A photograph of a multi-lane highway that is almost completely empty. In the foreground, a large electronic sign displays the message 'AVOID TRAVEL STAY HOME BEAT COVID-19' in orange LED lights. The background shows a residential area with houses and trees under a cloudy sky. The overall color palette is dominated by blues and greys, with a teal tint.

bp Statistical Review of World Energy  
Energy in 2020: the year of COVID



Reviewing world energy  
data for 70 years

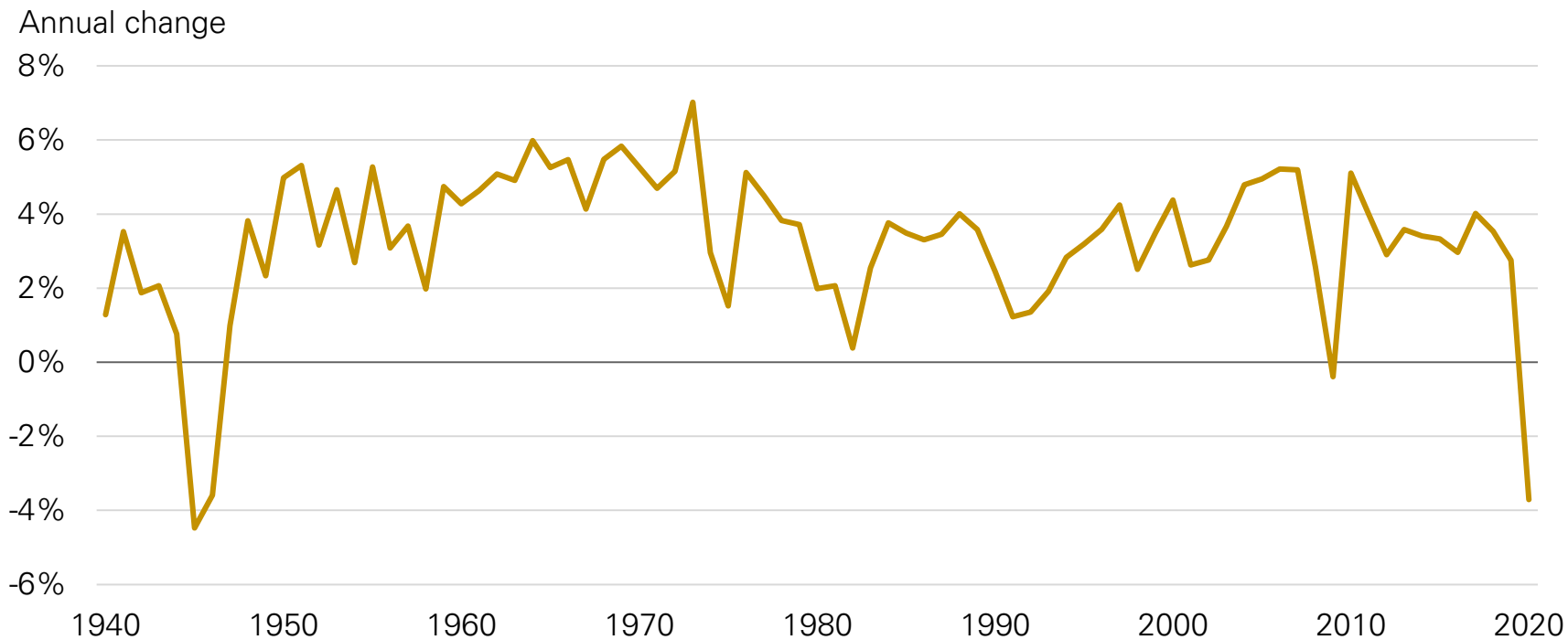
# Energy in the year of COVID: three questions



1. What happened last year and how surprising was it?
2. What did we learn from how the energy system responded to the COVID stress test?
3. Progress since Paris – how is the world doing



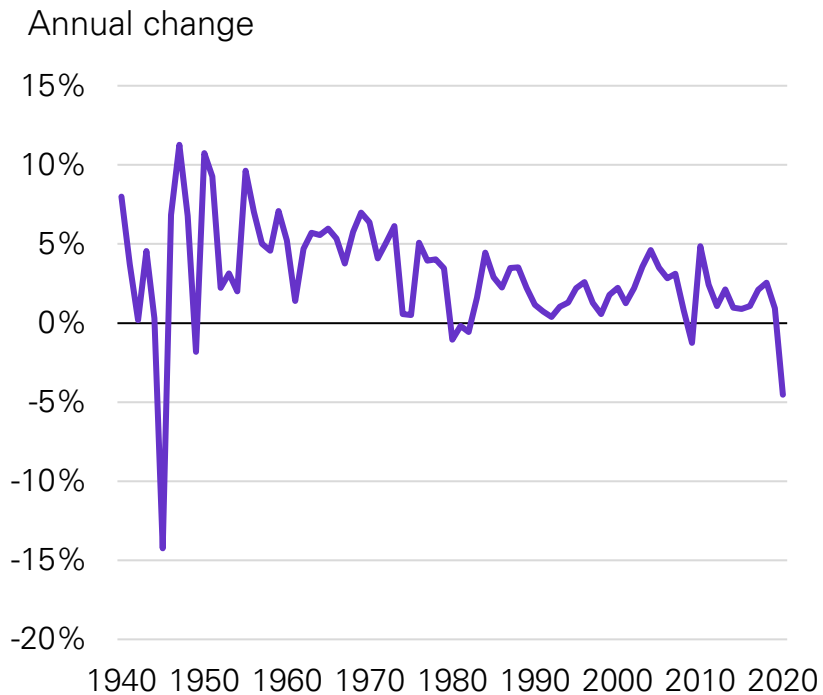
# Global GDP contracted by the most since WWII



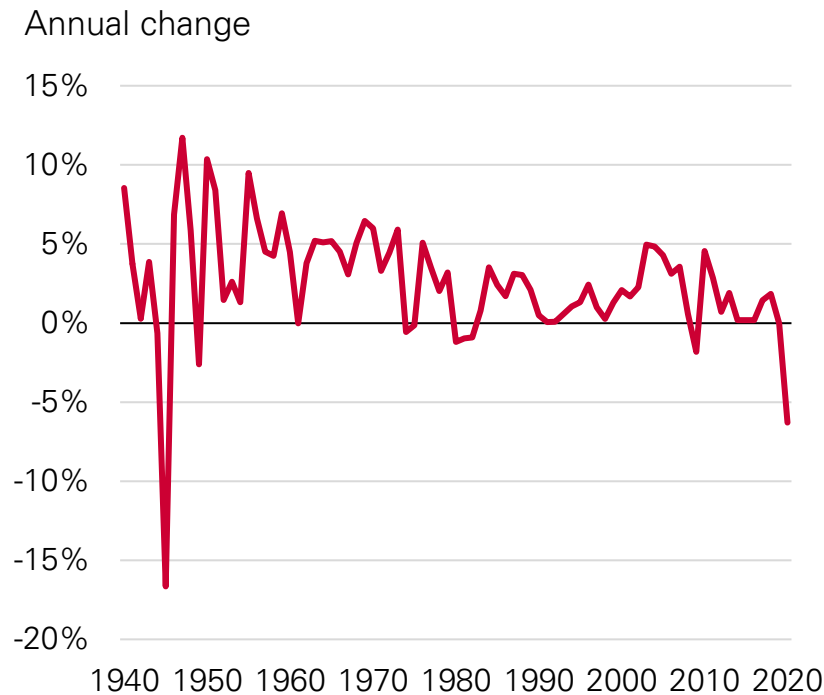
# Global energy demand and carbon emissions moved in lockstep



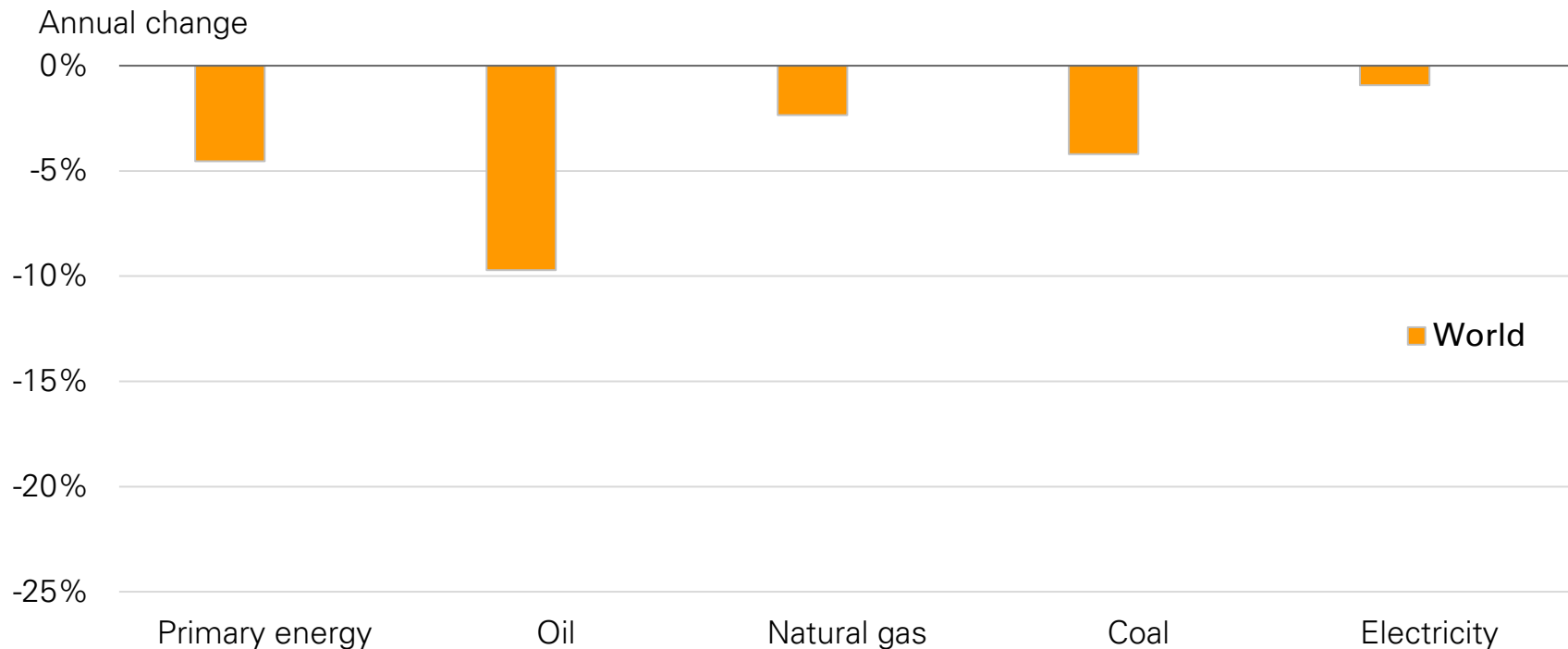
## Primary energy consumption



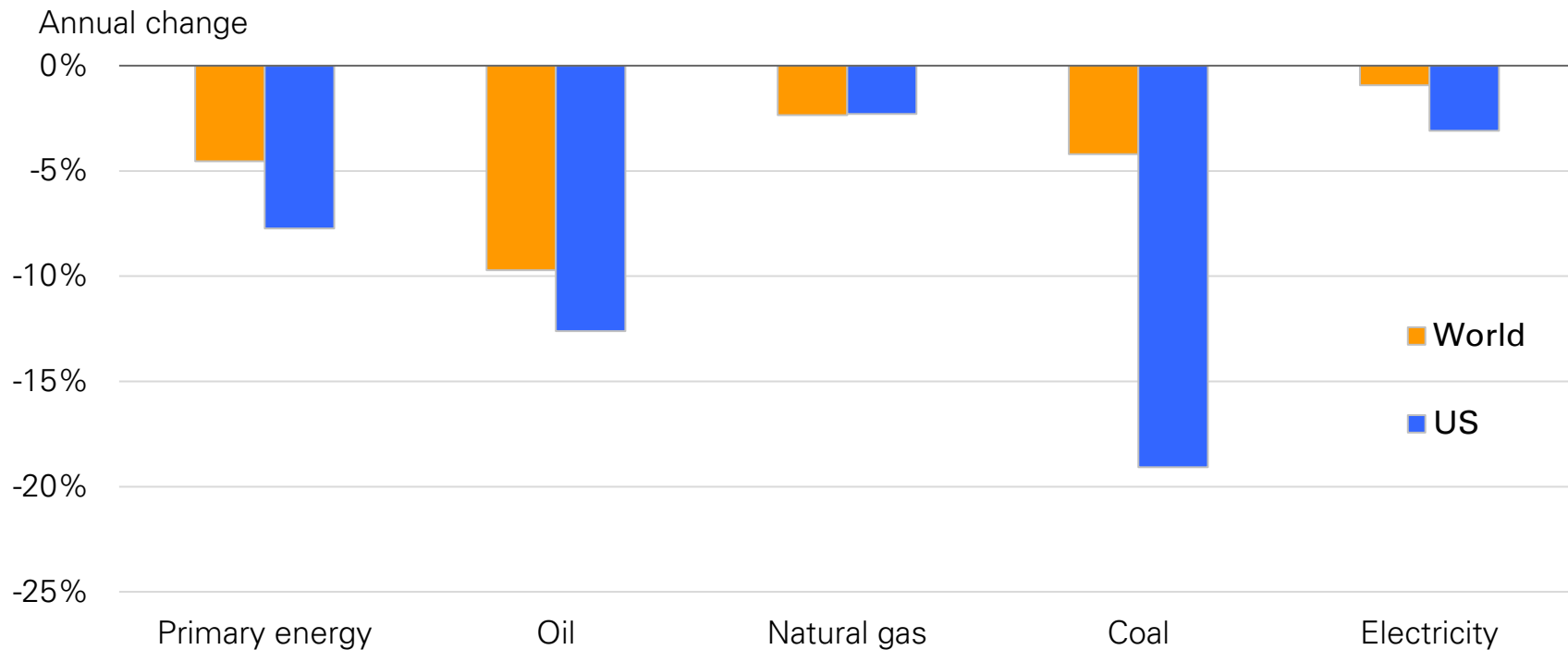
## CO<sub>2</sub> emissions from energy use



# Energy demand contracted in 2020

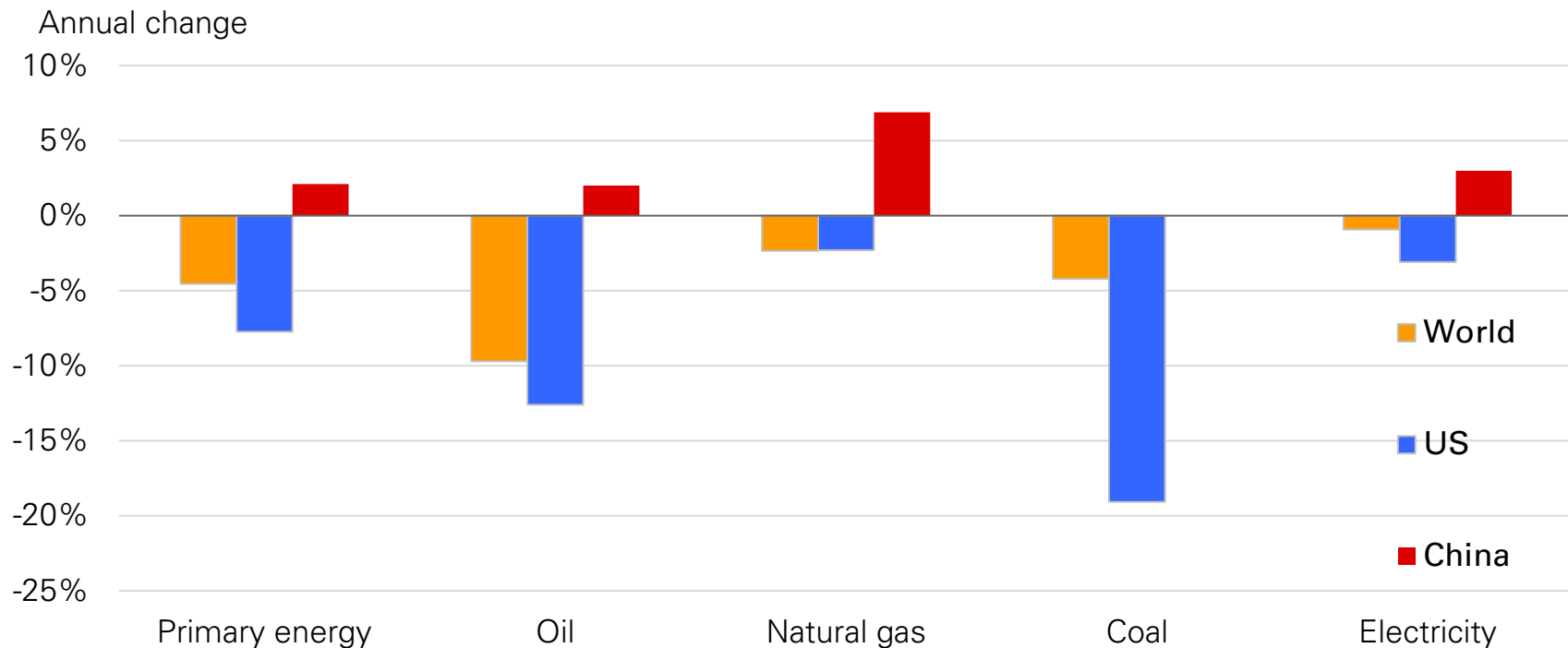


# Energy demand: US vs World



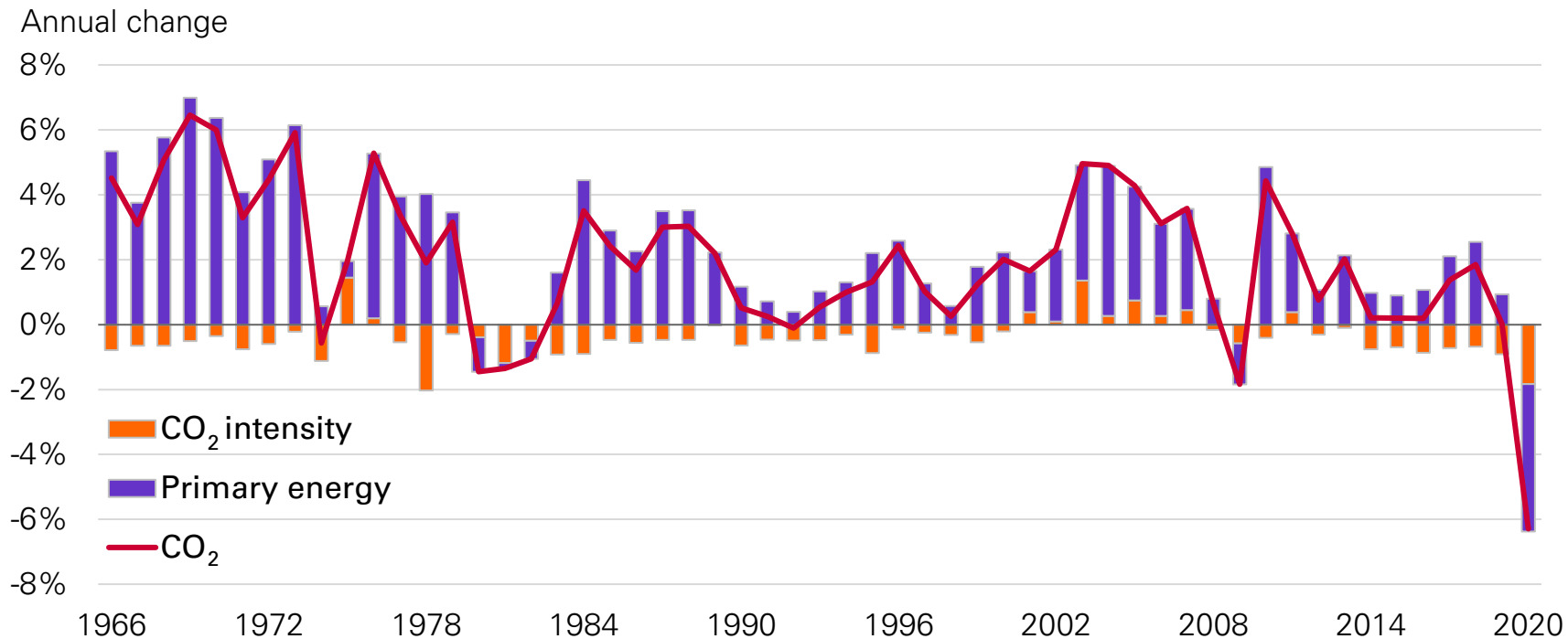


# Energy demand: US, China, World

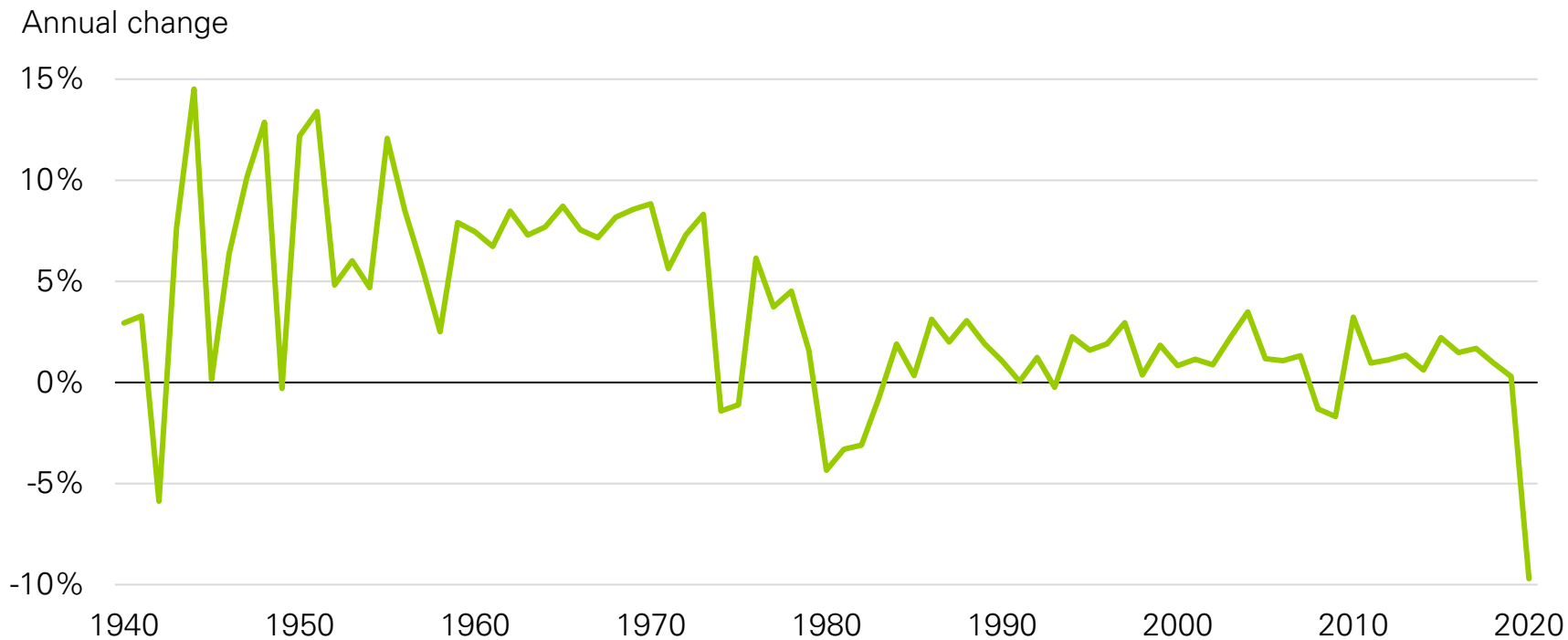




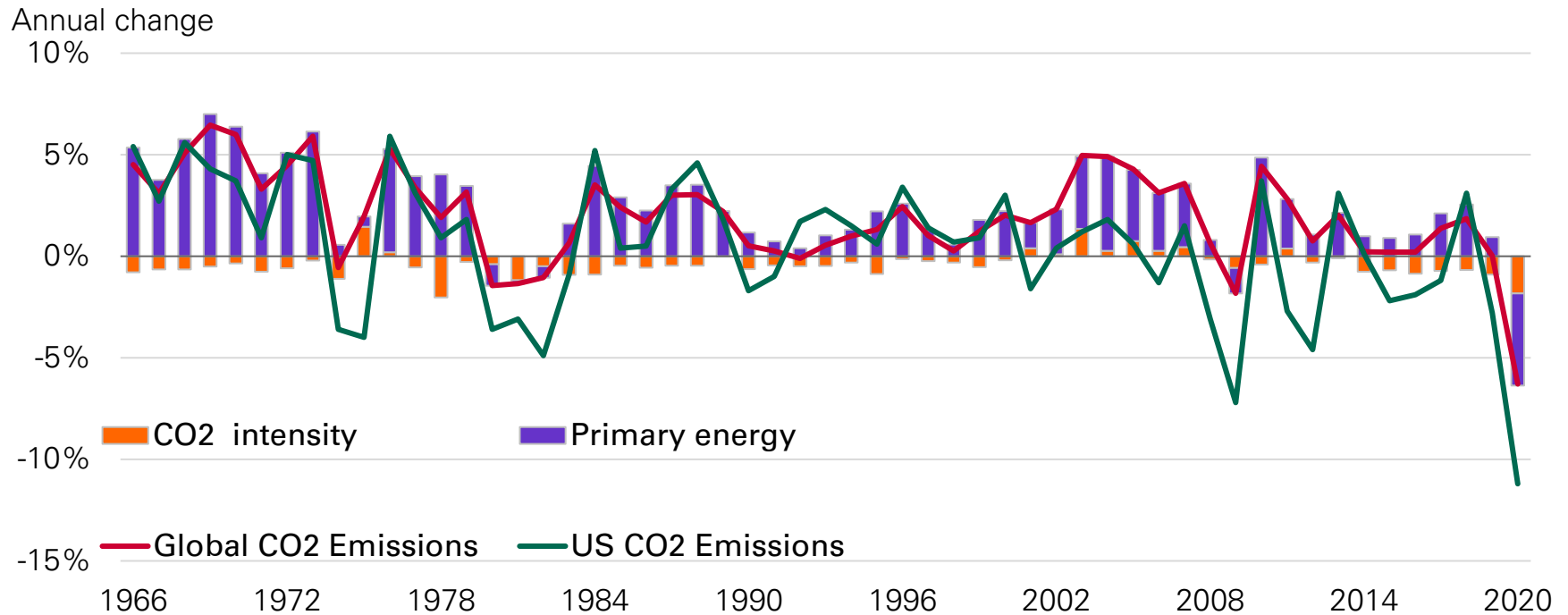
# CO<sub>2</sub> emissions from energy use fell by 6%



# Oil demand contracted by the most in history



# And in the US the emissions decline was almost twice as large

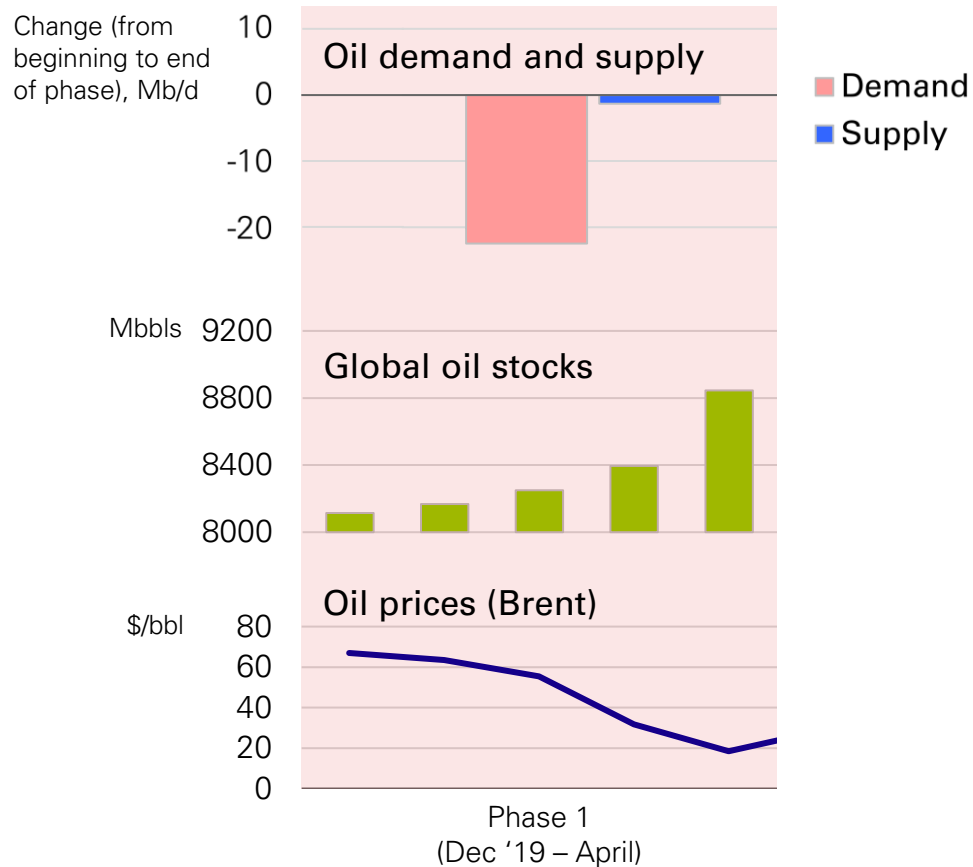


# Energy in the year of COVID: three questions

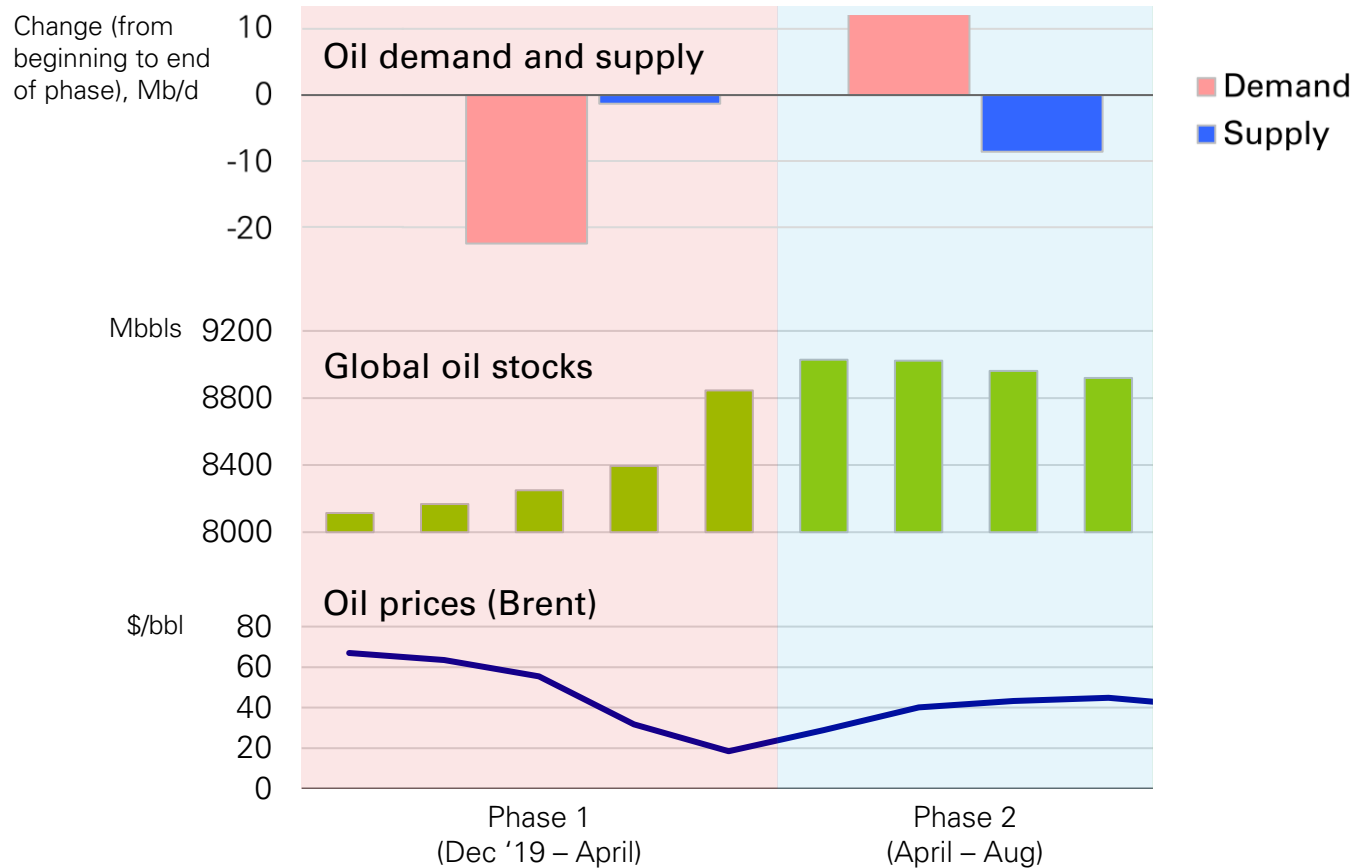


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# Oil market in 2020

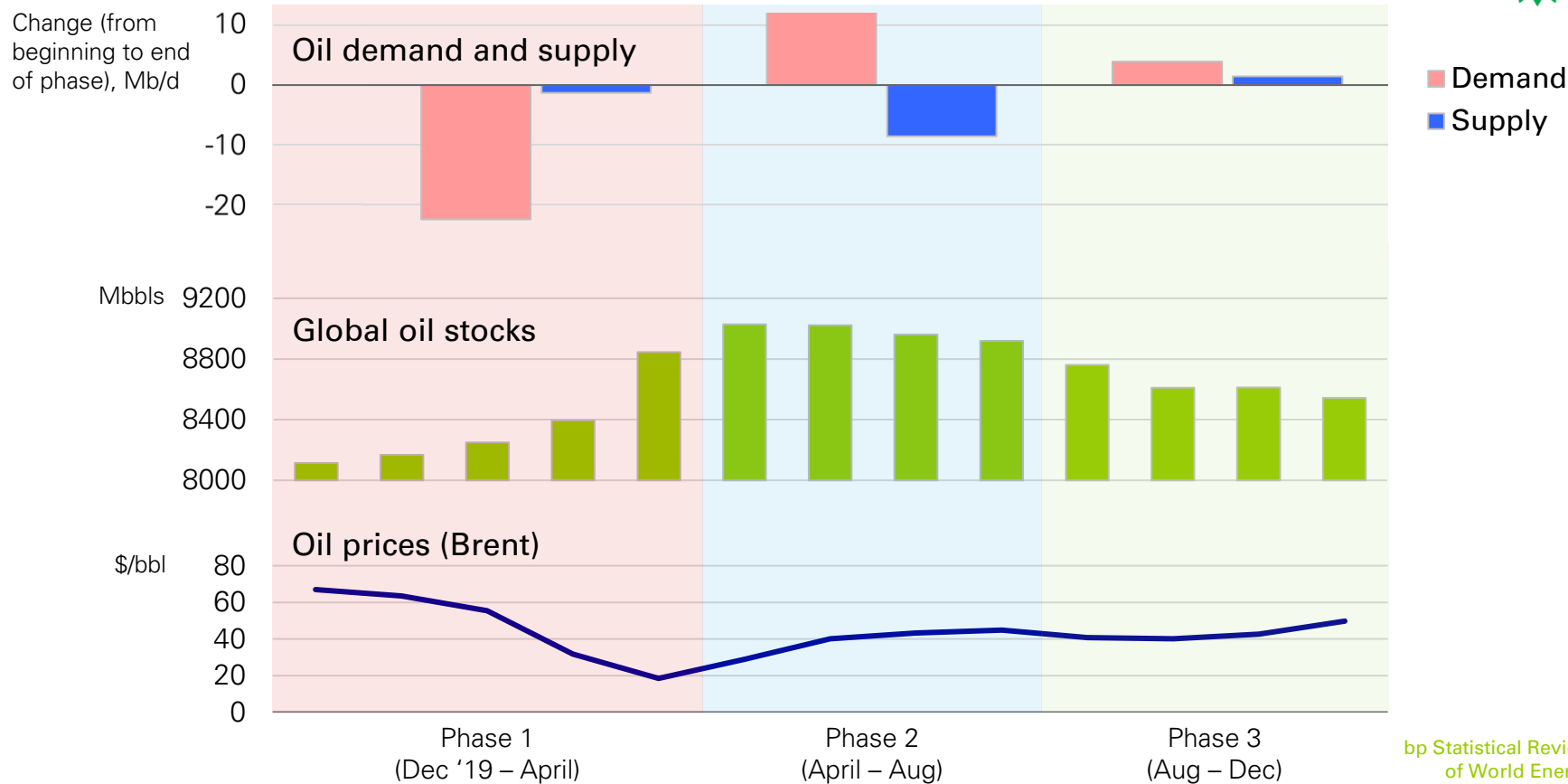


# Oil market in 2020



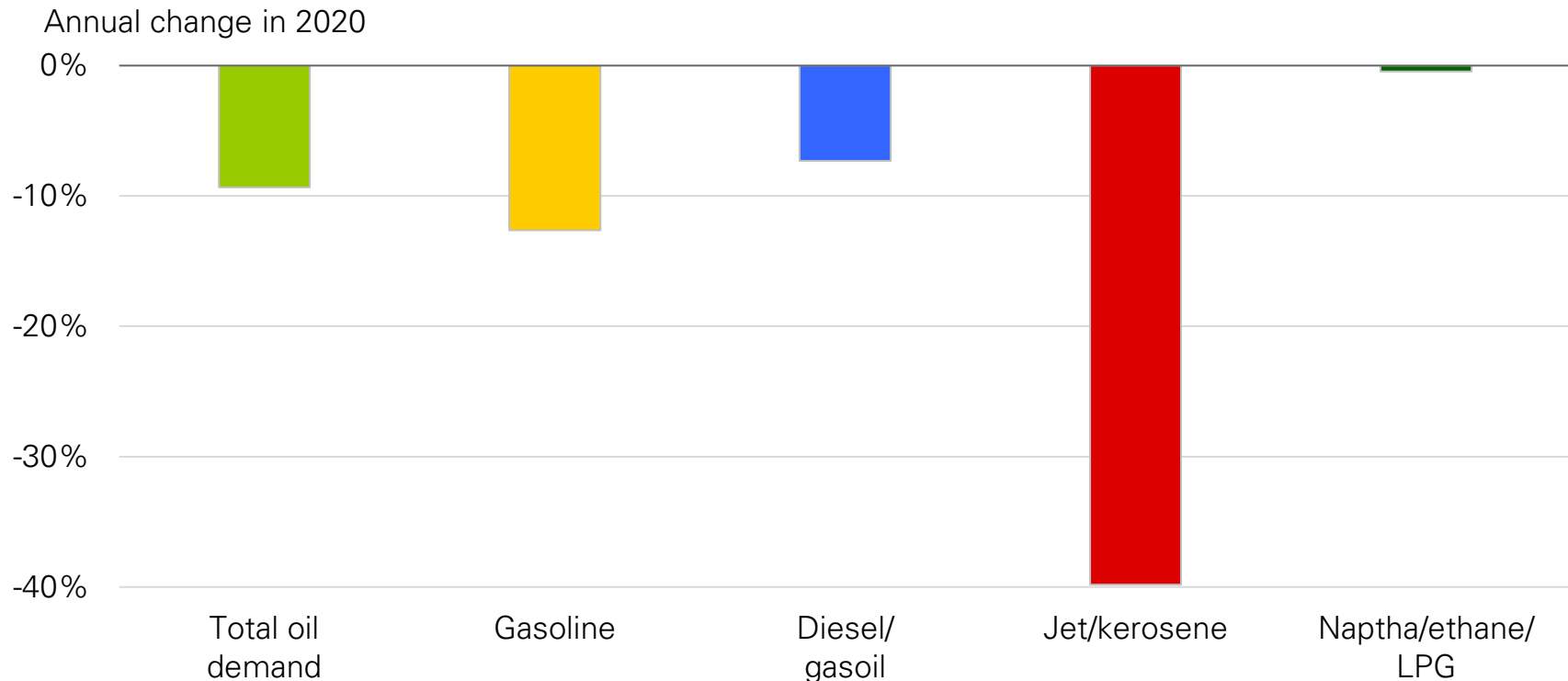


# Oil market in 2020





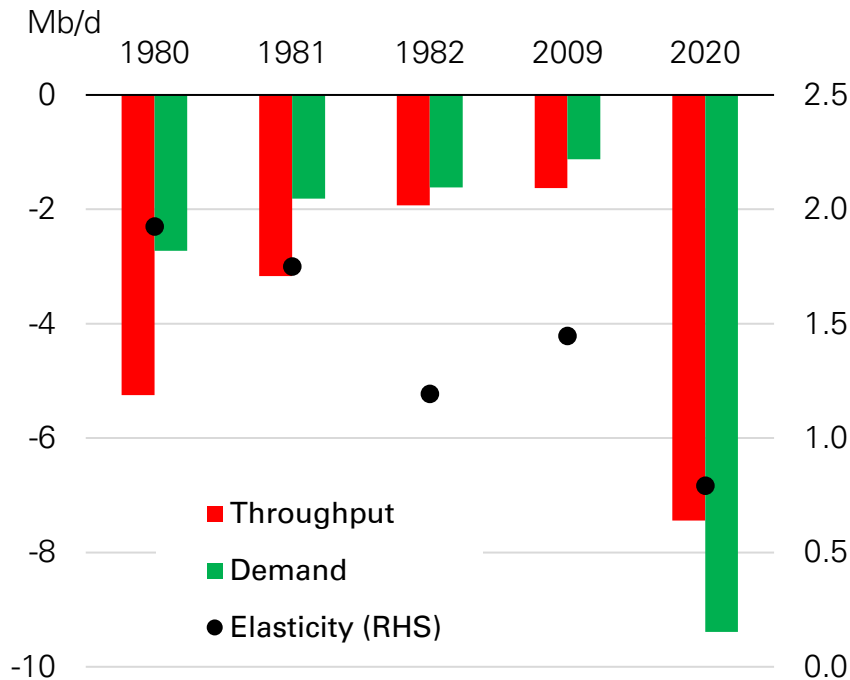
# Divergent effects on oil demand by product



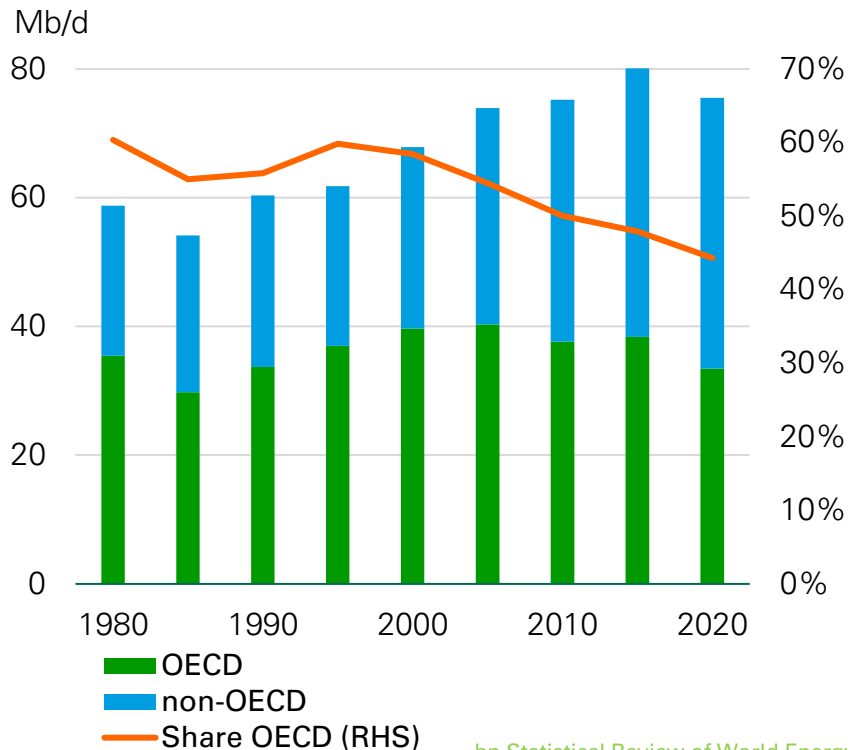


# Oil shocks: Pressure on OECD refineries to grow

## Change in demand and throughput

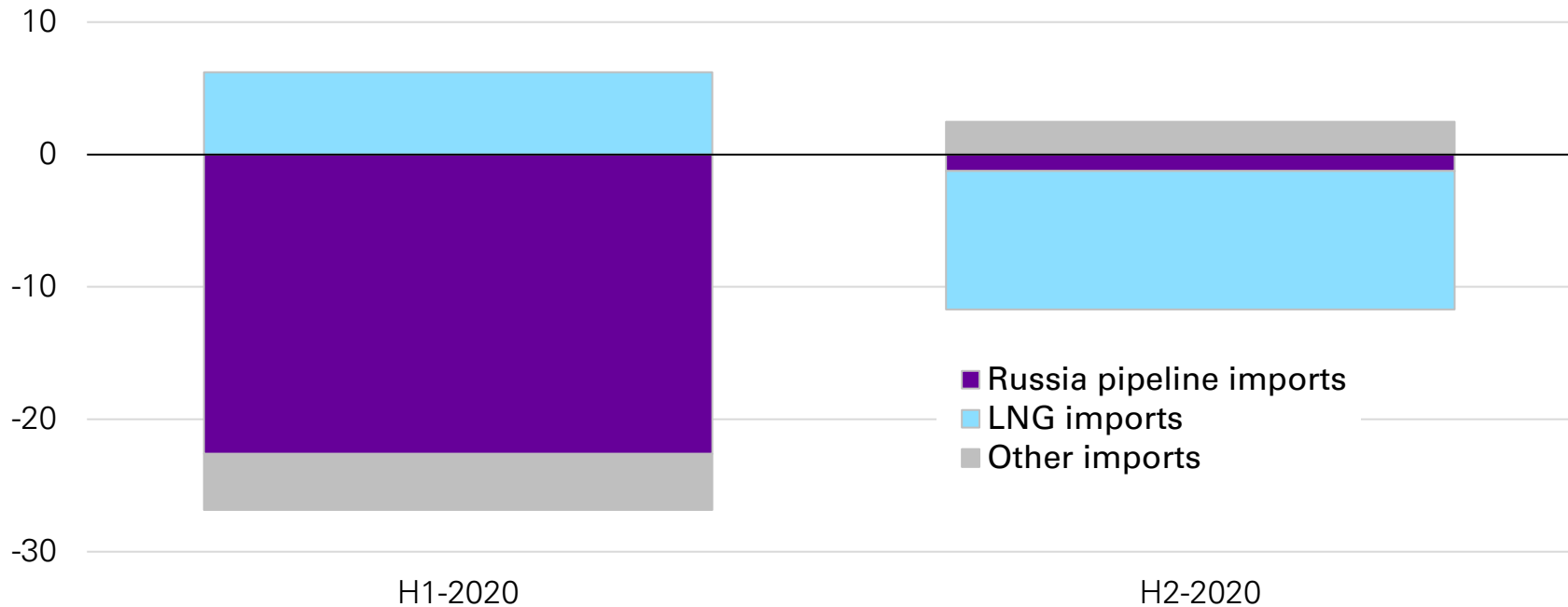


## Throughput, OECD vs Non-OECD



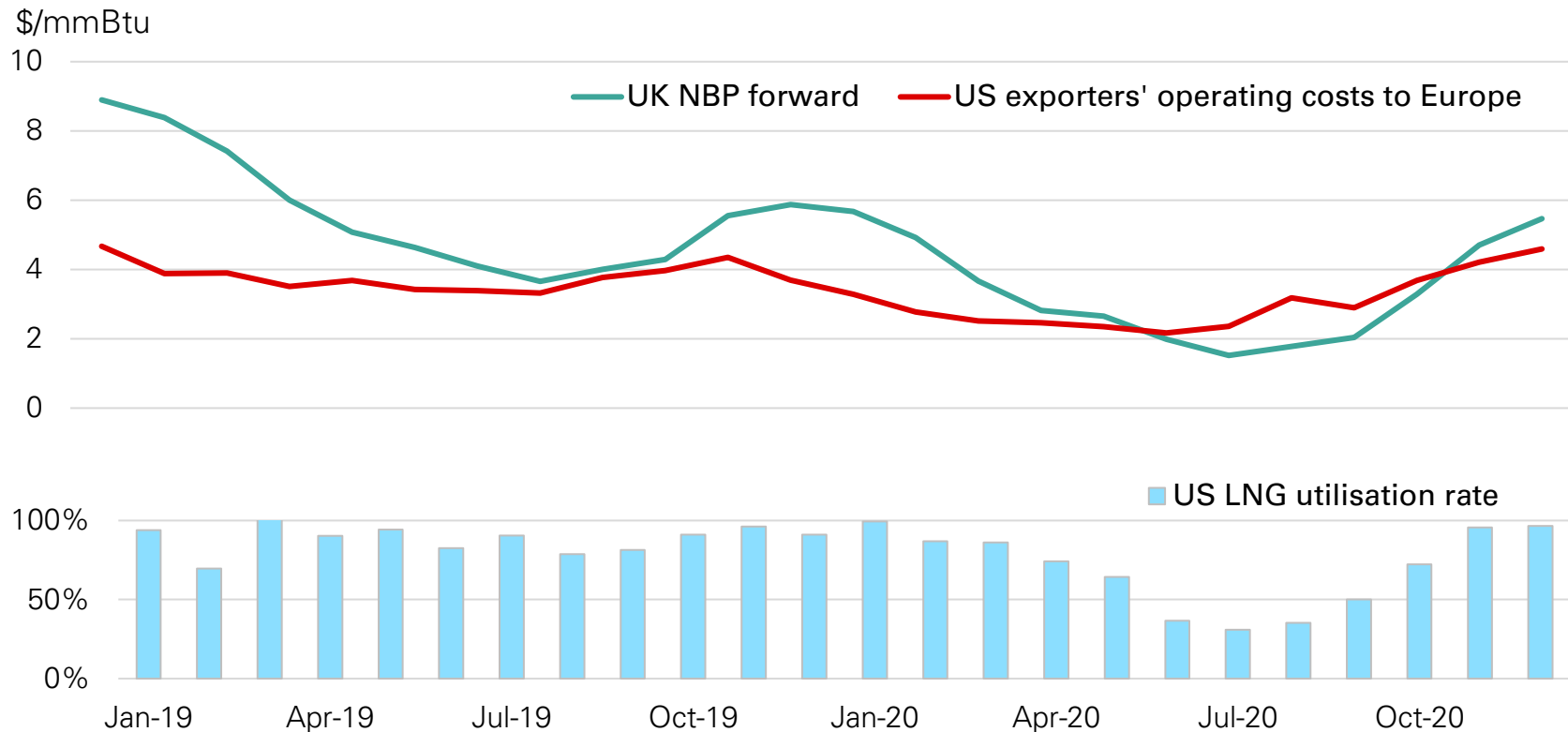
# European natural gas imports

Year-on-year change, bcm





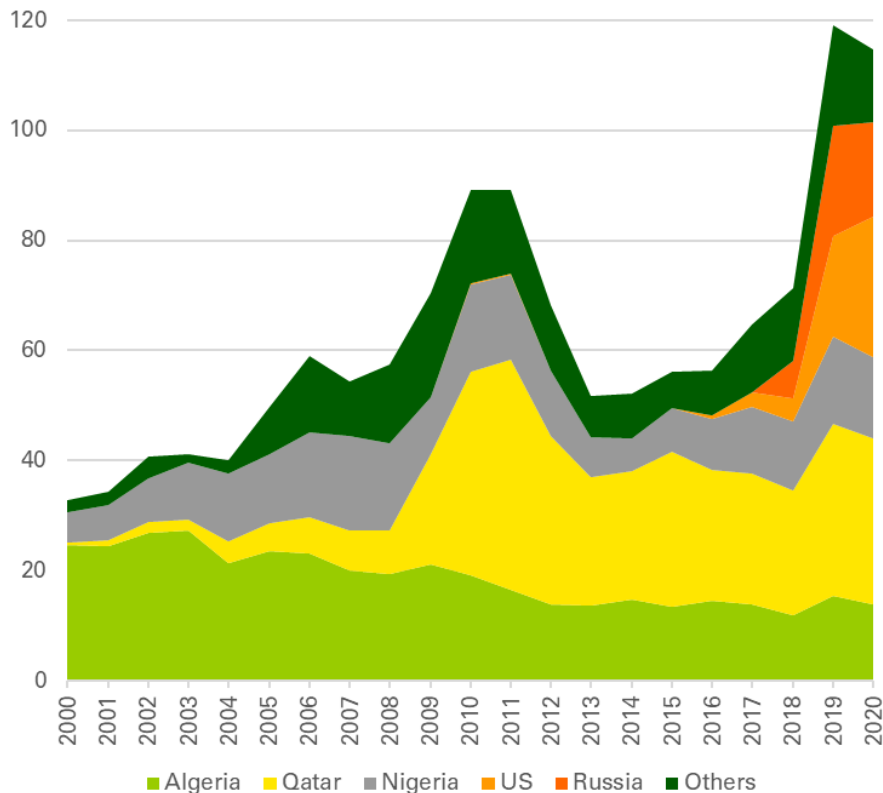
# US LNG: operating costs and utilisation rates



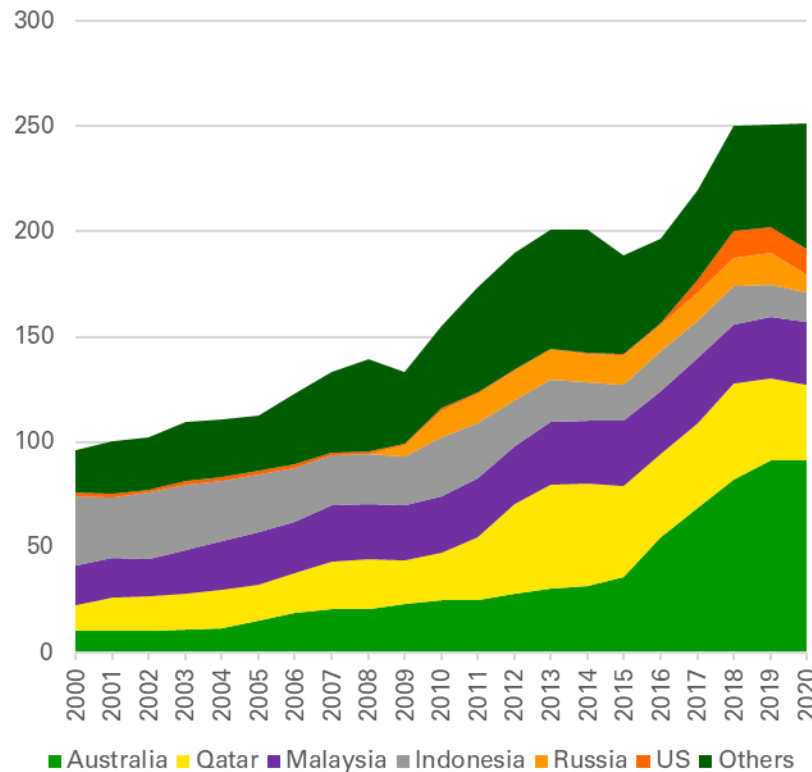
# US LNG exports account for growing share in Europe, Asia



## European LNG Imports by Source



## Asian LNG Imports by Source



# Energy in the year of COVID: three questions

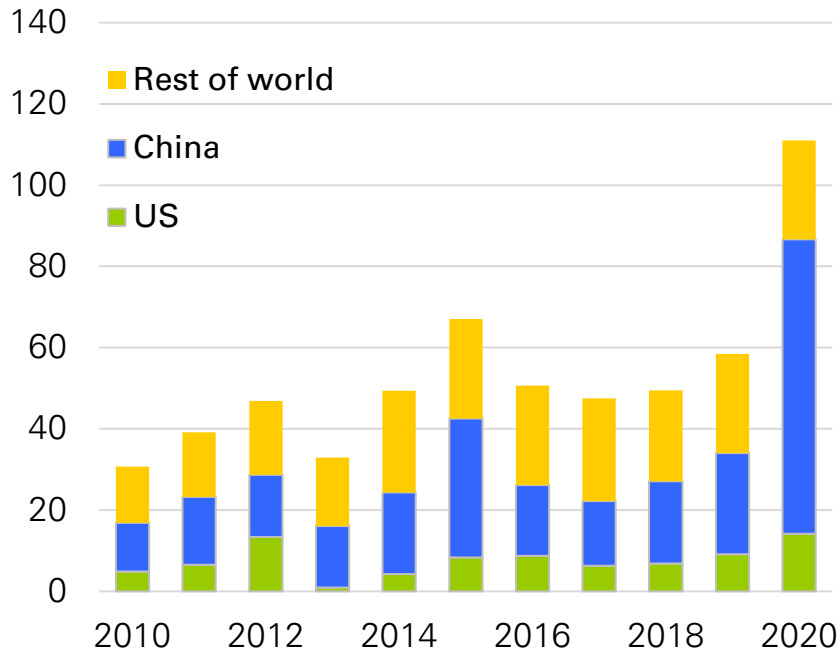


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# Wind and solar power capacity growth

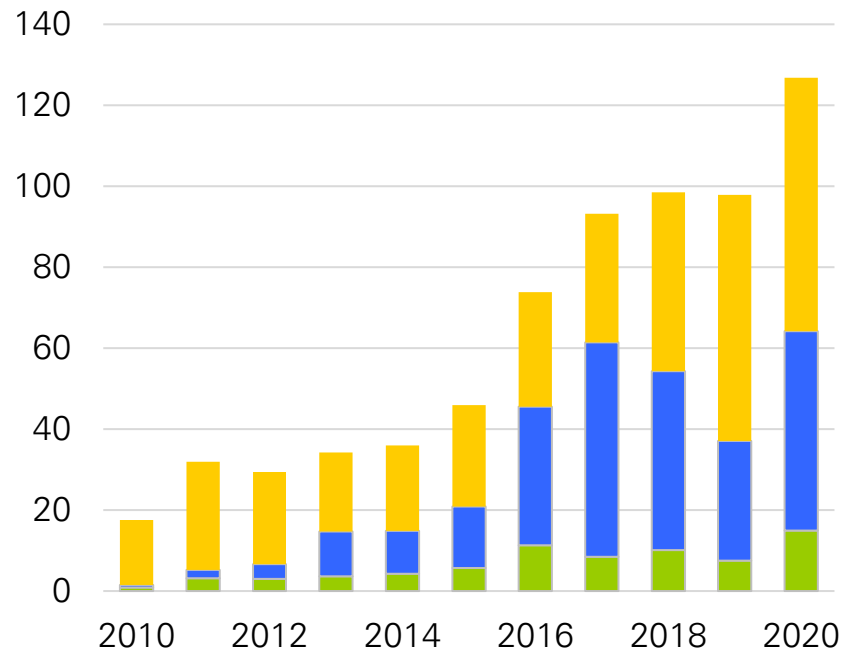
## Wind capacity

Annual change, GW



## Solar capacity

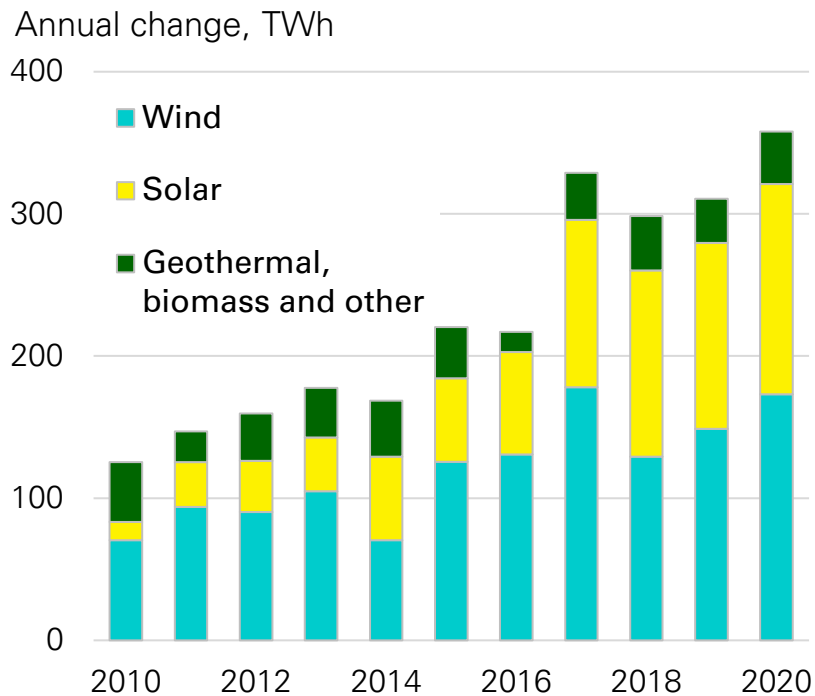
Annual change, GW



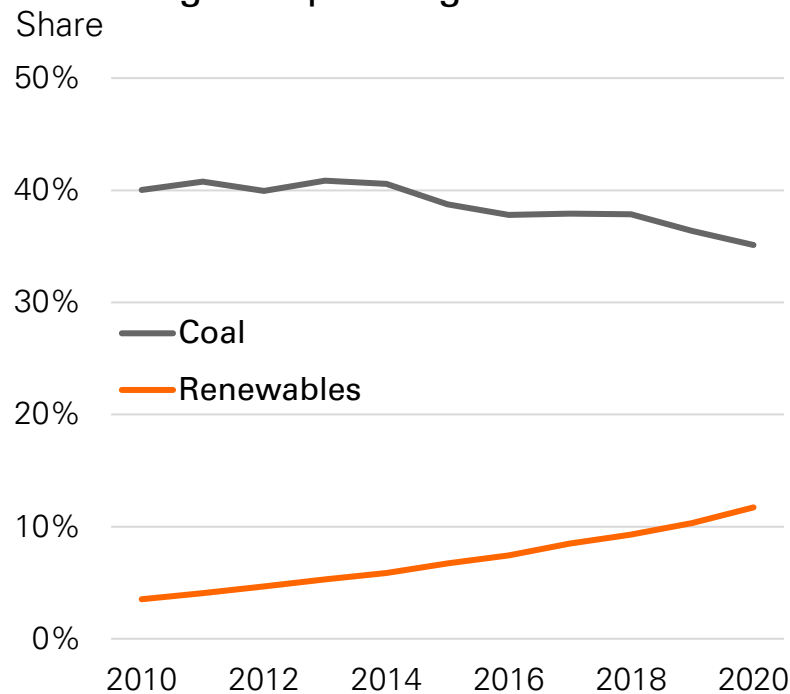
# Power generation



## Renewable power generation



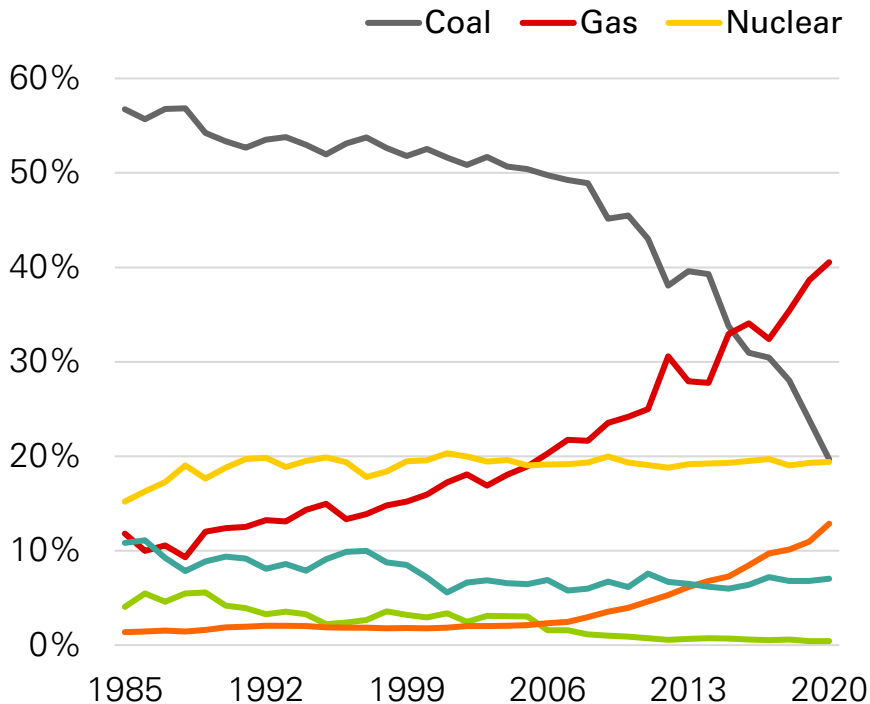
## Share of renewables and coal in global power generation



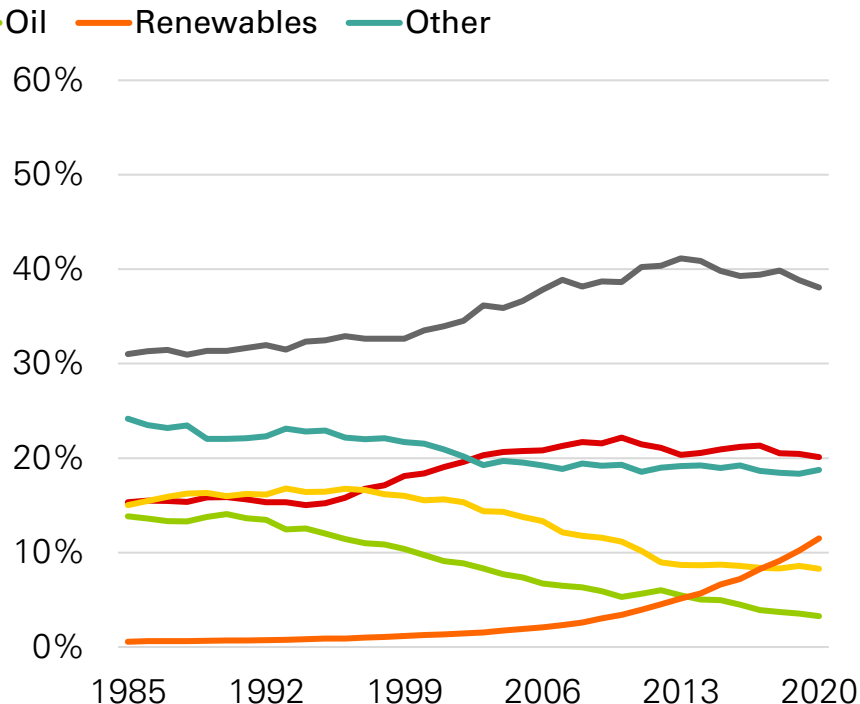


# US vs Rest of World power mix

## US Power Mix



## Rest of World Power Mix

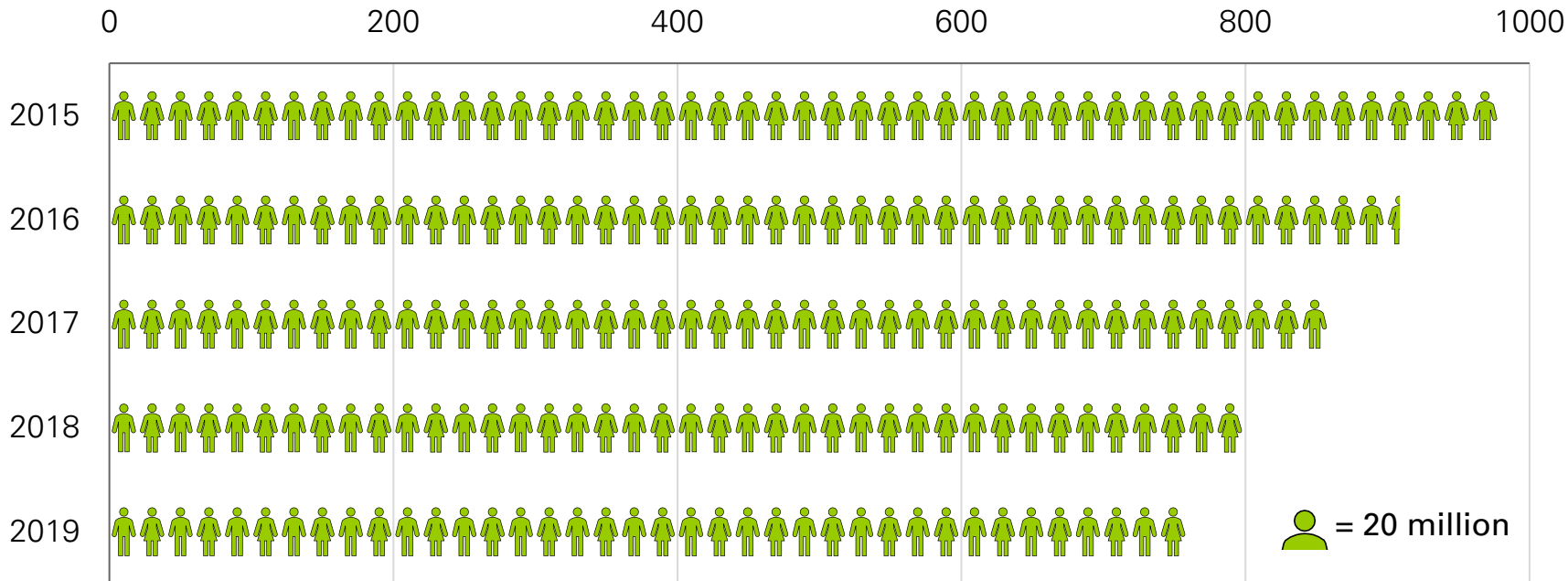




# Significant improvements in energy access but it's not enough



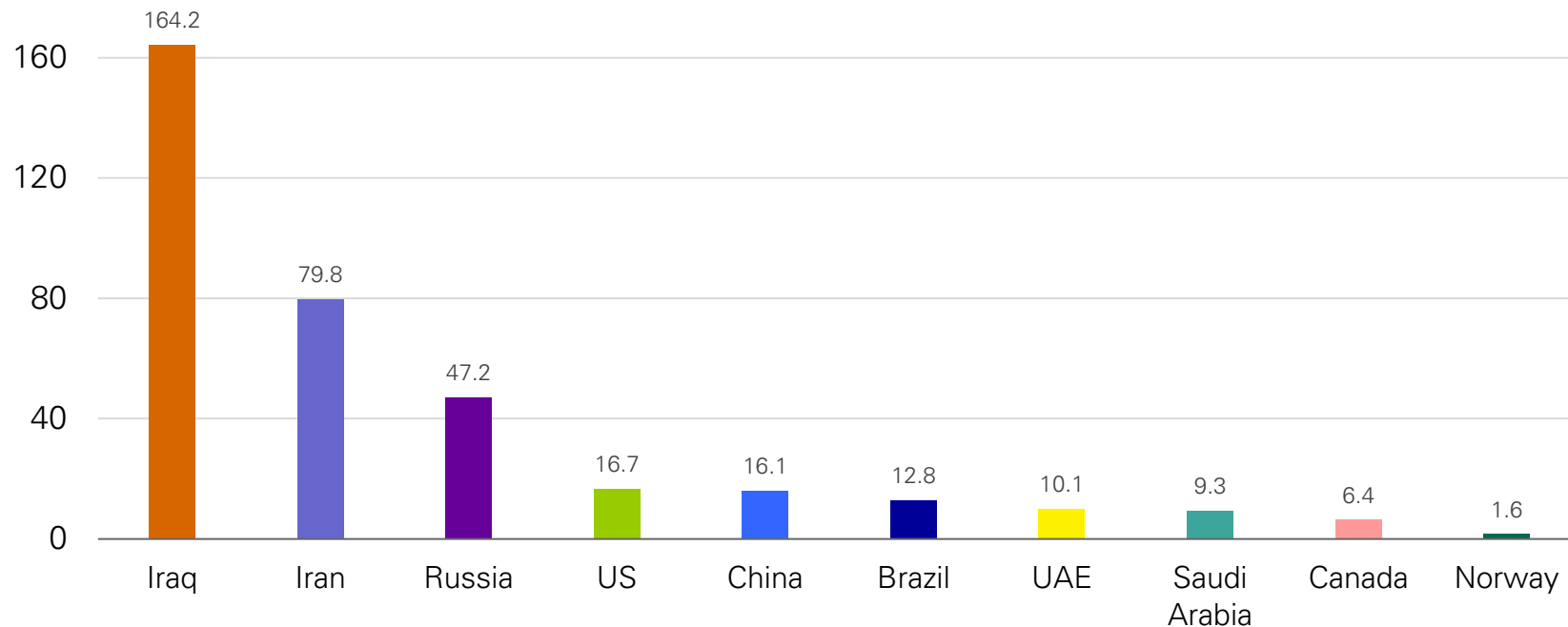
Number of people without access to electricity, millions



# Flaring intensity by top oil and gas producing countries



CO<sub>2</sub> per tonne of oil and gas

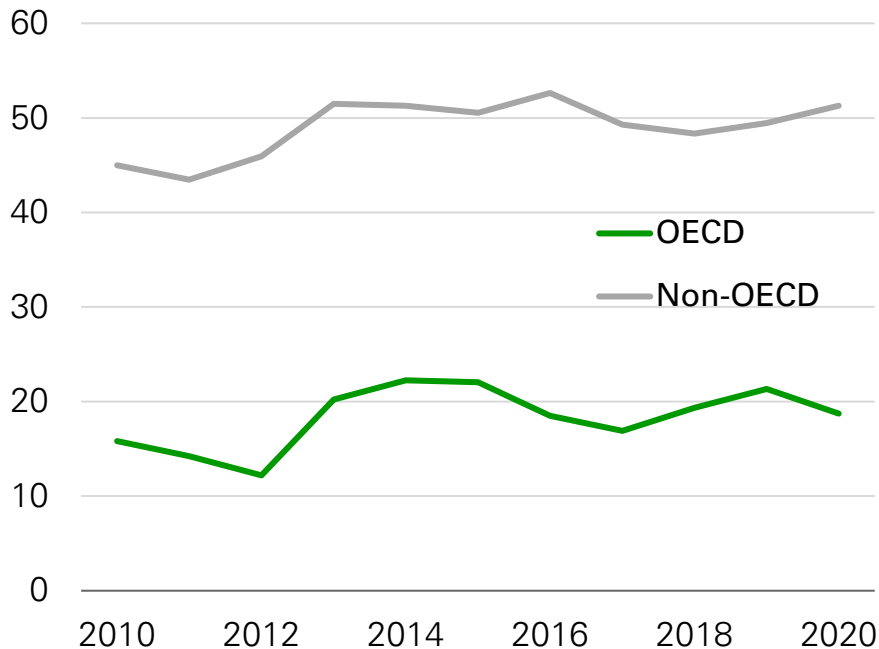


# Despite increasing awareness, flaring intensity has not improved

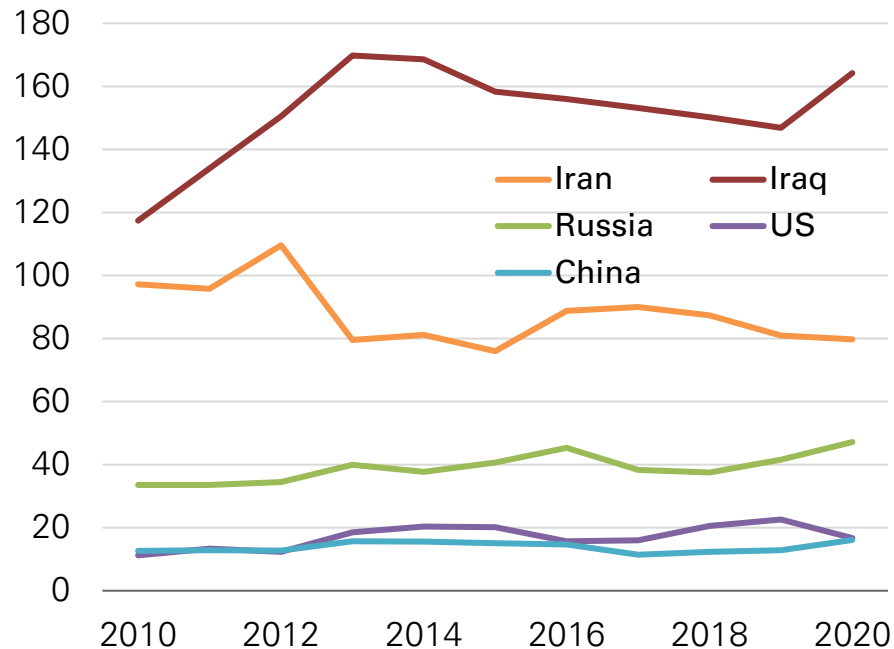


## OECD vs non-OECD

CO<sub>2</sub> per tonne of oil and gas



## Top five O&G producers





# Key takeaways: The energy system in 2020

1. OPEC and Russia's response to covid-induced shock differs from their response to an energy transition.
2. Renewable energy system grew strongly despite the pandemic. But this growth does not suffice to kick coal out of power sector.
3. Pace of progress on renewable energy needs to be matched by the many other dimensions of the energy transition
4. 6% contraction in energy emissions was covid-induced blip. Challenge is to reduce at this pace without such reduction.
5. Half of the world still at energy levels that are below a 'Modern energy minimum'.