



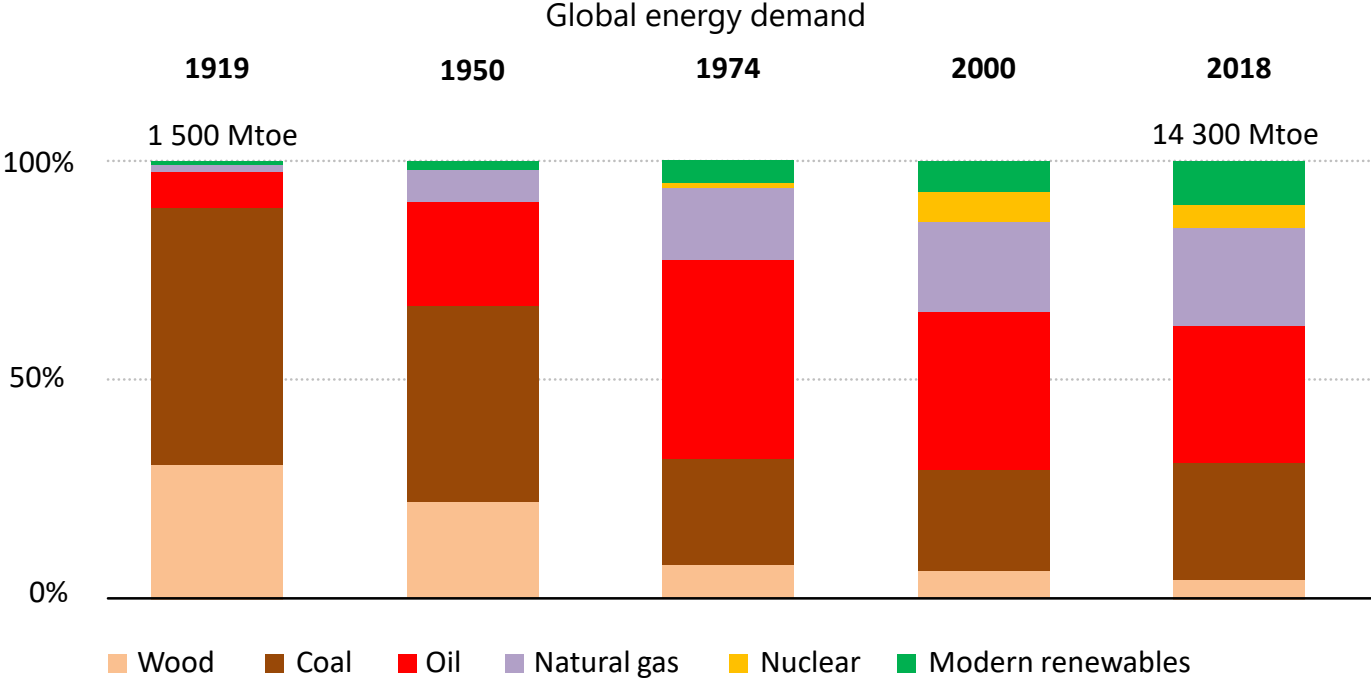
Global energy prospects and their implications for energy security & sustainable development

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OECD, Paris, 24 February 2020

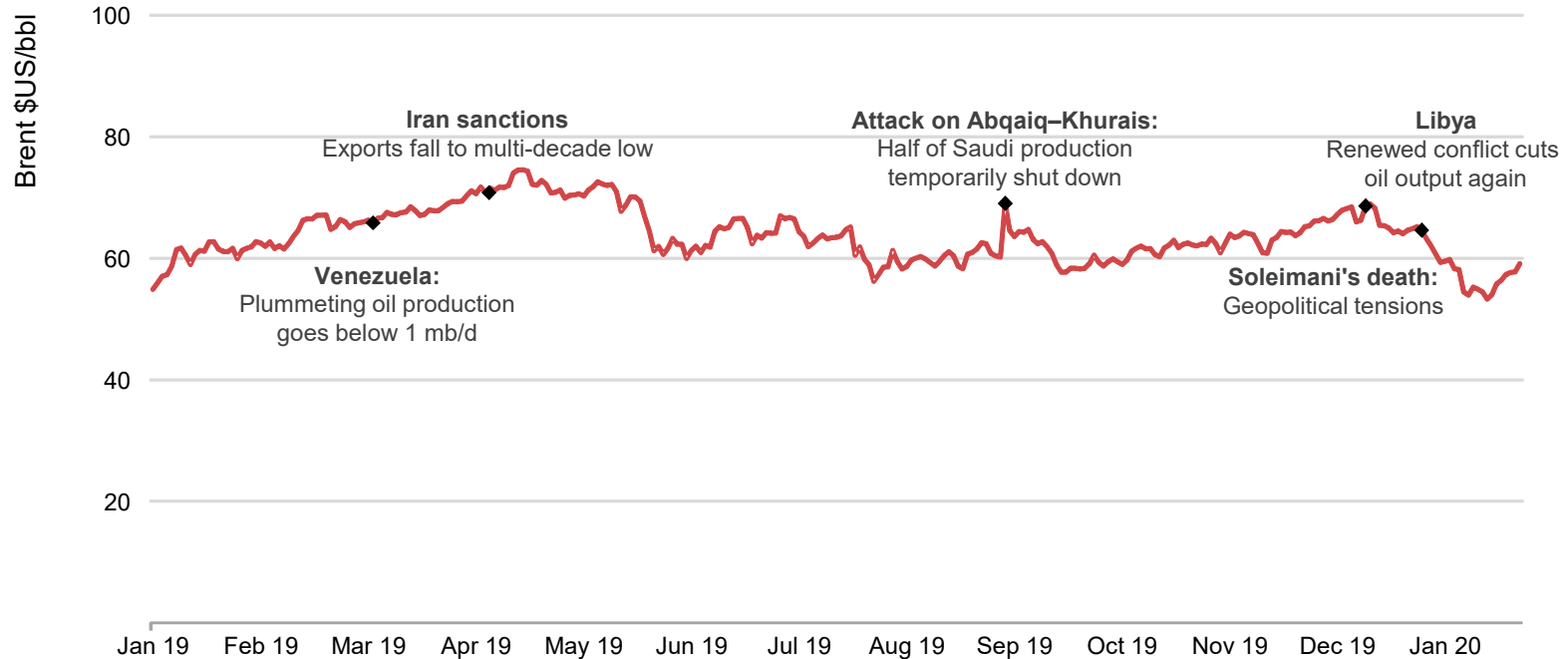
Perspectives from energy history



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The last century has witnessed multiple transitions to and from different fuels and technologies
The challenge today is one of scale: global energy use is ten times higher than in 1919... and growing

Oil has been *immune* to recent turmoil

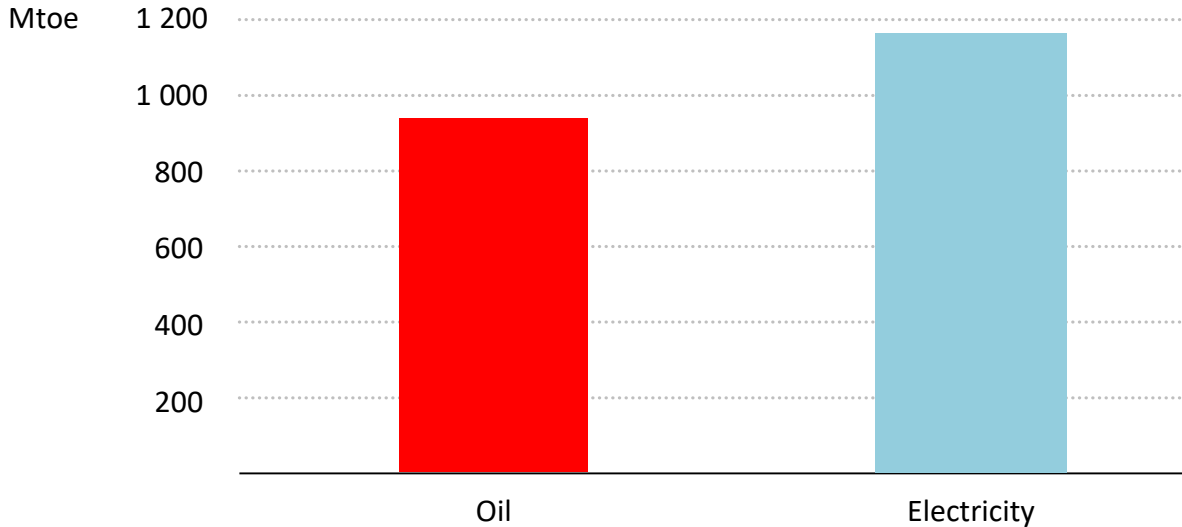


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Well-supplied oil markets, largely thanks to US shale, have traded in a remarkably narrow band despite the range of supply disruptions and geopolitical uncertainties over the last year

The 20-year switch

Change in global oil and electricity consumption, 2008 - 2040

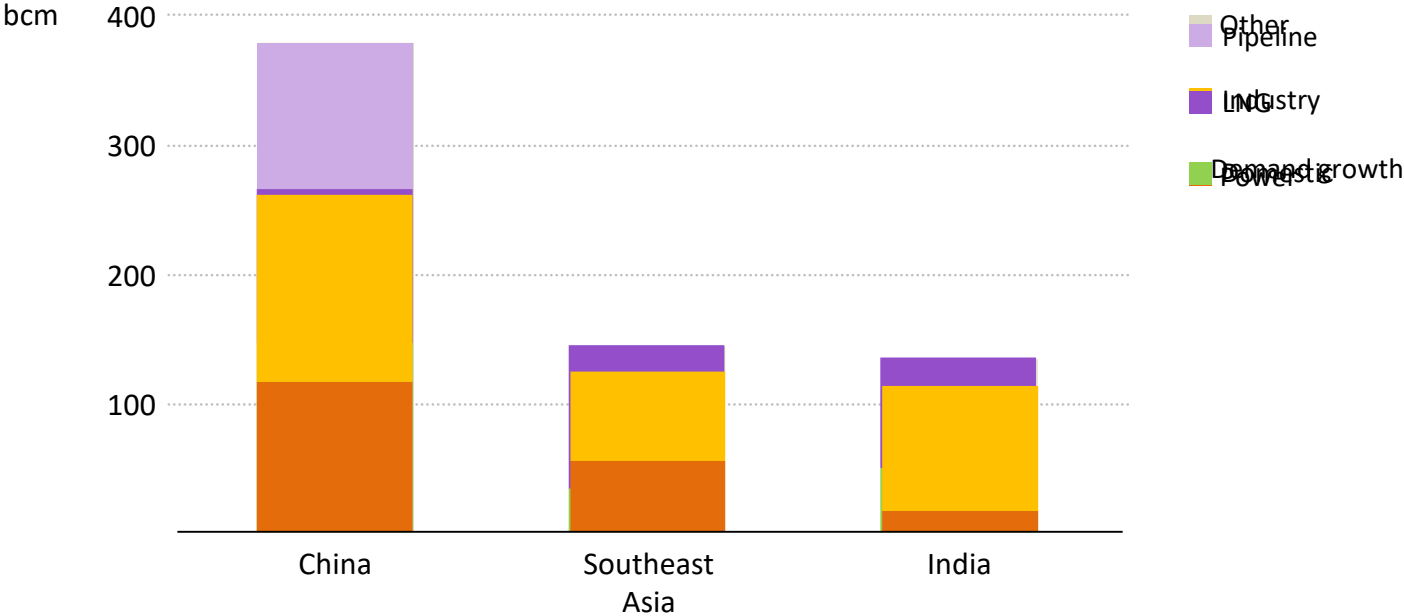


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When consumers needed more energy in the past, they traditionally turned to oil
In the future, they turn first to electricity

Natural gas turns to Asia

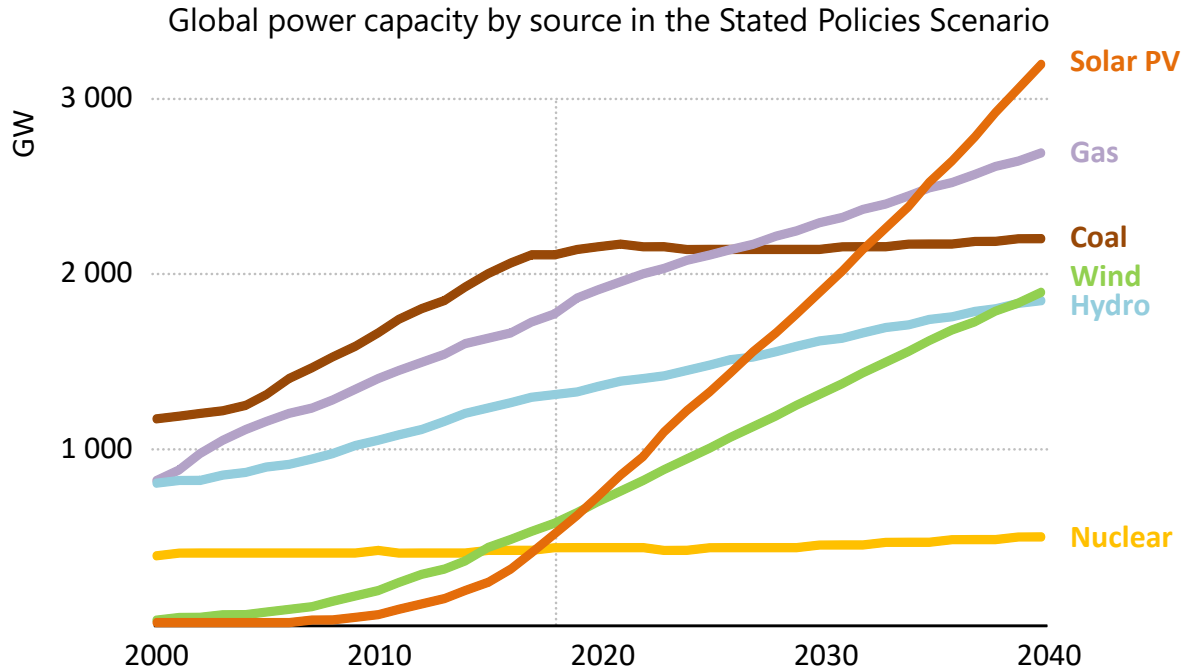
Growth in gas demand and supply in selected Asian markets, 2018-2040



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Developing economies in Asia account for half of global growth in gas demand, with industrial consumers taking the largest share, and this provides the spur for almost all the growth in gas trade, led by LNG

Solar is the star

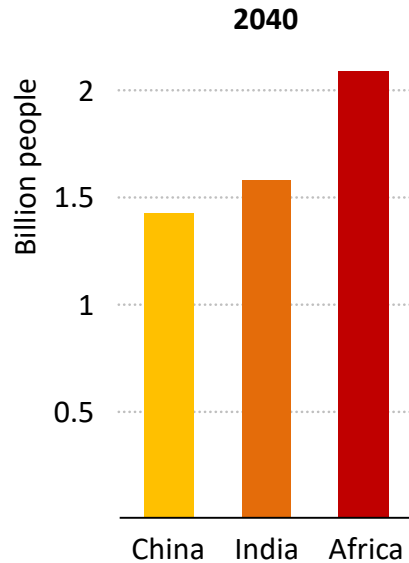


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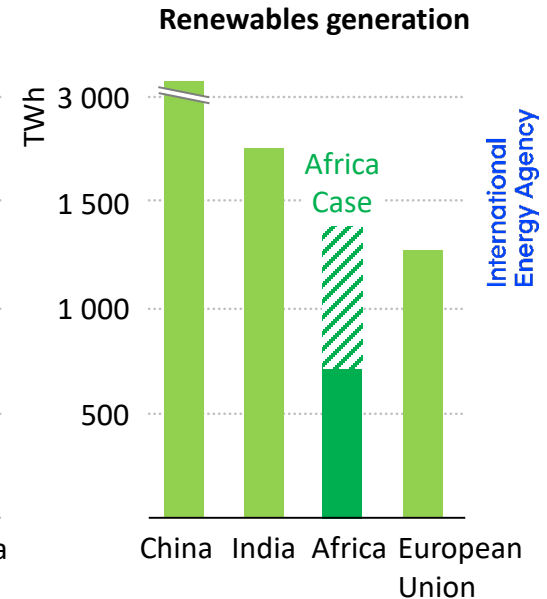
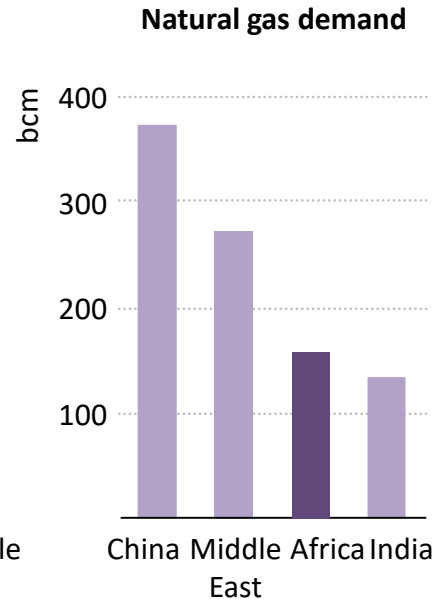
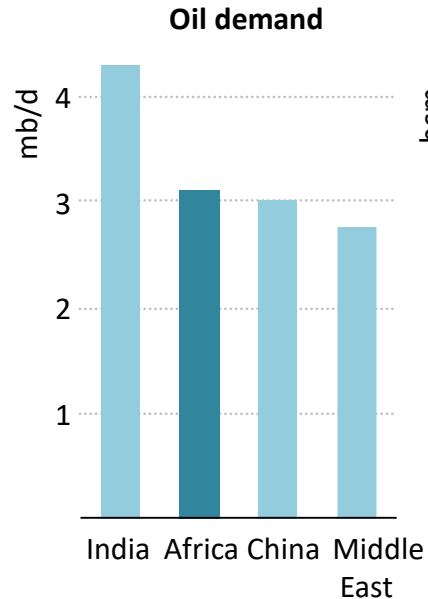
Renewables provide three-quarters of the growth in electricity supply to 2040 under stated policies but much more is needed: in Sustainable Development Scenario wind and solar capacity in 2040 is 50% higher

Africa emerges as a key driver for global energy markets

Total population by region

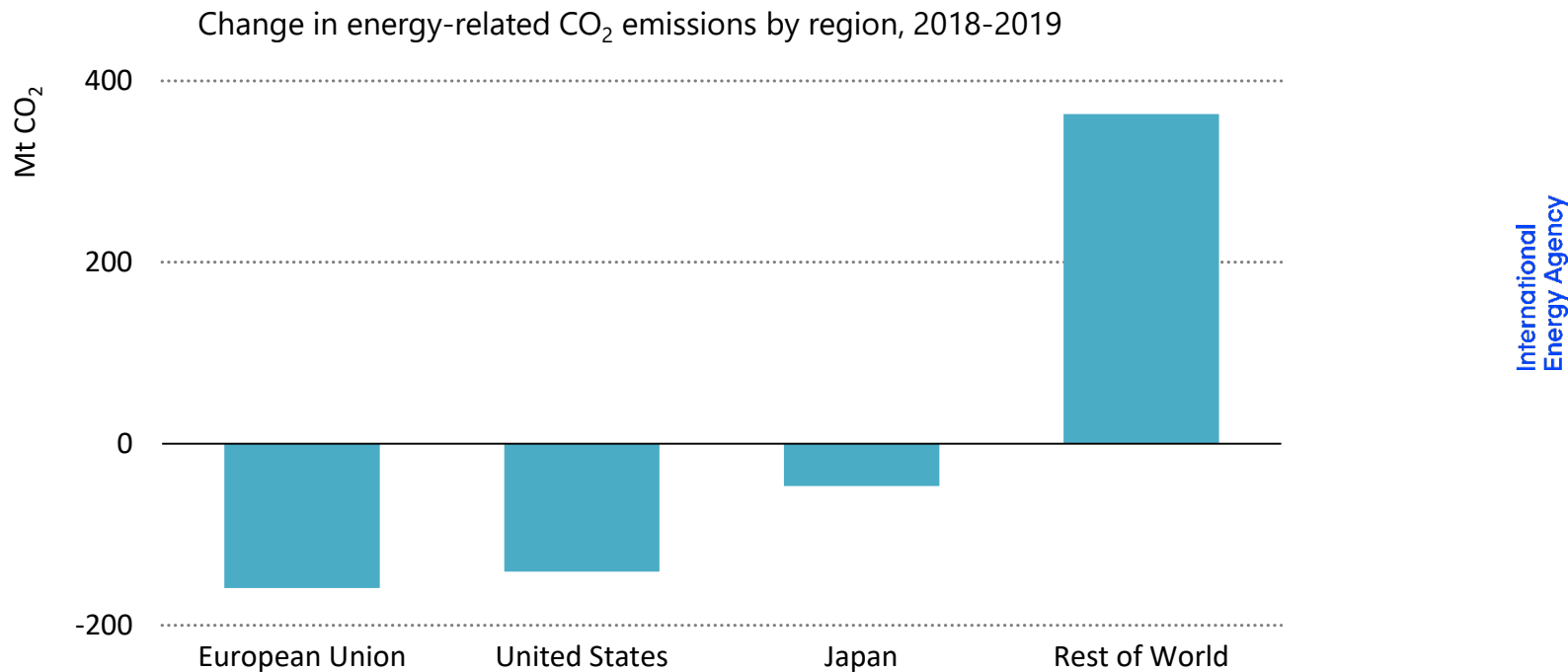


Africa's role in global energy growth, 2018-40



With rapidly rising population and a major switch away from the traditional use of biomass, Africa emerges as a major source of global growth for oil, natural gas and renewables

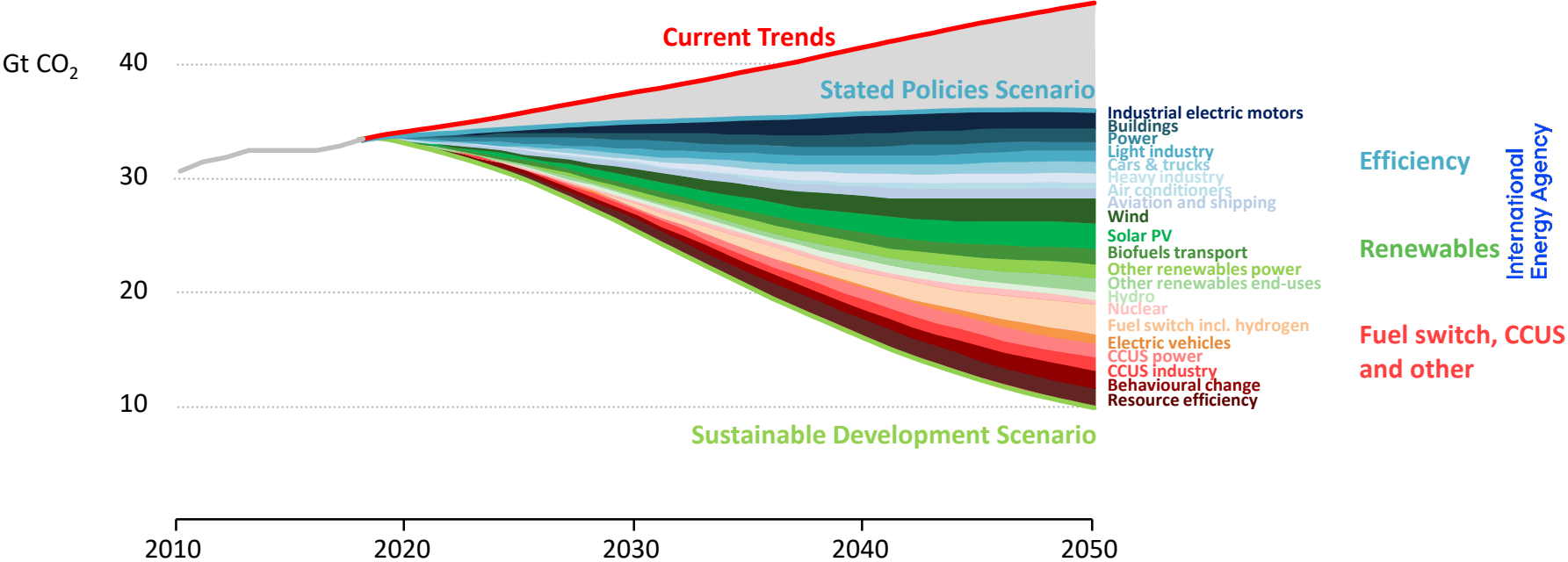
Defying expectations, global CO₂ emissions did not rise in 2019



New IEA data show global CO₂ emissions were unchanged at 33 gigatonnes in 2019, even as the world economy expanded by 2.9%, mainly due to lower emissions from electricity generation

No single or simple solutions to reach sustainable energy goals

Energy-related CO₂ emissions and reductions in the Sustainable Development Scenario by source



A host of policies and technologies will be needed across every sector to keep climate targets within reach, and further technology innovation will be essential to aid the pursuit of a 1.5°C stabilisation

Conclusions

- The energy sector is adjusting to new pressures, but the overall response remains far from adequate in view of the energy security & environmental threats the world faces
- While solar, wind, storage & digital technologies are transforming the electricity sector, legacy issues surrounding existing infrastructure also need to be tackled
- Investment in energy efficiency, renewables and more flexible energy systems must significantly accelerate
- The oil & gas industry is critical for some key capital-intensive technologies to reach maturity, including CCUS, low-carbon hydrogen, biofuels, and offshore wind
- The IEA is convening, leading & supporting a [**Grand Coalition**](#) – made up of govts, industry & civil society – to accelerate global energy transitions that underpin energy security & economic growth

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