China's Energy Outlook 2030

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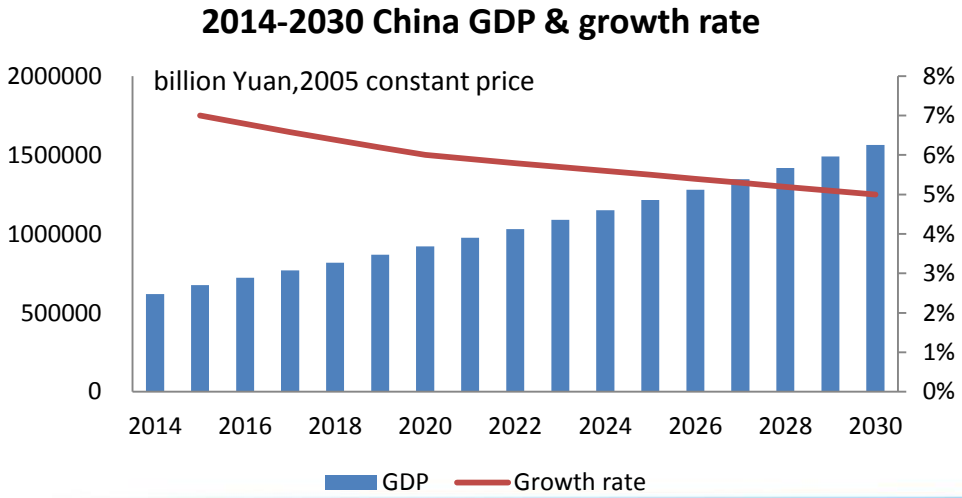
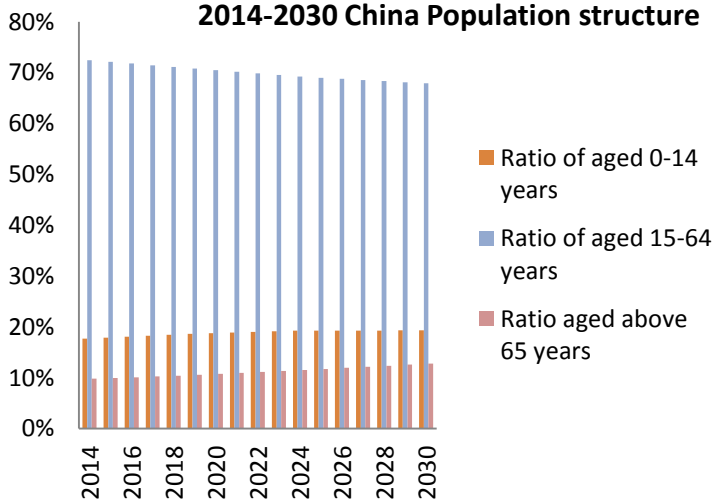
the most likely scenario

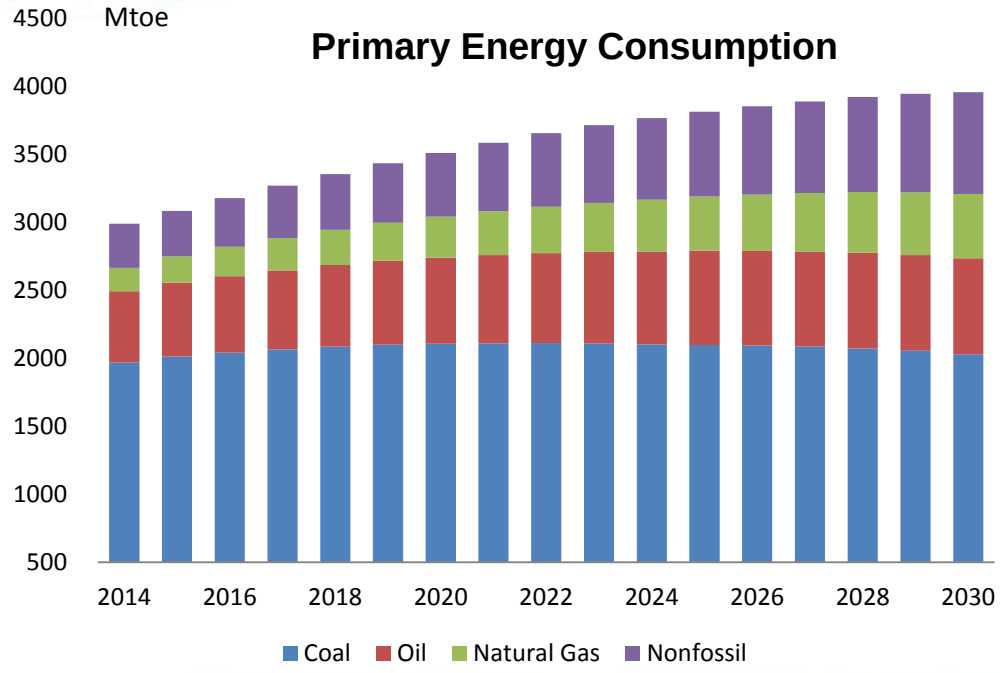
- Chinese GDP growth is expected to slow from 7% today to 5% by 2030.
- Chinese economic growth becomes less dependent on heavy industry and becomes more dependent on service industry.
- By 2030, the China's population is projected to reach 1.5 billion, and will Close to the peak around 2030. The aging of the population has gradually become a problem in China's society.

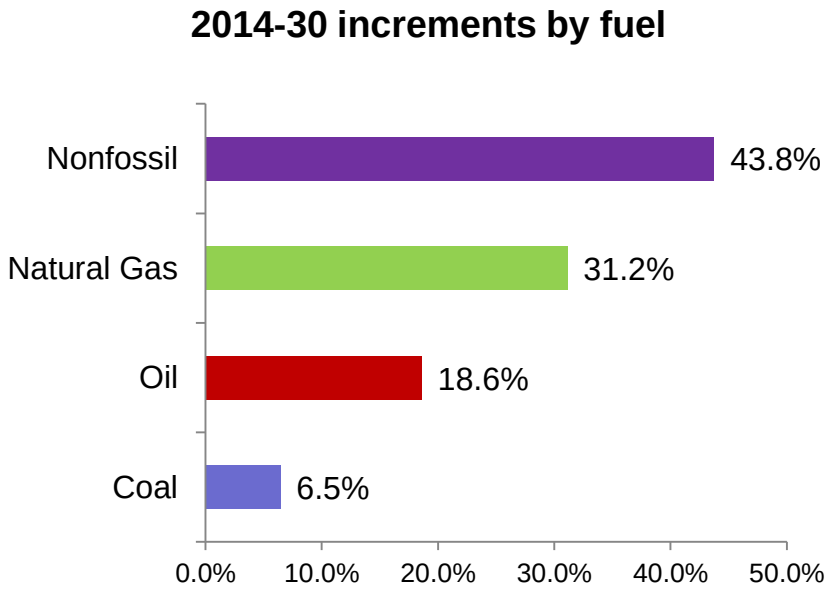




Primary energy consumption growth slows

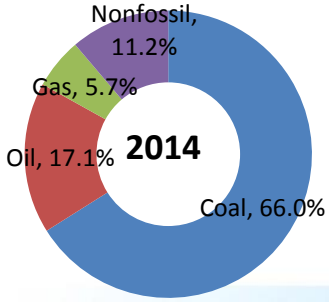
- Primary energy consumption is expected to increases by 1.8% between 2014 and 2030, by contrast, increased by 8.3% between 2000 and 2014.
- Clean energy are key drivers of total energy consumption，non-fossil and natural gas represents 44% and 31% of the increment, respectively.
- Coal is still the single dominant energy.

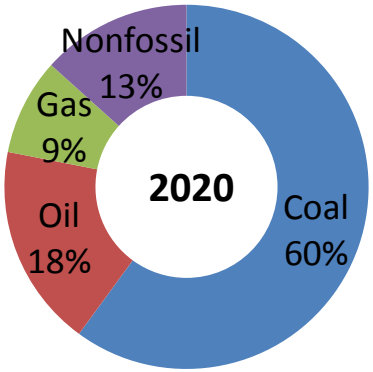


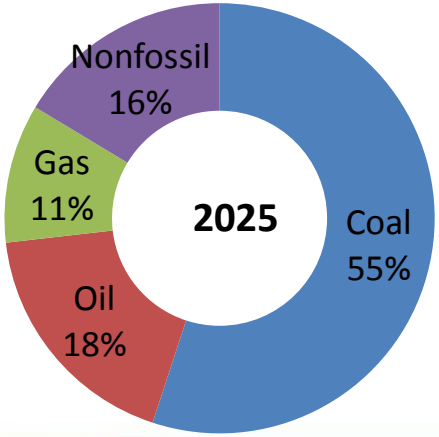


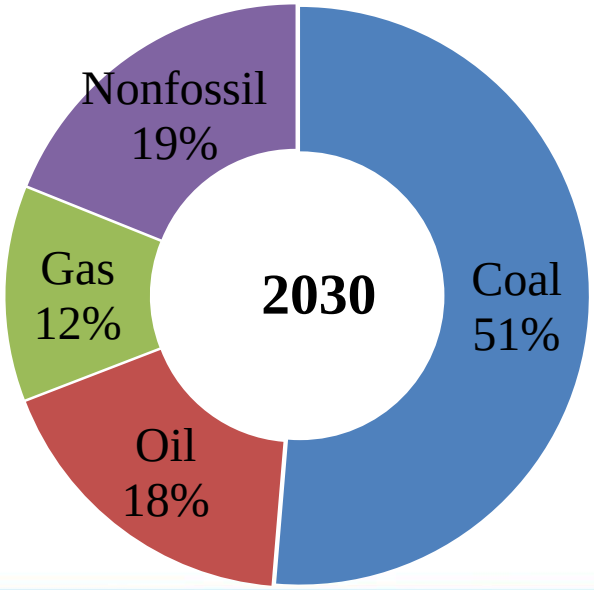
Energy structure obviously optimized

- The proportion of oil remain the same.
- The share of coal is expected to decline obviously from 66% today to 60% by 2020, and 51% by 2030.
- Non-fossil fuels gain share rapidly, from around 11% today to 19% by 2030.
- Natural gas also gain share rapidly, from 5.7% today to 12% by 2030.
- Fossil fuels in aggregate remain the dominant form of energy by 2030 with a share of 81% of the total consumption, down from 89% in 2014.





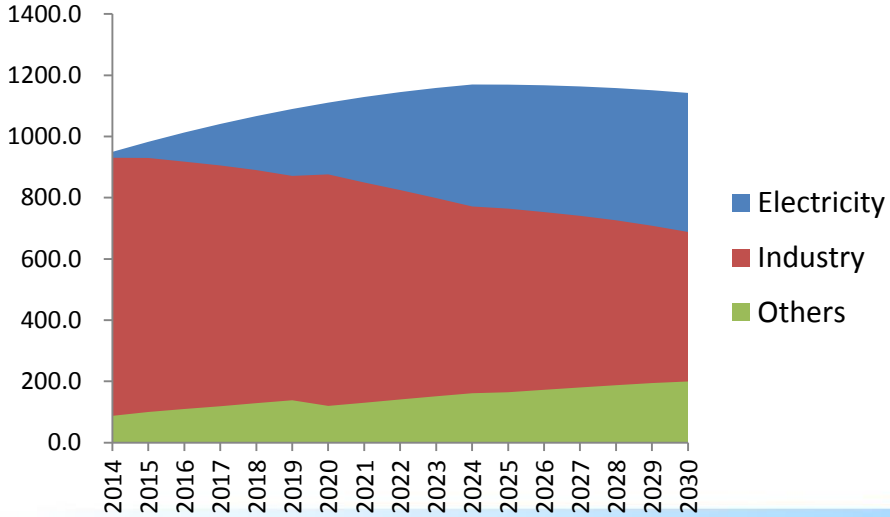




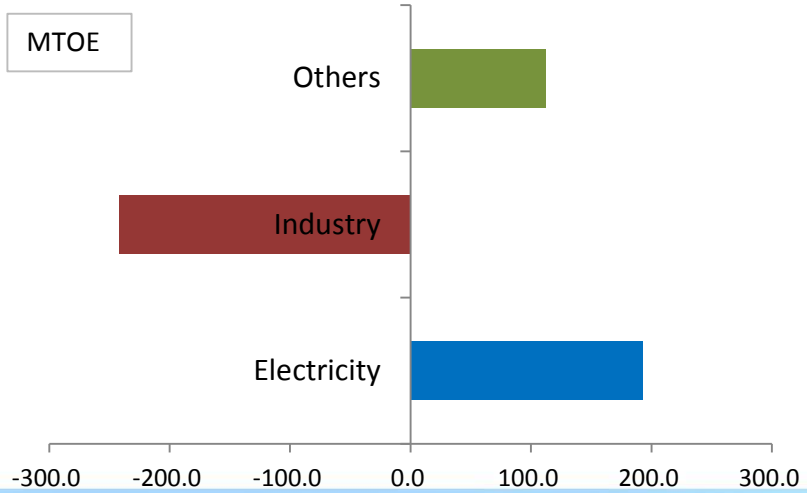
The slowest growing fuel is coal

- Coal consumption is expected to slow from 7% since 2000 to 1.1% by 2020 or 0.2% by 2030 . This reflects the slowing of coal-based industrialization in china.
- Coal consumption is expected to peak by 2020's.
- The coal which use for electricity is key drivers of total coal consumption， but the coal which use for industry decrease too much.
- There is a certain uncertainty about the coal-to-chemical project

Coal Consumption by sector

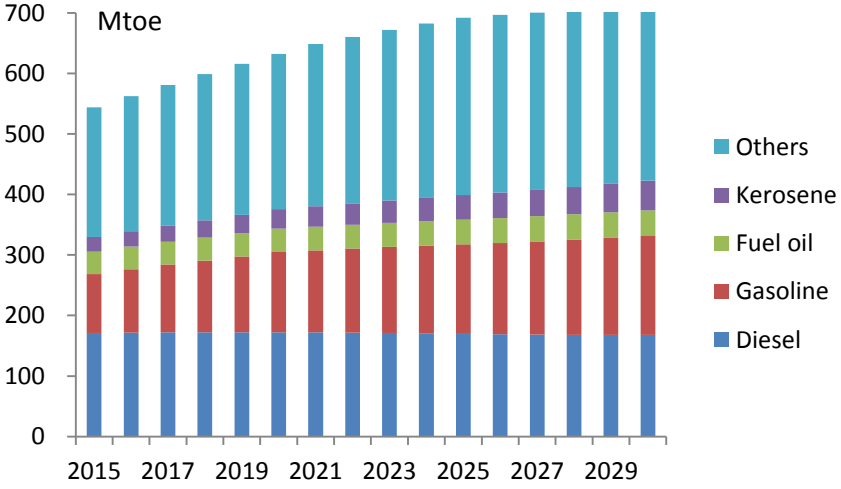


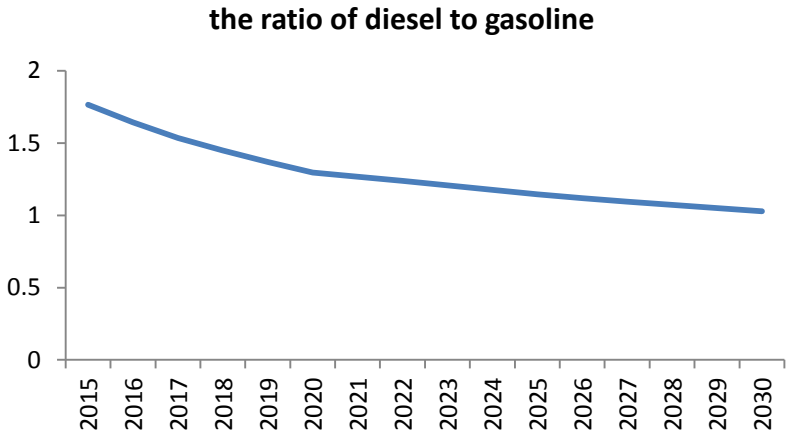
2014-30 increments by sector



Oil consumption growth is likely to ease

- Oil consumption is expected to slow from 6.5% since 2000 to 3% by 2020 and 1% between 2020 and 2030 .
- Diesel consumption growth will be significantly slower than the recent trend
- Gasoline consumption is expected to increases by 3% between 2014 and 2020， and 1% between 2020 and 2030.
- Transport continues to play a important role in oil consumption.

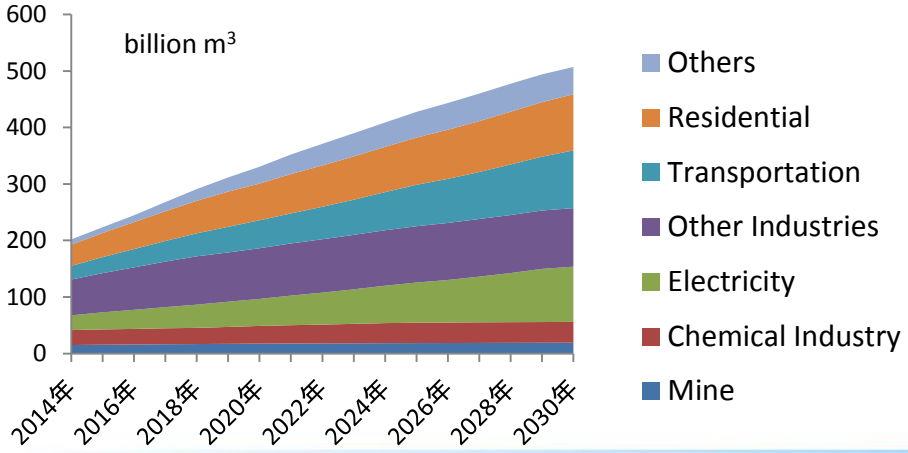




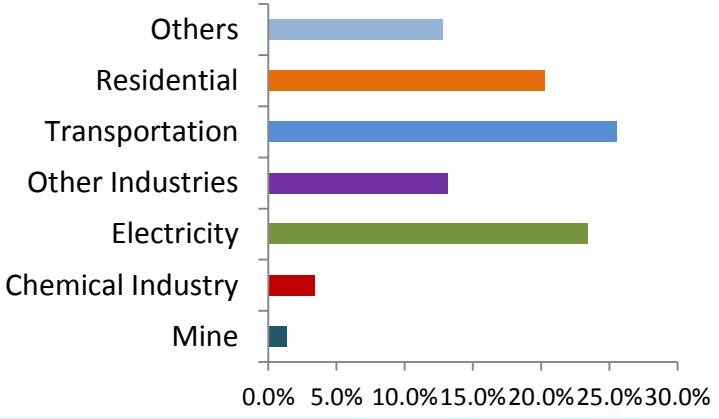
Natural Gas has the fastest growth rate among fossil fuels

- Natural gas consumption is expected to increases by 9% between 2014 and 2020，and 4% between 2020 and 2030.
- By sector, transport , electricity , residential and other industries accounts for about 20% of total gas demand, respectively.
- Transportation contributes 25.6% of the total demand increment to 2030,electricity contributes 23.4% of the total demand increment to 2030,residential contributes 25.6% of the total demand increment to 2030.

Natural Gas Consumption by sector

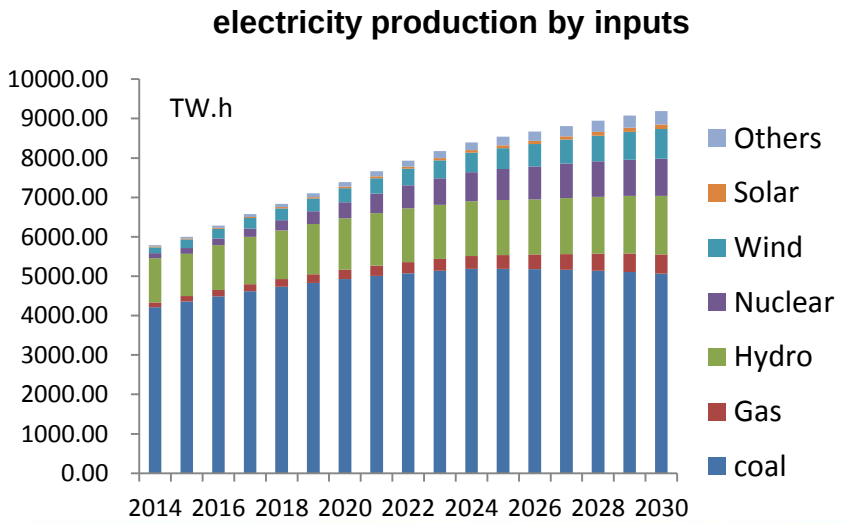


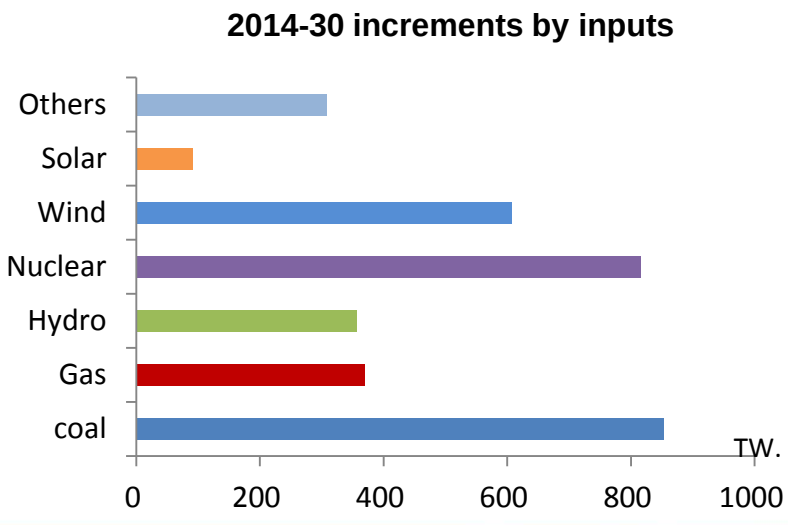
2014-30 increments by sector



China Electricity Production

- Power generation is expected to increases by 4% between 2014 and 2020， and 2% between 2020 and 2030.
- Coal power contributes 25% of the total increment to 2030,nuclear contributes 24% of the total increment to 2030,wind power contributes 18% of the total increment to 2030,and gas power contributes 11% of the total increment to 2030.





- The share of coal power is expected to decline obviously from 72% today to 66% by 2020, and 55% by 2030.
- The share of hydroelectricity is expected to decline from 19% today to 16% by 2030.
- The share of nuclear is expected to rise from 2% today to 10% by 2030.
- The share of renewables is expected to rise from 3% today to 13% by 2030.
- Power generation is expected to account for an ever-increasing share of primary energy, the share rises from 44% today to 52% by 2030.