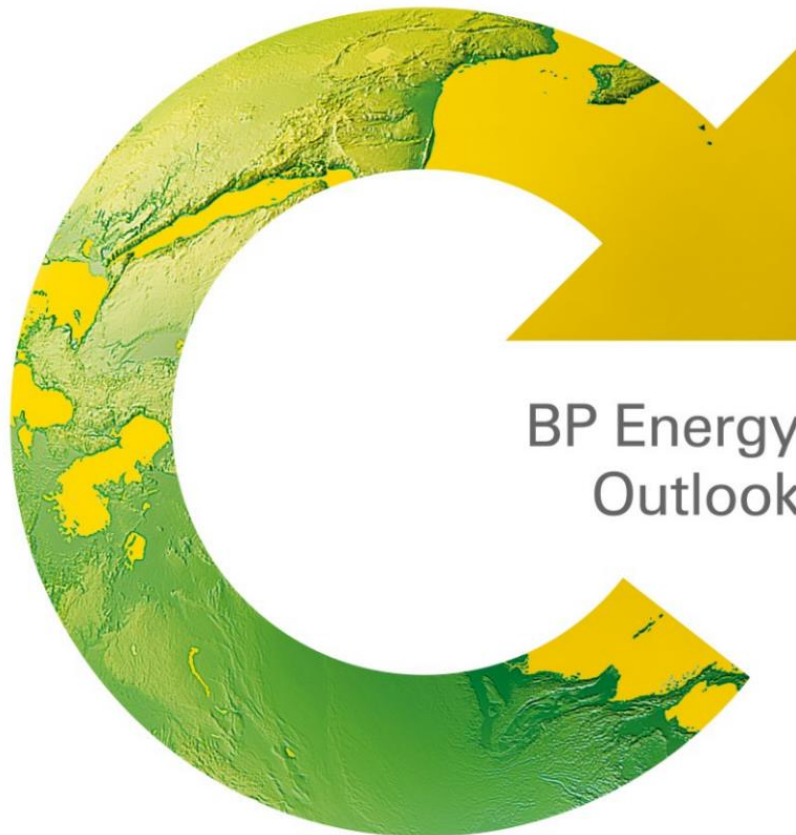




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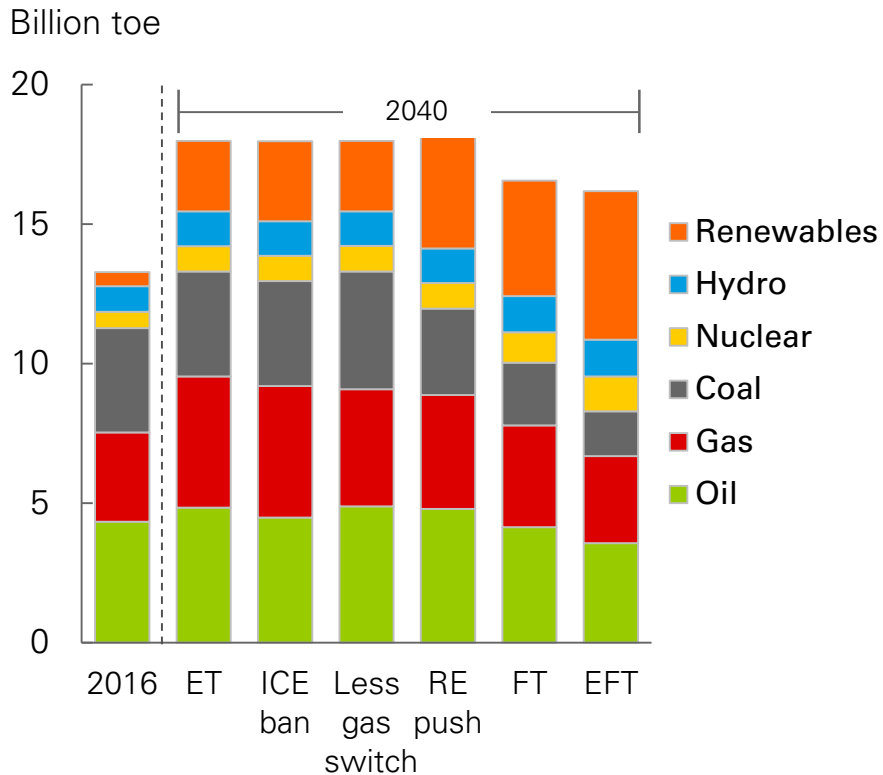
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Spencer Dale
Group chief economist

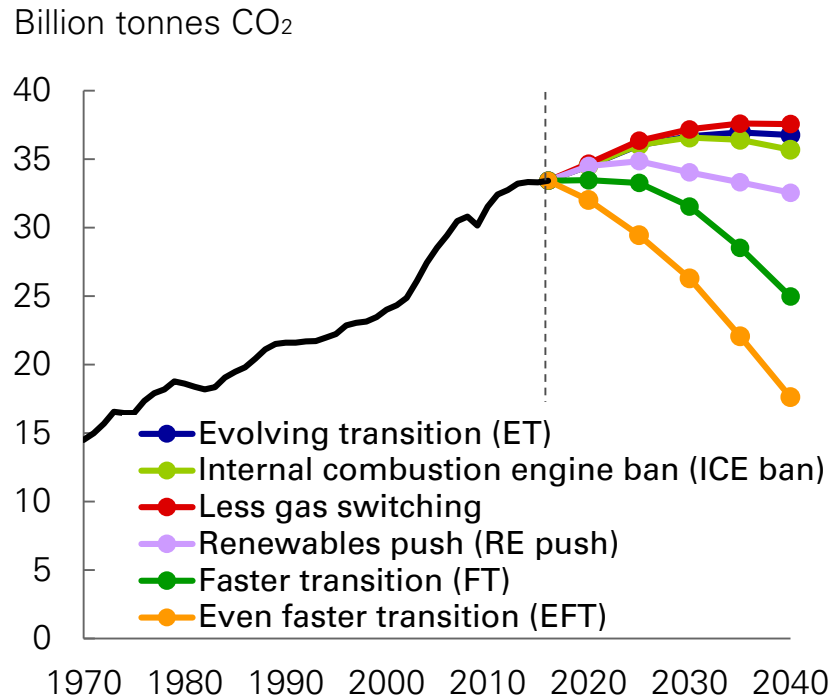
Alternative scenarios



Primary energy consumption by fuel



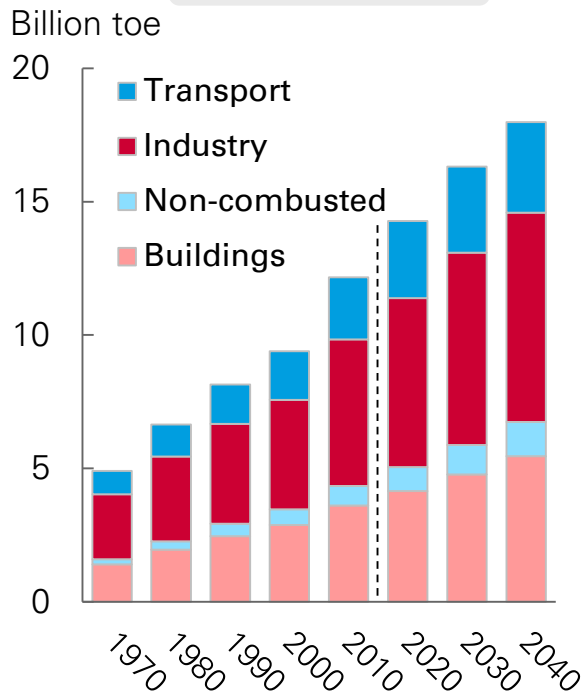
Carbon emissions



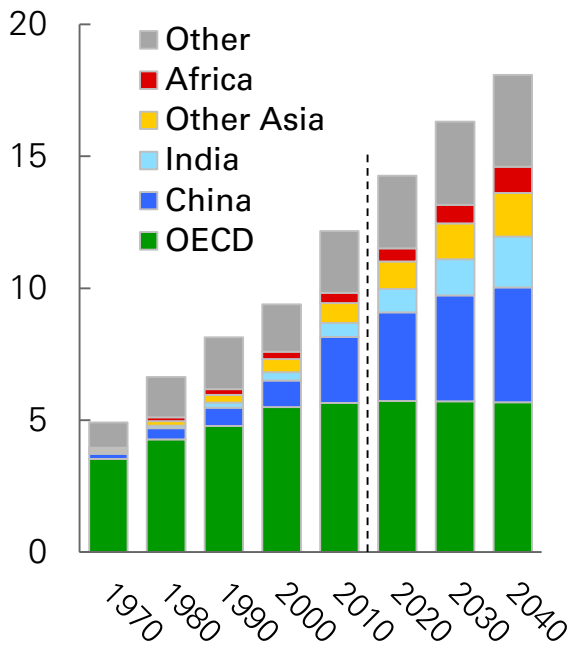
Three windows on the energy transition

Primary energy demand

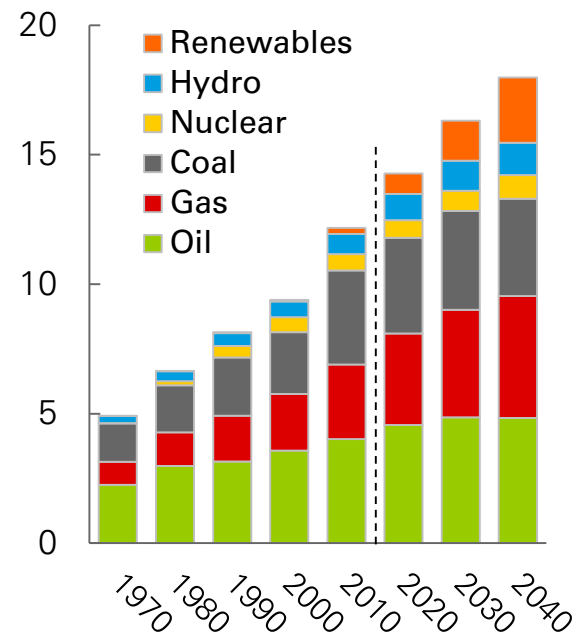
End-use sector



Region

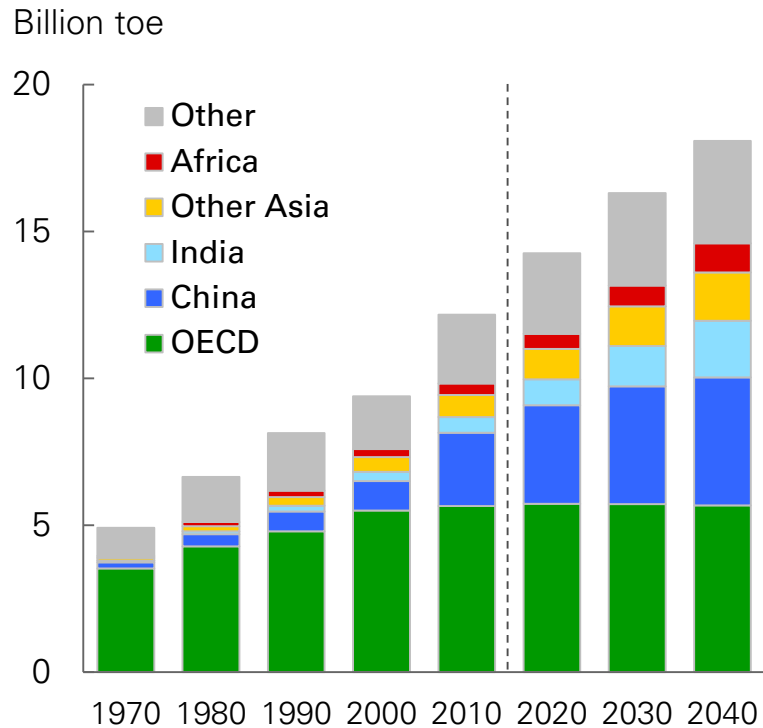


Fuel

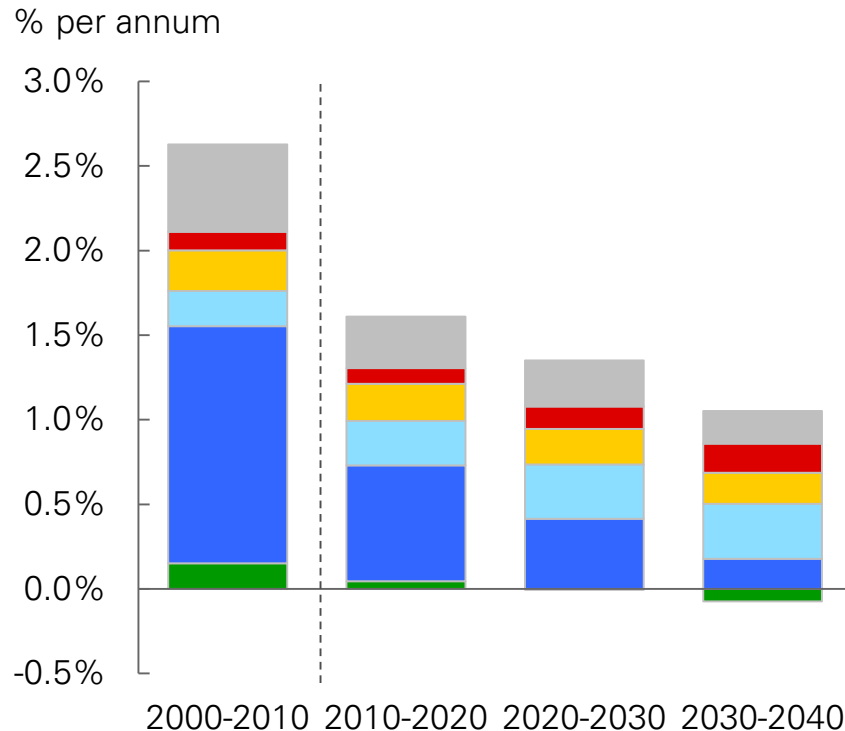


Regional energy demand

Primary energy consumption by region



Primary energy growth and regional contributions

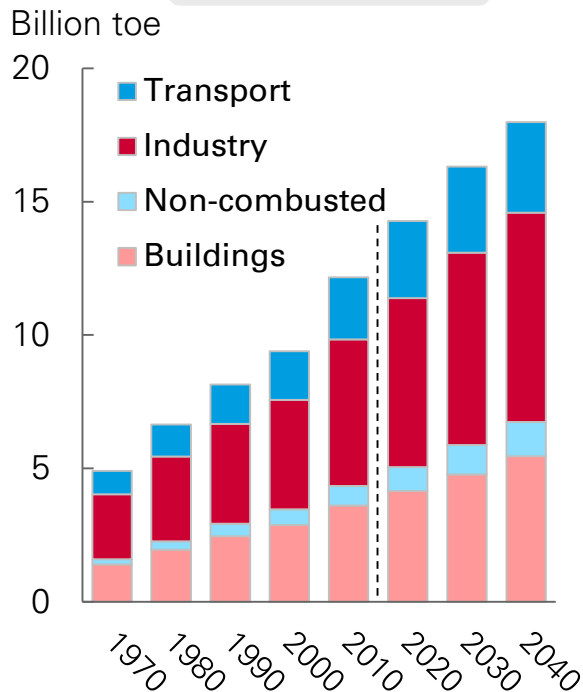




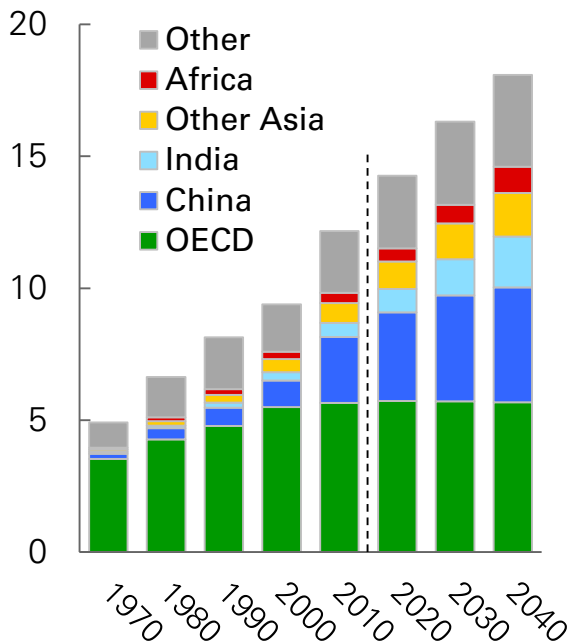
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Primary energy demand

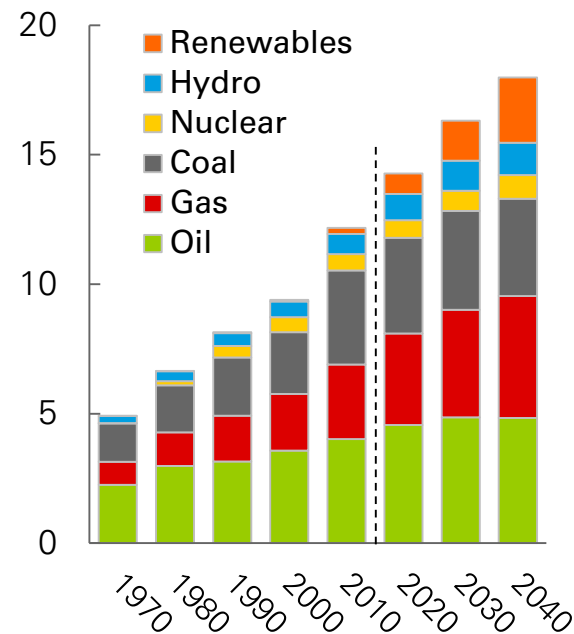
End-use sector



Region



Fuel

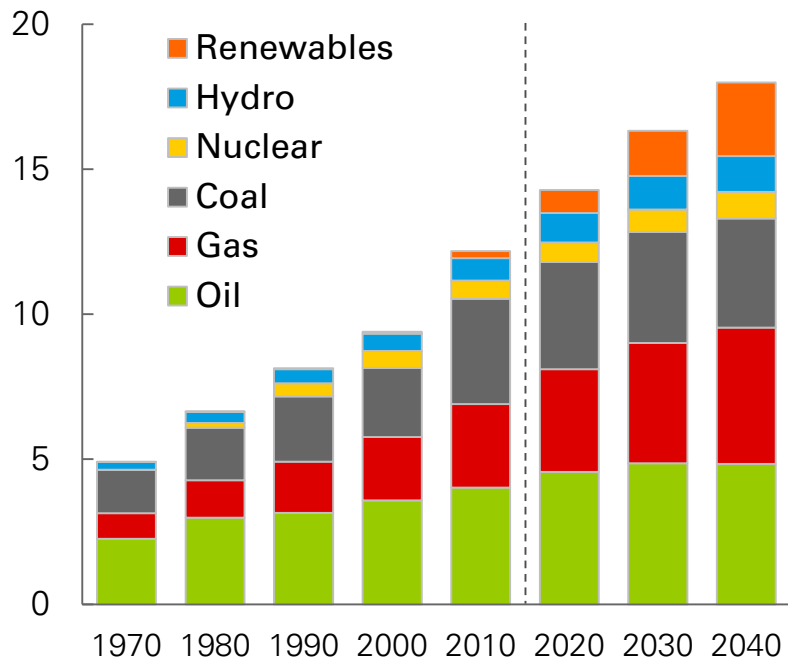


Global energy by fuel

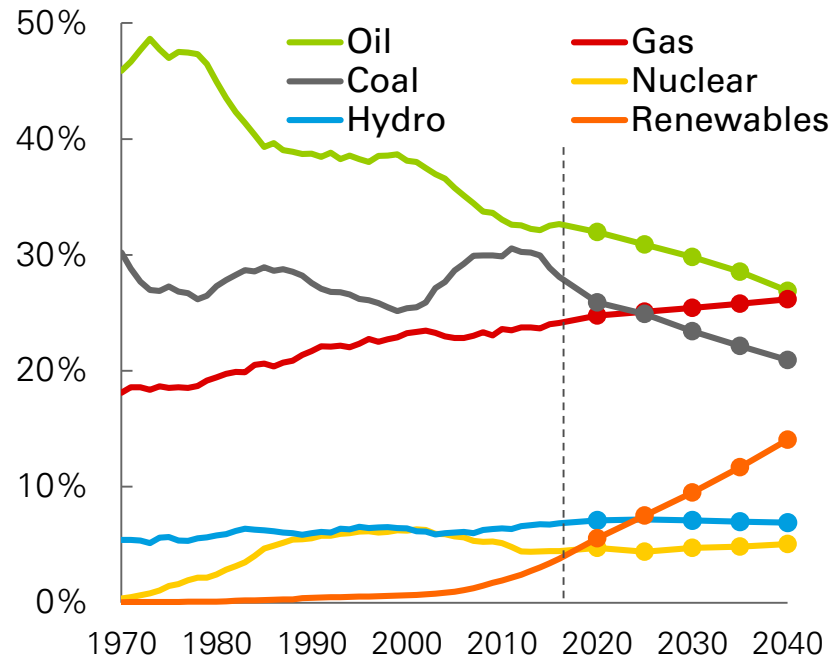


Primary energy consumption by fuel

Billion toe



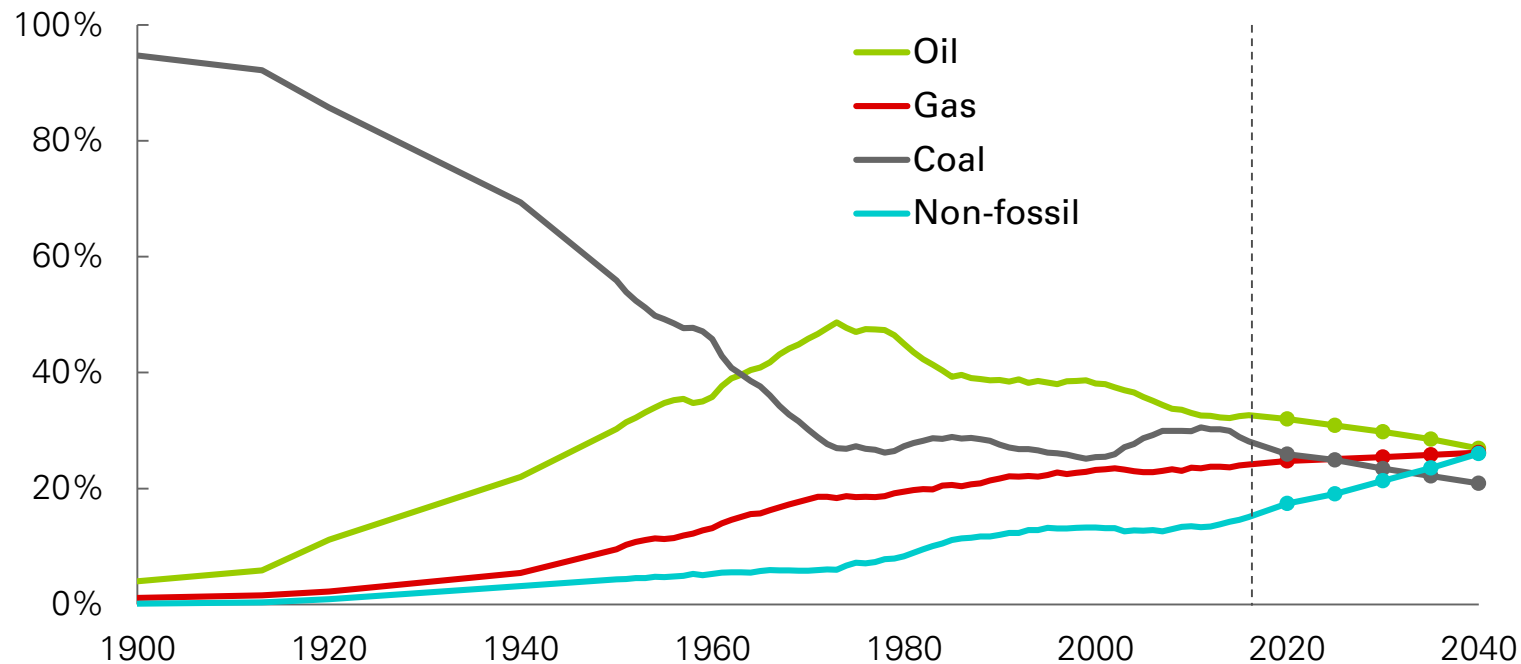
Shares of primary energy



Diversified fuel mix



Shares of primary energy



Five key questions

- What have we learnt about electric cars and the mobility revolution?
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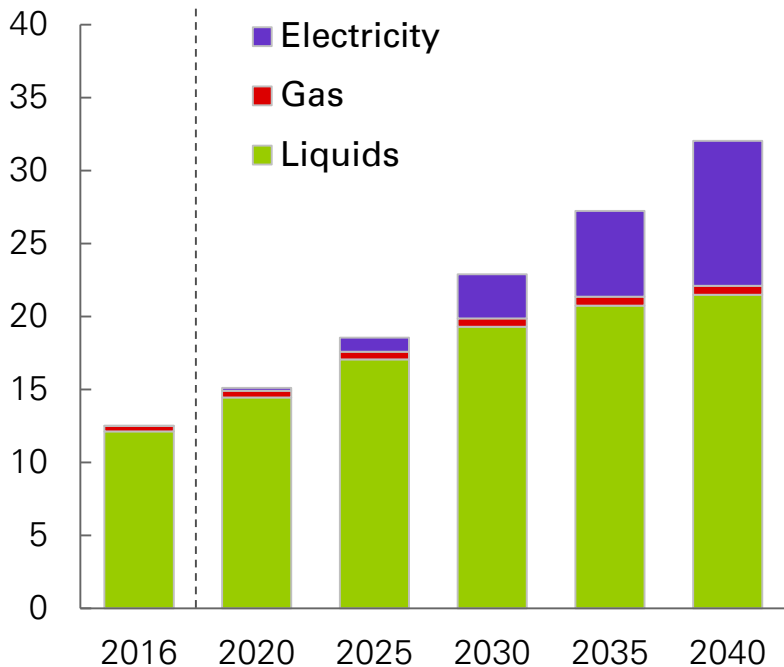
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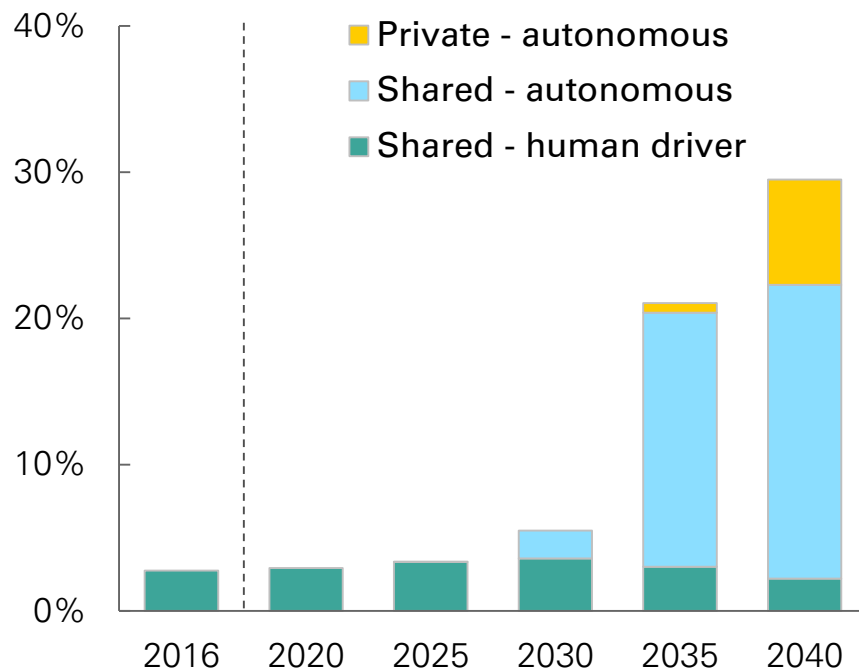
Electric cars, shared mobility and autonomy

Car kilometres by fuel type

Trillion km

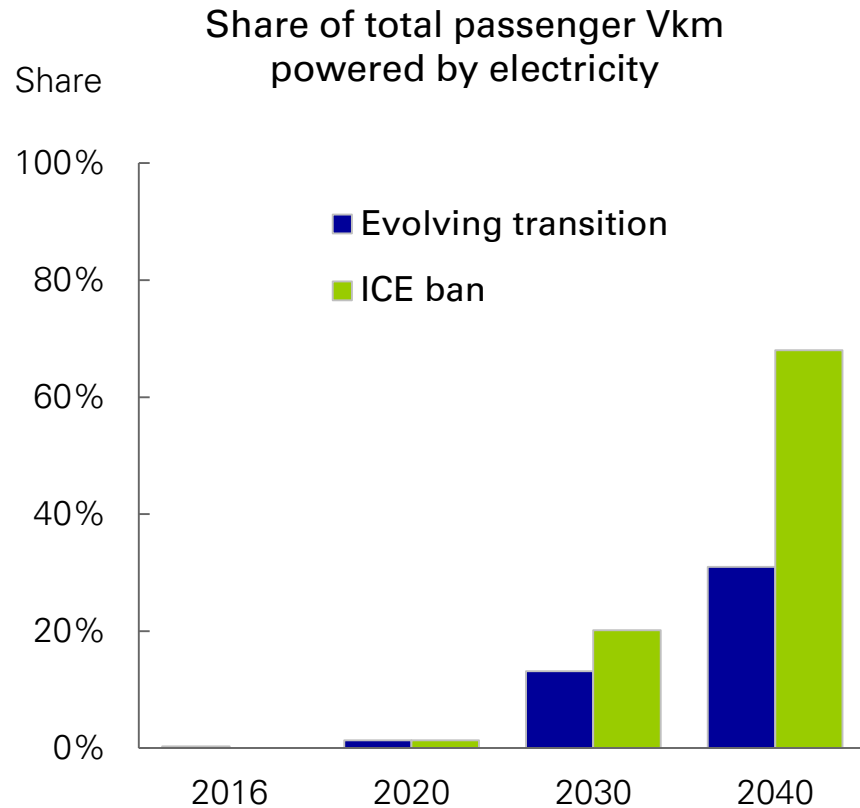
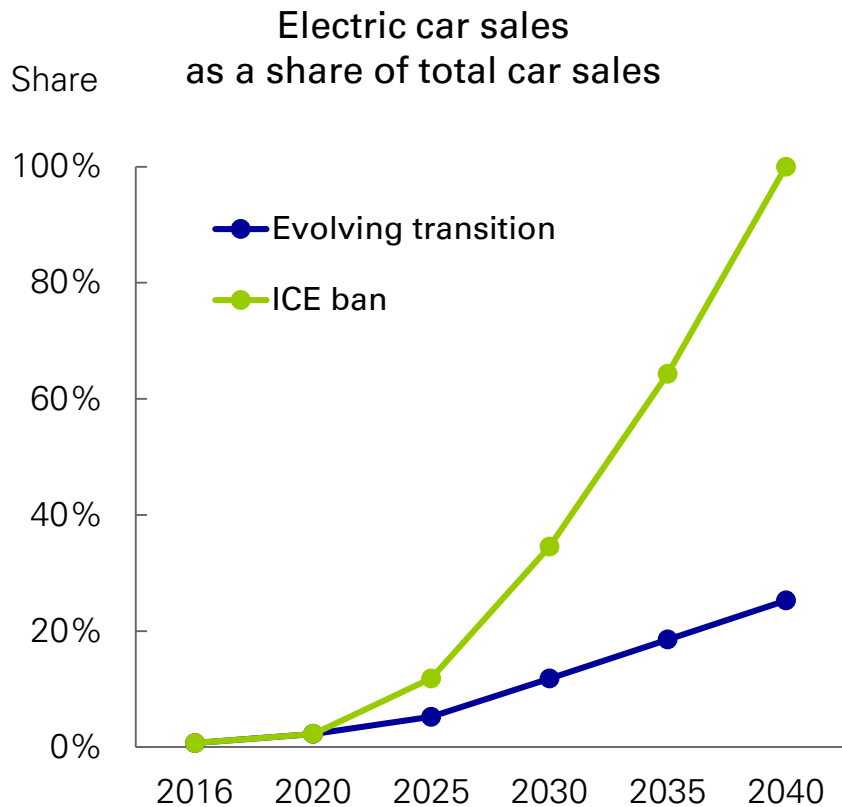


New mobility share of Vkm



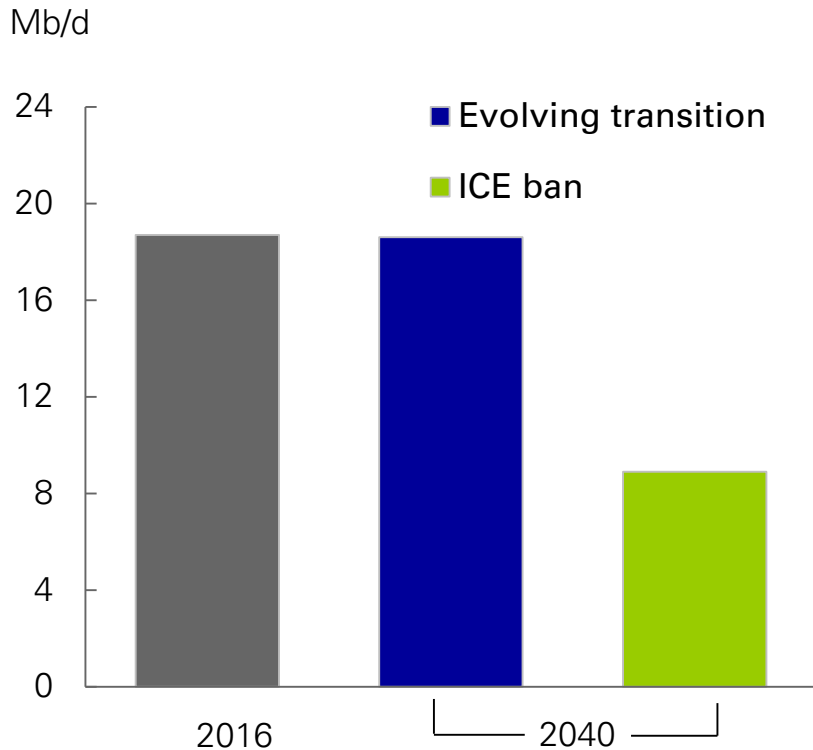


Global ban on internal-combustion engine (ICE) cars

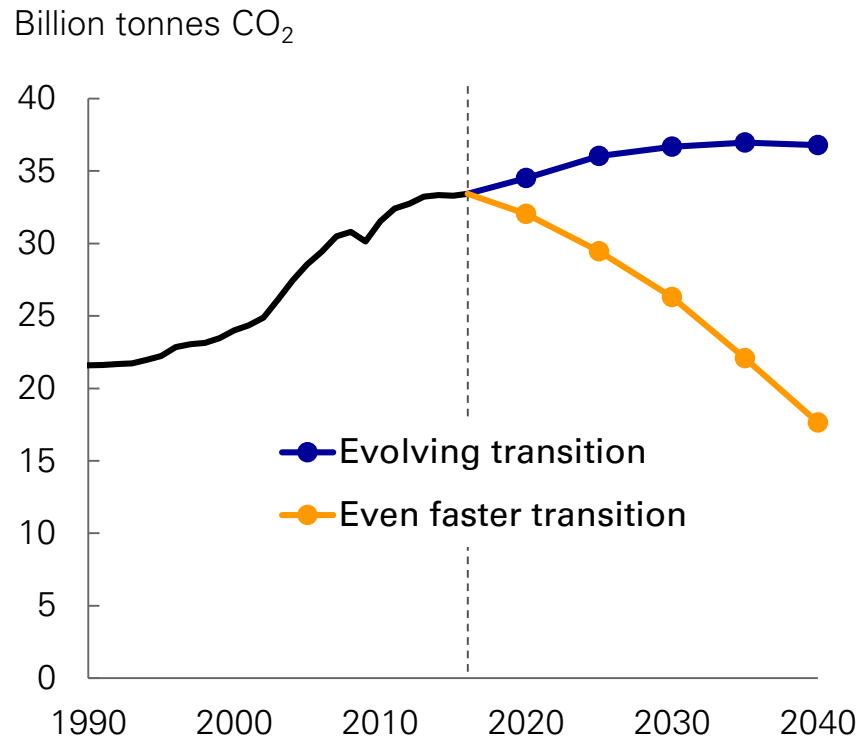


Impact of ICE ban

Passenger cars liquids demand

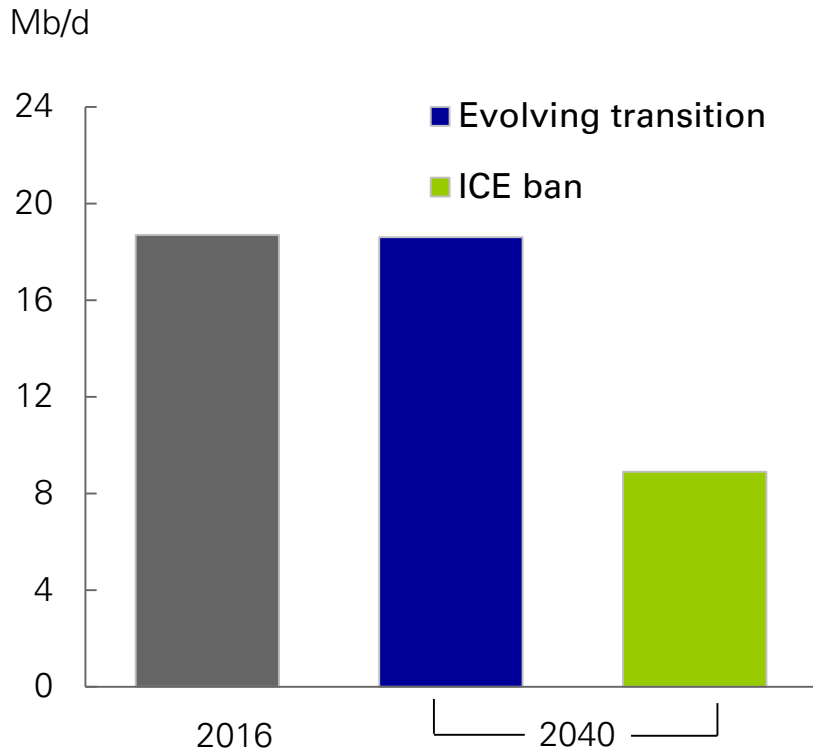


Carbon emissions from energy

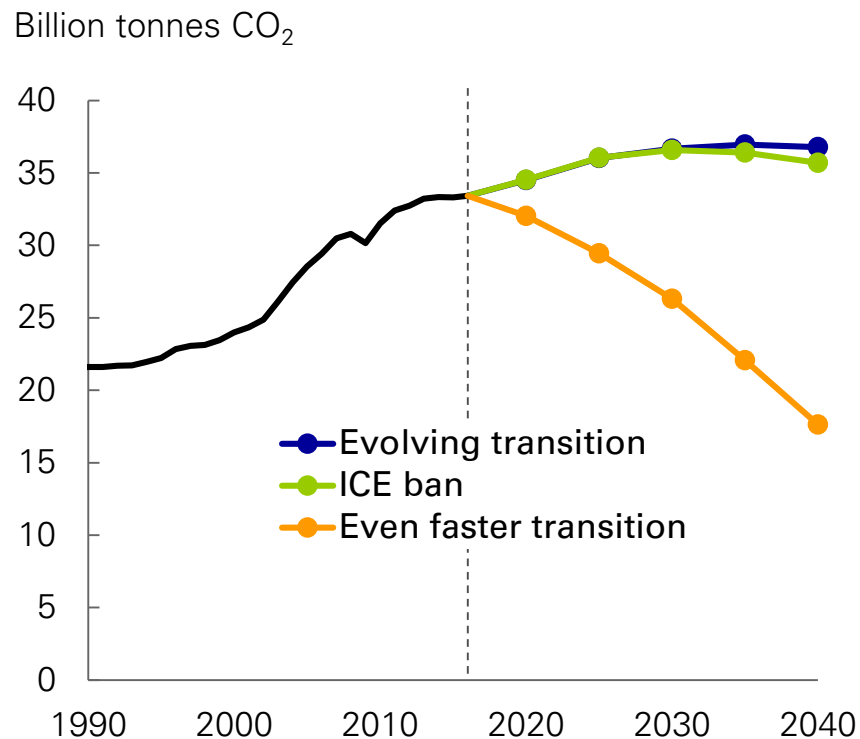


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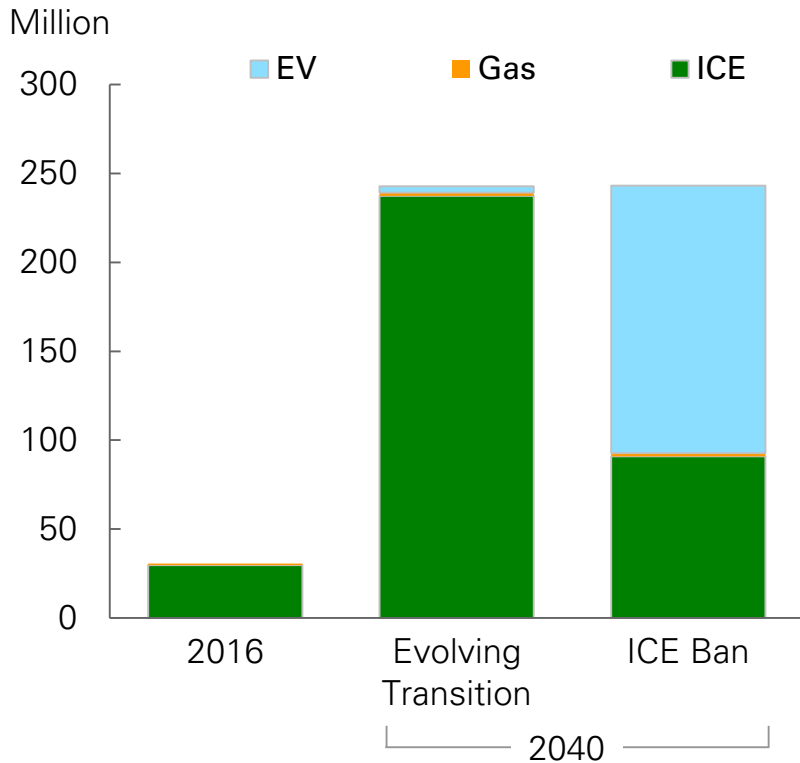


Carbon emissions from energy



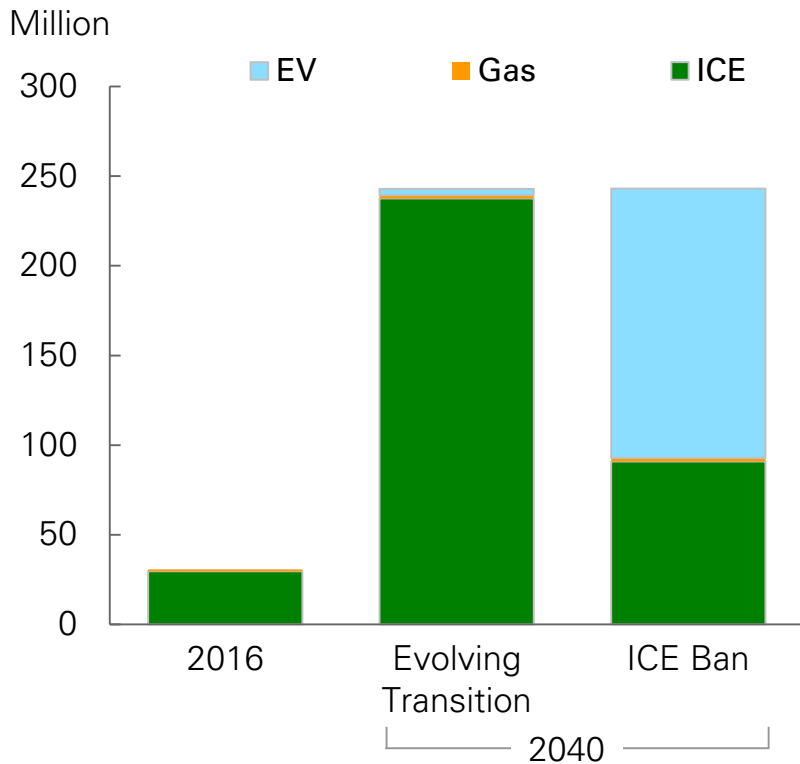
India: number of cars and liquids demand

Vehicles by type

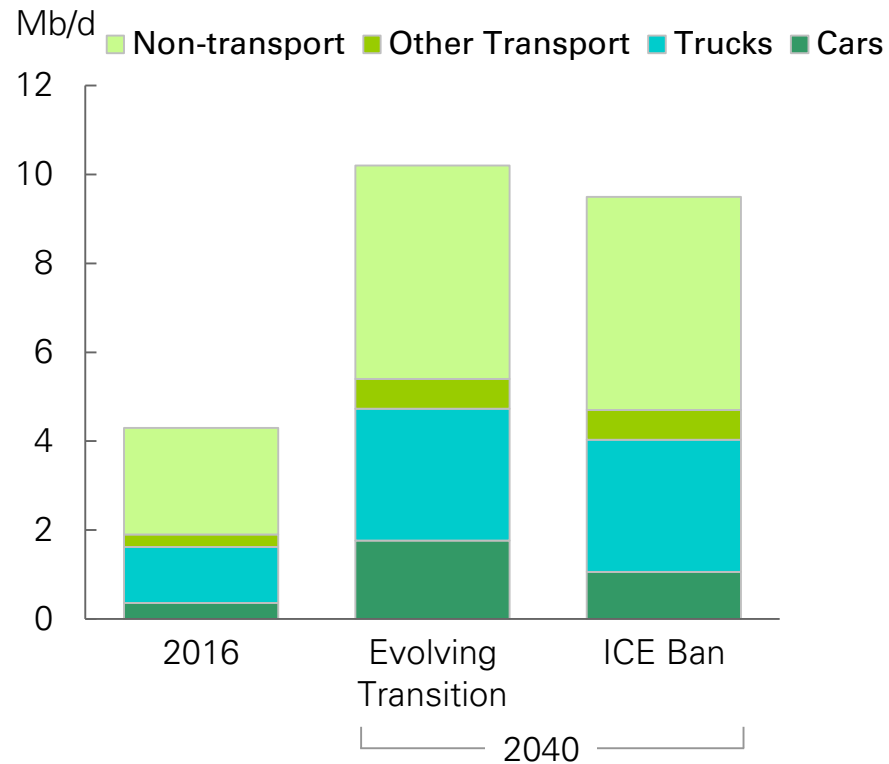


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Vehicles by type



Total liquids demand

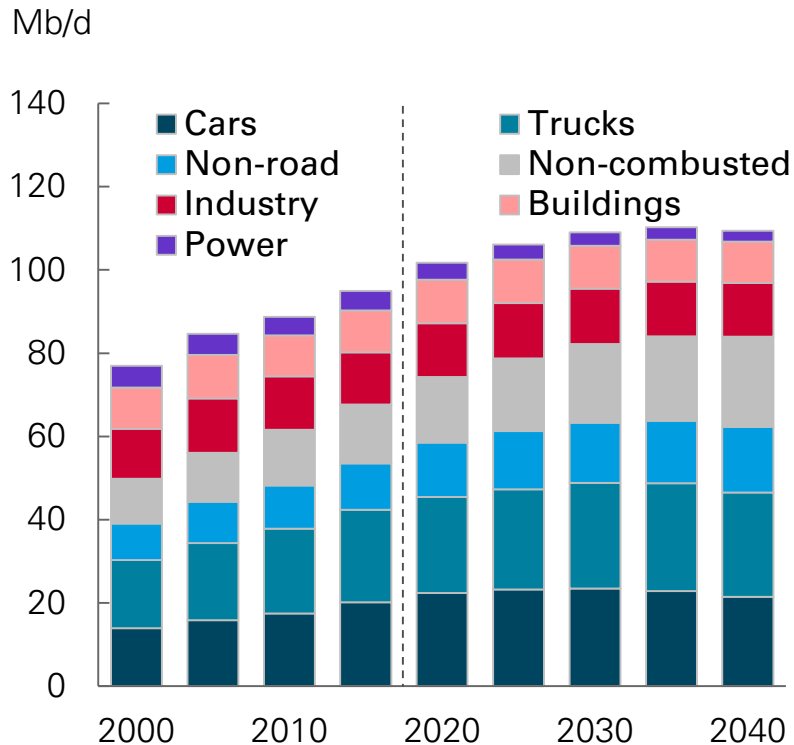


Five key questions

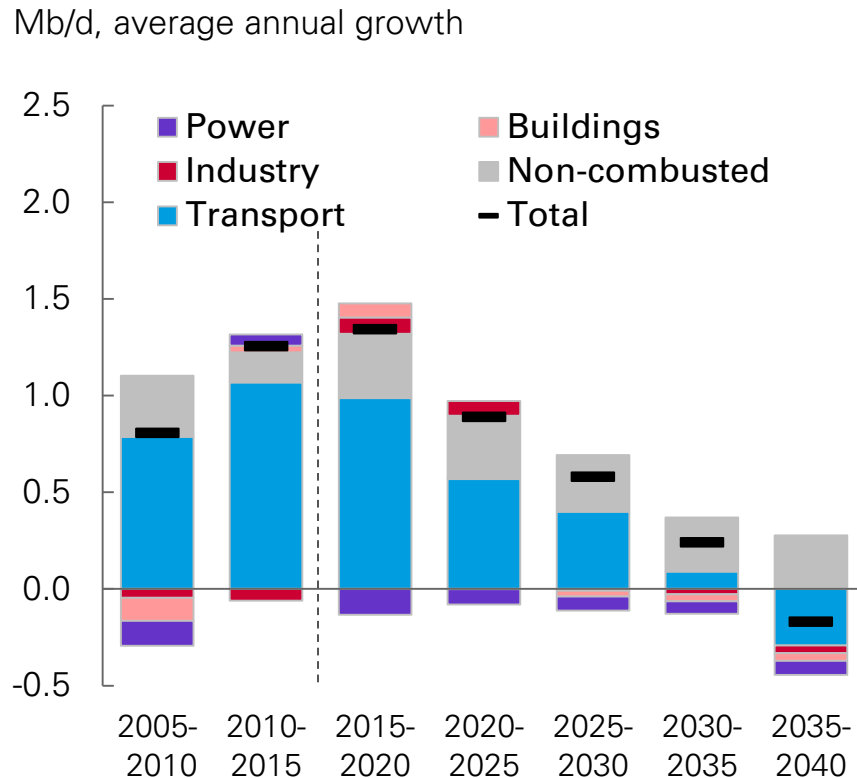
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Demand for oil and other liquid fuels

Liquids demand

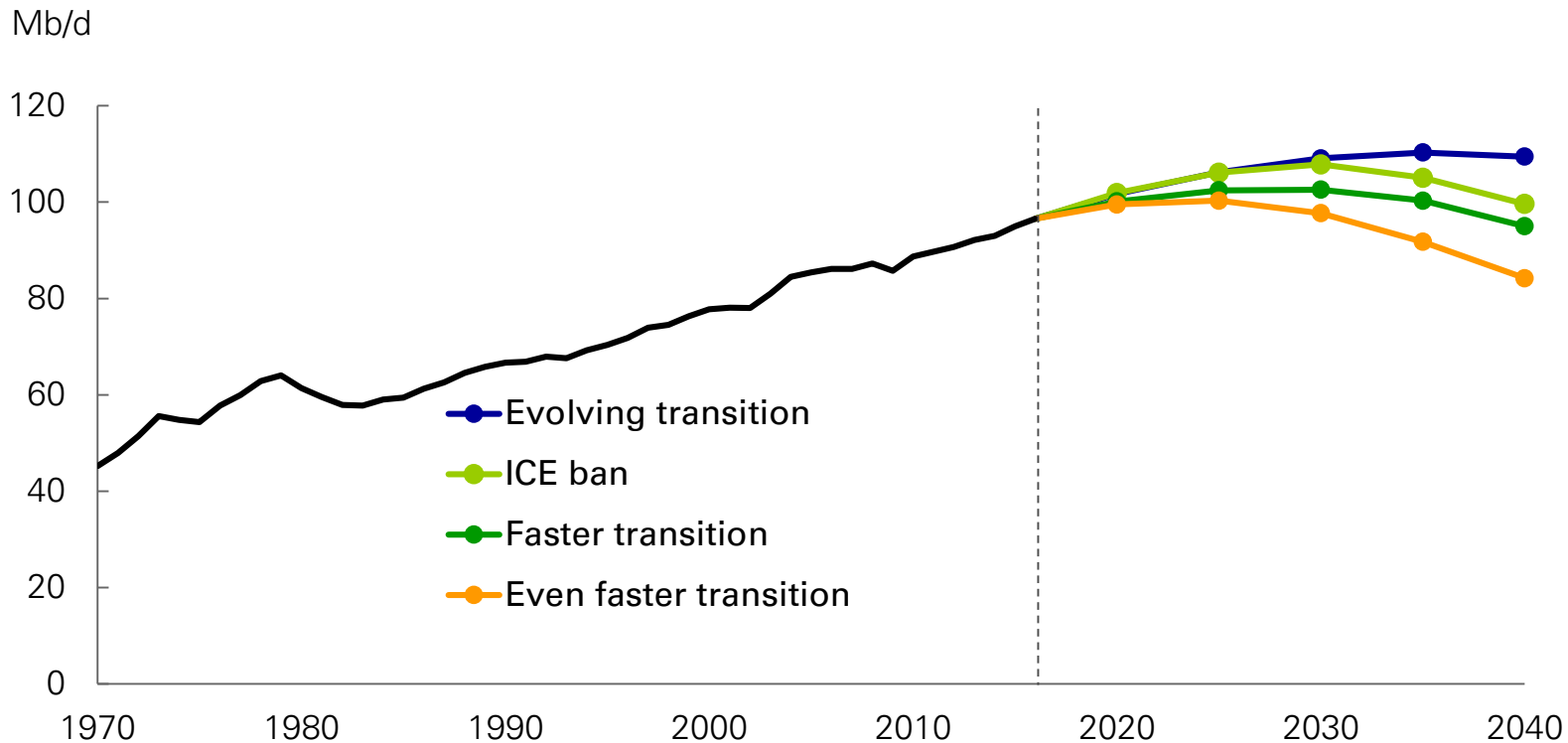


Liquids demand growth



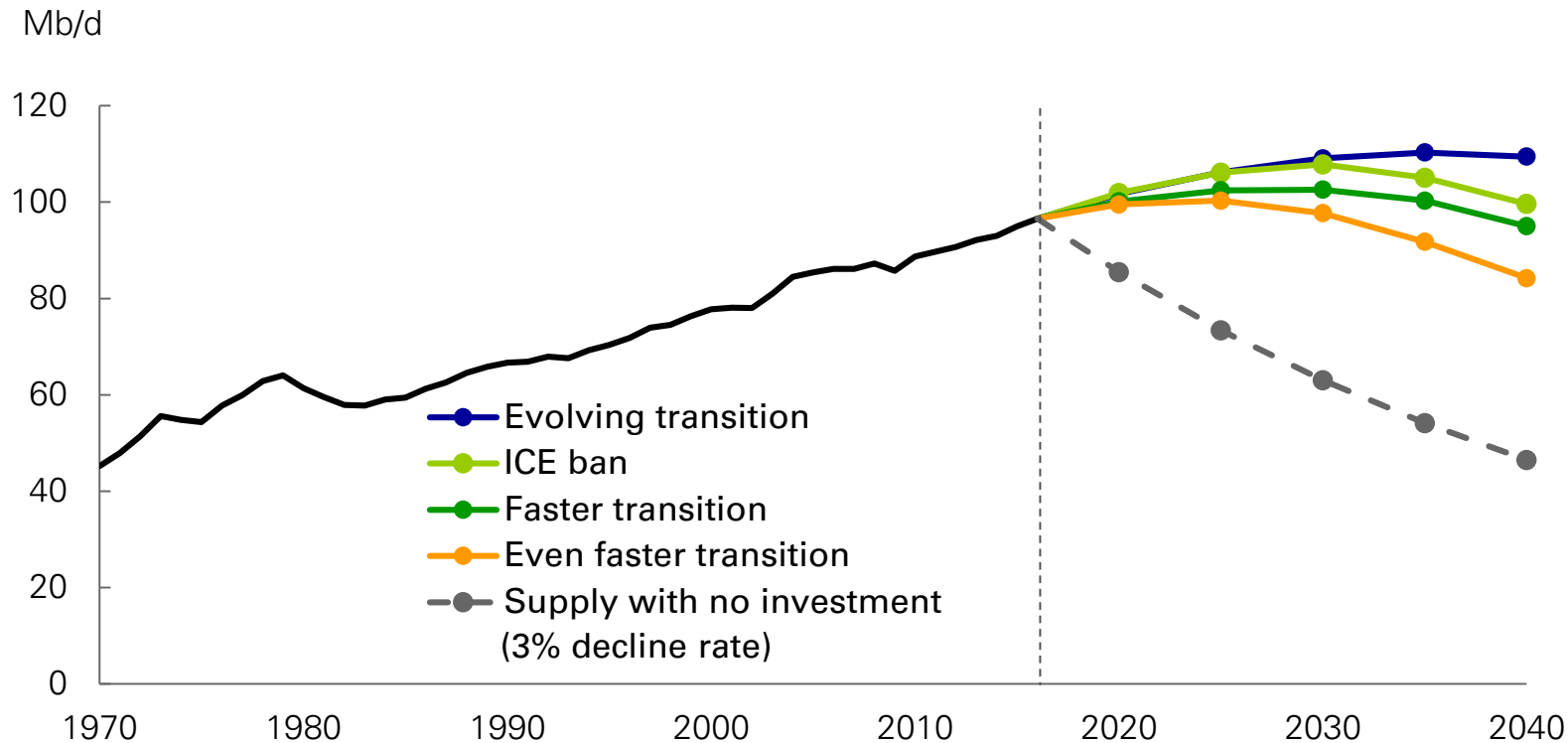
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Liquids demand



Demand for oil and other liquid fuels

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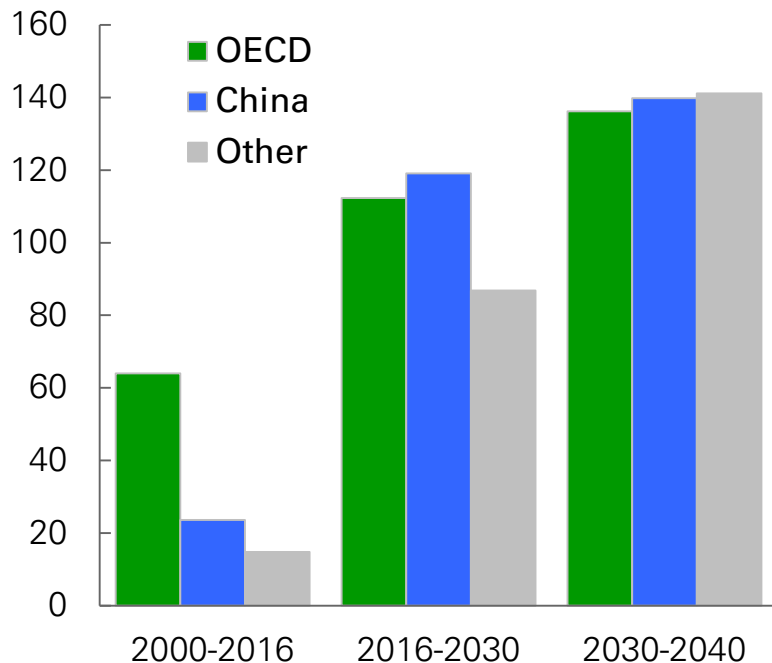
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Rapid growth in renewable energy

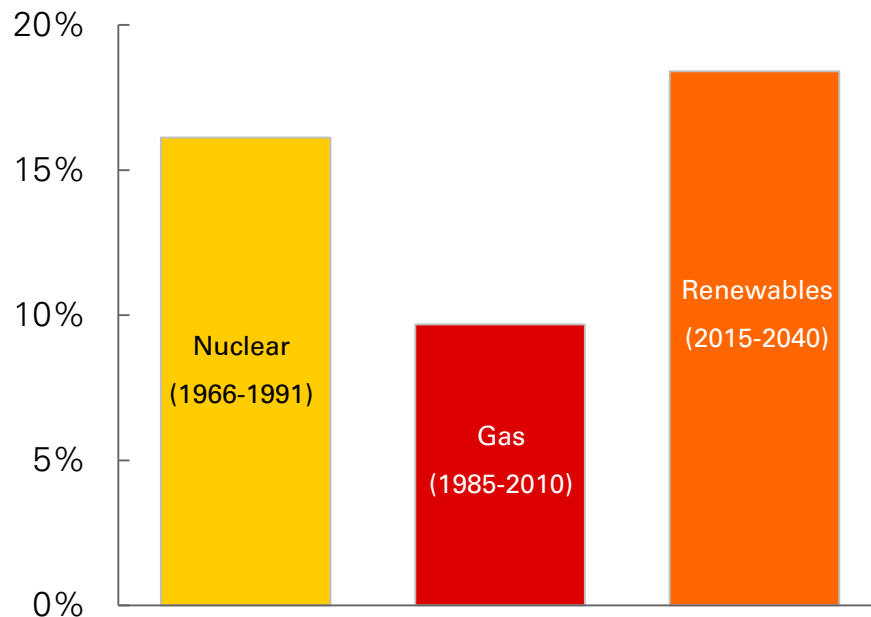
Growth of renewable power

TWh, average annual growth



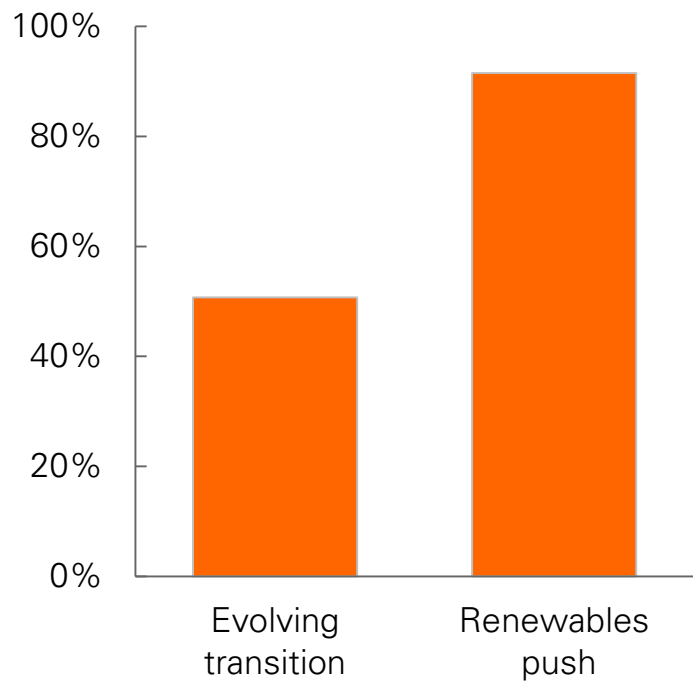
Pace of power market penetration

Largest gains in market share over 25 years, %pts



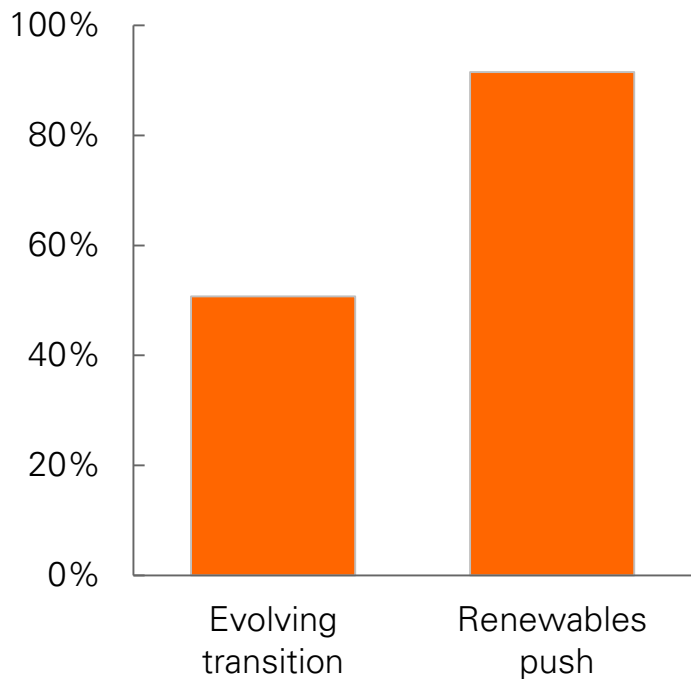
'Renewables push' scenario

Renewables share of power growth
2016-2040

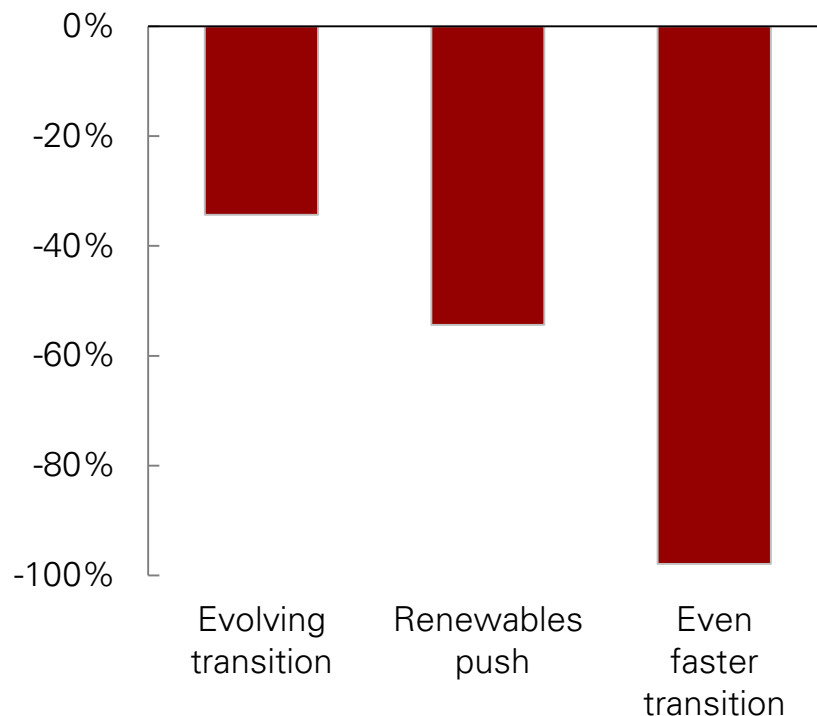


'Renewables push' scenario

Renewables share of power growth
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Change in carbon intensity of power
2016-2040

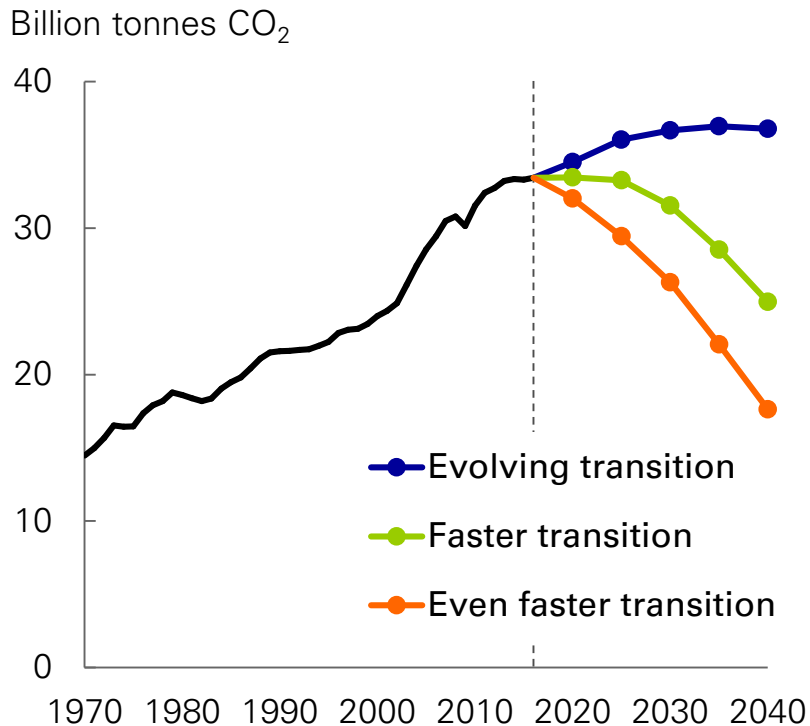


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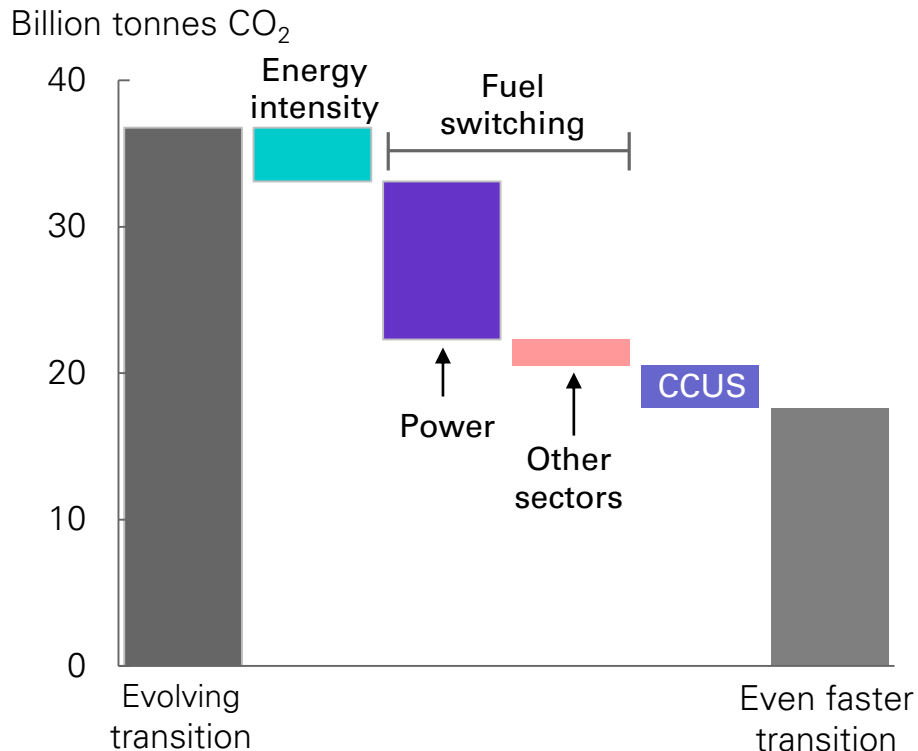
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Carbon emissions continue to rise in the ET scenario

Carbon emissions



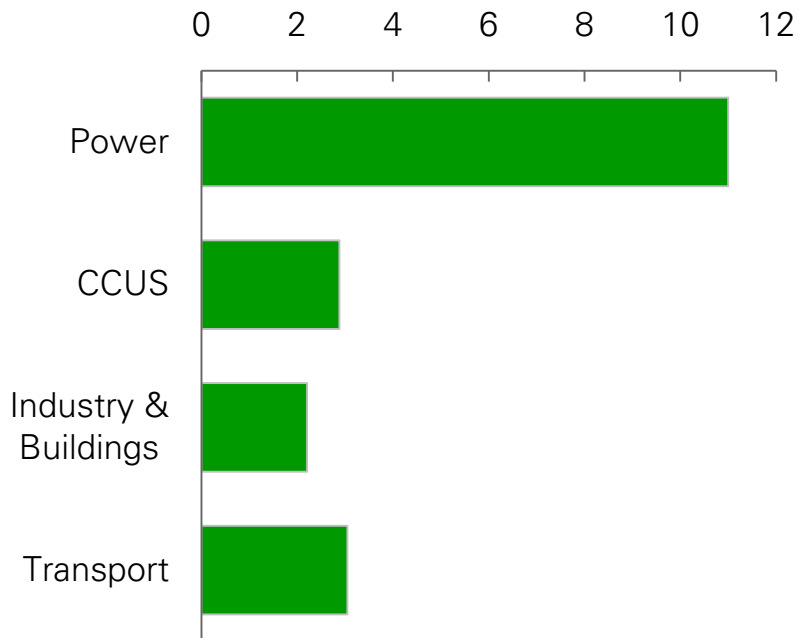
Carbon emissions in 2040:
EFT versus ET scenario



Impact of faster transition on global energy system

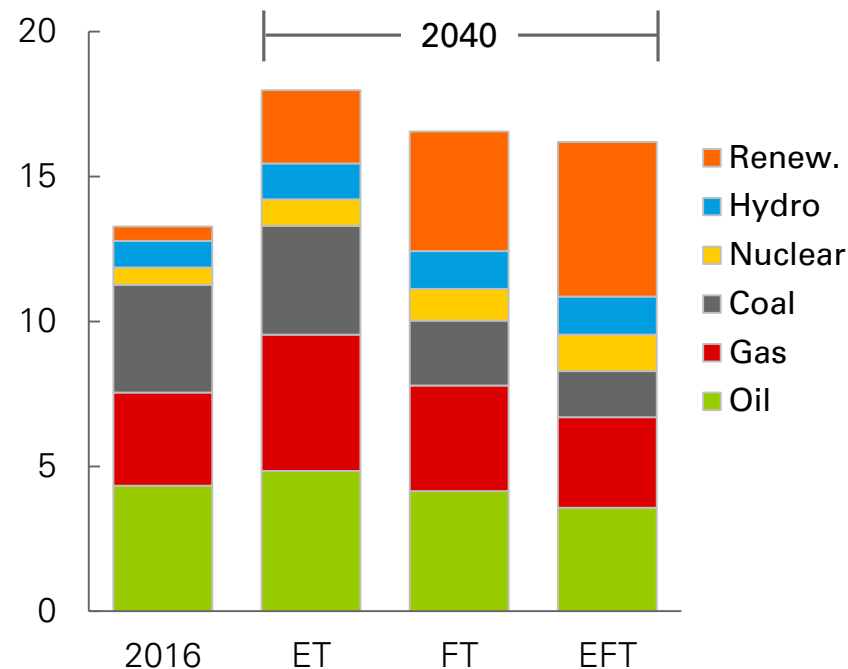
Reductions in carbon emissions:
EFT versus ET scenario

Billion tonnes CO₂ in 2040



Primary energy consumption under
different scenarios

Billion toe

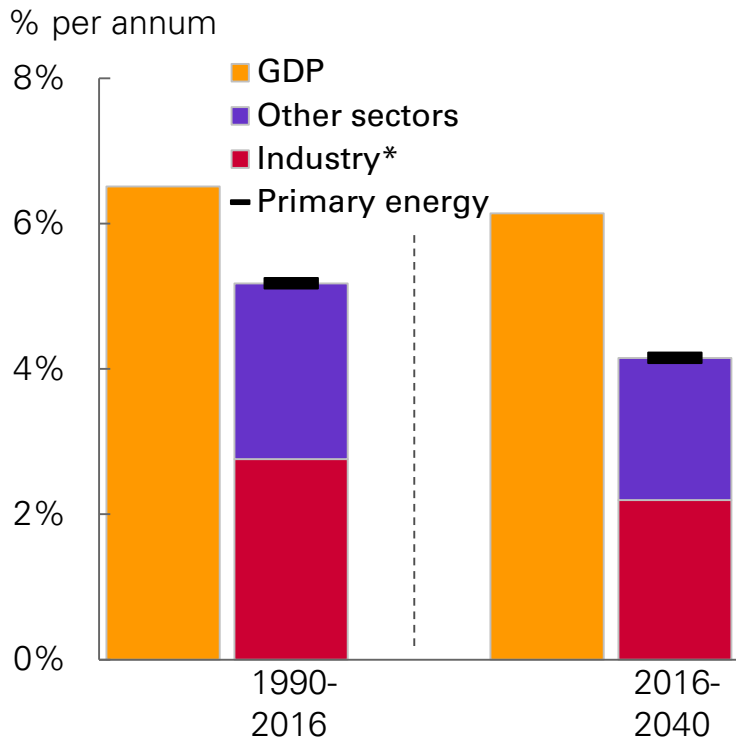


Five key questions

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Implications for India

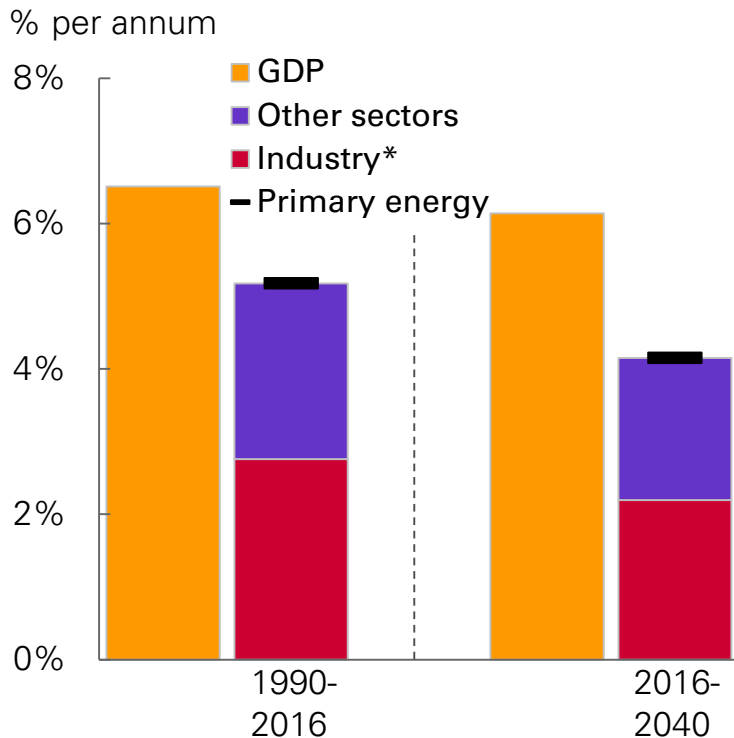
Growth of GDP and primary energy



*Excludes non-combusted fuels

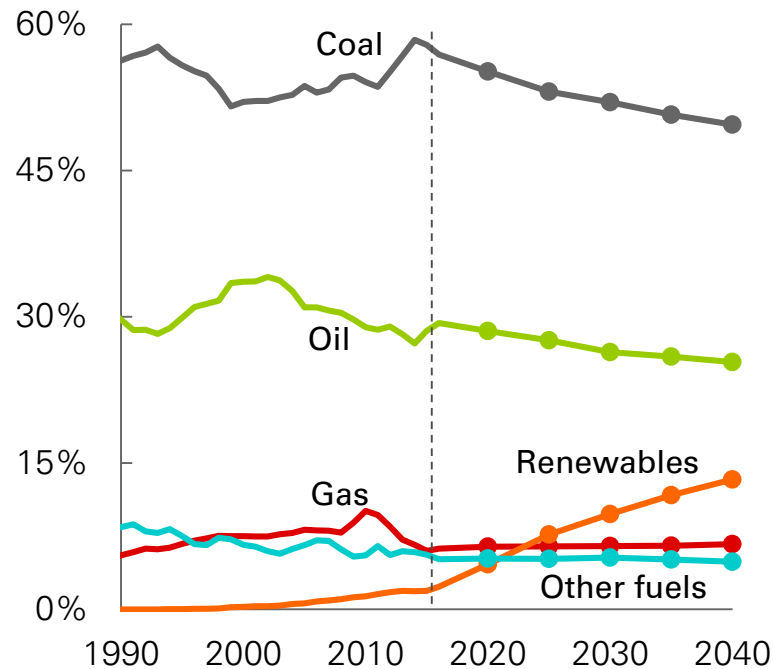
Implications for India

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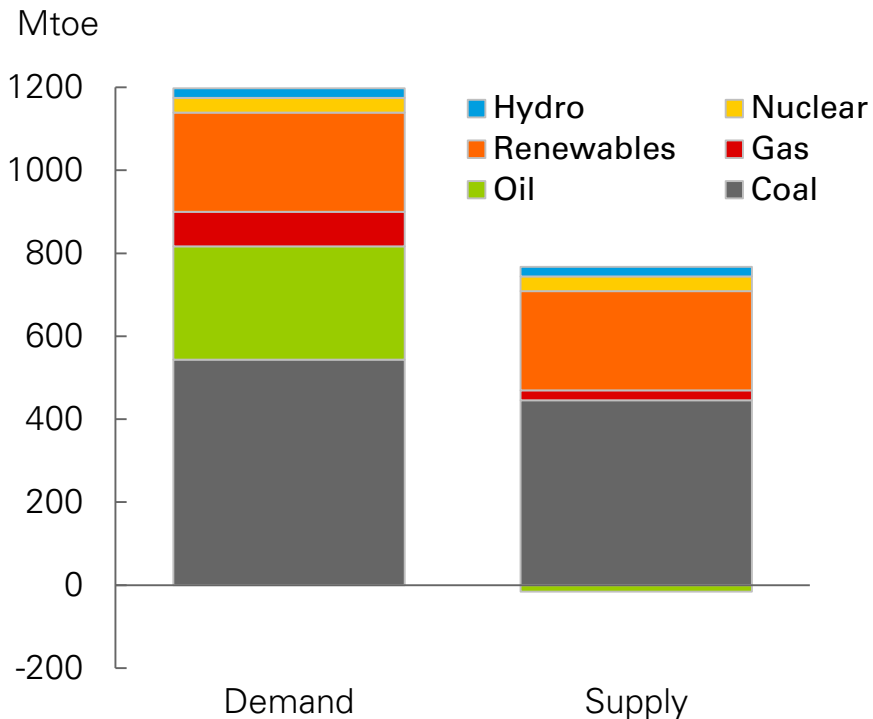
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Shares of primary energy



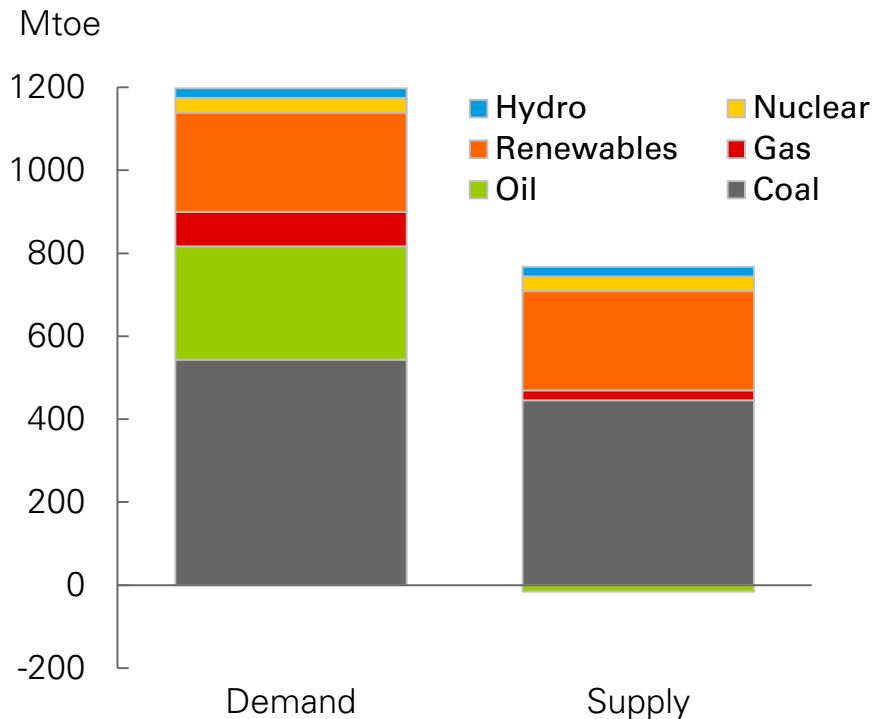
Indian energy: supply and demand balance

Primary energy supply and demand growth
in the ET scenario: 2016-2040

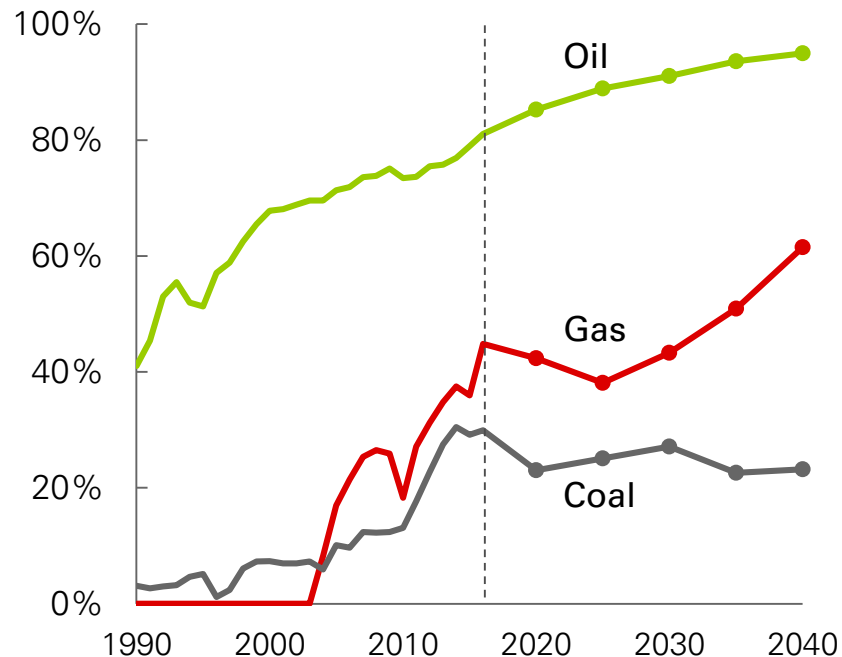


India energy: supply and demand balance

Primary energy supply and demand growth in the ET scenario: 2016-2040



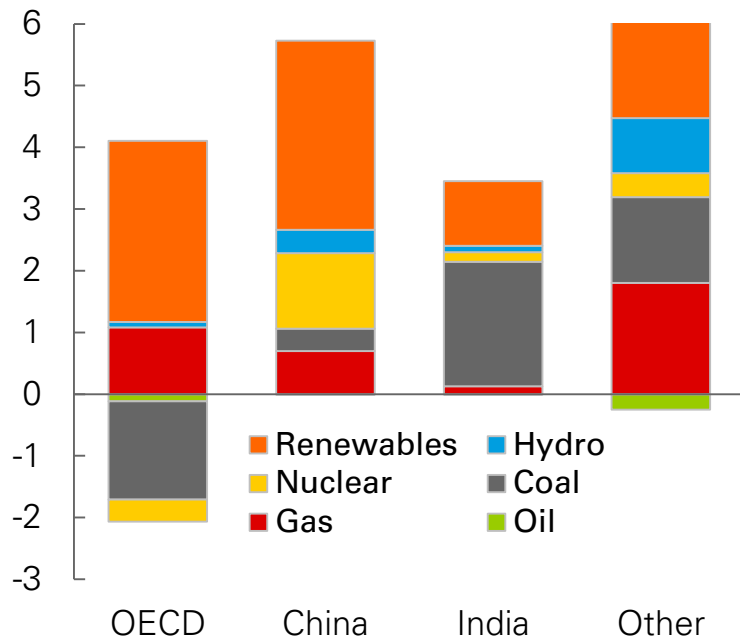
Energy imports as share of consumption



Key role of power sector

Growth of power generation, 2016-2040

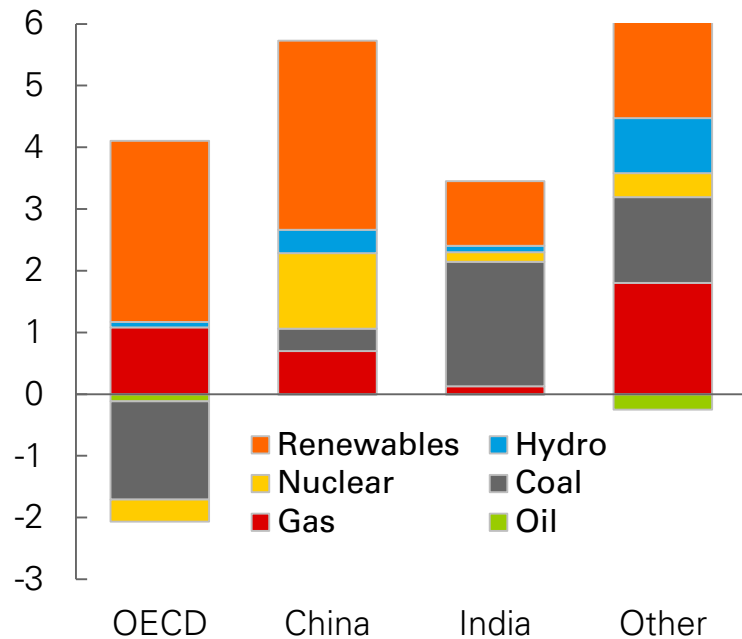
Thousand TWh



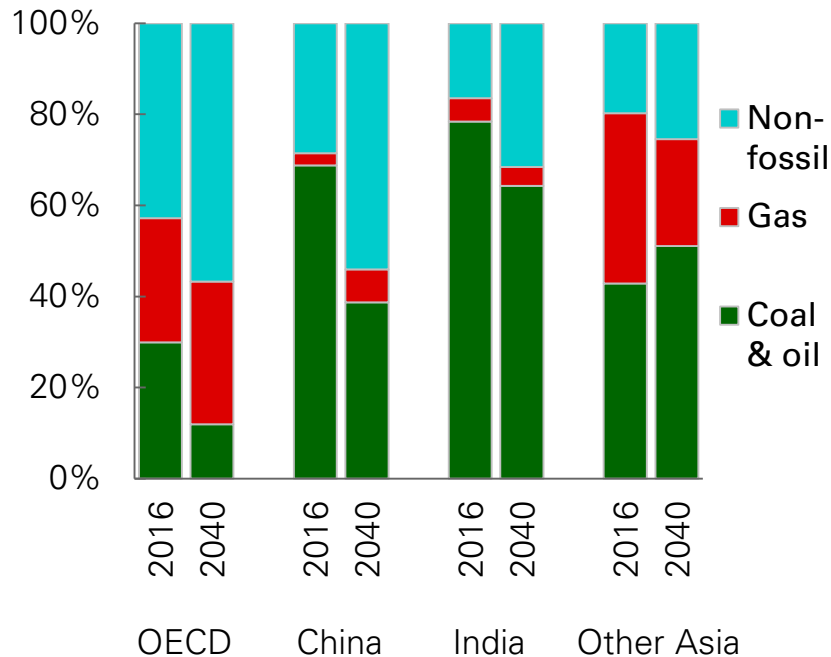
Key role of power sector

Growth of power generation, 2016-2040

Thousand TWh



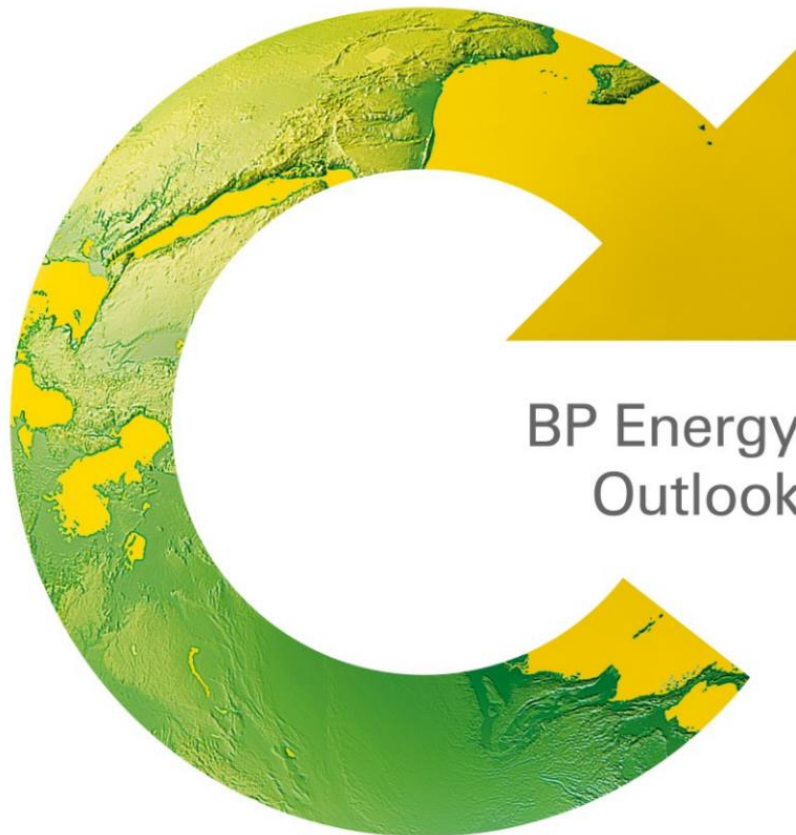
Shares of power generation, 2016 and 2040





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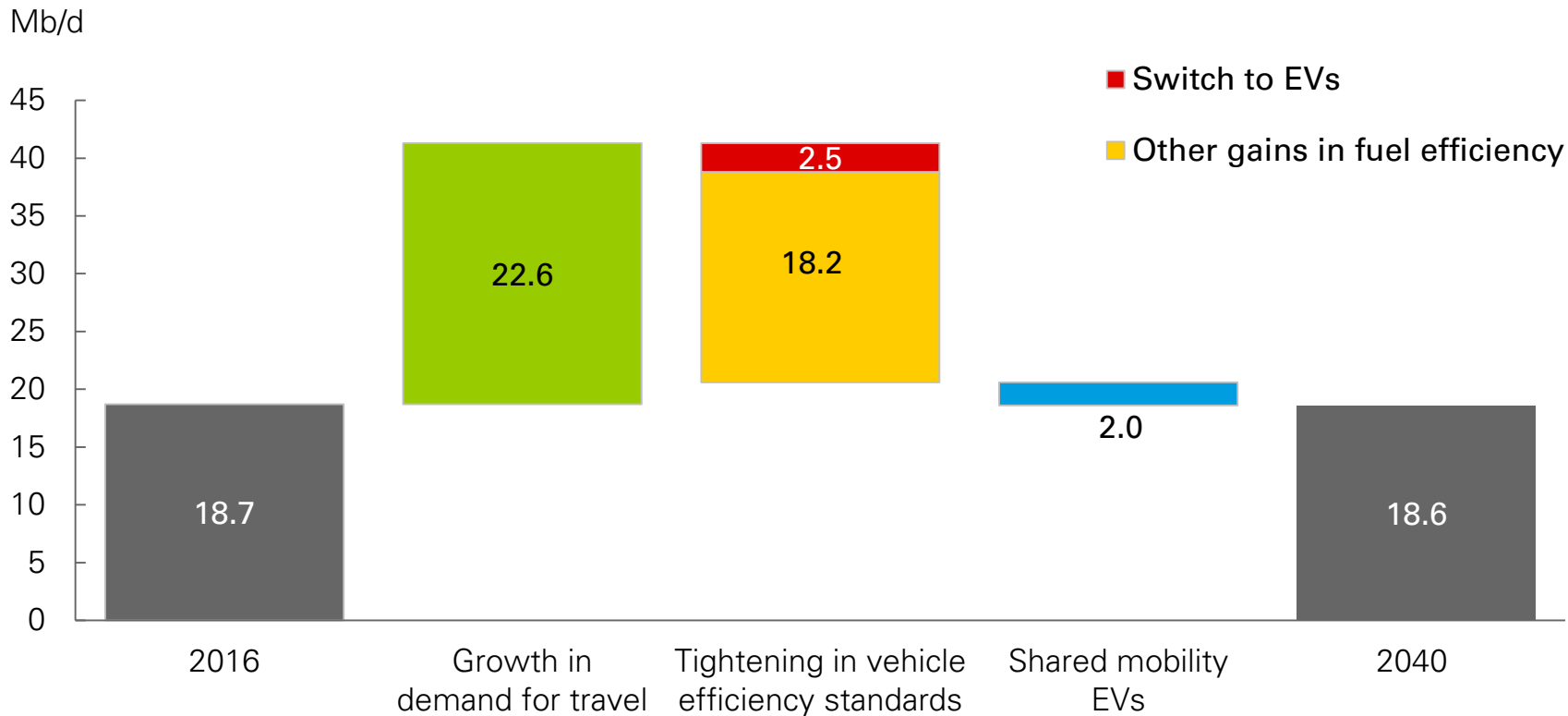


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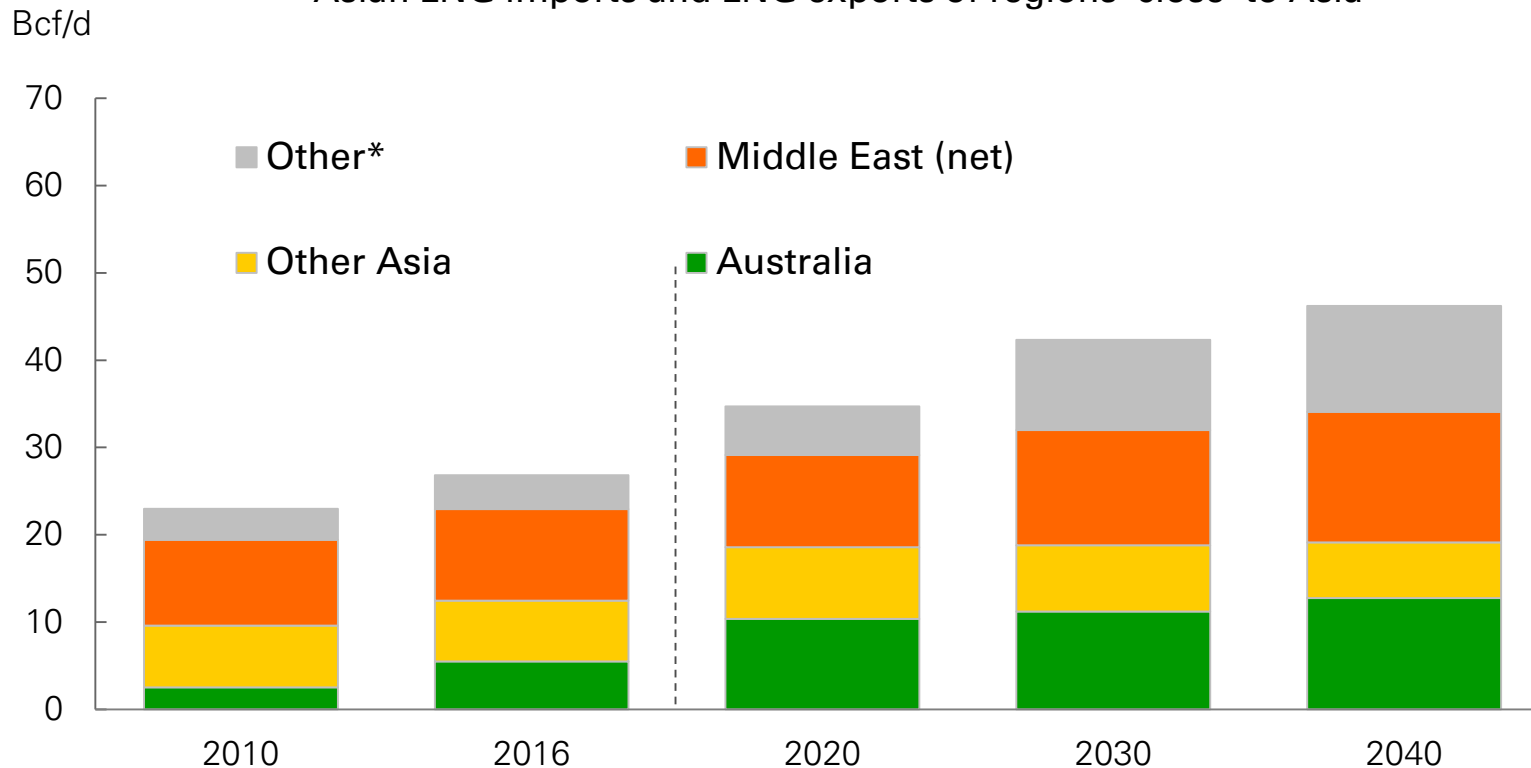
Liquid fuel demand from passenger cars

Changes in liquids demand from cars: 2016-2040



Asian demand for US LNG

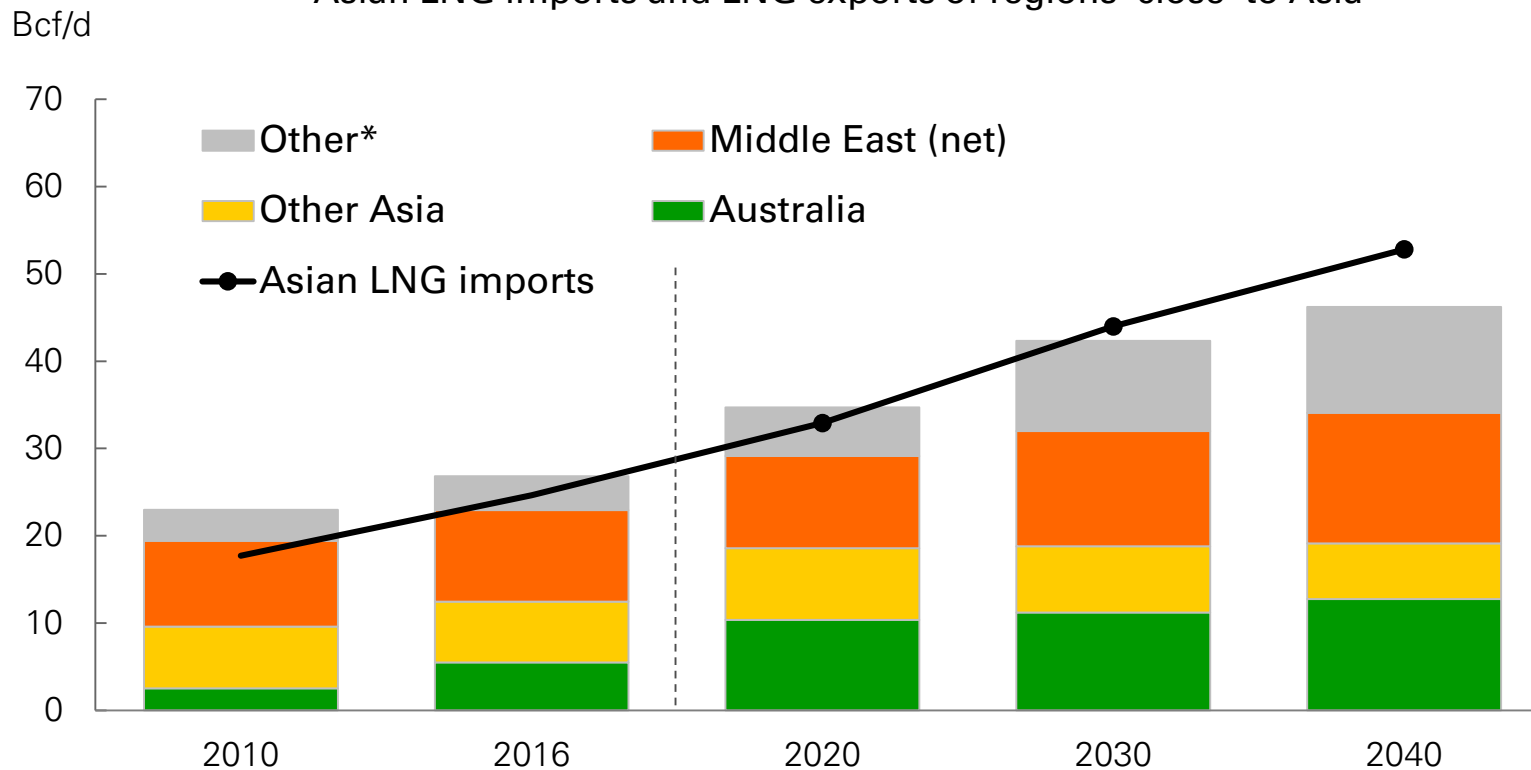
Asian LNG imports and LNG exports of regions 'close' to Asia



*Other includes Peru, Canada, East Africa, Angola, parts of West African and Russian gas supplies

Asian demand for US LNG

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