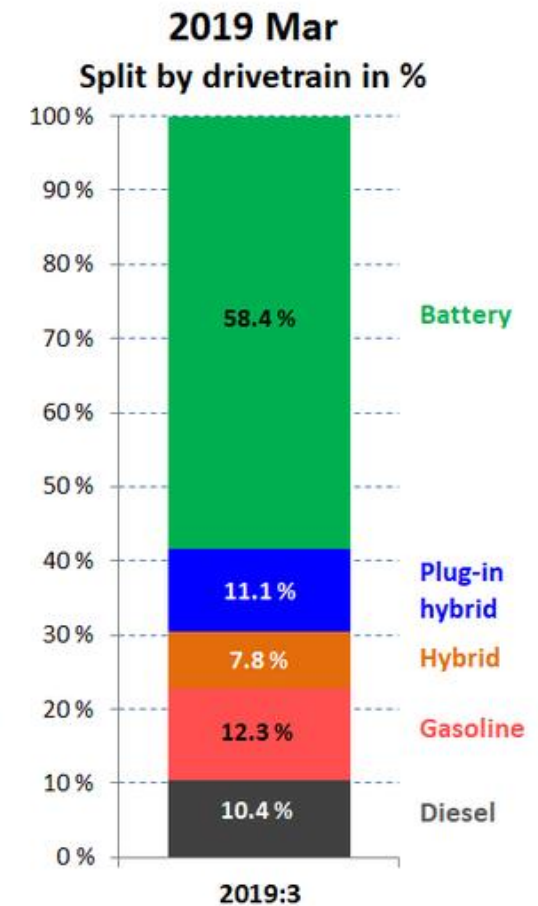
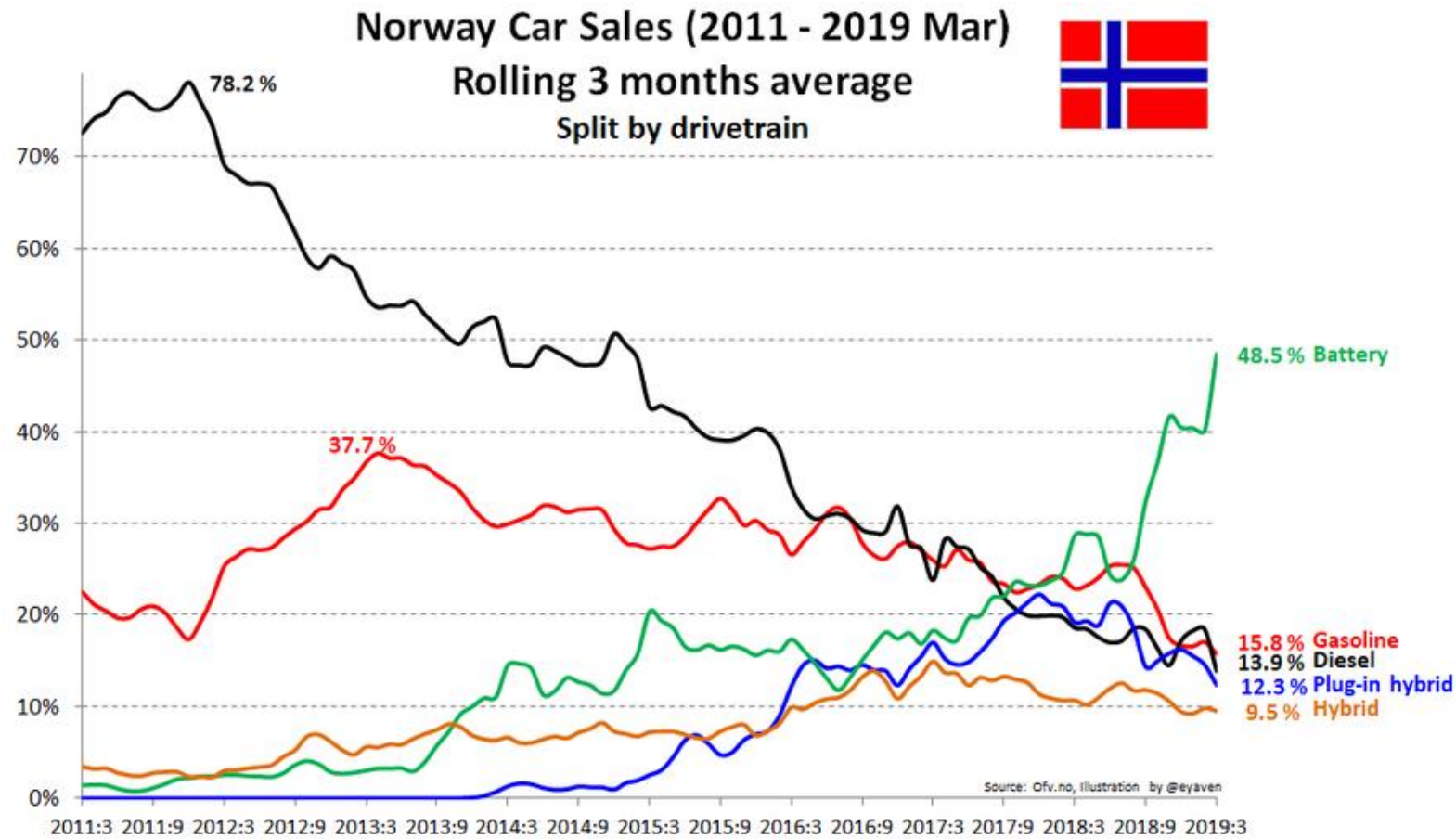
Primary sector split of global oil demand growth



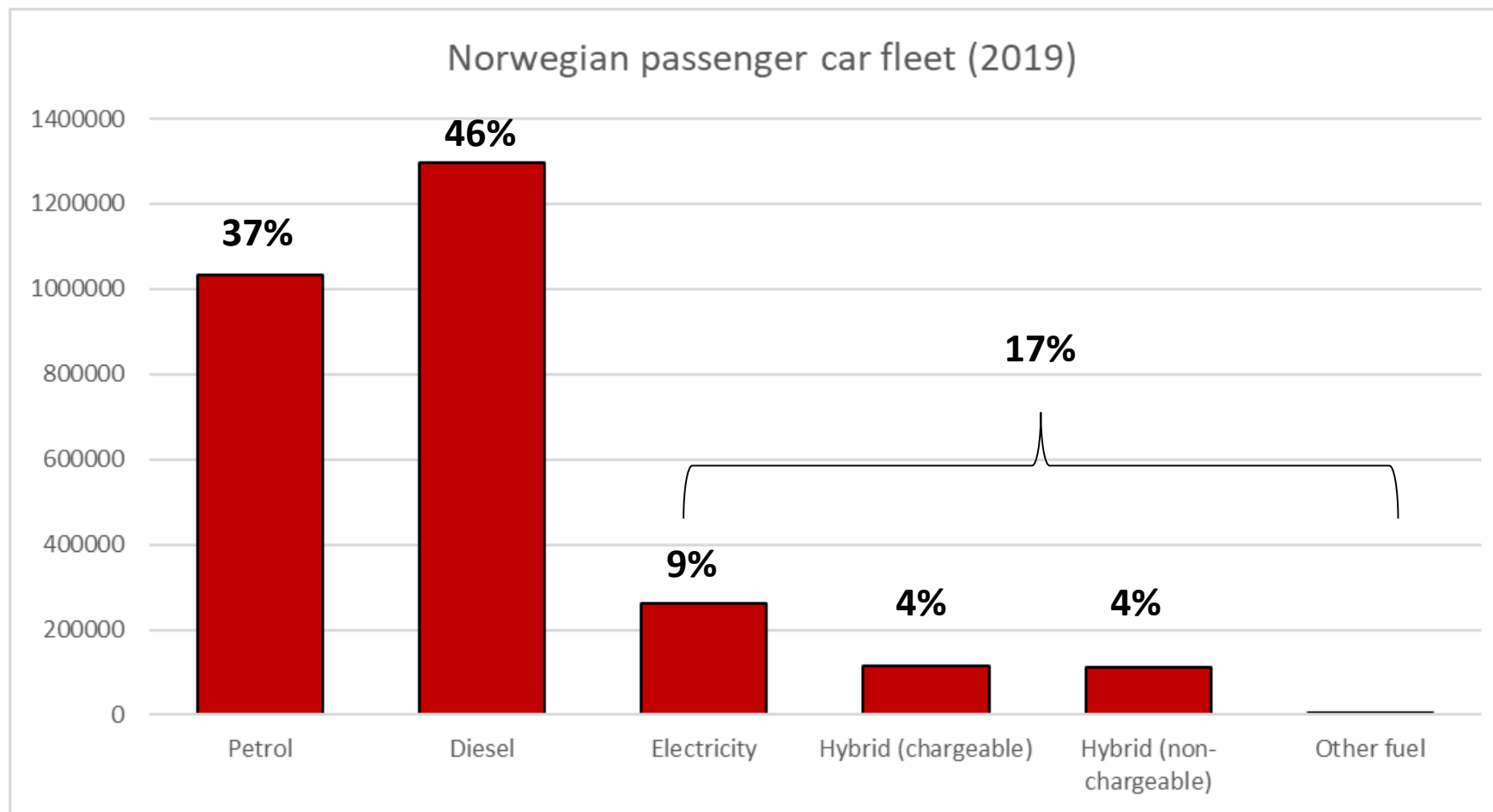
CHINA HAS THE LARGEST NUMBER OF ELECTRIC CAR SALES WORLDWIDE, FOLLOWED BY EUROPE AND THE UNITED STATES



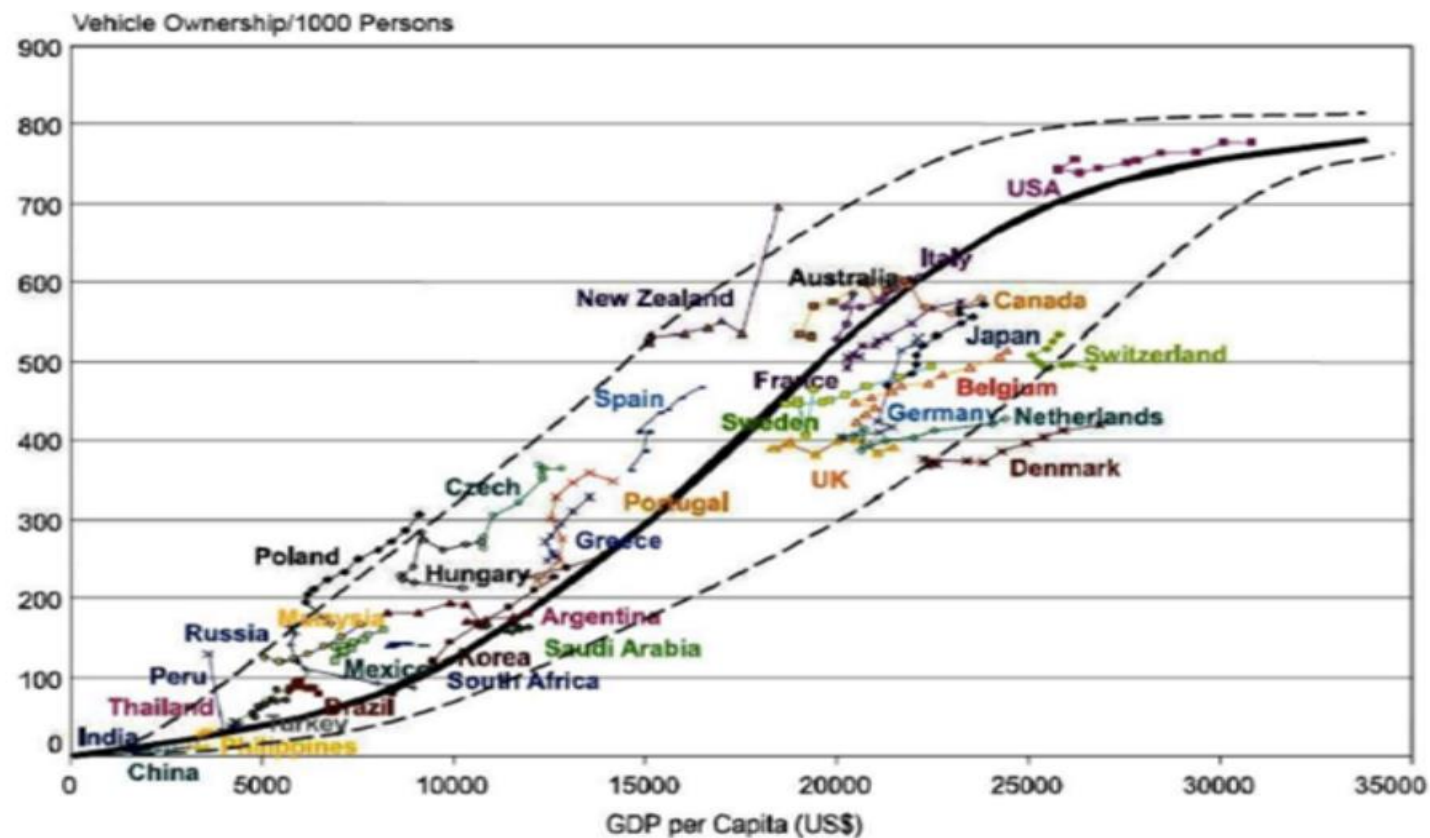
WHAT CAN WE LEARN FROM THE NORWEGIAN EXAMPLE



NEW SALES VS. FLEET: REPLACEMENT TAKES TIME

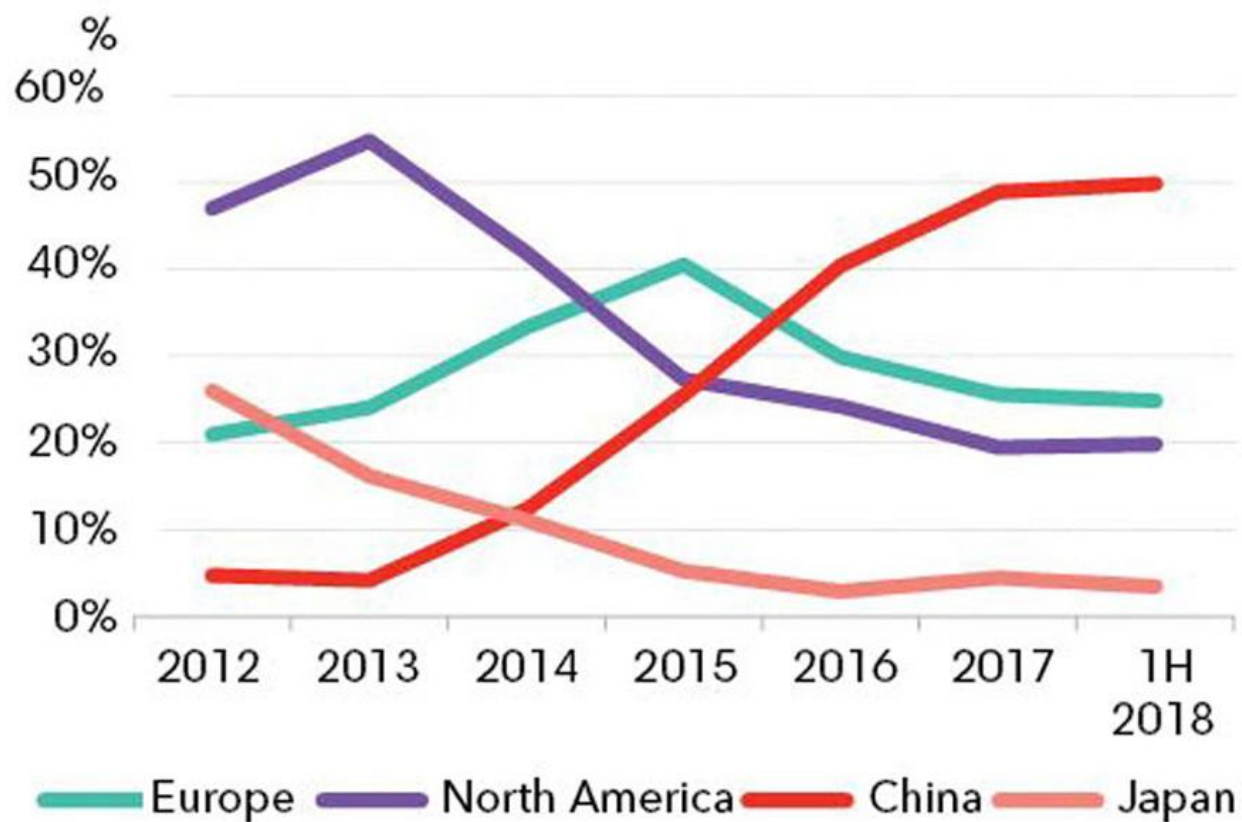


MOTORIZATION RATE IN DEVELOPING COUNTRIES WILL BE KEY



CHINA: NUMBER OF CARS VS. SHARE IN SALES

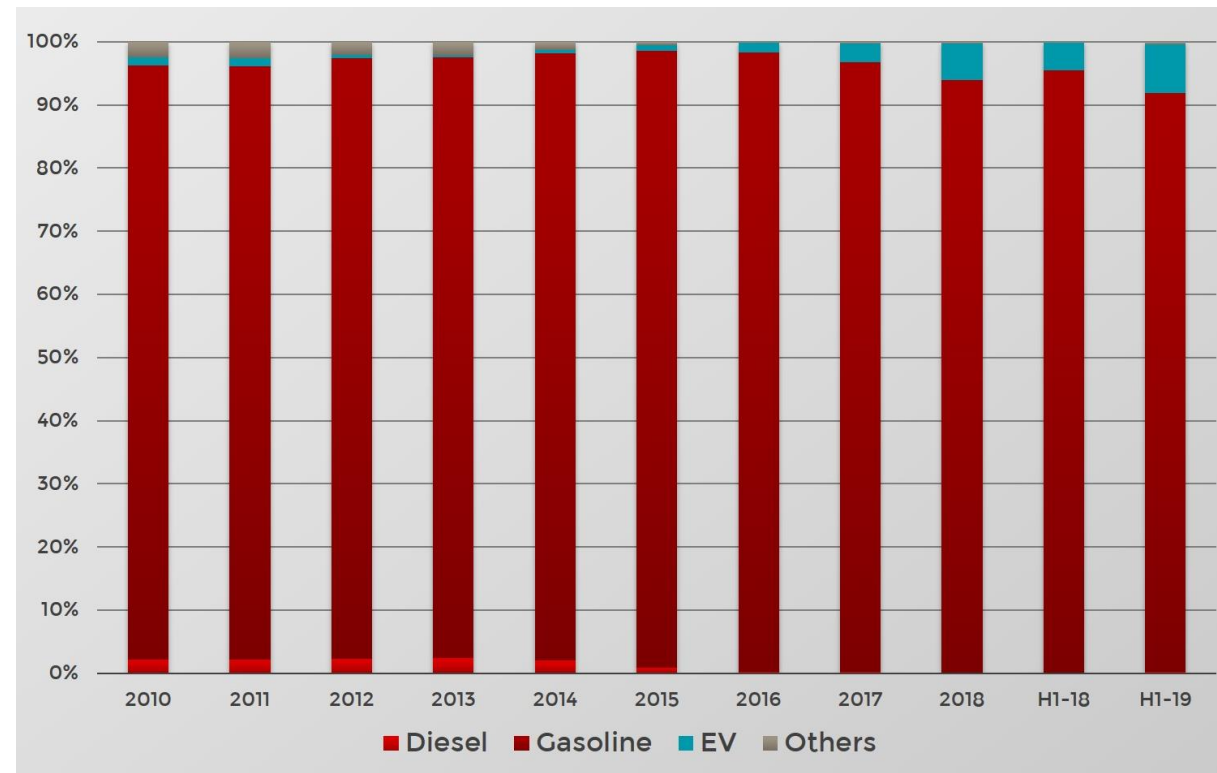
Regional share of global annual EV sales



Source: Bloomberg NEF, Marklines

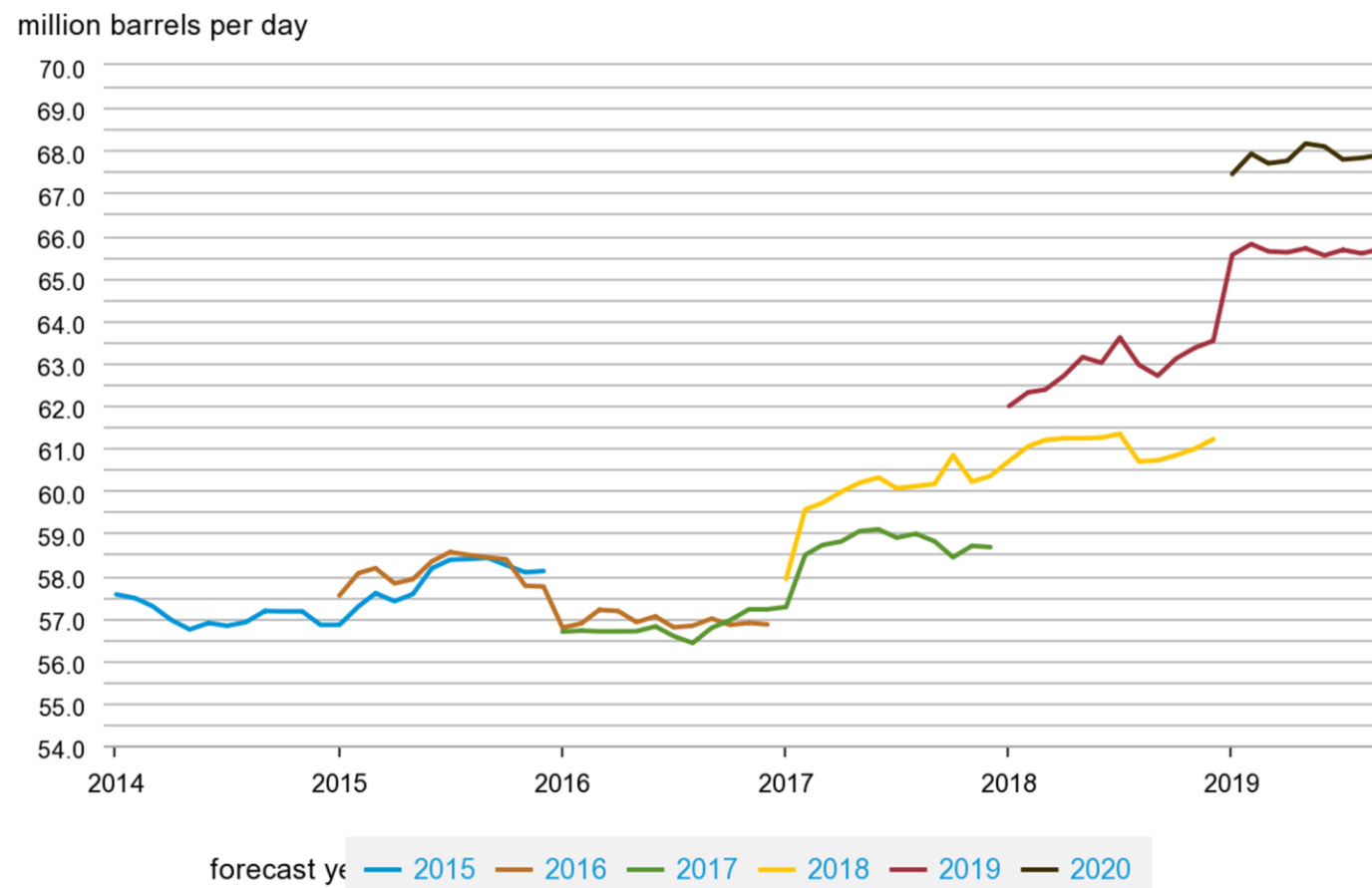
Source: JATO

China car sales by fuel type

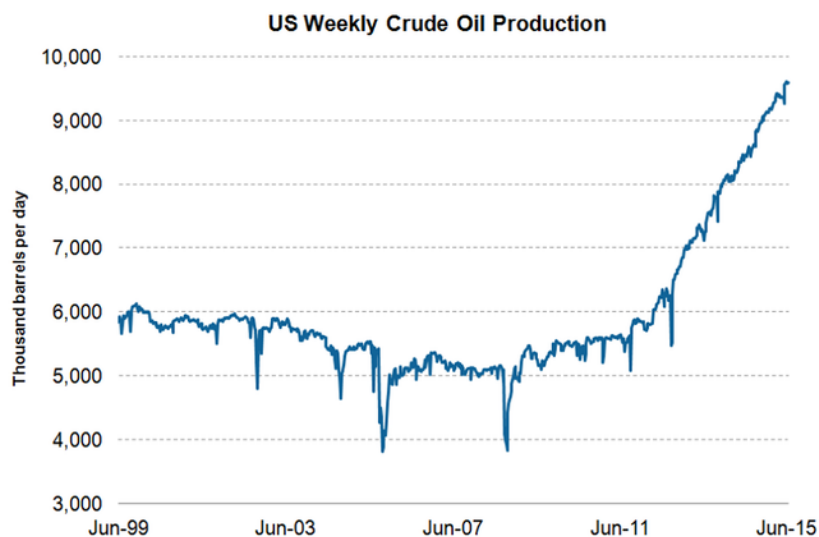


WHILE THE DEMAND OUTLOOK WORSENEED, NON-OPEC SUPPLY SURGED OVER THE LAST 3 YEARS

Projected non-OPEC liquid fuels production, annual expectations

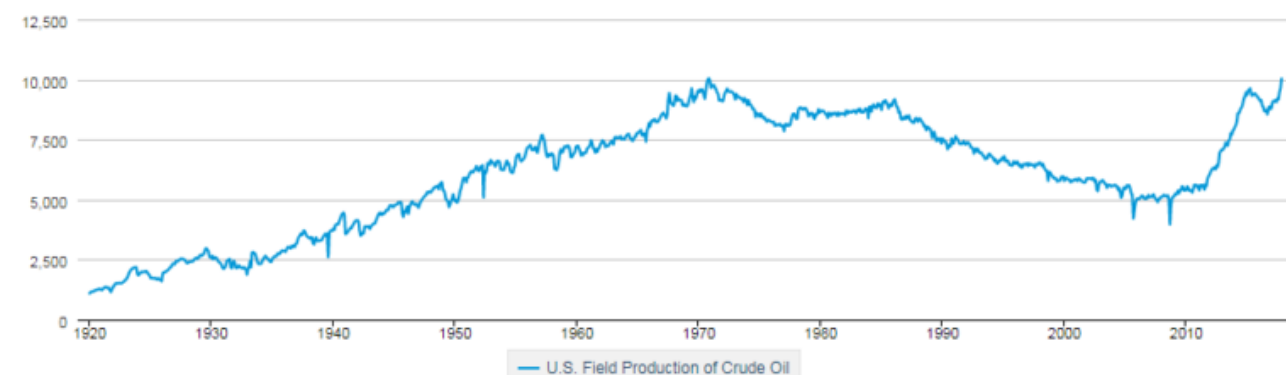


U.S. SHALE POTENTIAL HAS BEEN MASSIVELY UNDERESTIMATED



U.S. Field Production of Crude Oil

Thousand Barrels per Day



DOWNLOAD

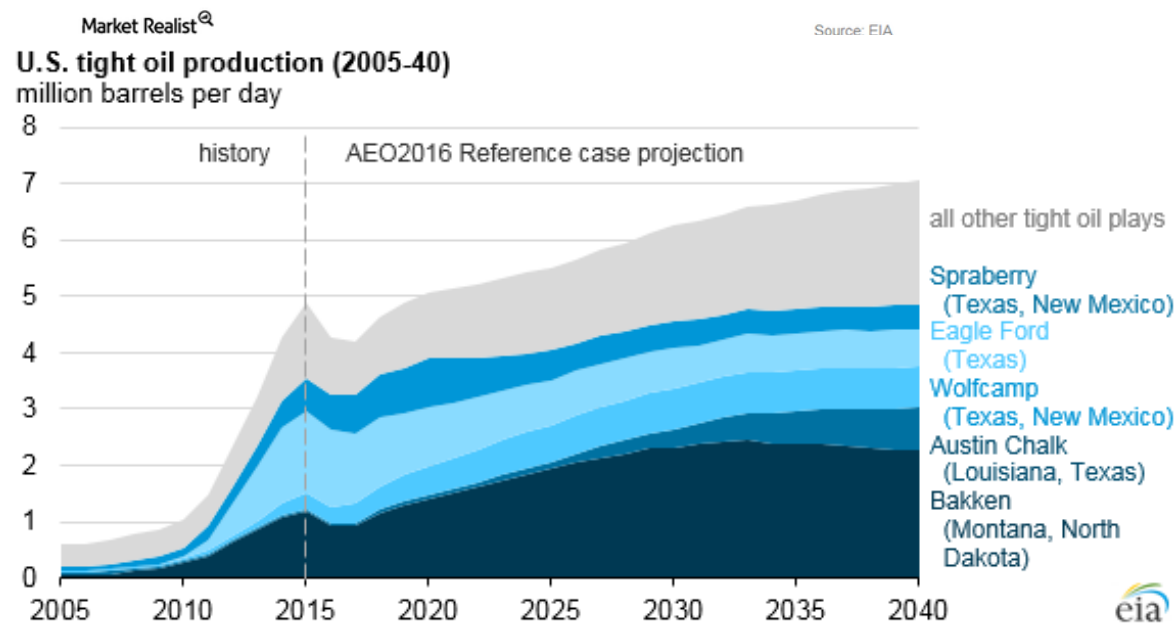
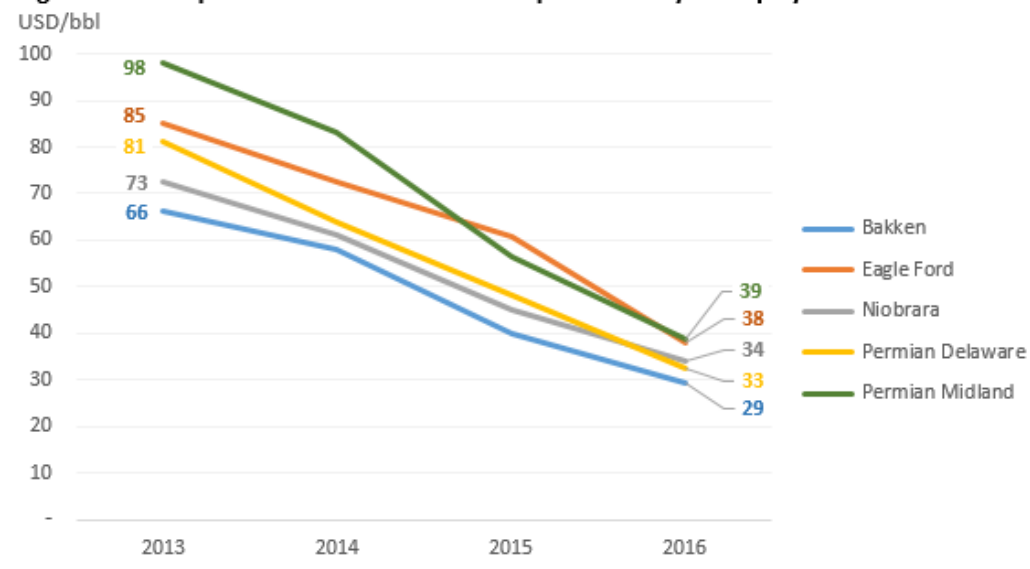


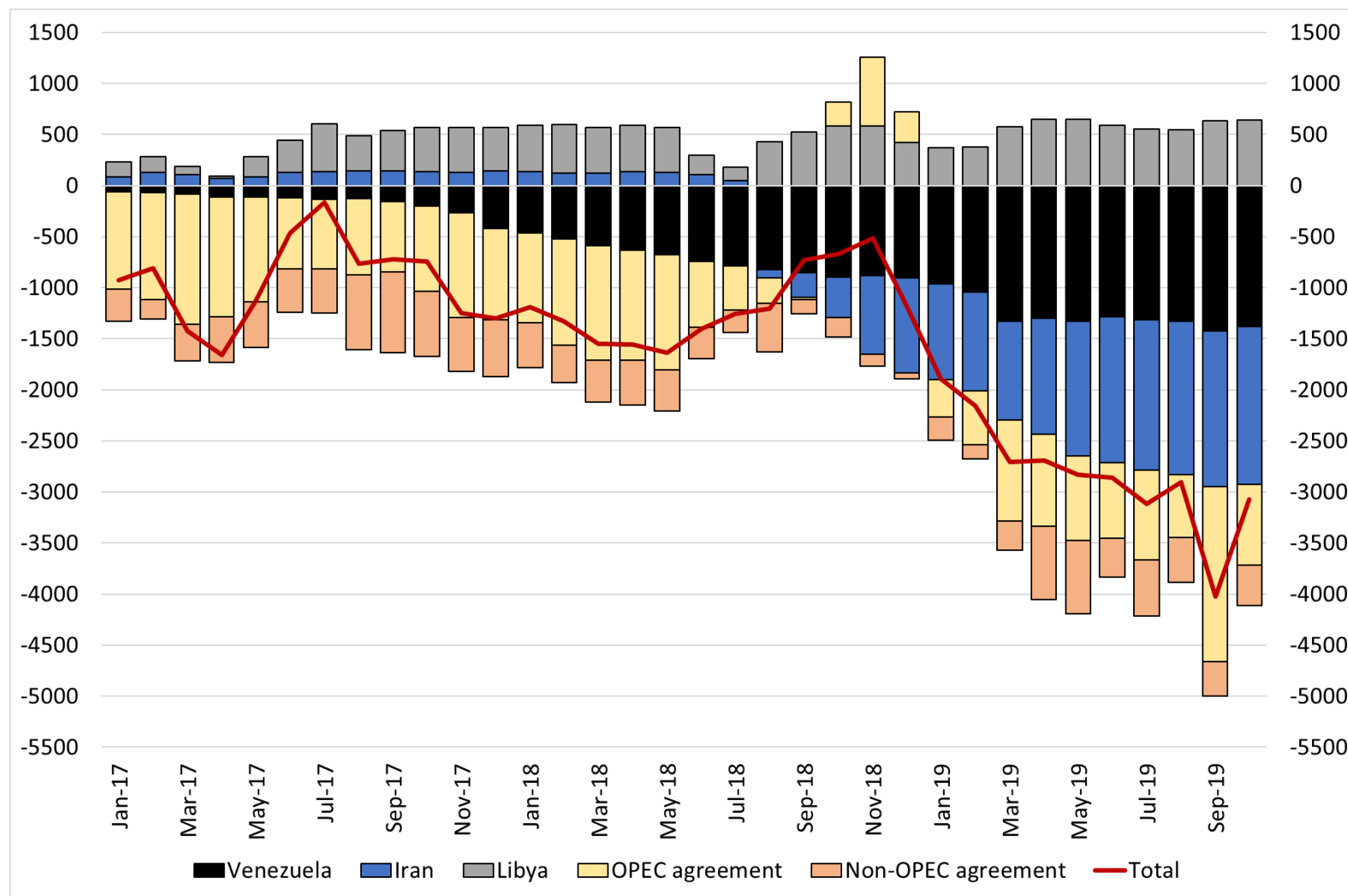
Figure 1: Development in wellhead breakeven prices for key shale plays



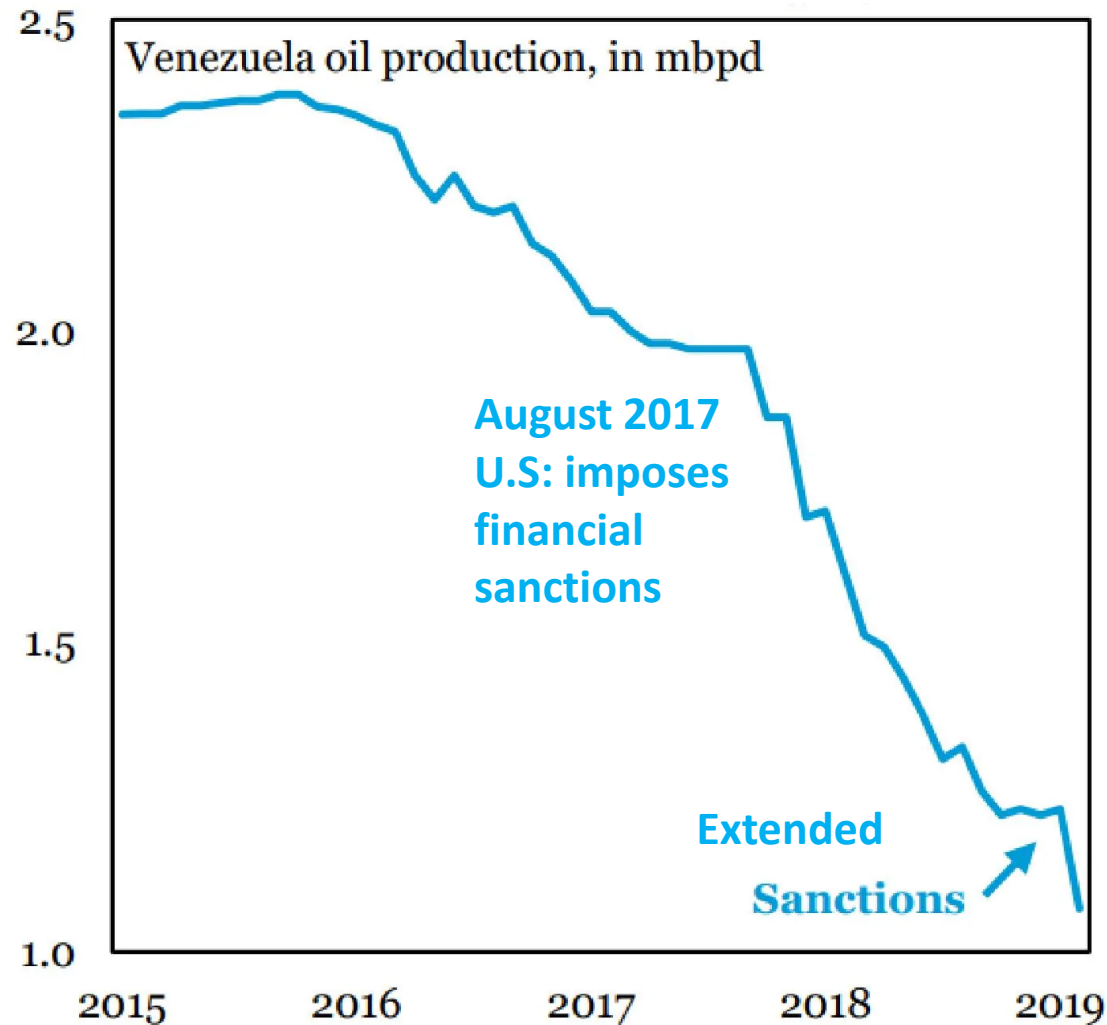
Source: Rystad Energy NASWellCube

OPEC+ AGREEMENT BRINGS BACK SUPPLY MANAGEMENT

Cumulative change in OPEC+ production (kb/d, October 2016 = 0)

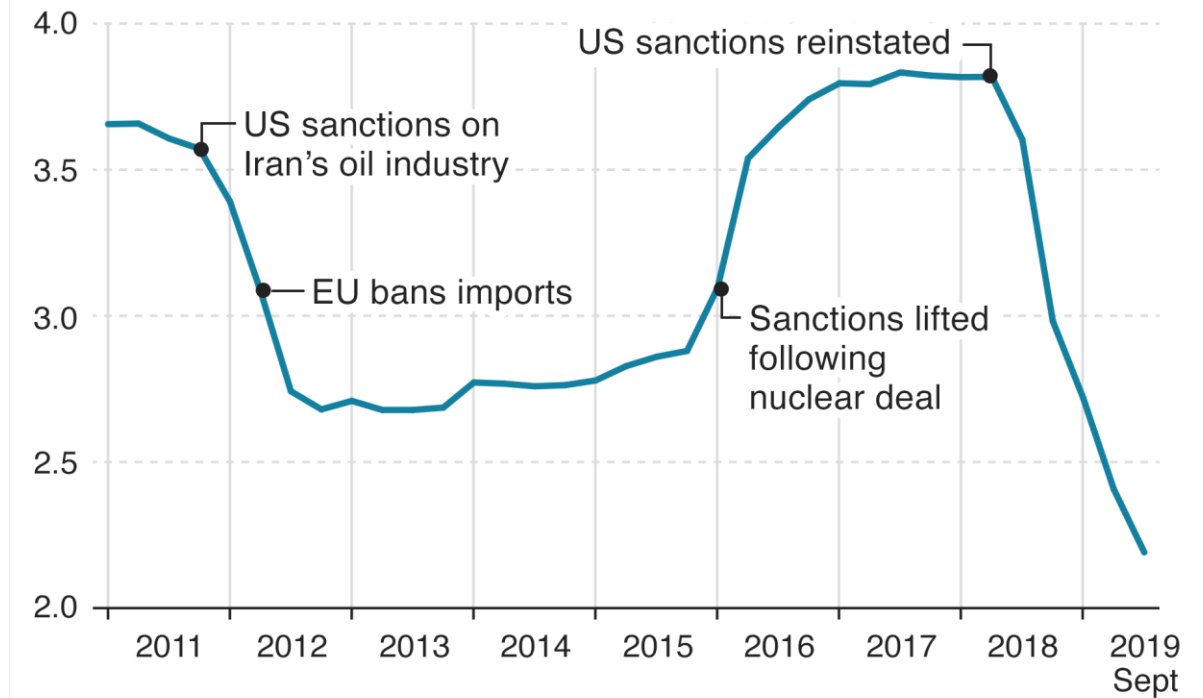


OIL PRICE COLLAPSE TOGETHER WITH U.S. SANCTIONS REDUCED GLOBAL SUPPLY IN KEY PRODUCER COUNTRIES



Iran's oil output

Production in millions of barrels per day

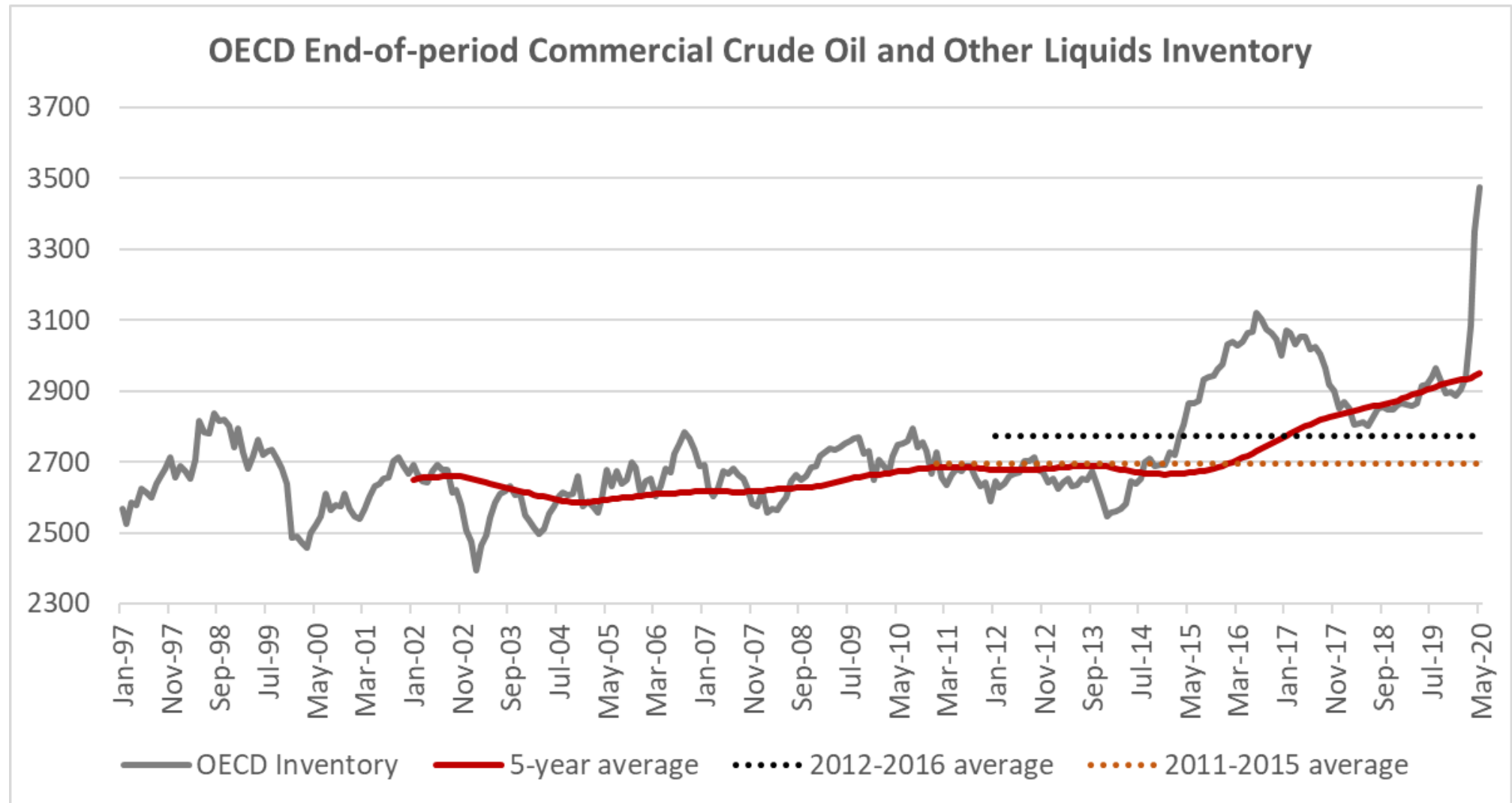


Data to September 2019

Source: OPEC

BBC

OVERSUPPLY ON OIL MARKET REMAINS AND IS EXAGGERATED BY COVID-19 LOCKDOWN MEASURES

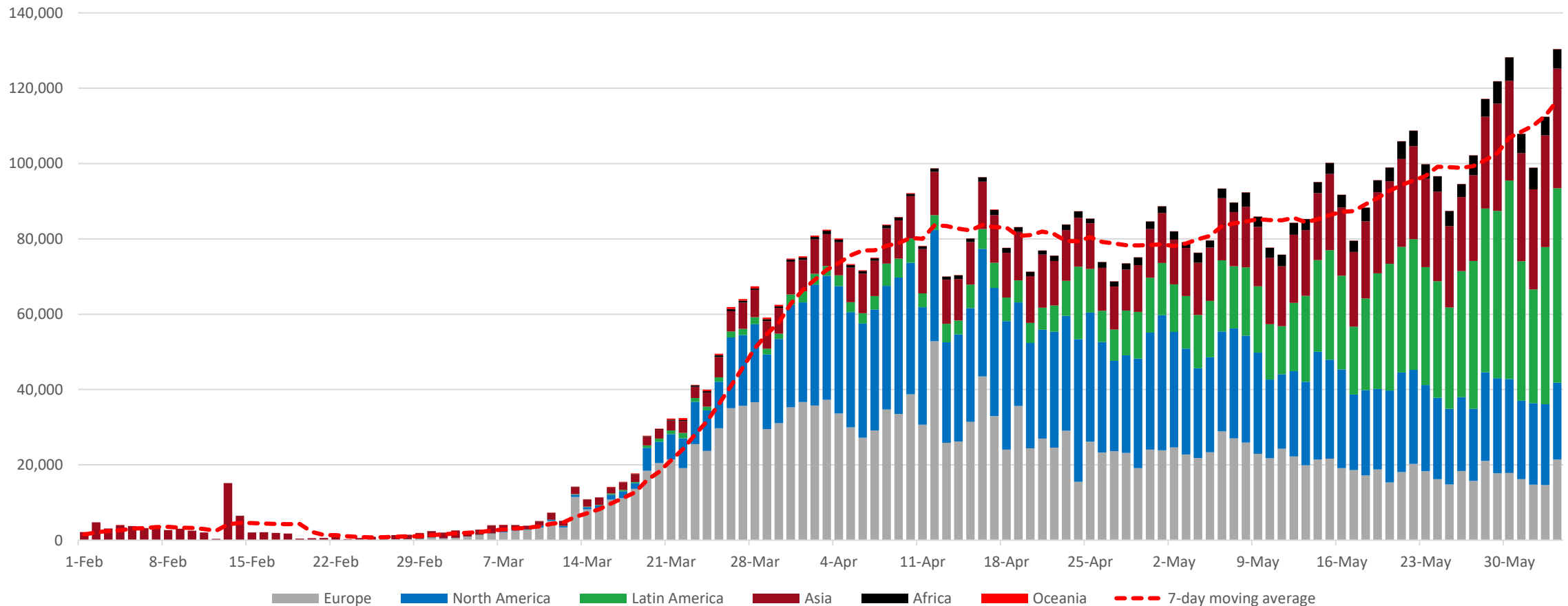


OIL MARKET AND COVID-19

NO DECREASE IN SIGHT IN THE 7-DAY MOVING AVERAGE OF DAILY NEW CASES GLOBALLY

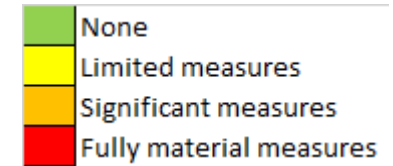
Distribution of COVID-19 new daily cases worldwide

Data
as of
3 June



CORONAVIRUS CONTAINMENT MEASURES BECAME STRICTER OVER TIME

MAGNITUDE AND THE SPEED OF ECONOMIC DAMAGE IS UNPRECEDENTED SINCE WORLD WARS



MARCH 15

	Germany	France	Italy	Spain	UK	Belgium	Poland	Russia	Turkey	Iran	South Africa	United States	Canada	Mexico	Brazil	China	Japan	South Korea	India
School Closing																			
Workplace Closing																			
Cancel public events																			
Restrictions on gatherings																			
Close public transport																			
Stay at home requirements																			
Restrictions on internal movement																			
International travel controls																			

- ▶ Mainly social distancing
- ▶ Less restrictions for workplaces

APRIL 15

School Closing																			
Workplace Closing																			
Cancel public events																			
Restrictions on gatherings																			
Close public transport																			
Stay at home requirements																			
Restrictions on internal movement																			
International travel controls																			

- ▶ Global spread of measures
- ▶ Widespread shutdowns and workplace closing

MAY 15

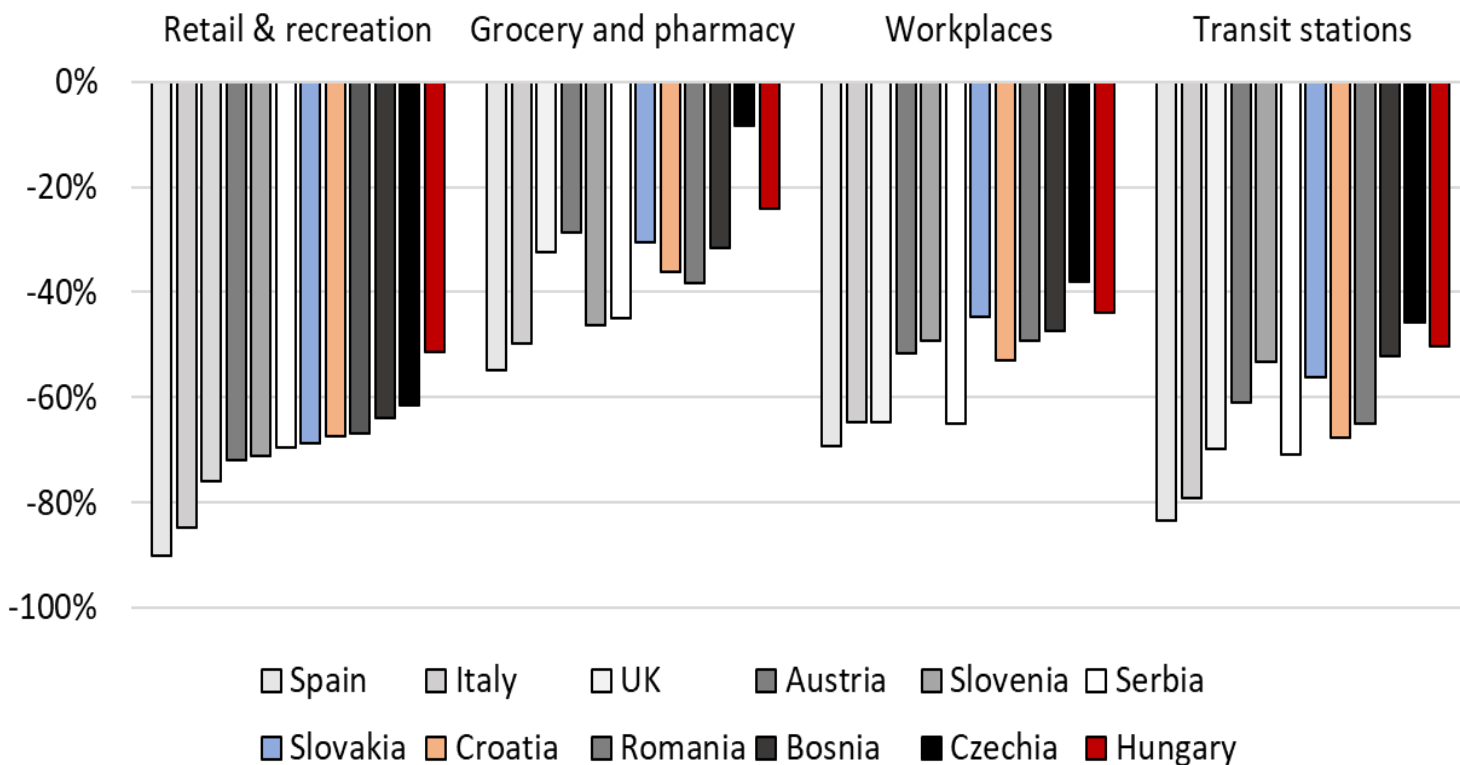
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- ▶ Workplace closing gradually declining
- ▶ China opening
- ▶ Europe and the U.S. gradually loosening restrictions

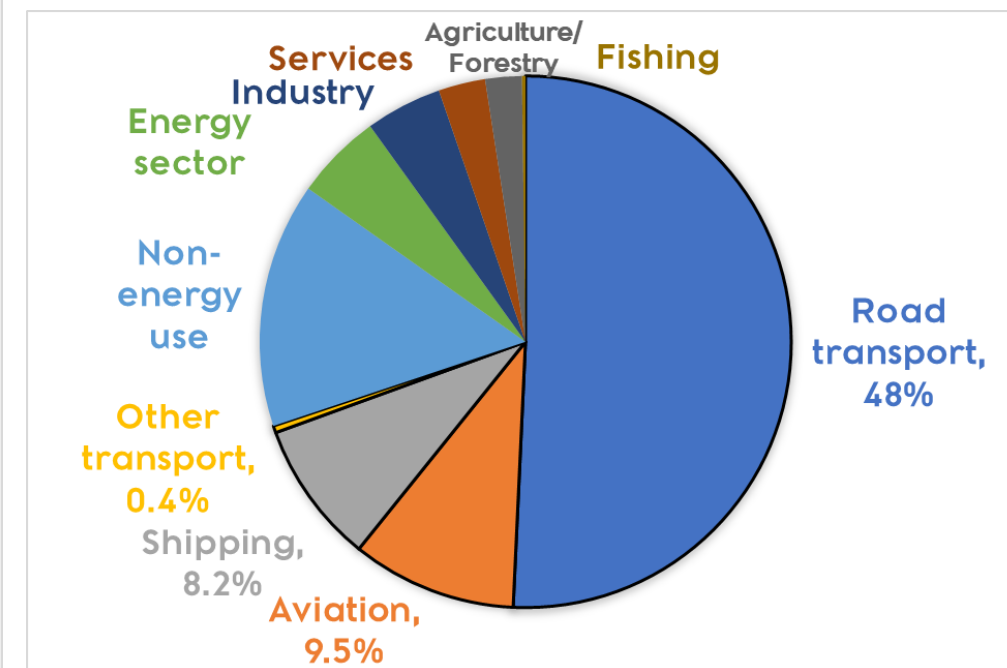
LOCKDOWN MEASURES RESULTED IN UNPRECEDENTED REDUCTION IN MOBILITY

"MOBILITY LOSS" WAS THE SMALLEST IN HUNGARY AND THE CZECH REPUBLIC WITHIN THE CEE, BEING AROUND 60% OF THAT OF ITALY AND SPAIN

Google community mobility trends (April average)
compared to baseline, % difference



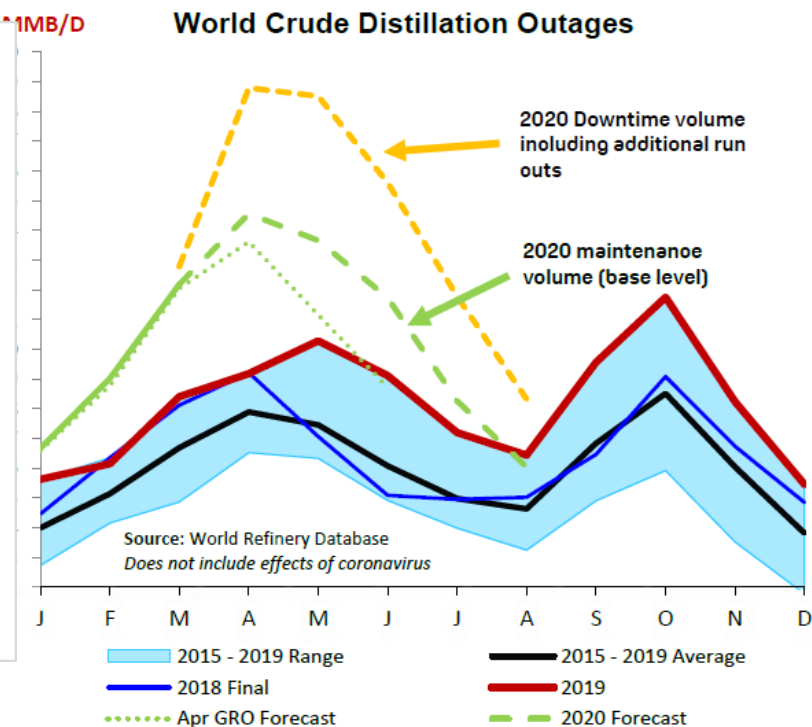
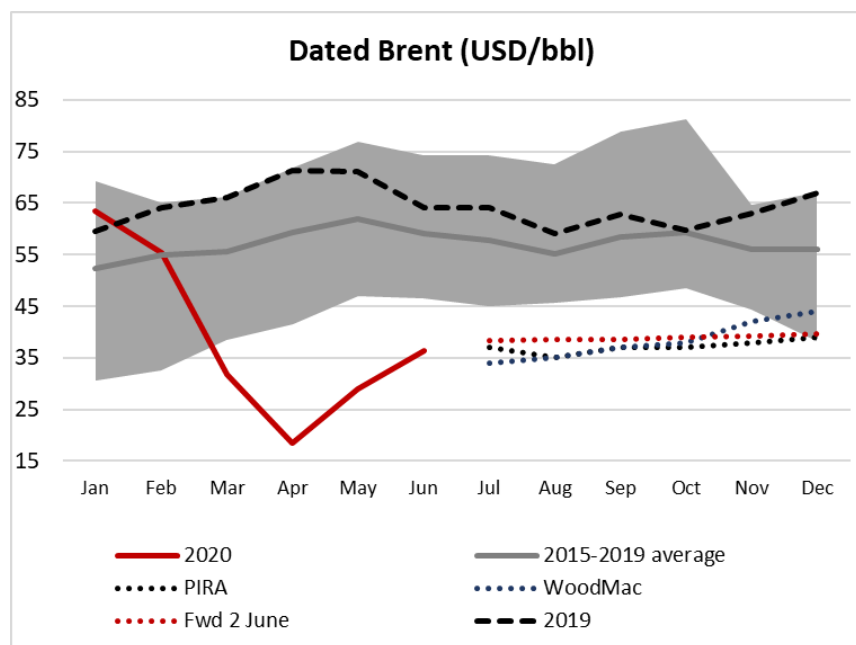
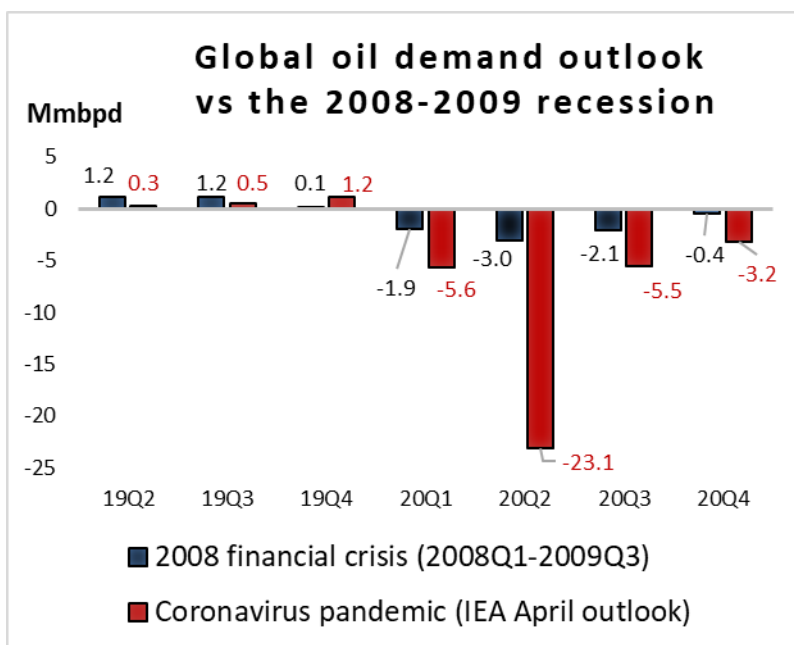
EU28 oil consumption by sectors (% , 2017)



Transportation gives 66,1%
of total oil demand in EU28

BOTH THE MAGNITUDE AND THE SPEED OF THE OIL DEMAND DESTRUCTION ARE UNPARALLELED

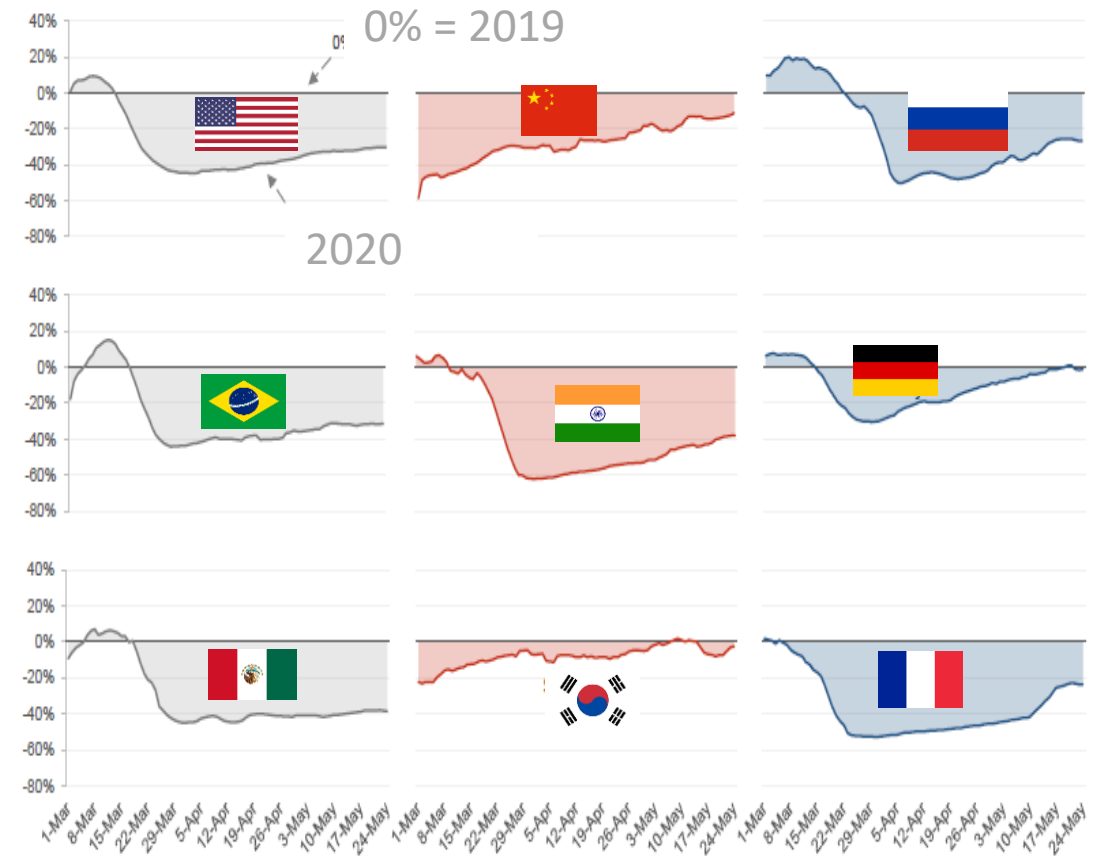
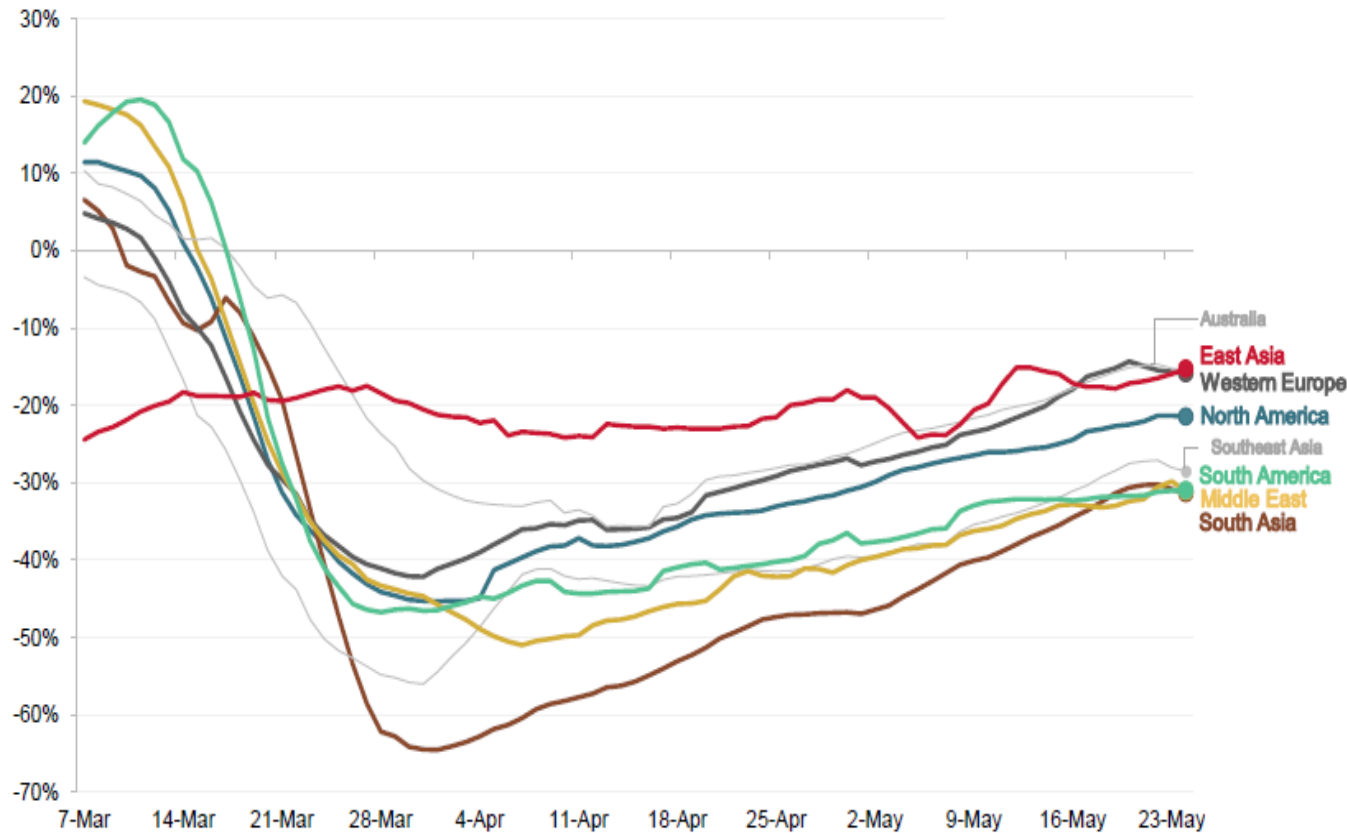
OPEC+ CUTS AND FORCED FIELD CLOSURES ENOUGH TO COUNTERBALANCE REFINERY OUTAGES AND HALT CRUDE OVERSUPPLY GROWTH ALREADY IN THE SHORT TERM, BUT REFINED PRODUCT OVERSUPPLIES REMAIN



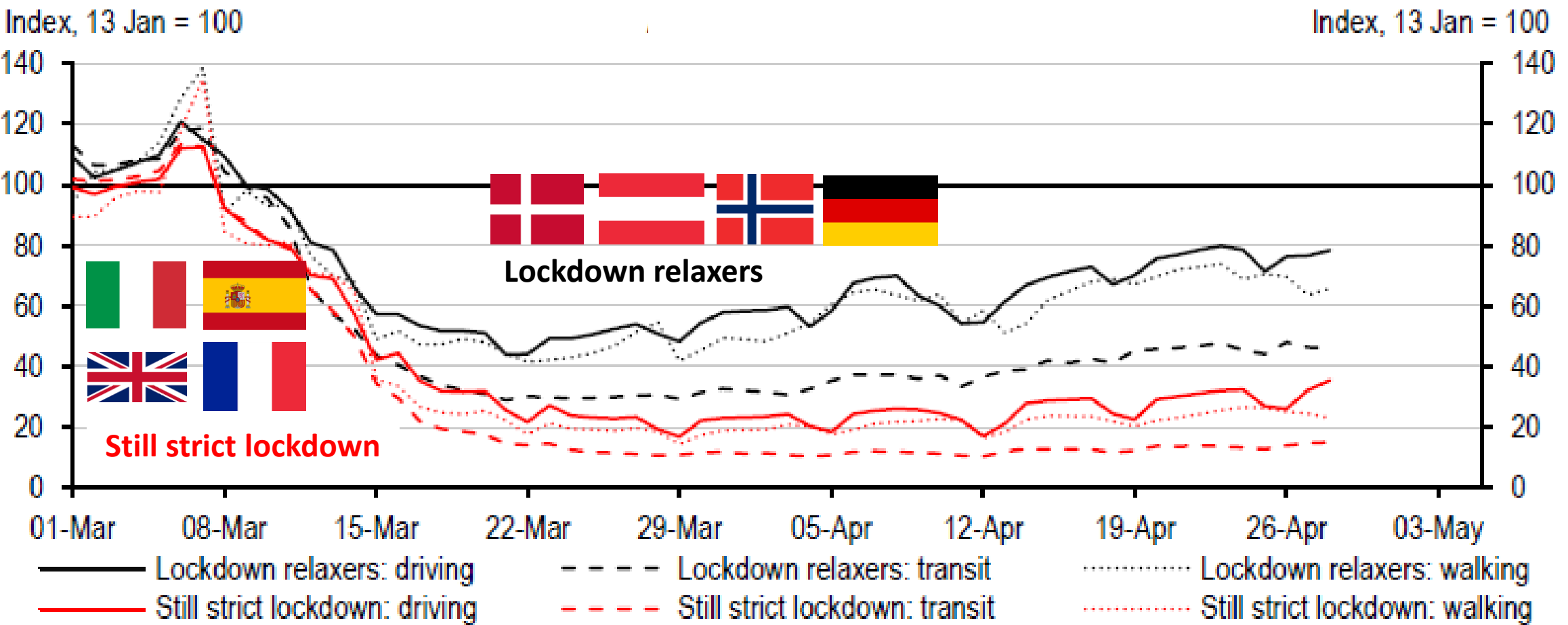
ROAD TRAFFIC GLOBALLY LOOKING TO RECOVER FROM THE BOTTOM IN APRIL

AVIATION AND SHIPPING DEMAND WILL REMAIN SUBDUED FOR LONGER

Road traffic reduction versus normal levels (Percentage difference from normal levels, 7-day moving average), 7 March to 24 May



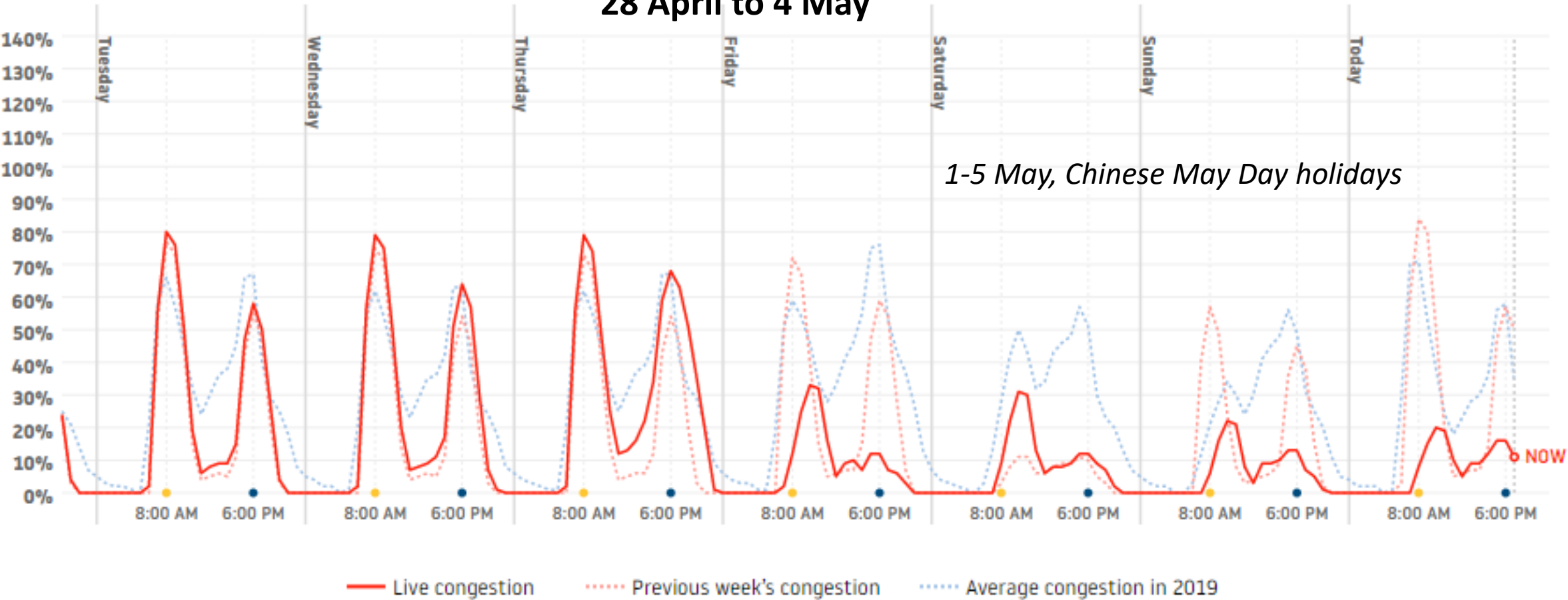
RECOVERY IN TRAFFIC IN SOME PARTS OF EUROPE SHOWS WHAT MAY COME ELSEWHERE



Source: Apple Mobility Trends. Note: 'Lockdown relaxers' are Denmark, Austria, Norway and Germany while 'Still strict lockdown' is UK, France, Italy and Spain. Transit is public transportation.

RUSH-HOUR TRAFFIC IN BEIJING HAS RECOVERED TO PRE-CRISIS LEVELS,
BUT REMAINS DEPRESSED ON WEEKENDS AND PUBLIC HOLIDAYS

Beijing traffic, congestion level (% of maximum)
28 April to 4 May

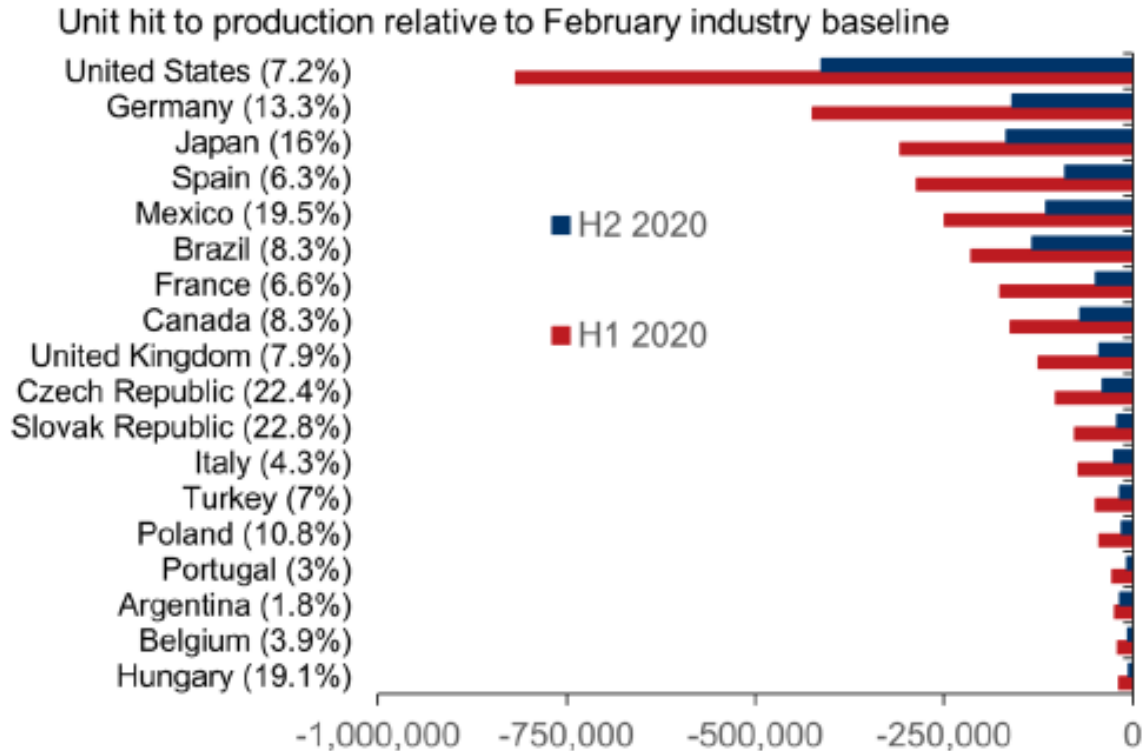


Source: TomTom Traffic Index

AUTOMOTIVE COLLAPSE FEEDS THROUGH SUPPLY CHAINS

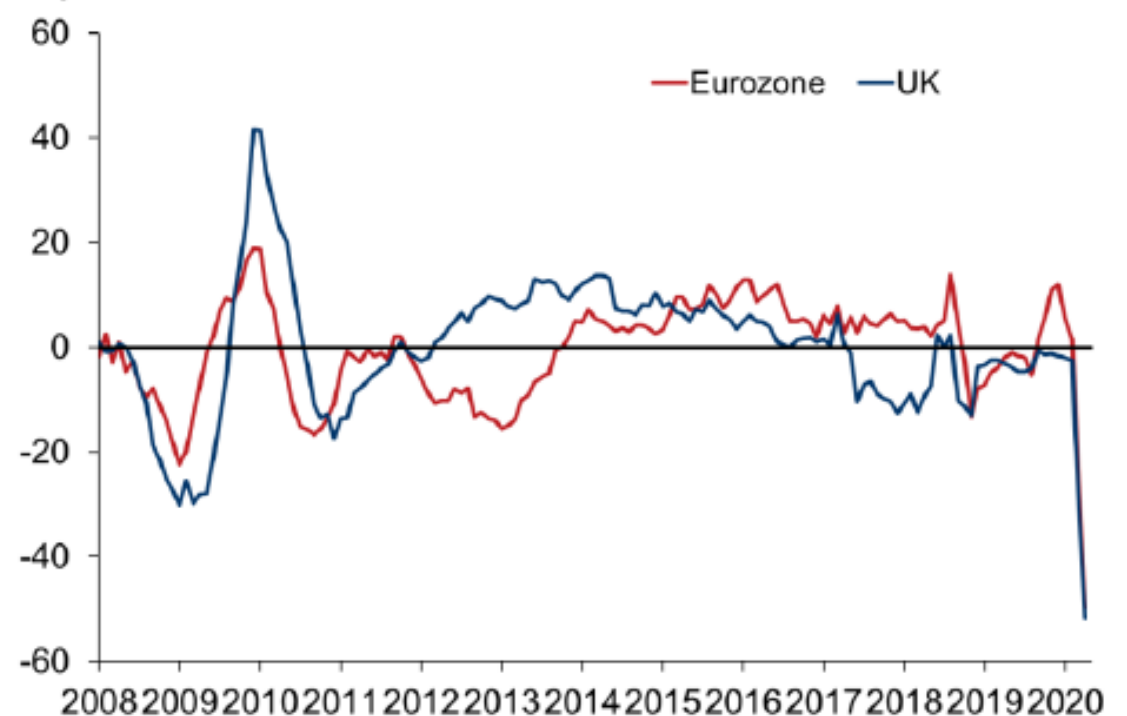
THE GLOBAL CAR INDUSTRY IS HEADED FOR A DEEPER RECESSION THAN IN THE AFTERMATH OF THE FINANCIAL CRISIS IN 2008, WITH A 30% DROP IN BOTH THE U.S. AND EUROPEAN MARKETS (MCKINSEY)

World: Automotive factory closures



Europe: Passenger car registrations

% year, 3mma

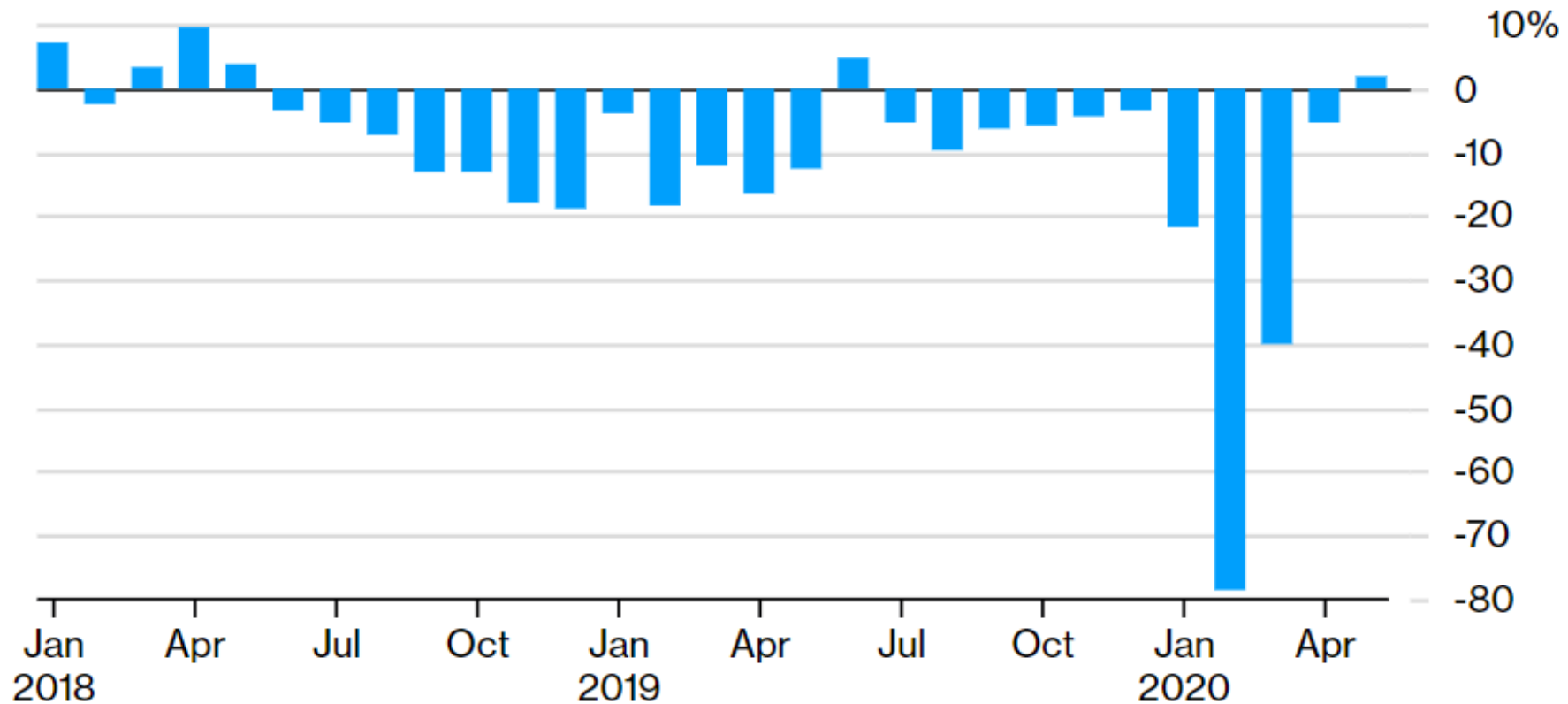


MOTORIZATION RATE TREND ASSUMED TO STAY IN DEVELOPING COUNTRIES

CAR PURCHASES POSTPONED NOT CANCELLED, WITH SCRAPPAGE PROGRAMS TARGETTING TYPICALLY ELECTRIC VEHICLES IN EU

China car sales rebounded for the first time in almost a year in May

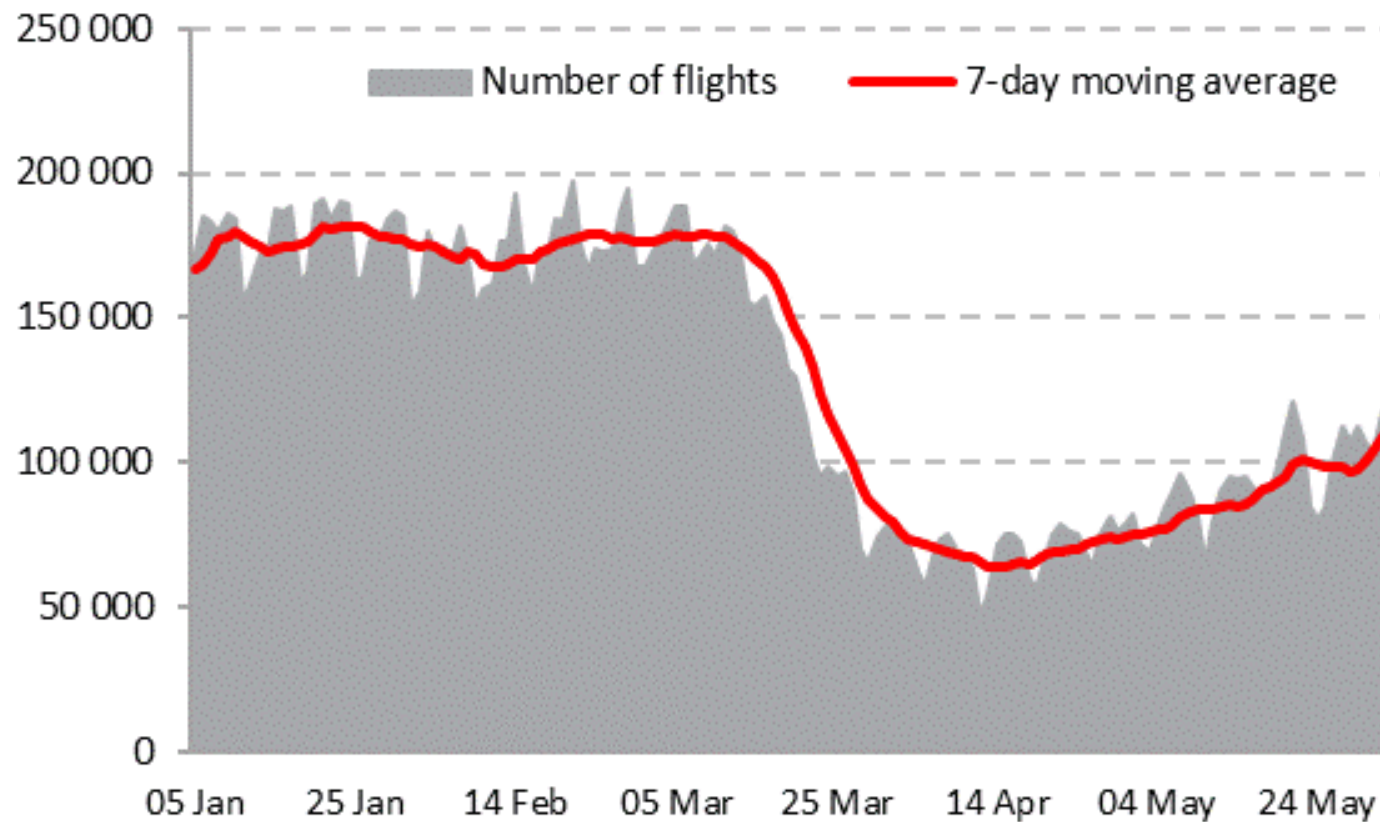
■ Year-on-year change in China passenger vehicle sales



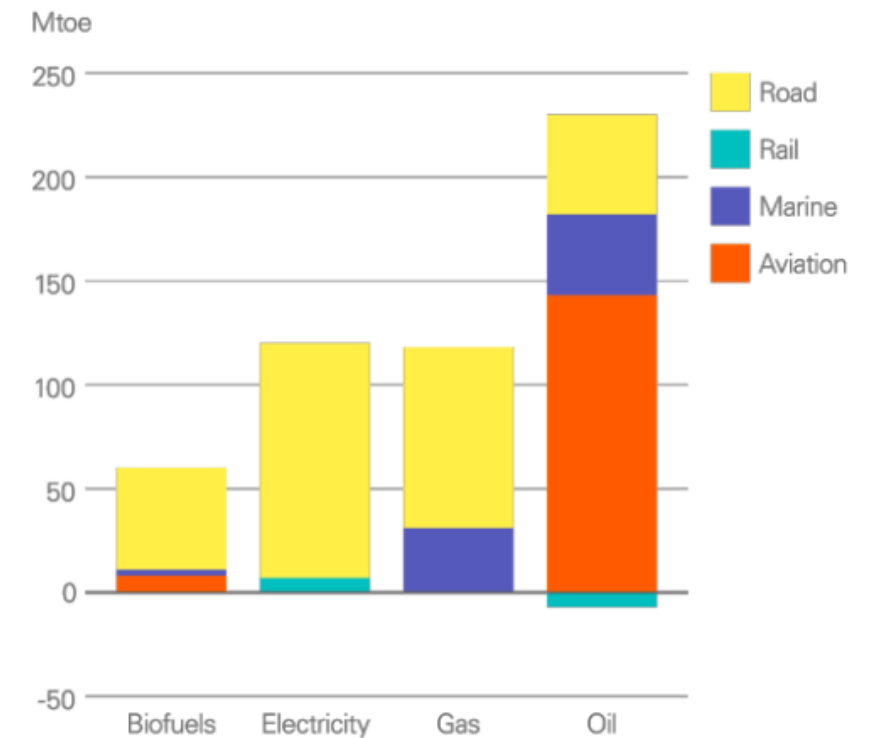
AVIATION SLOWLY PICKING UP FROM "CARGO ONLY" MODE

RECENT SURVEY SAYS 86% OF PEOPLE WOULD DELAY AIR TRAVEL EVEN AFTER CORONAVIRUS WAS DETERMINED TO BE CONTAINED ON A WIDE SCALE.

Global number of daily flights



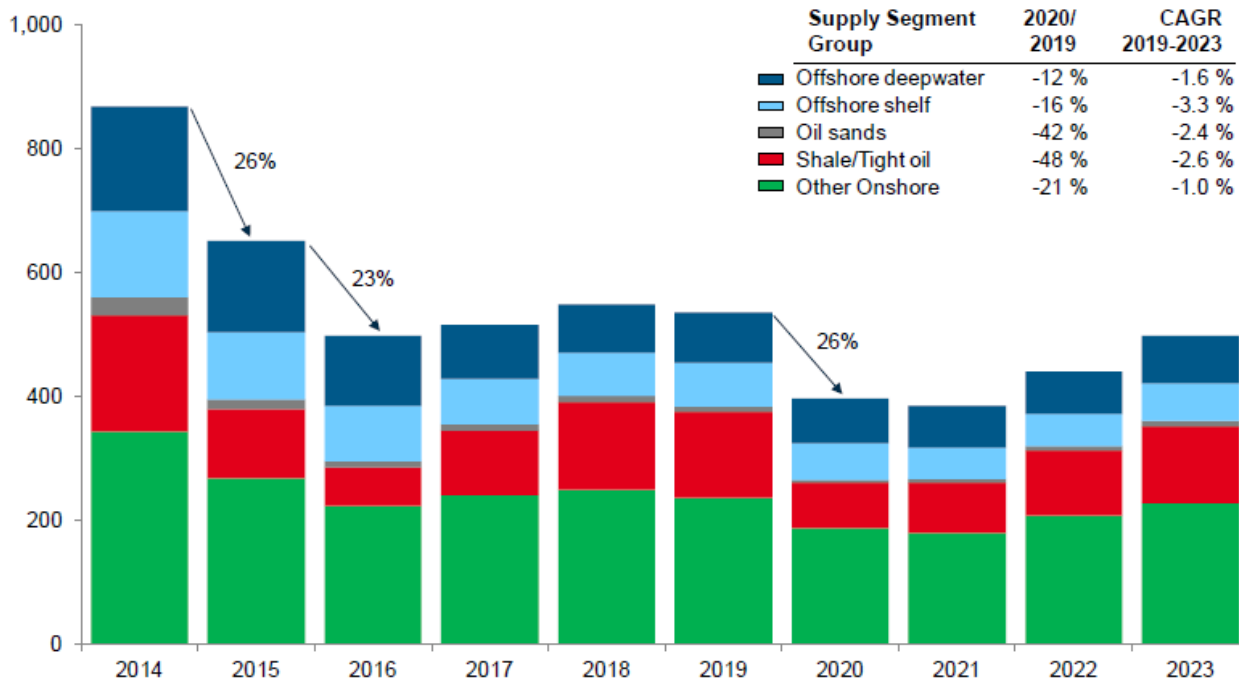
Final energy consumption in transport: growth by fuel and mode, 2017-2040



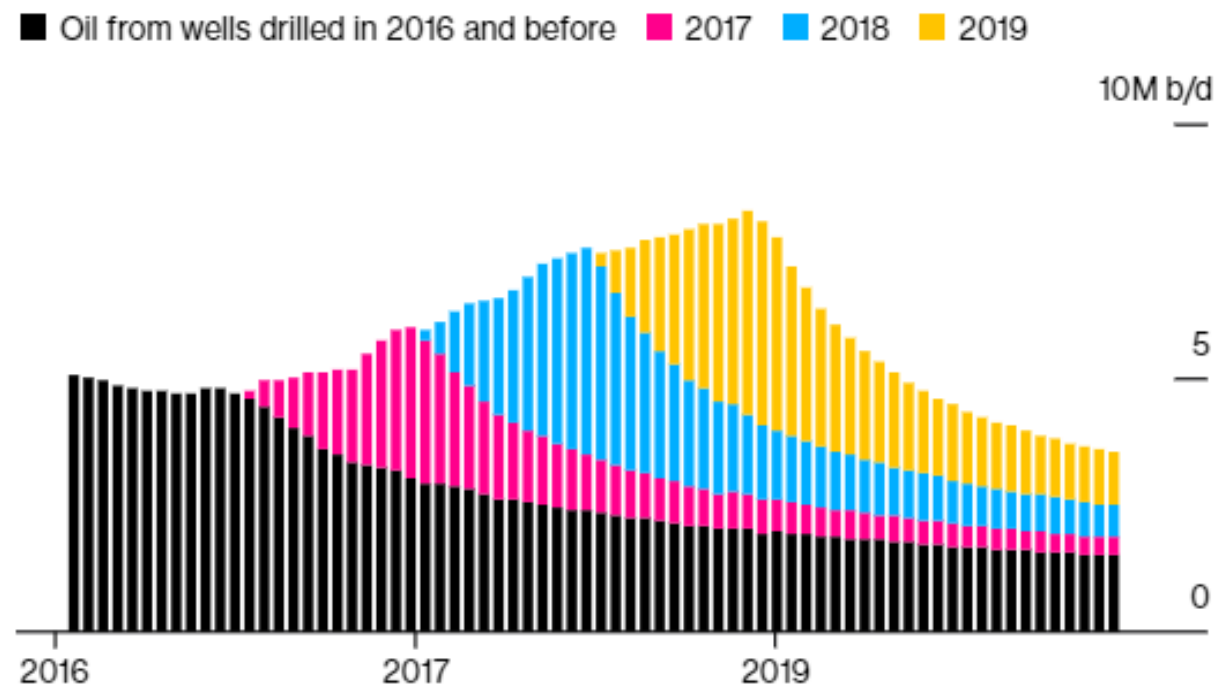
THE LOW PRICE ENVIRONMENT UNDERMINES THE APPETITE FOR NEW INVESTMENT

U.S. DRILLERS HAVE DROPPED NEARLY TWO-THIRDS OF RIGS IN 2020, U.S. PRODUCTION BY MAY 20 HAD DROPPED ALMOST 20%, OR 2.3M BARRELS A DAY

Global E&P Investments (in bn USD)
expected to fall more than 25% this year



Each year U.S. shale needs new drilling to replace fast-declining old production



QUESTIONS?