

# China 2035 Outlook: Changing energy needs

IMEMO, 26 April 2016

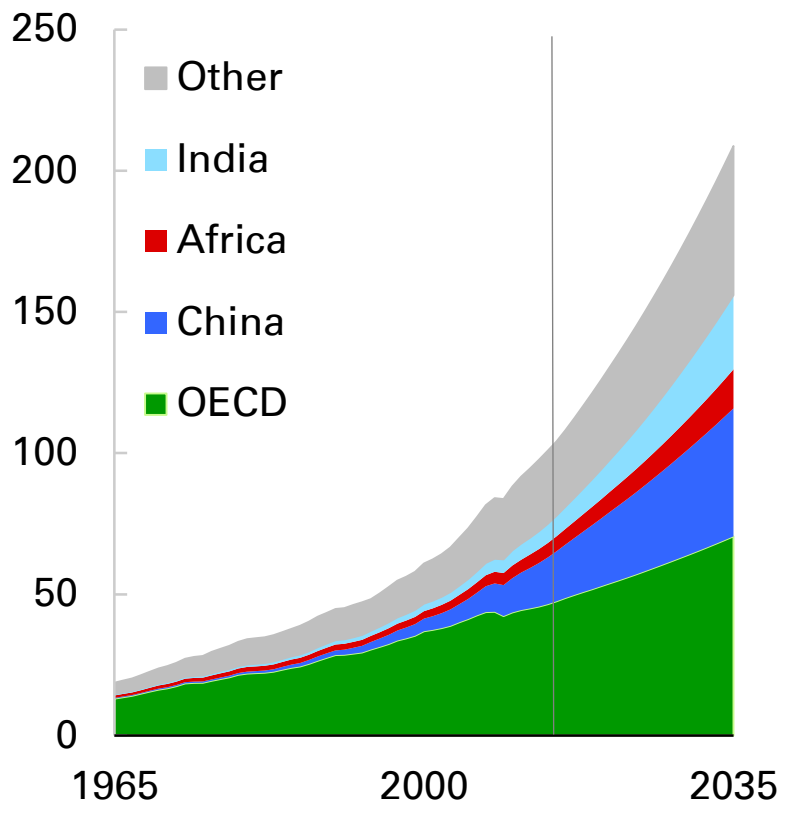
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# Economic backdrop

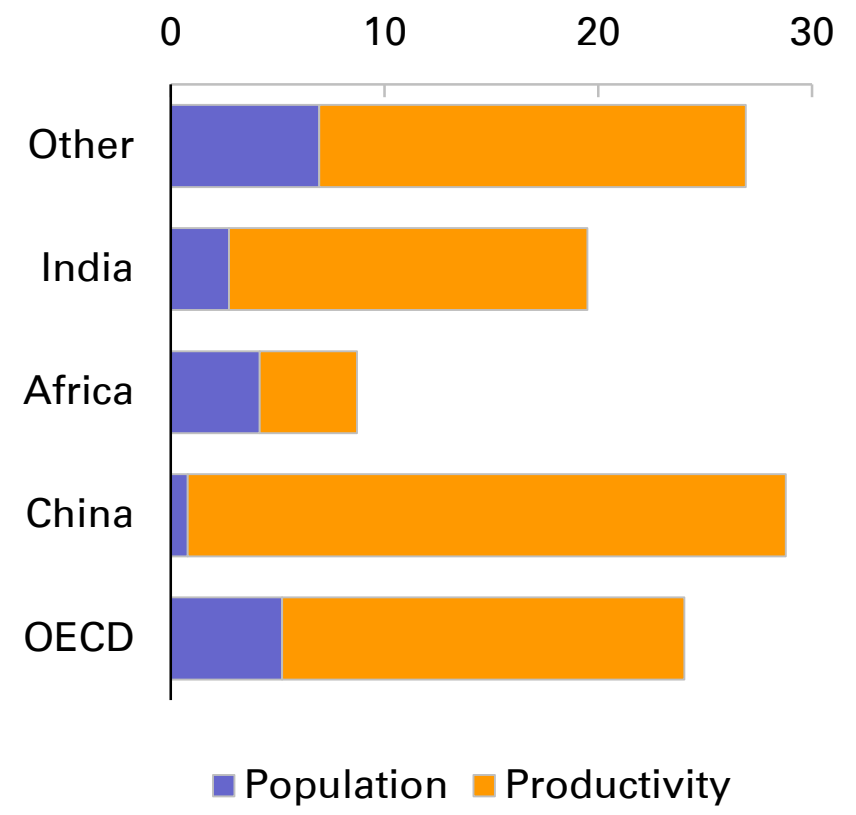
## GDP

Trillion, \$2010



## Contribution to GDP growth 2014-35

Trillion, \$2010



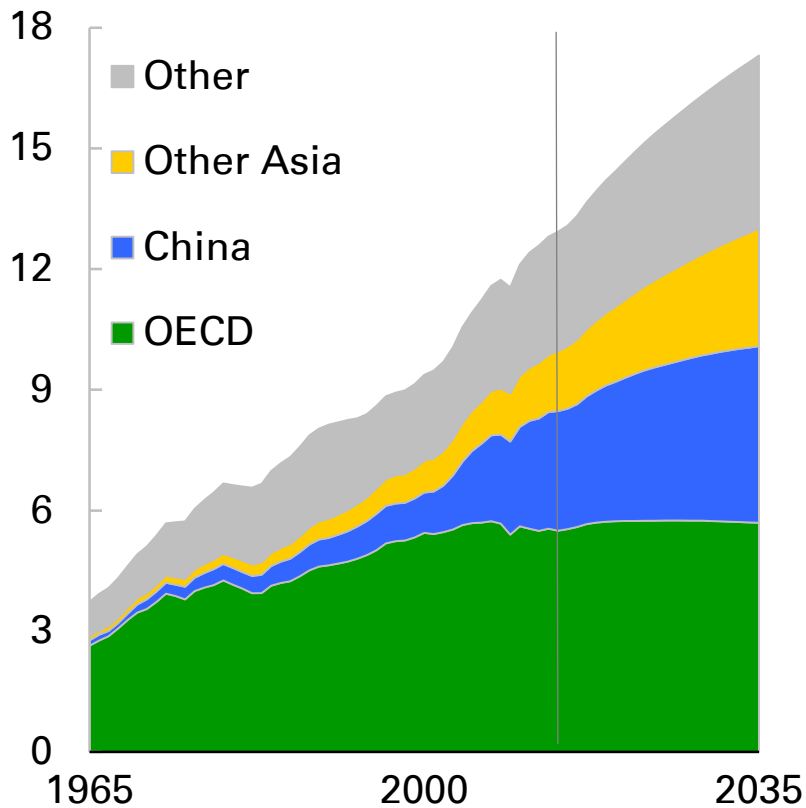
# Global energy demand

## China remains the largest energy consumer in the world



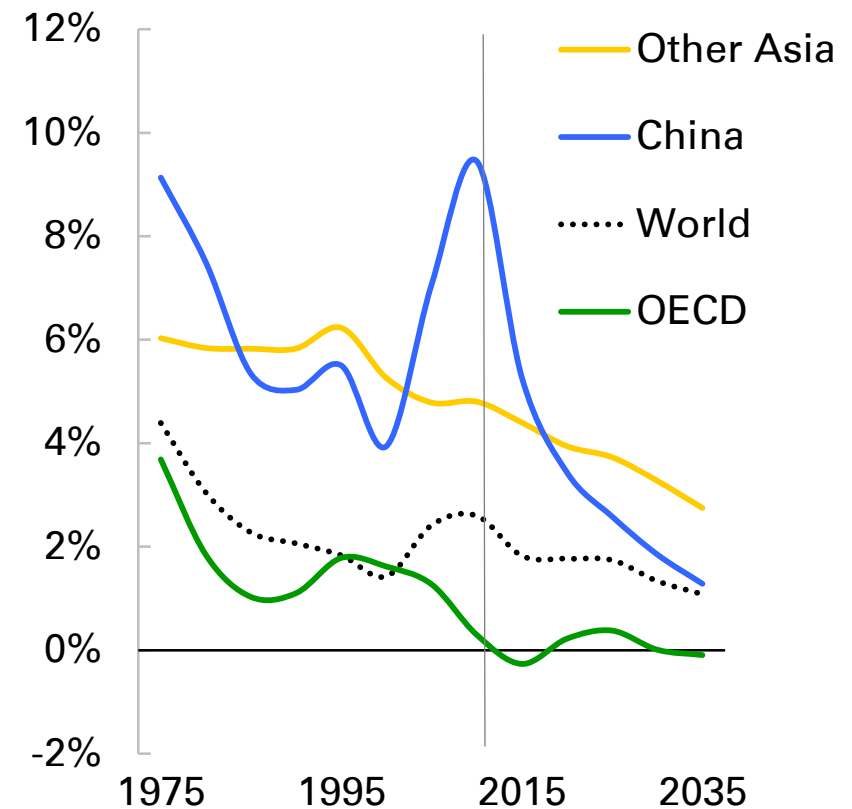
### Consumption by region

Billion toe



### Consumption growth by region

10 year average, % per annum

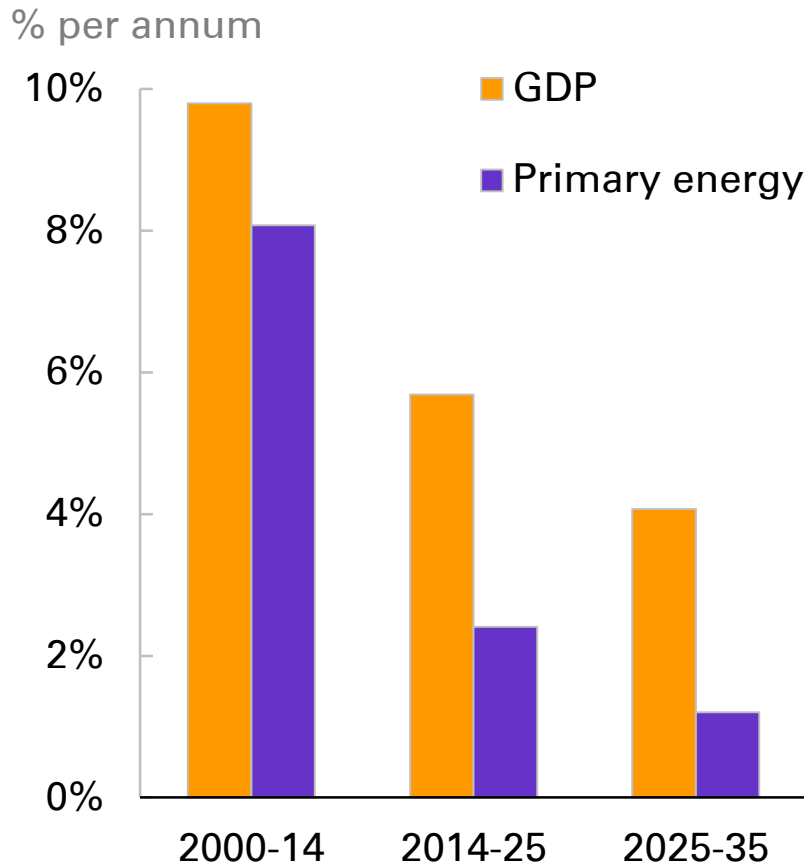


# China's energy needs are changing...

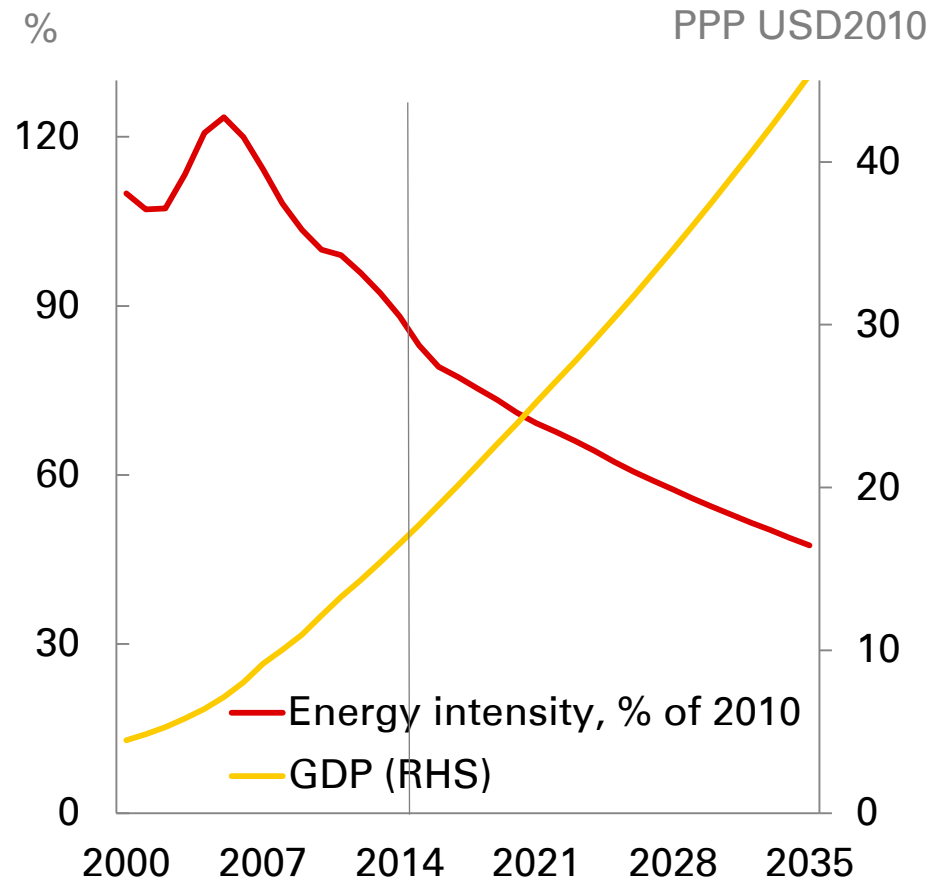
As energy demand tends to decouple from GDP growth



### GDP and primary energy growth



### GDP and energy intensity

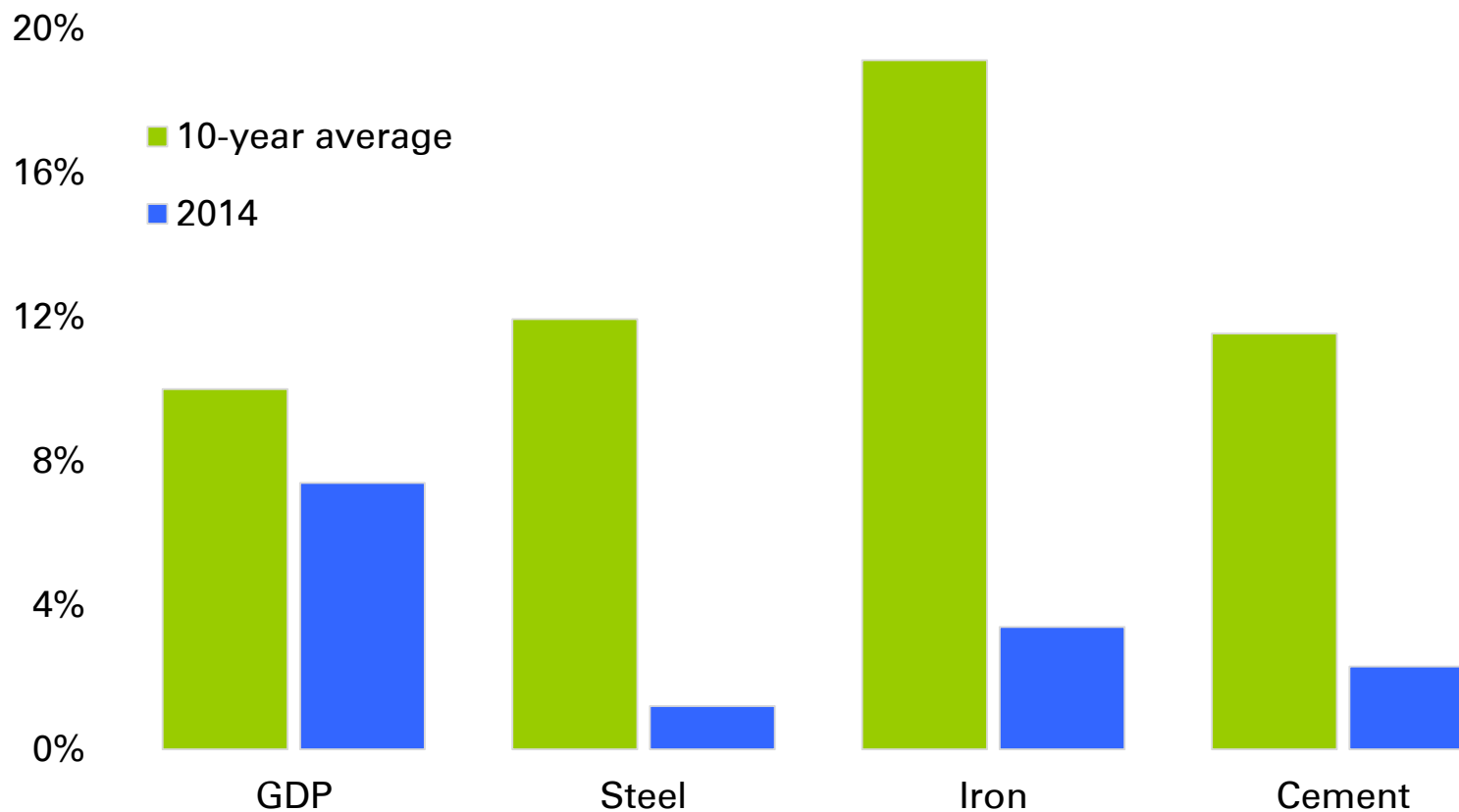


# Chinese GDP and energy-intensive sectors

Contribution of heavy industries to GDP is diminishing



Annual change, %



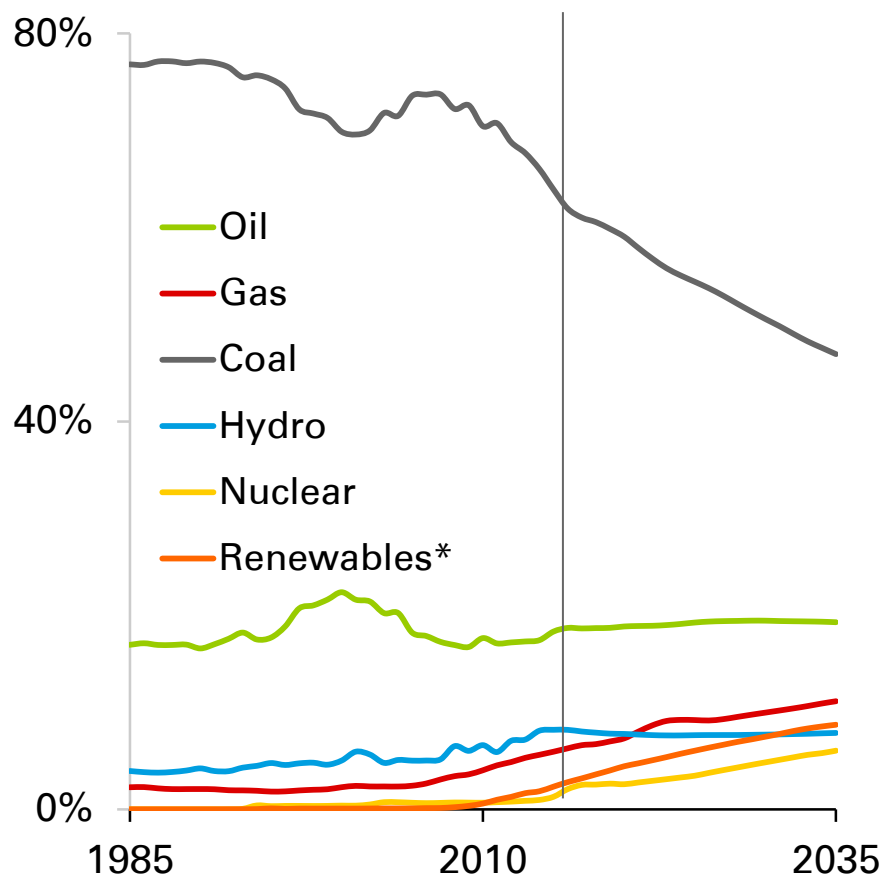
Source: includes data from China National Bureau of Statistics.



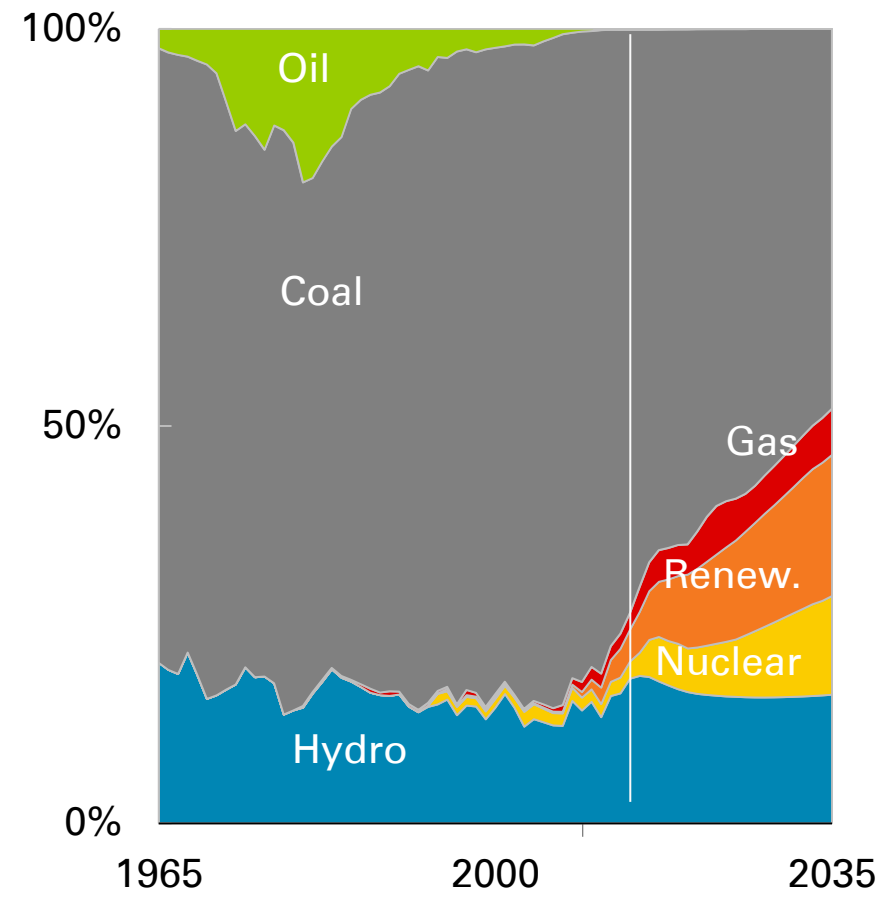
# China's changing fuel mix

## Declining coal allows gas and non-fossil fuels to grow

### Shares of primary energy



### Primary inputs to power sector



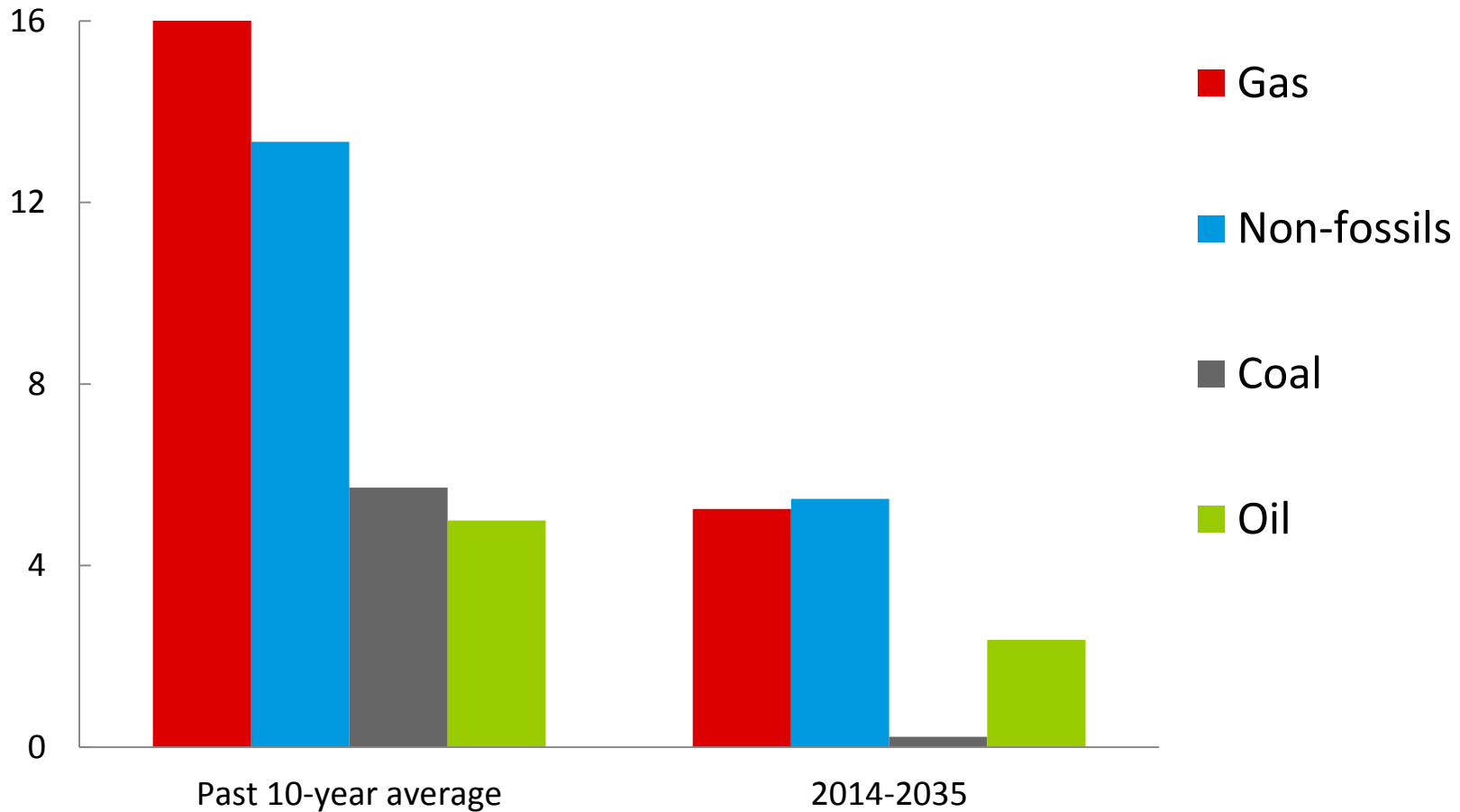
\*Includes biofuels

# Changing growth path of different fuels

Gas, nuclear and renewables promise to be the fastest growing fuels



% per annum

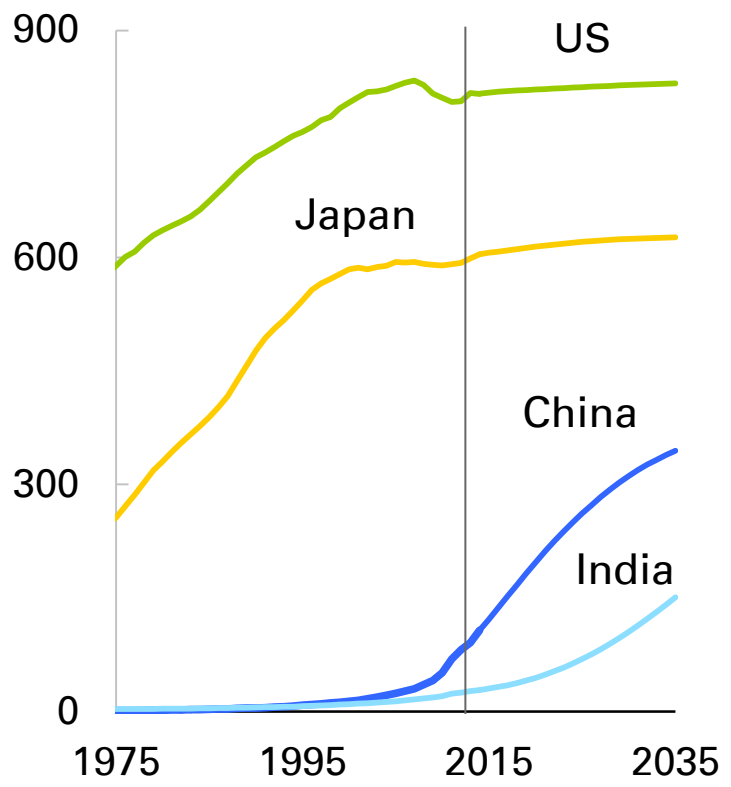




# Growth in China's oil demand

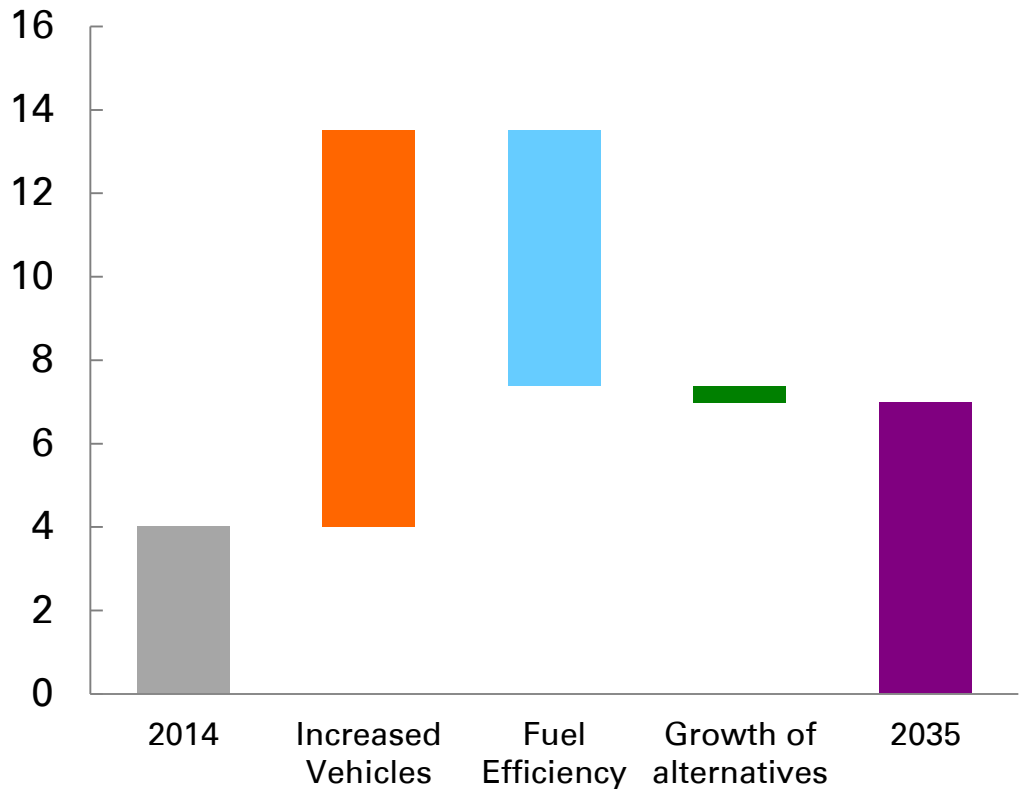
## Vehicle ownership

Vehicles per 1000 people



## Growth in Chinese transport demand

Mb/d



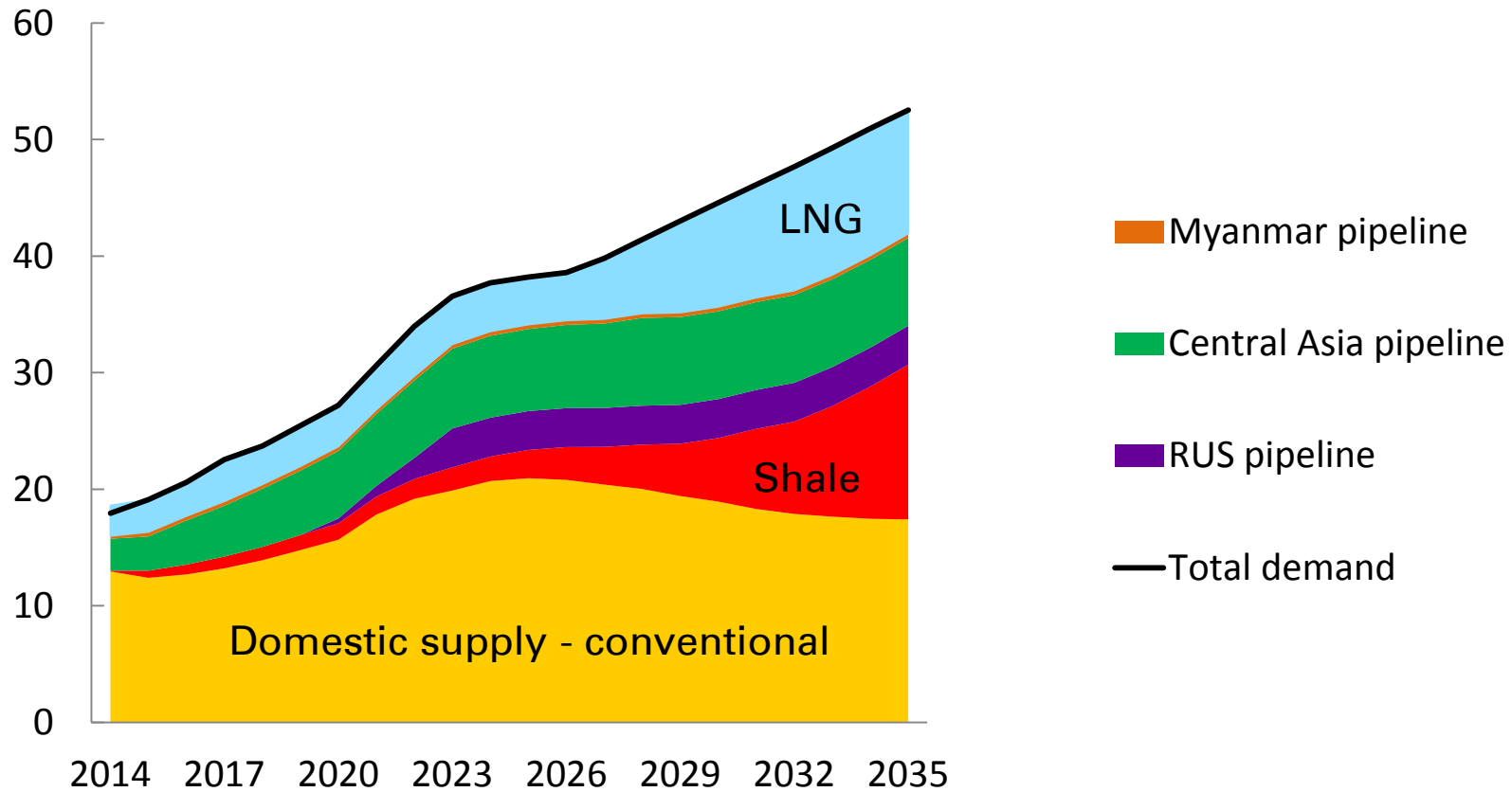


# Base case: Chinese gas balance

Prospects of domestic shale supply would contain the expansion of import



Bcf/d Chinese gas supply: Base case

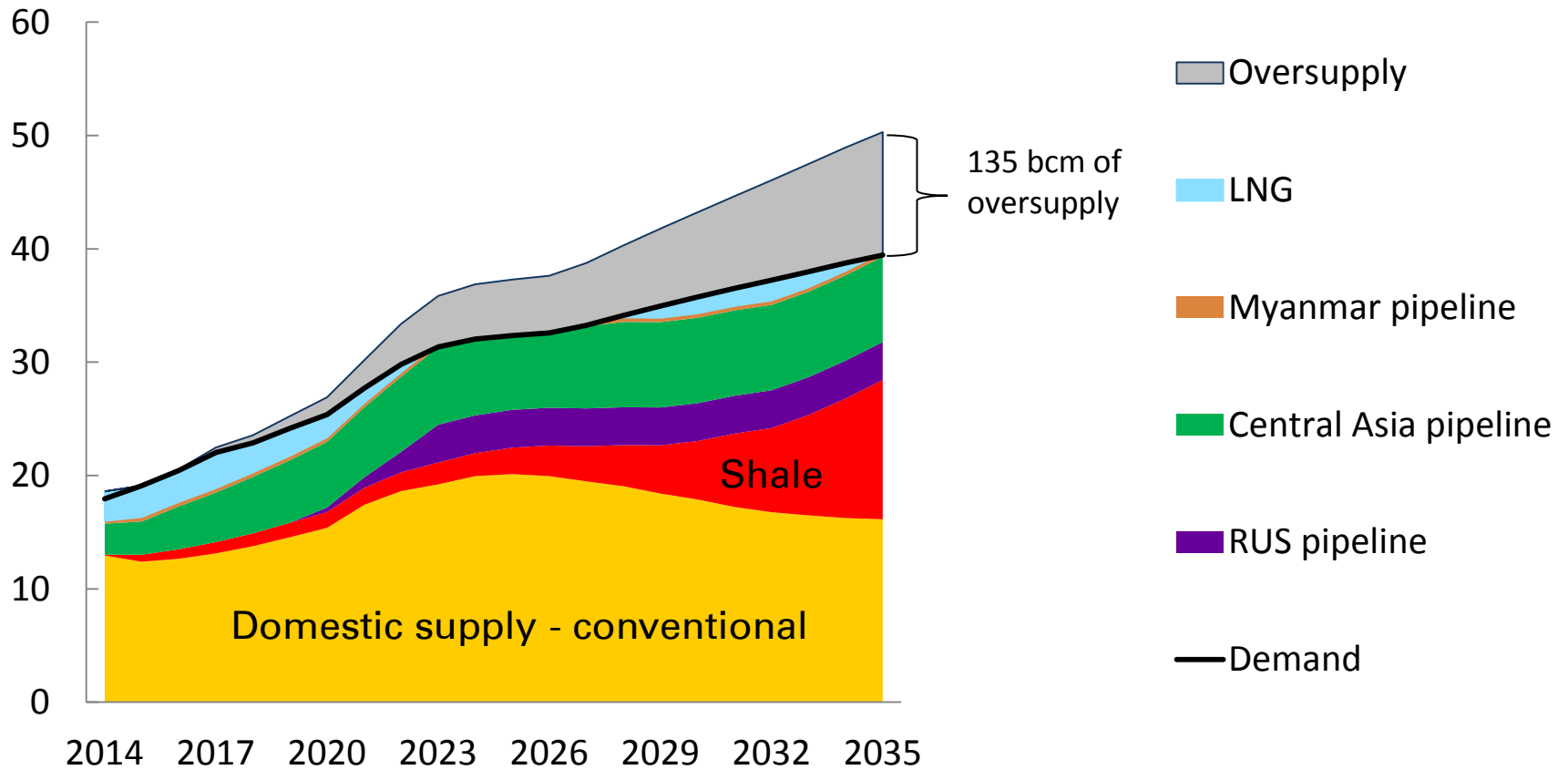


# Low GDP Case

## Chinese uncertainty



Bcf/d Chinese gas supply: Alternative case



# Conclusions

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- China is the world's largest energy consumer and has been the most important source of growth of global energy demand over the past 20 years.
- Chinese energy demand will continue to grow by less than 2% p.a. over the Outlook period. This is above the world's average rate of 1.4% but far slower than 8% p.a. seen in China since 2000.
- China will remain the biggest energy consumer by 2035 but its needs will substantially change.
- China's energy demand growth decouples from the GDP growth due to improvements in energy efficiency and changing structure of economy.
- These changes will also impact Chinese energy mix.
- As the share of coal is expected to decline following stricter environmental policies and structural changes in economy, China focuses on higher use of gas, nuclear and renewable energy.

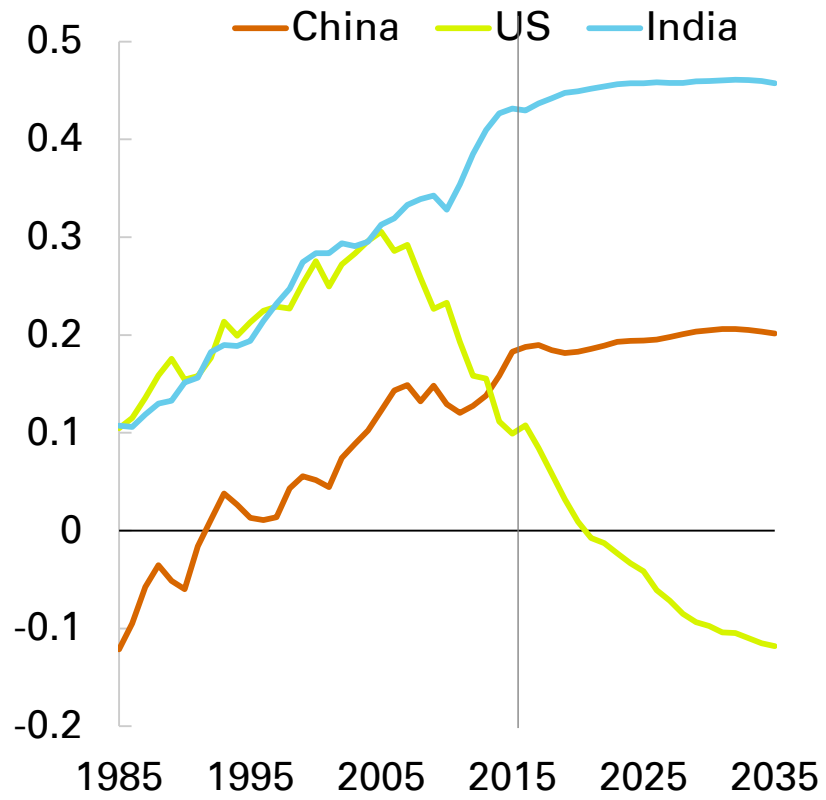
# Back-up slides



# Energy imbalance

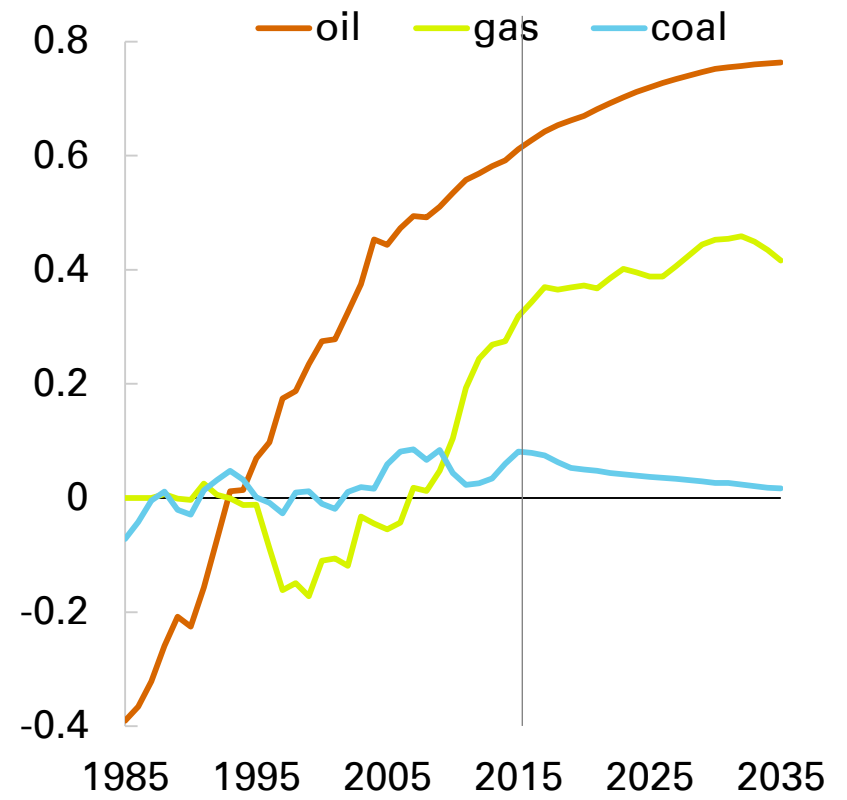
## Net energy imports

Share of total energy consumption



## Net imports of fuels in China

Share of fuel consumption





# Carbon emissions: China

