China Economic Transition Needs Electricity Greenization

——2050 China Energy Transition Outlook

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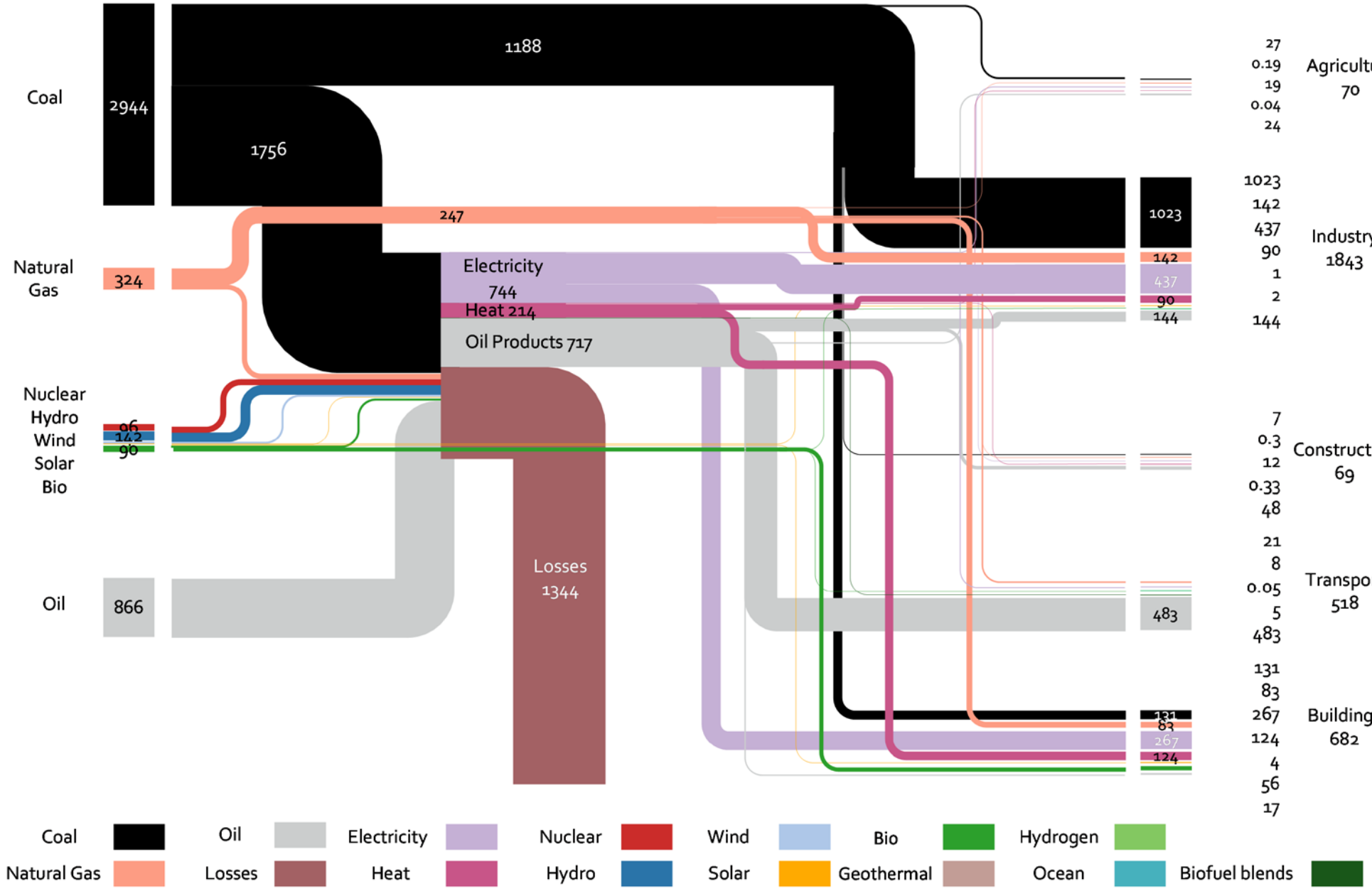
2017 Energy flow

Dominated by fossil fuels

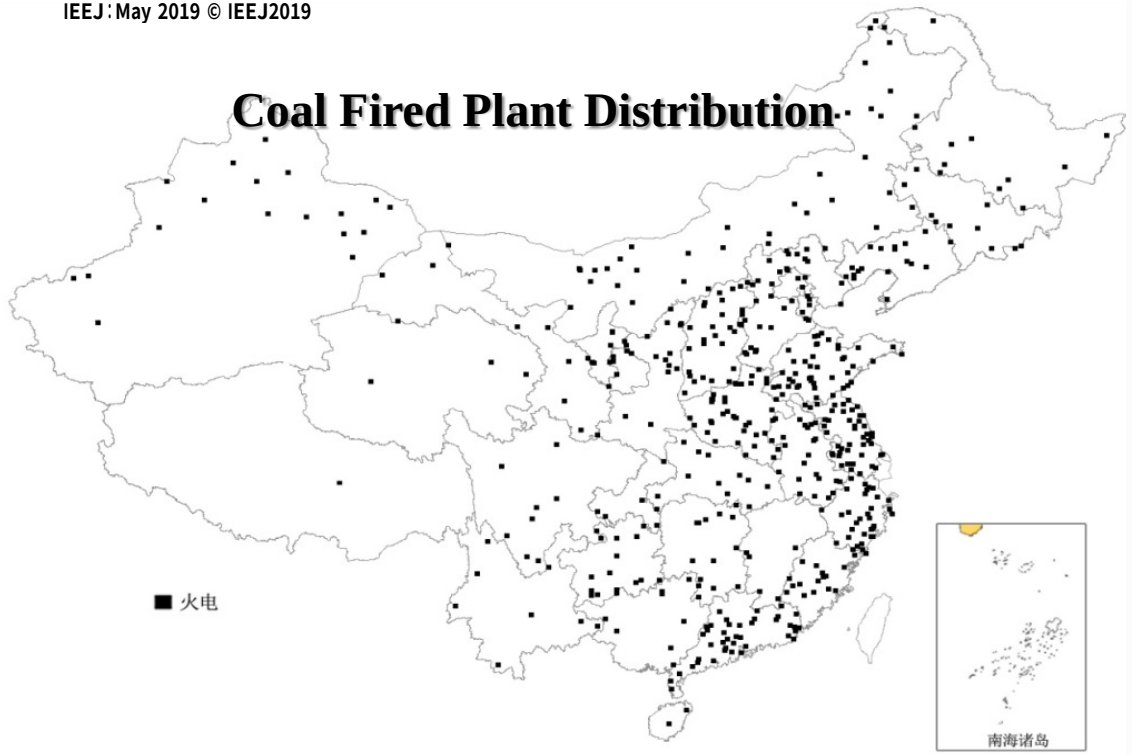
Coal consumption in power sector and industry sector

Big losses in energy transformation, especially in the power sector

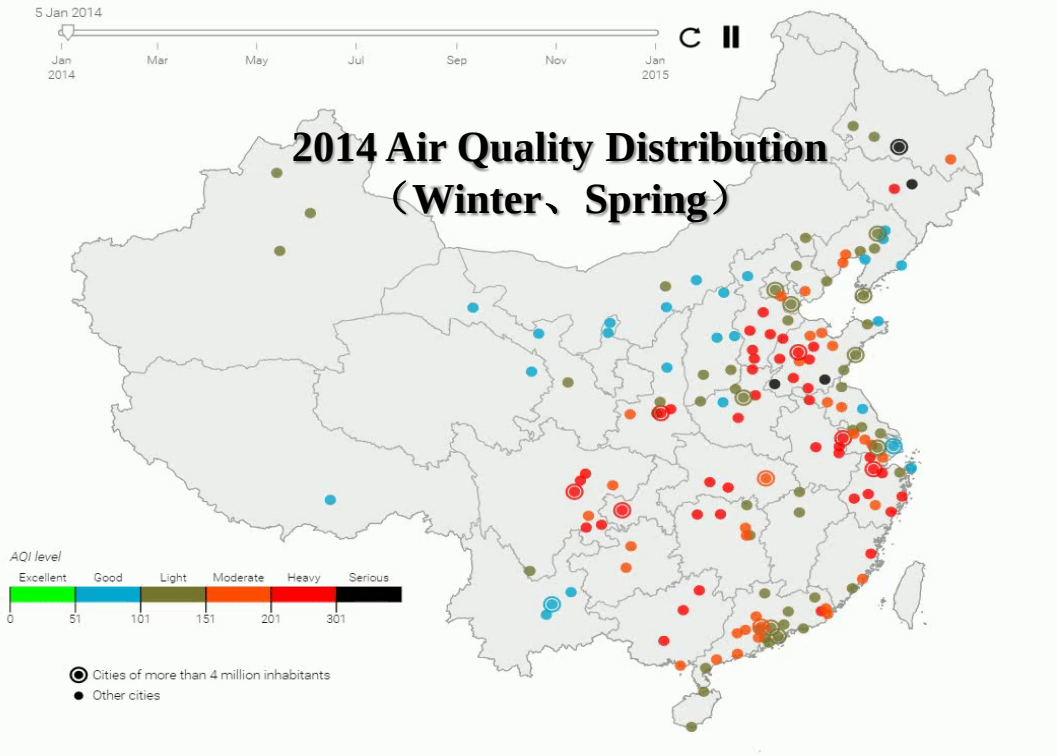
Oil dominates in the transport sector



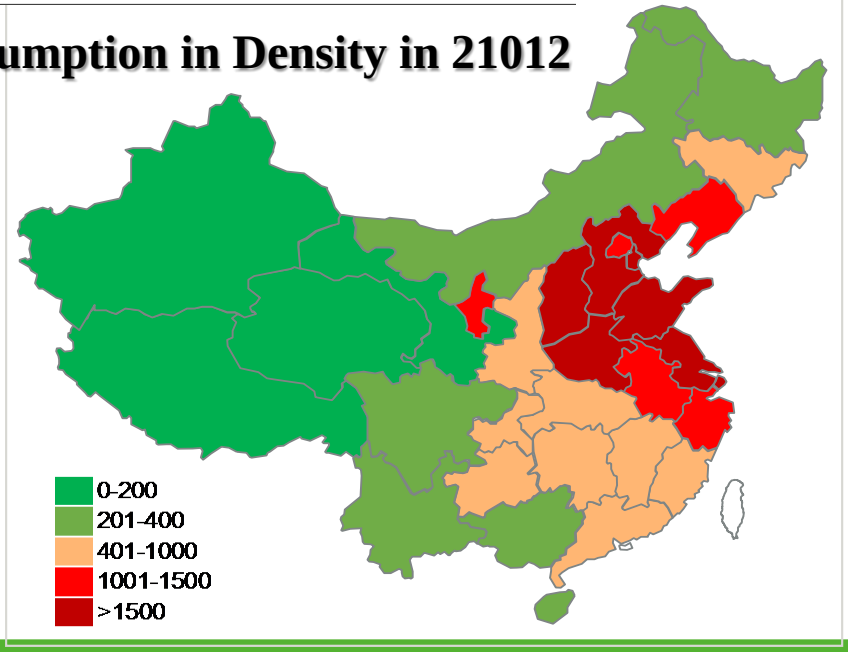
Coal Fired Plant Distribution

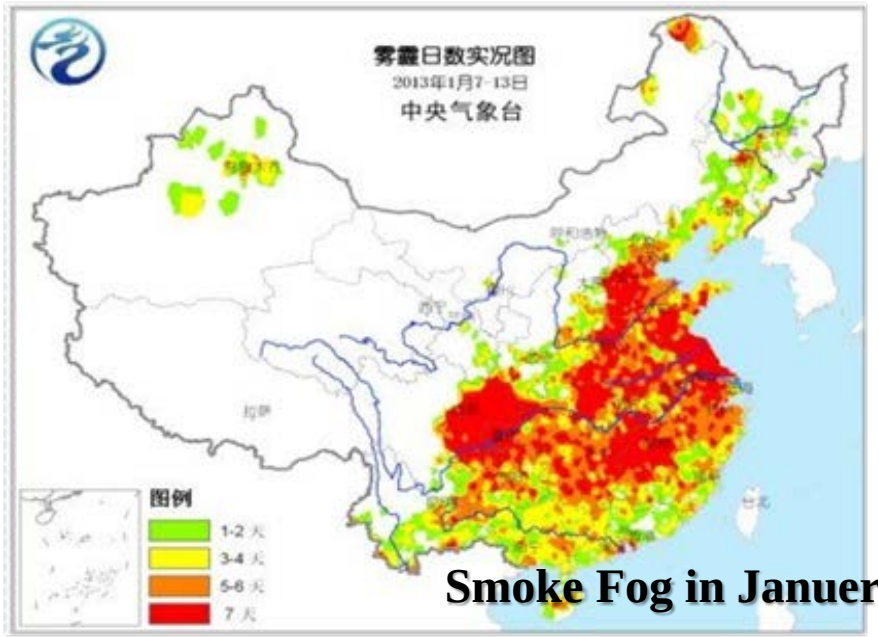


2014 Air Quality Distribution （Winter、Spring）



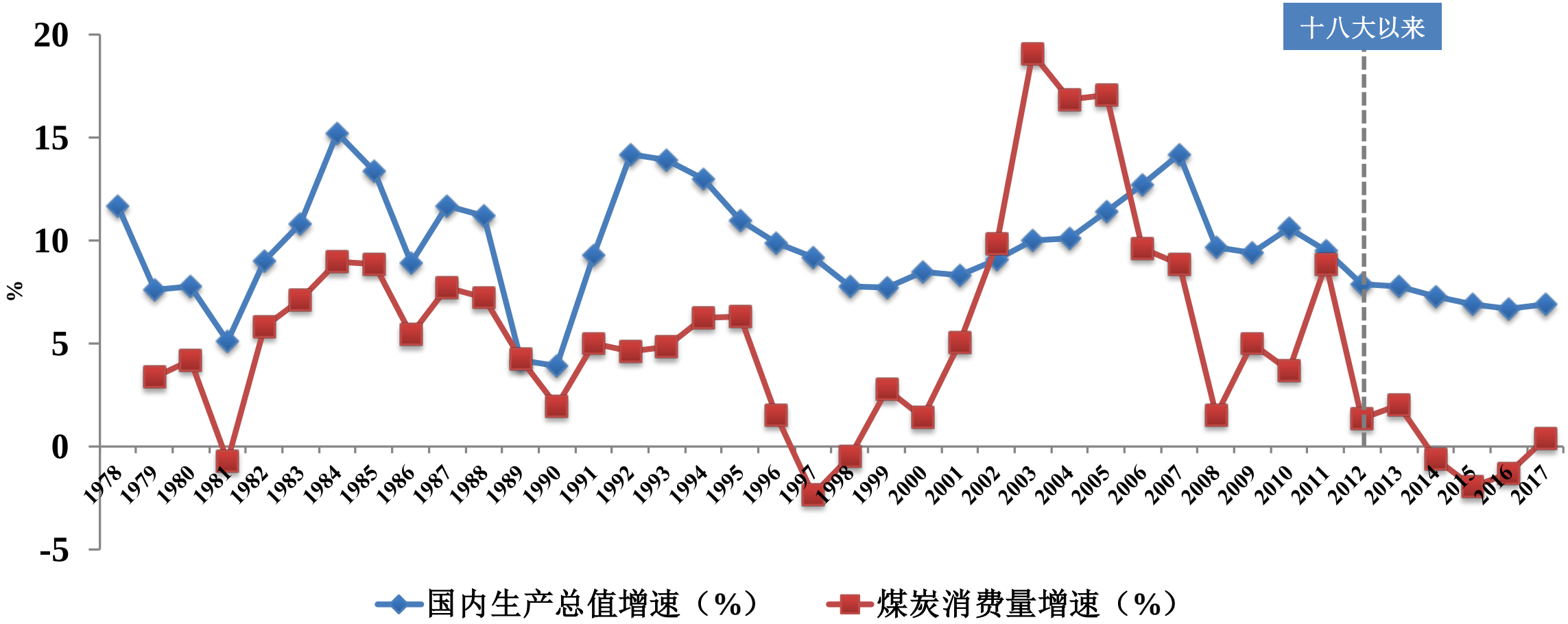
Coal Cosumption in Density in 21012



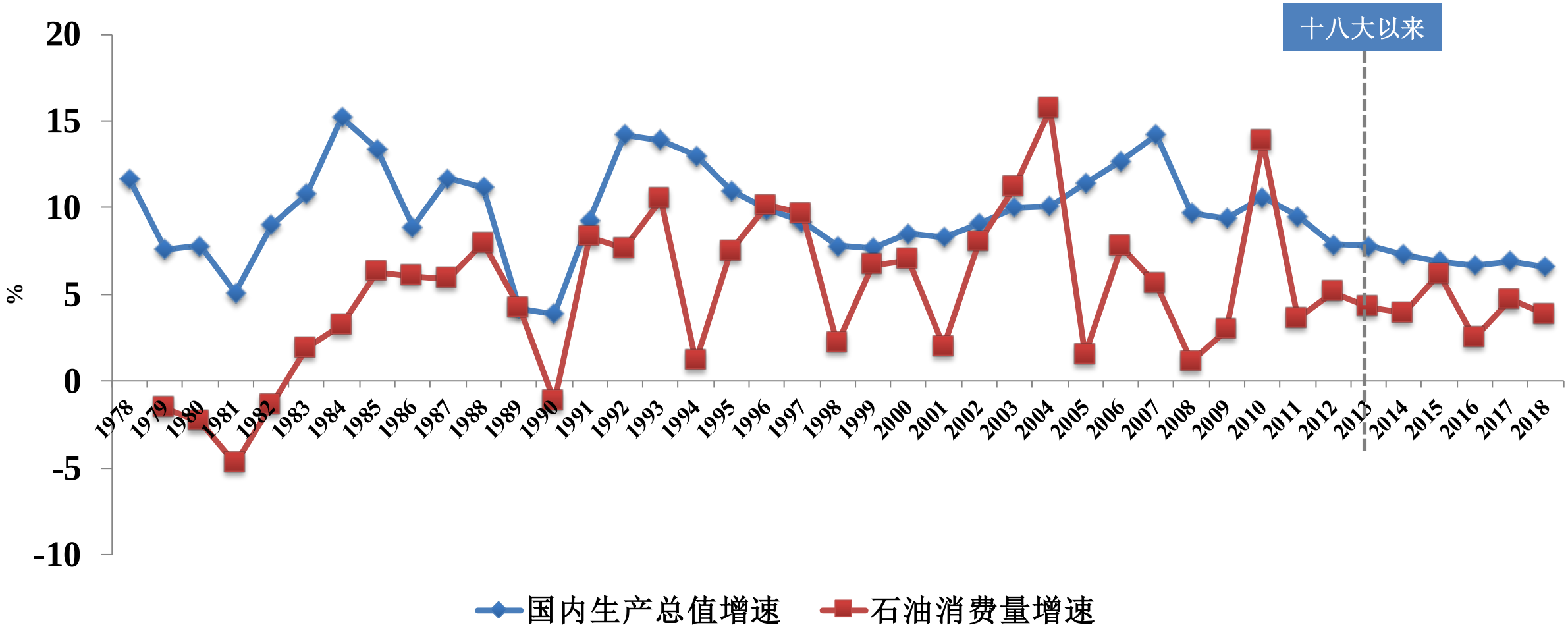


Smoke Fog in Januery of 2013

Coal and GDP



Oil and GDP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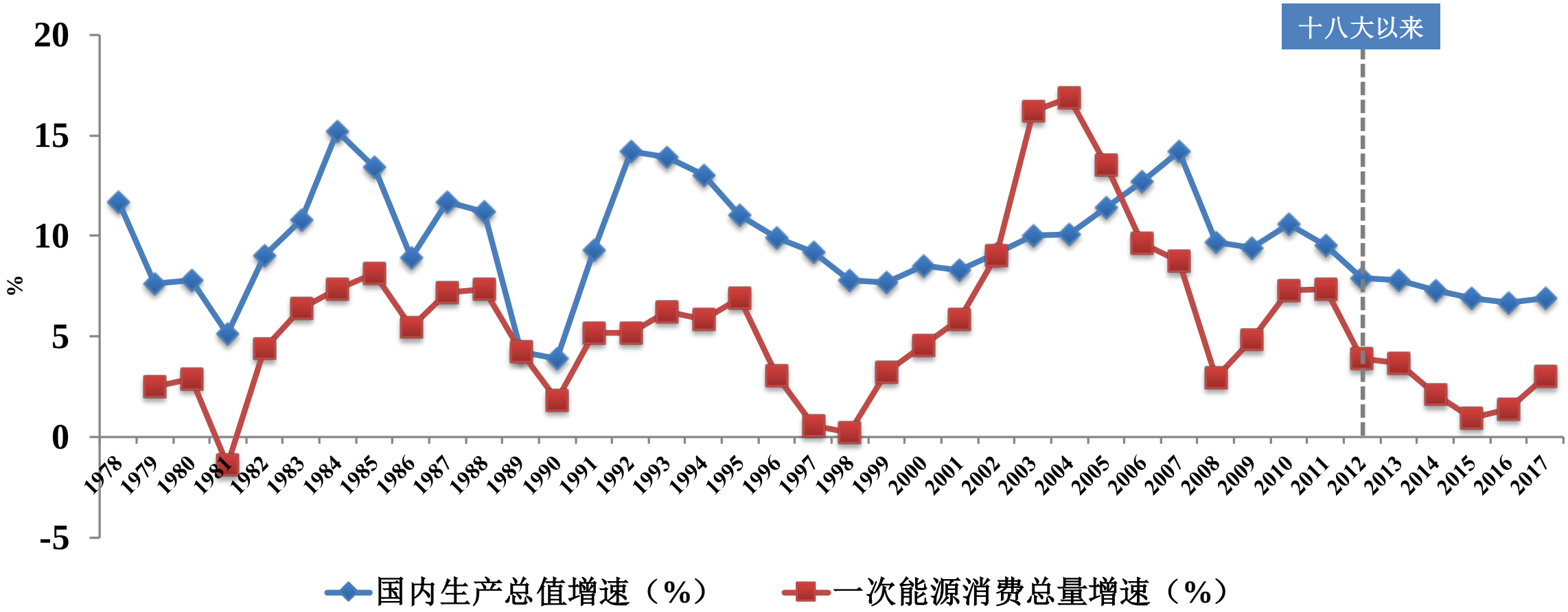
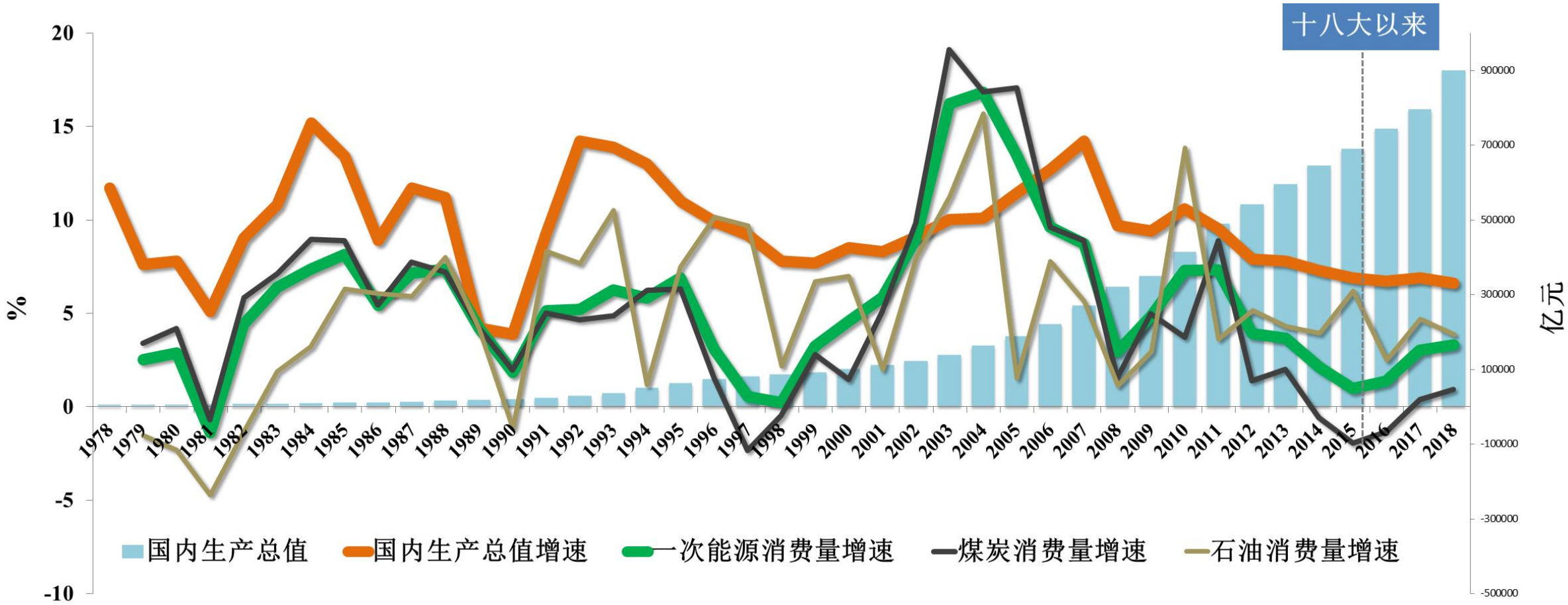
国内生产总值增速
石油消费量增速

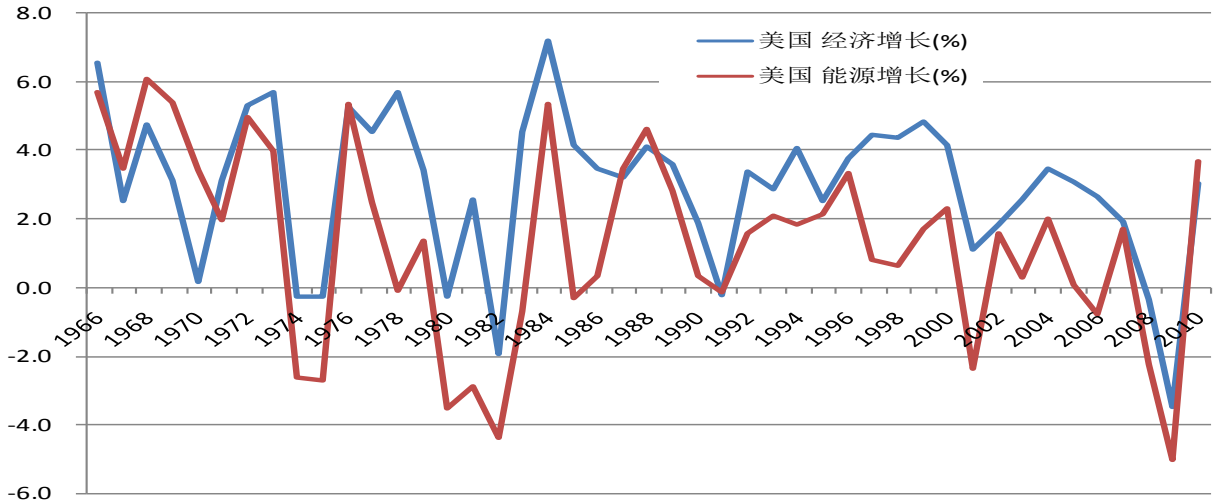
Primary Energy and GDP



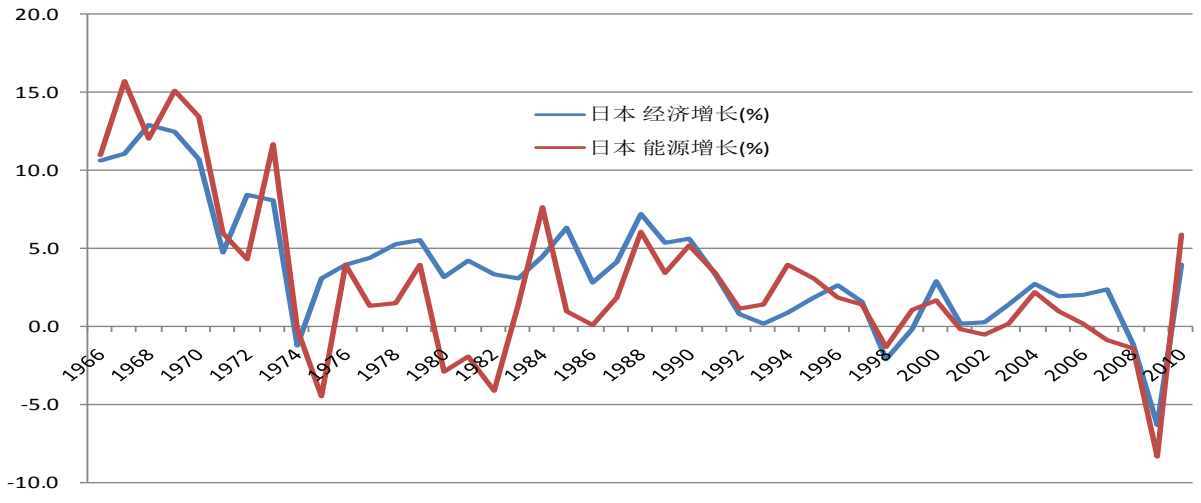
Coal, Oil, Primary Energy and GDP



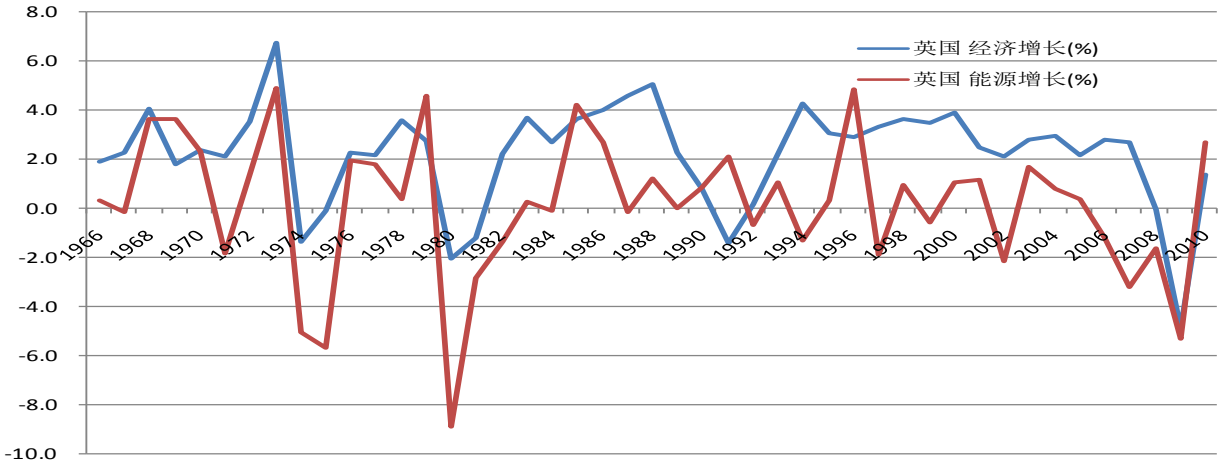
USA, Japan, UK, Germany's Energy and GDP



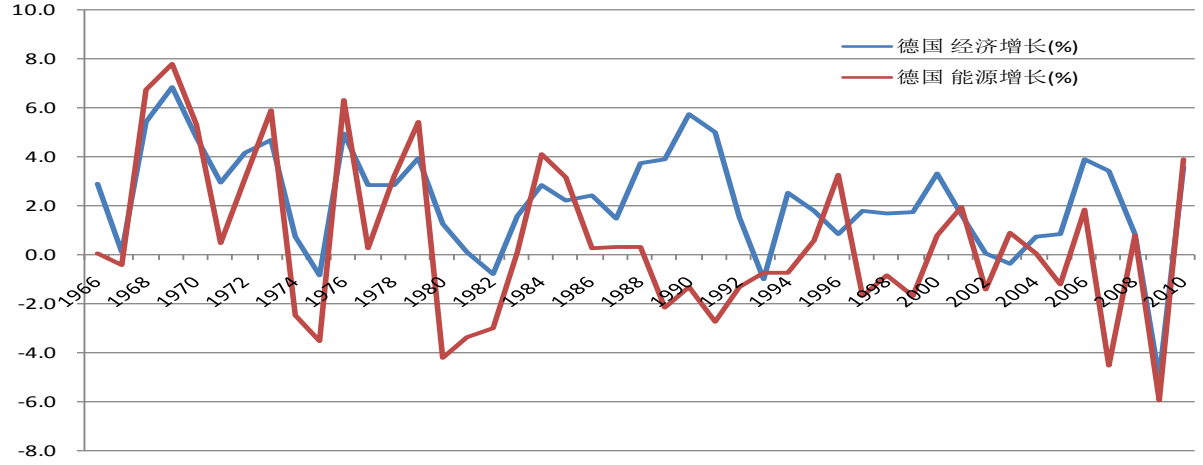
（a）USA



（b）Japan

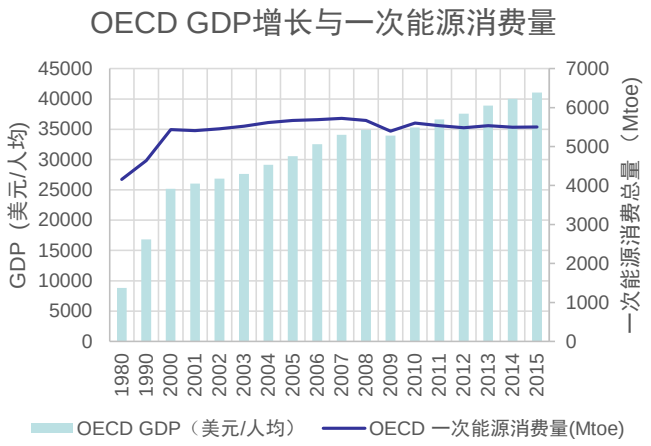


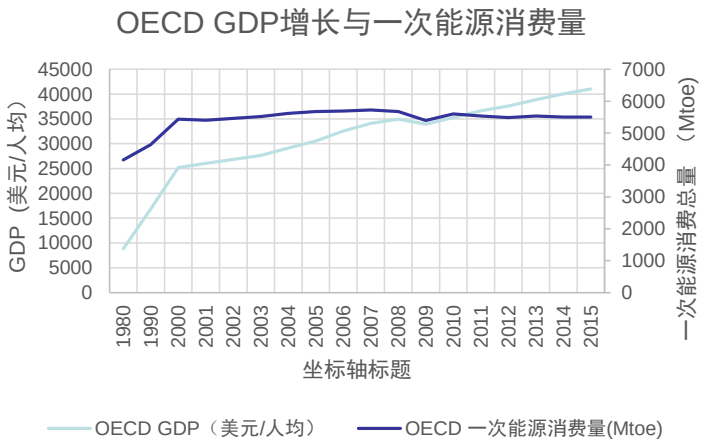
（c）UK

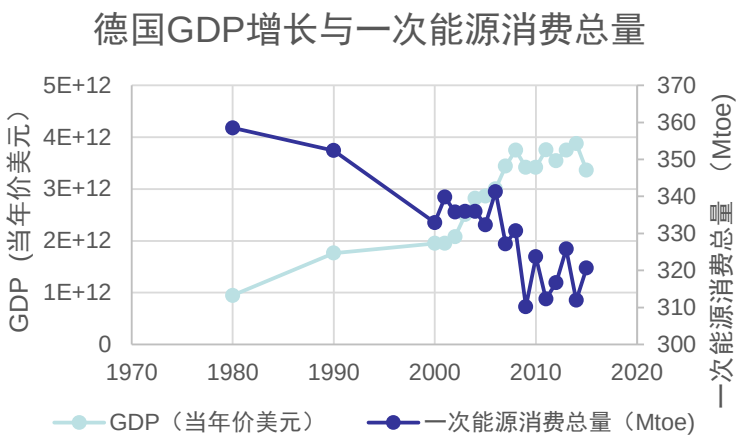


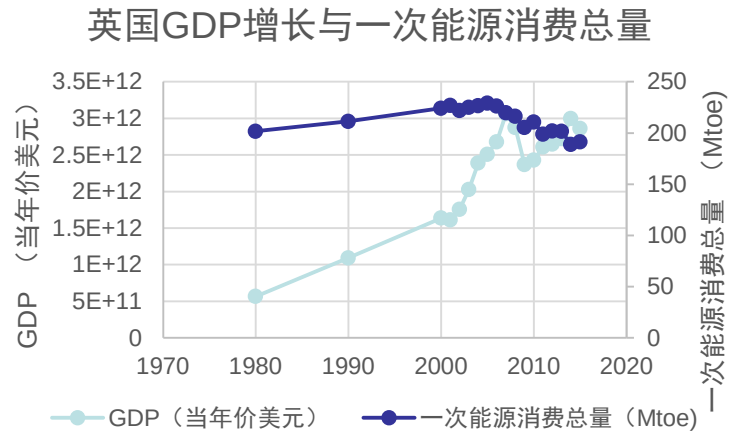
（d）Germany

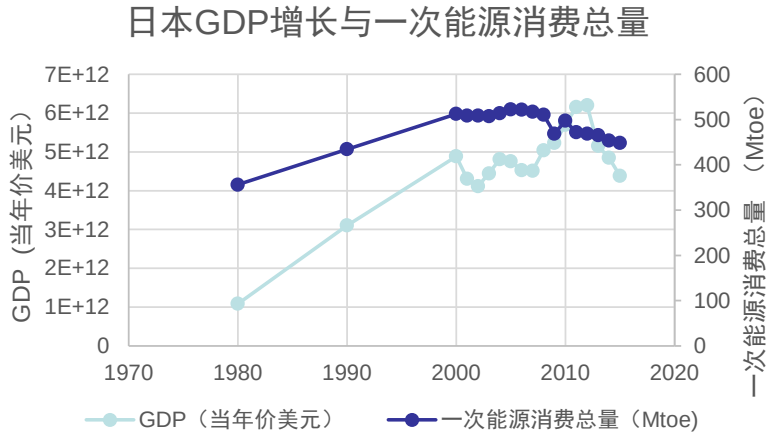
GDP and Energy Trends for OECD Countries

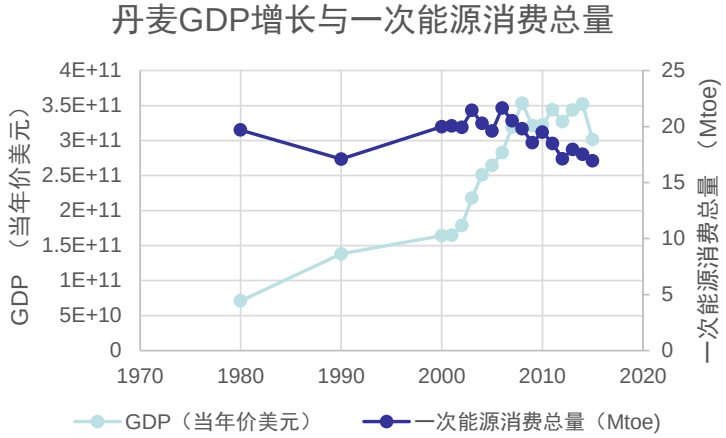






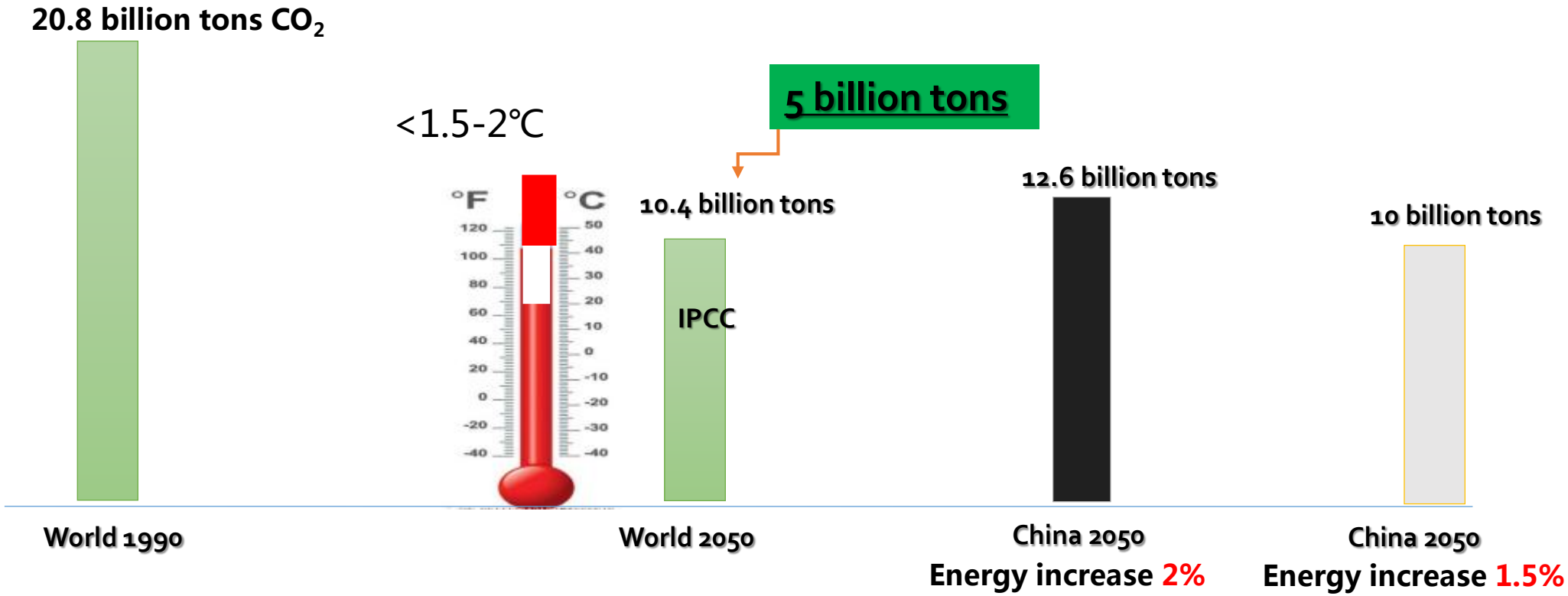






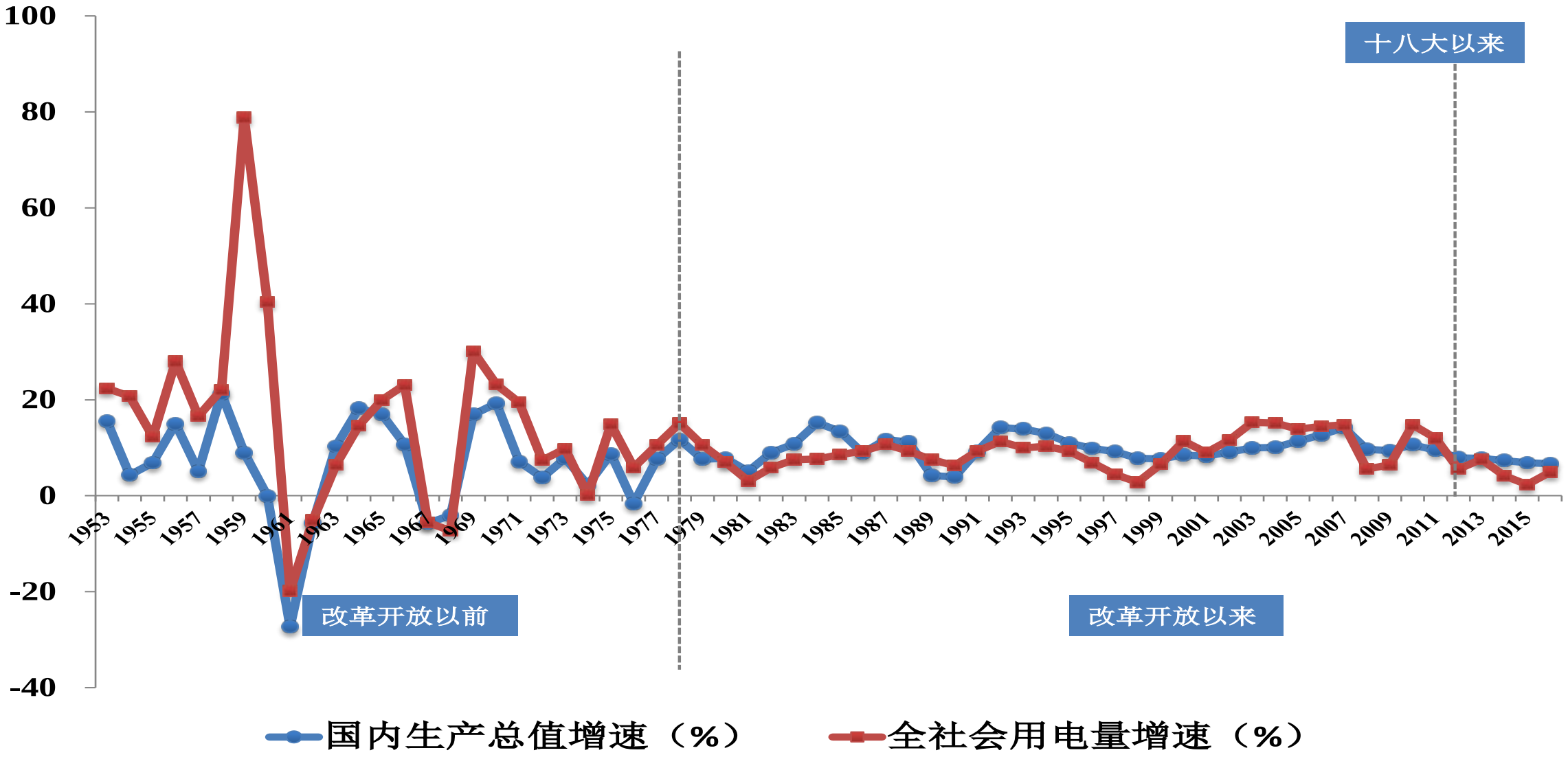
The energy transition should start with controlling and reducing coal consumption: 100 million tons less each year and within 1 billion tons by 2050.

Base year: 2011; Energy Mix: three one third.
2050: 6500Mtce (1.5%), 7500Mtce (2%)

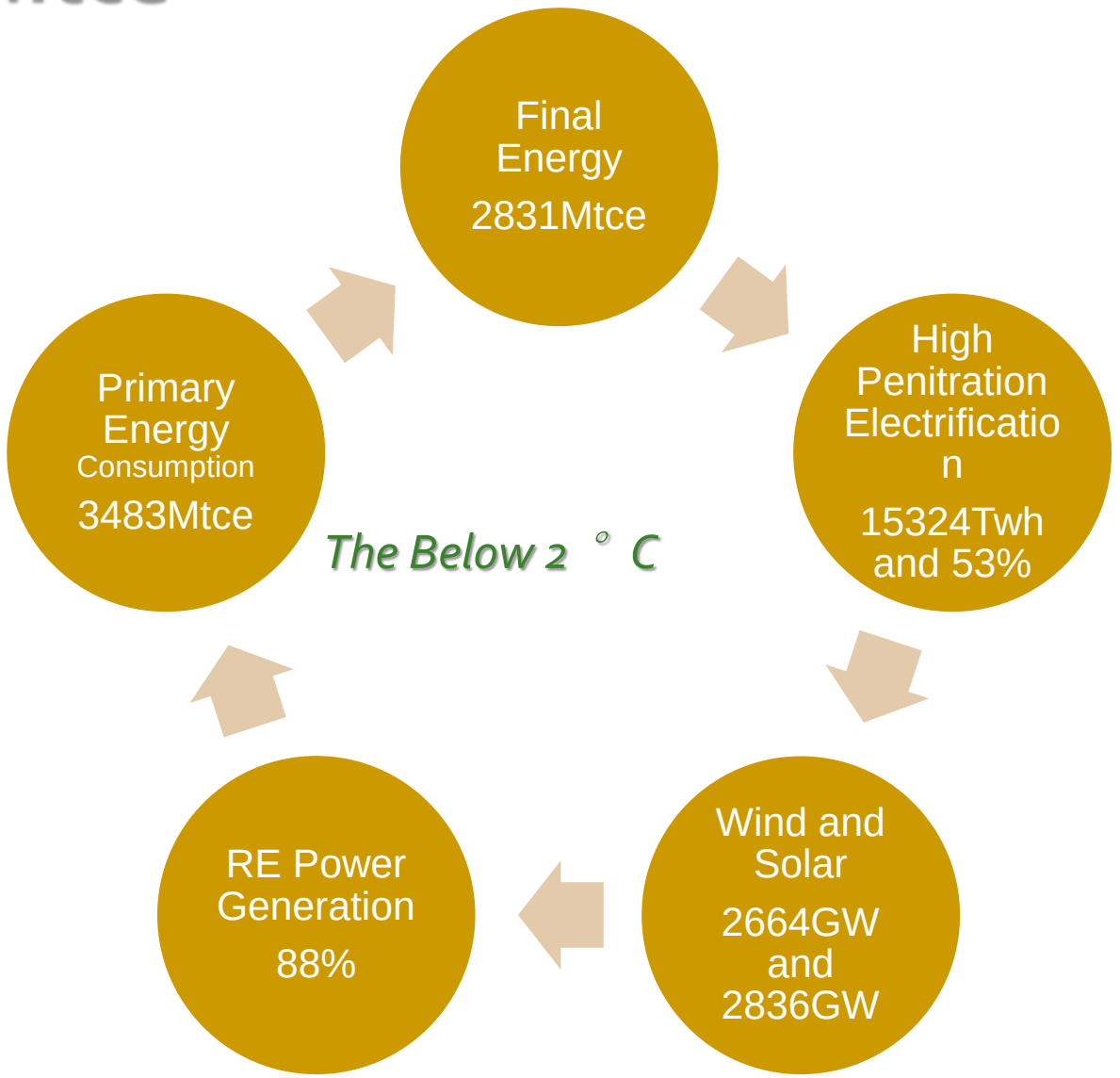


How to reduce primary energy consumption from 6500-7500Mtce to 3500-3800Mtce in 2050???

Electricity to GDP

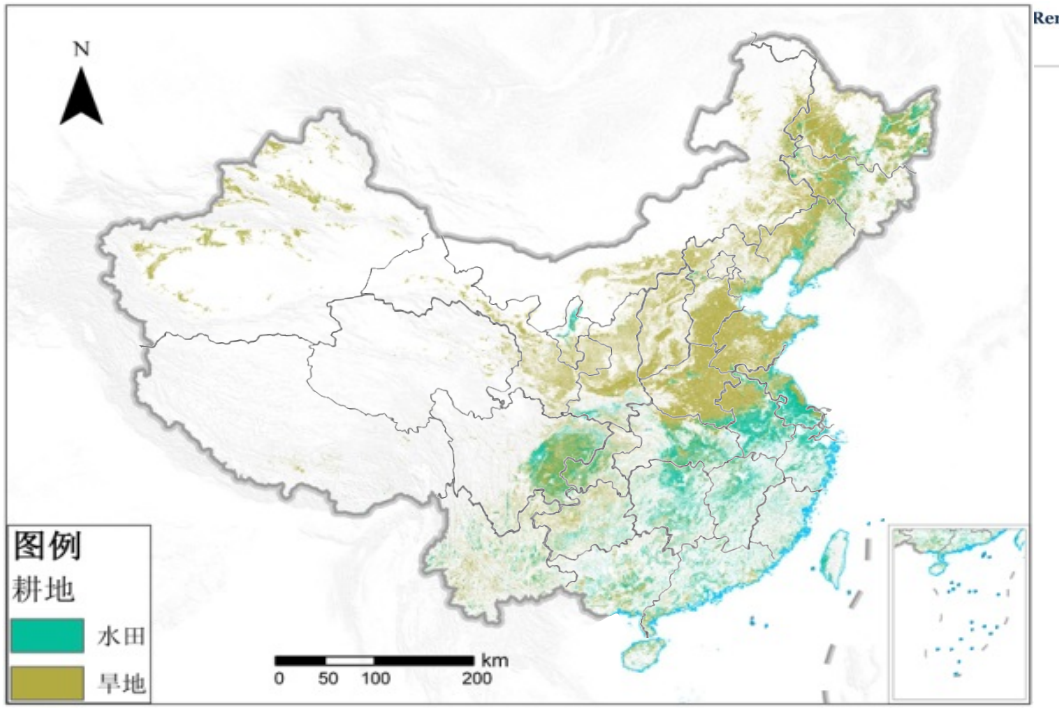


The Below 2 ° C: 3483Mtce

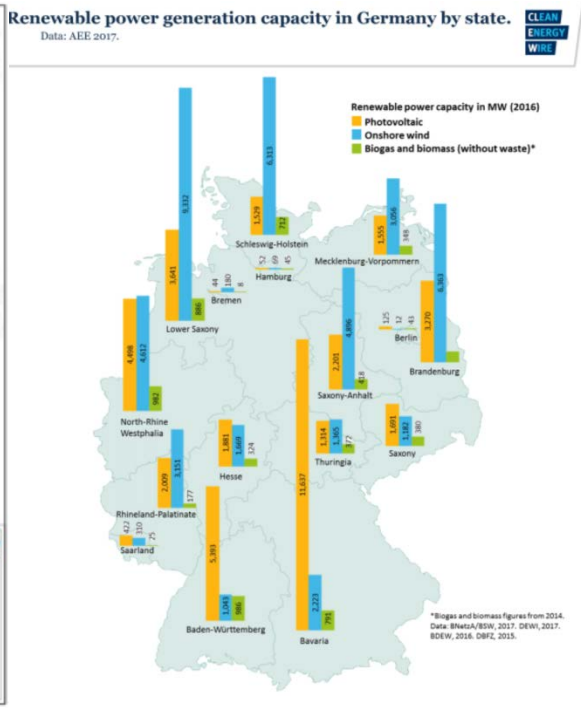


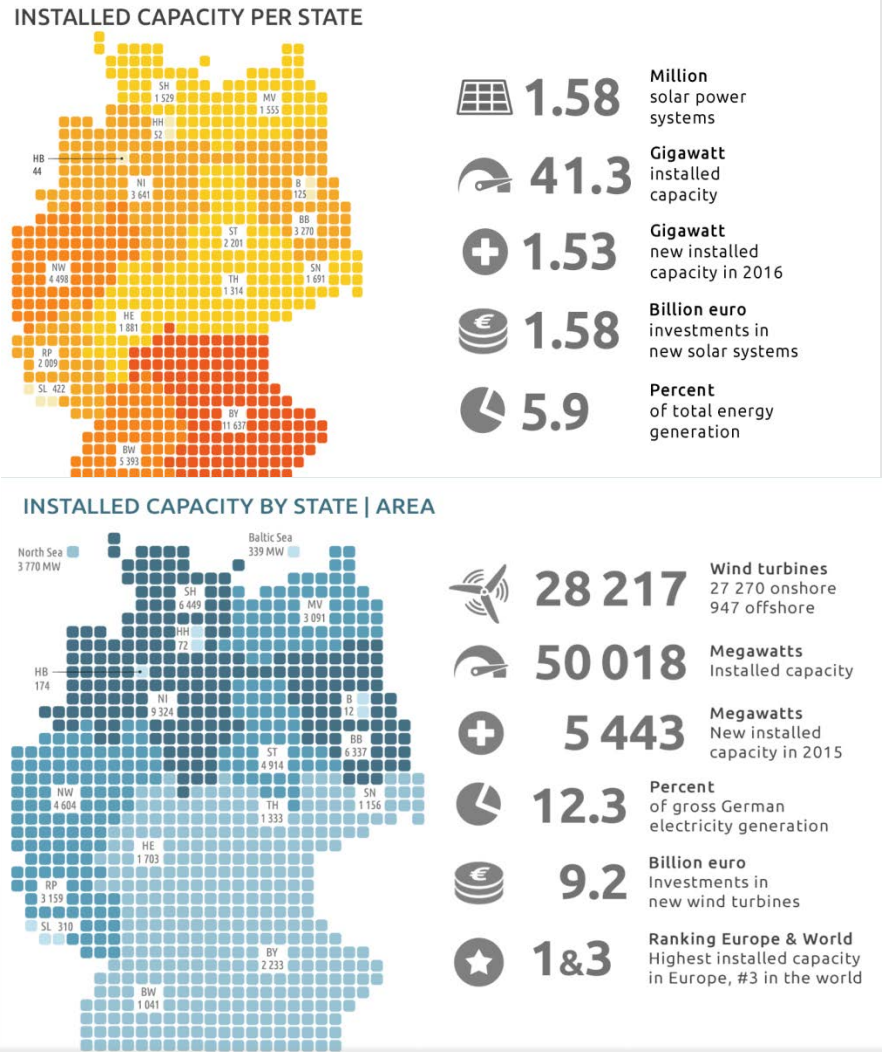
The Stated Policy: 3724Mtce

Find a Place to Install a 2MW Wind Turbine，The Potential Will Be 20TW in 1800 Million mu



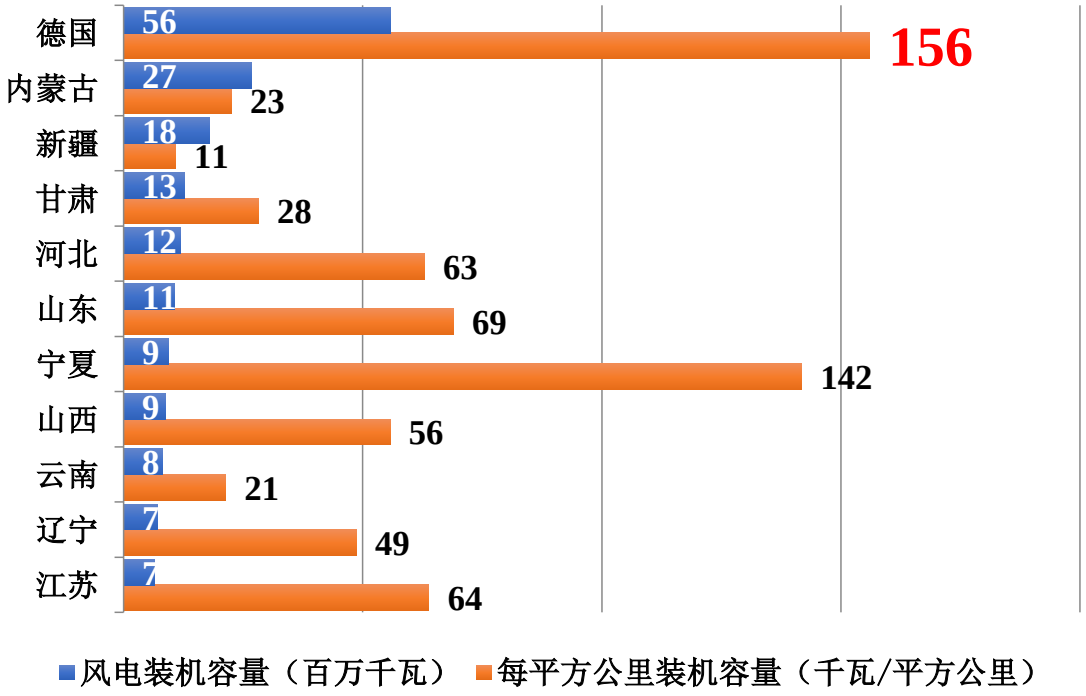
China Agriculture Land Distribution

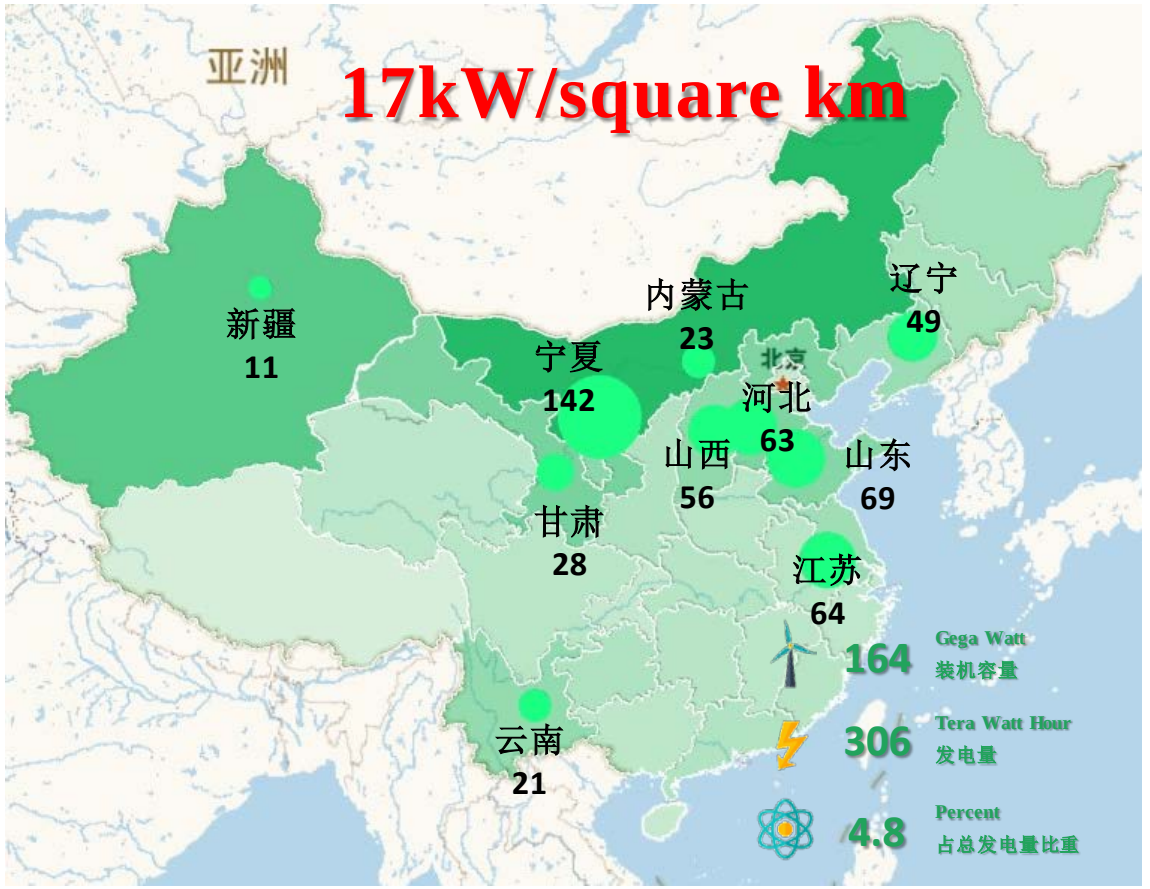




Germany Case

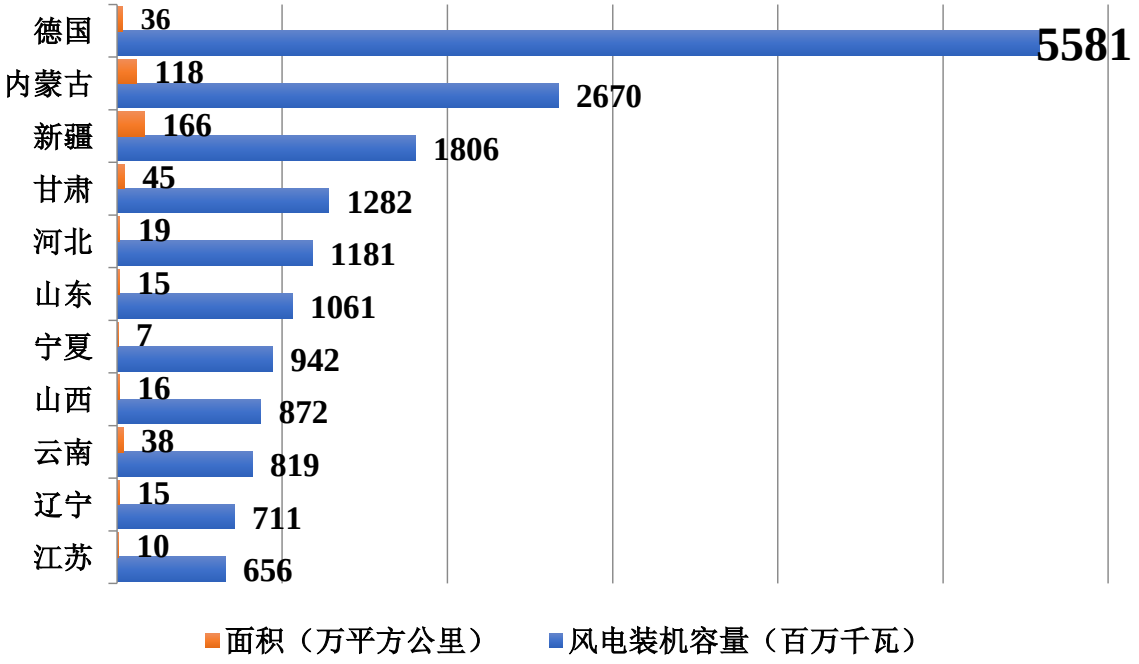
Wind Power For China and Germany

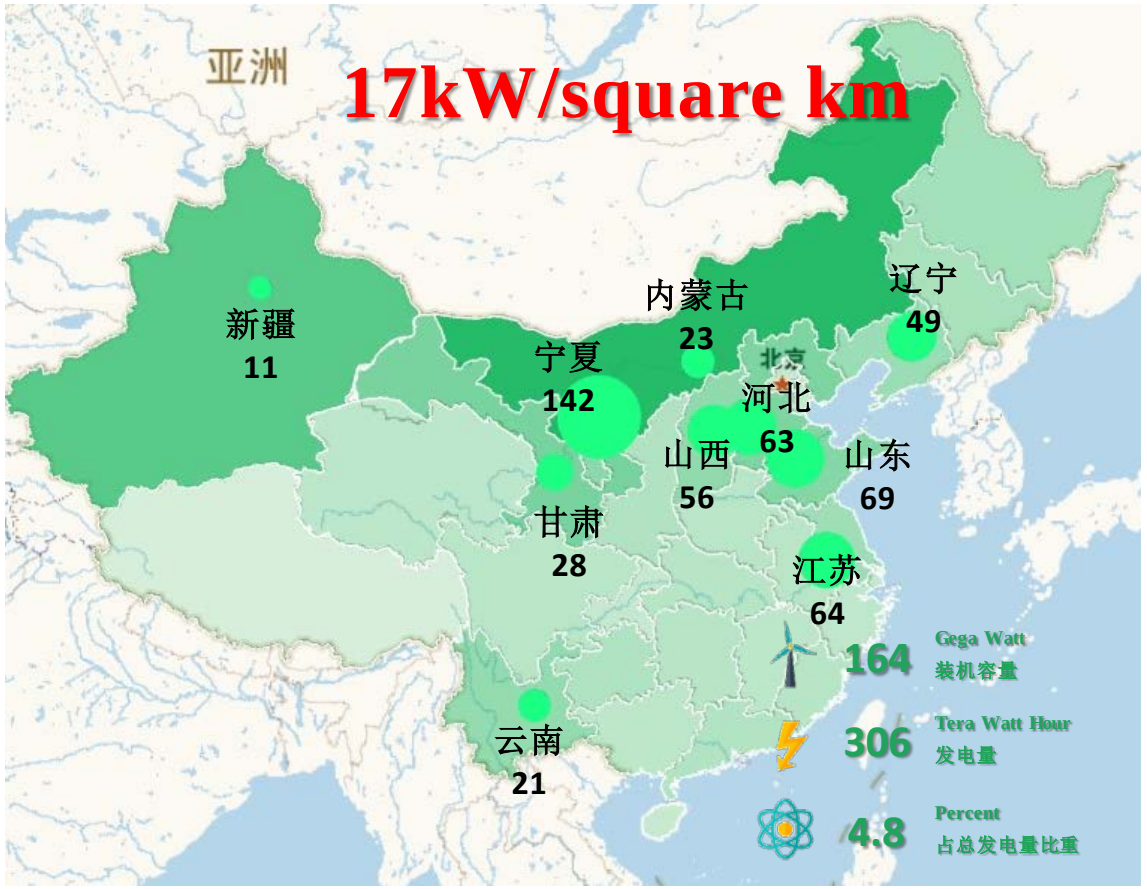




In Germany, per square km installed 156kW by the end of 2017, and in China, per square km installed17kW, which was the Germany's 11%.

Wind Power For China and Germany (Total Installed Capacity)





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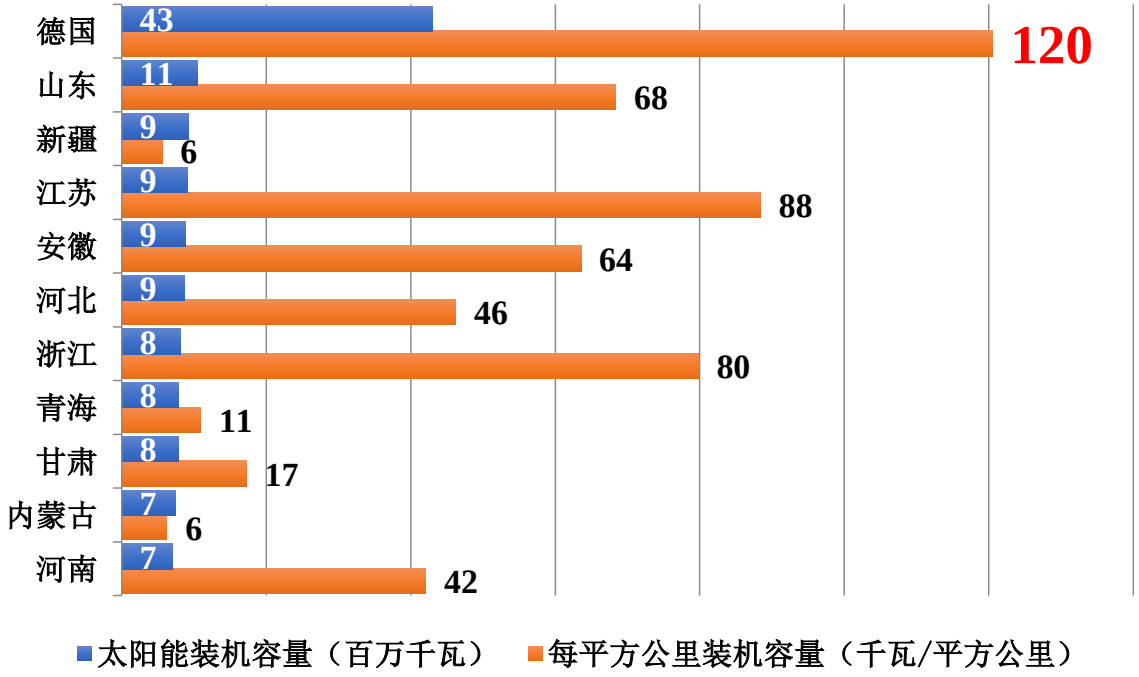
Solar PV For China and Germany



In Germany, per square km installed 120kW by the end of 2017, and in China, per square km installed14kW, which was the Germany's 11.7%.

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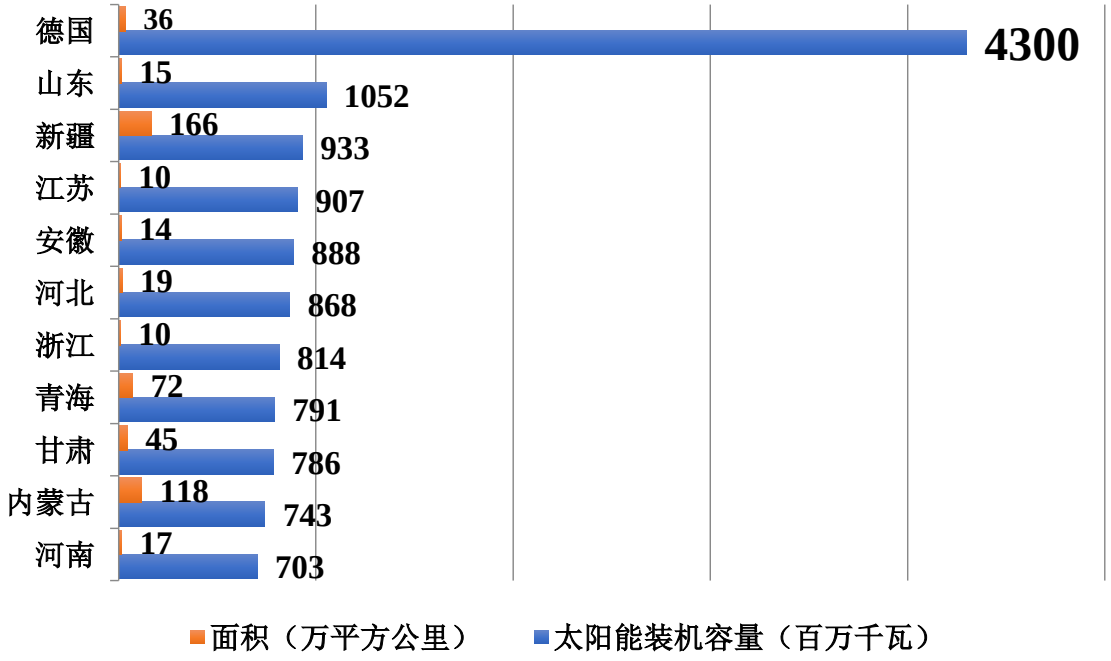

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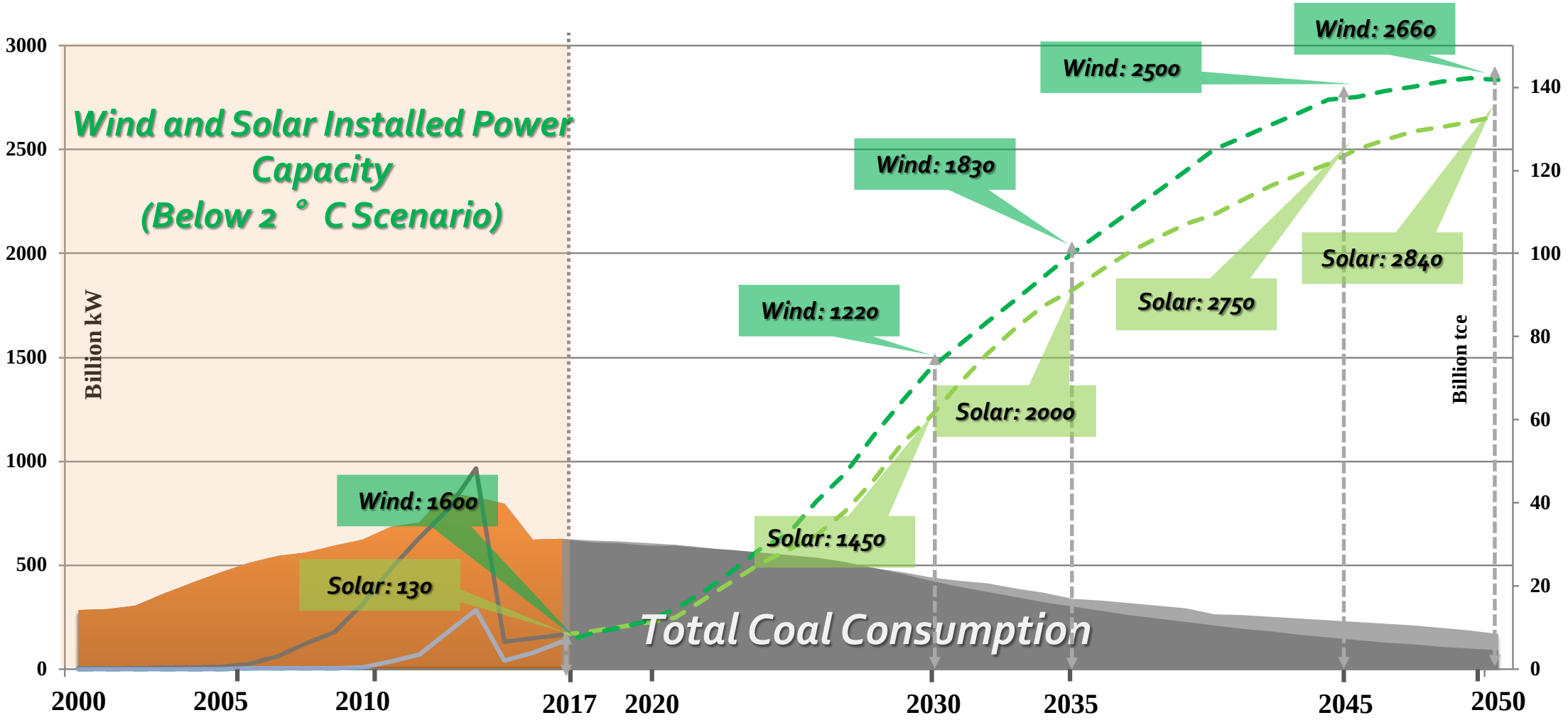
Power System Revolution: Wind power and solar power as the backbone



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