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*Side-event*  
**Chinese Energy Sector's Role in  
Low Carbon Transition**

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**The IEA works around the world to support an accelerated clean energy transition that is**

**enabled by real-world SOLUTIONS**

**supported by ANALYSIS**

**and built on DATA**

# China as an IEA Association country & beyond



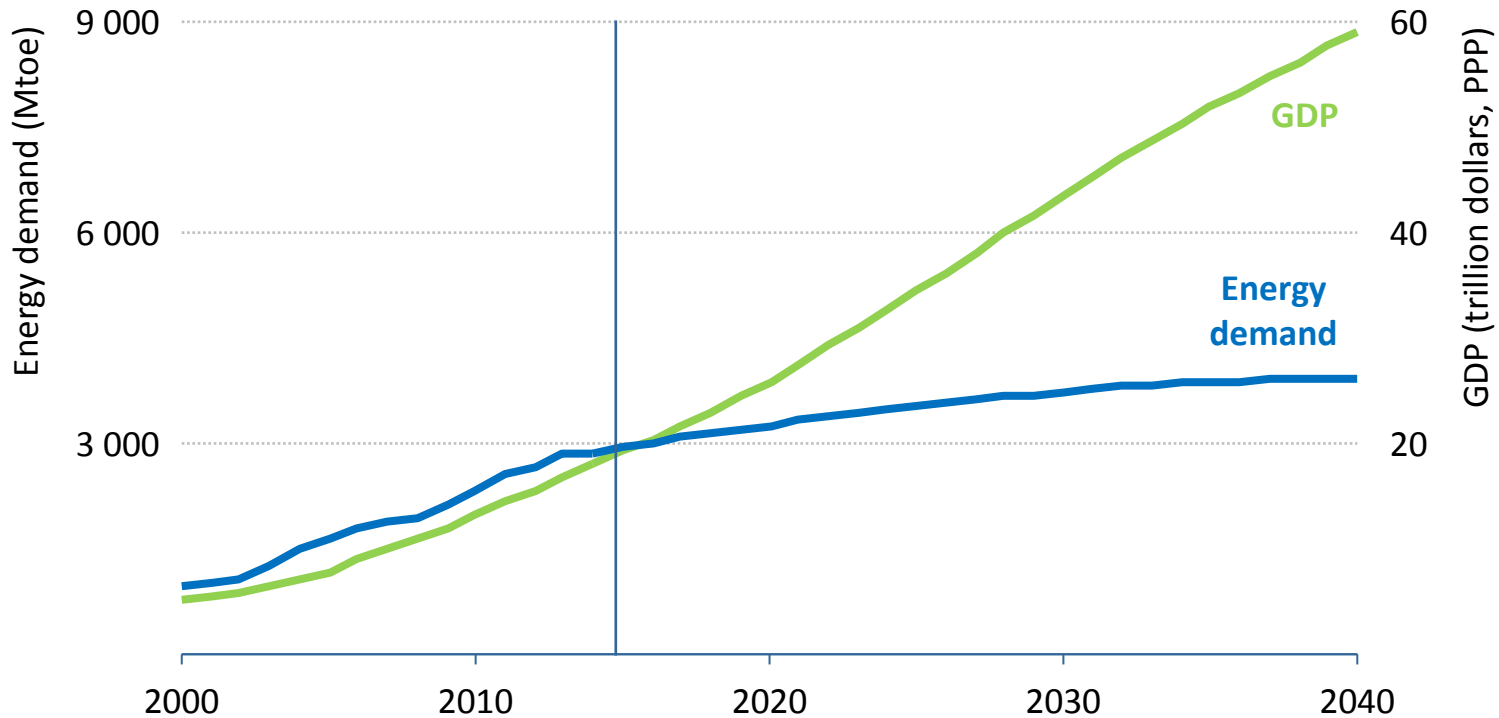
- **Sept 2015: “opening doors” to emerging economies**
- **Nov 2015: China became IEA’s Association country**
  - *Chinese Energy Minister attended the IEA Ministerial for the first time*
  - *IEA Ministers endorsed steps to modernise the IEA*
  - *Association countries: China, Indonesia and Thailand*
- **March 2016: 20<sup>th</sup> anniversary of IEA-China relations**
- **More engagements and analysis related to China**
  - *Three-year work programme*
  - *More personnel exchanges (NEA high-official and secondees), workshops (energy data), visits and meetings*
  - *Publications: WEO Air quality report (2016), A report on Chinese companies in the sub-Saharan power sector (2016), WEO special report on China (2017)*

# China's Energy Transition

- Coal has fueled China's massive economic growth especially since the beginning of this century
- But more attention has been shifted to clean energy within the context of climate change and air pollution
- China is now moving to a less energy-intensive model for growth
- Renewables and energy efficiency are now playing a key role in China

# A new chapter in China's growth story

## Energy demand in China

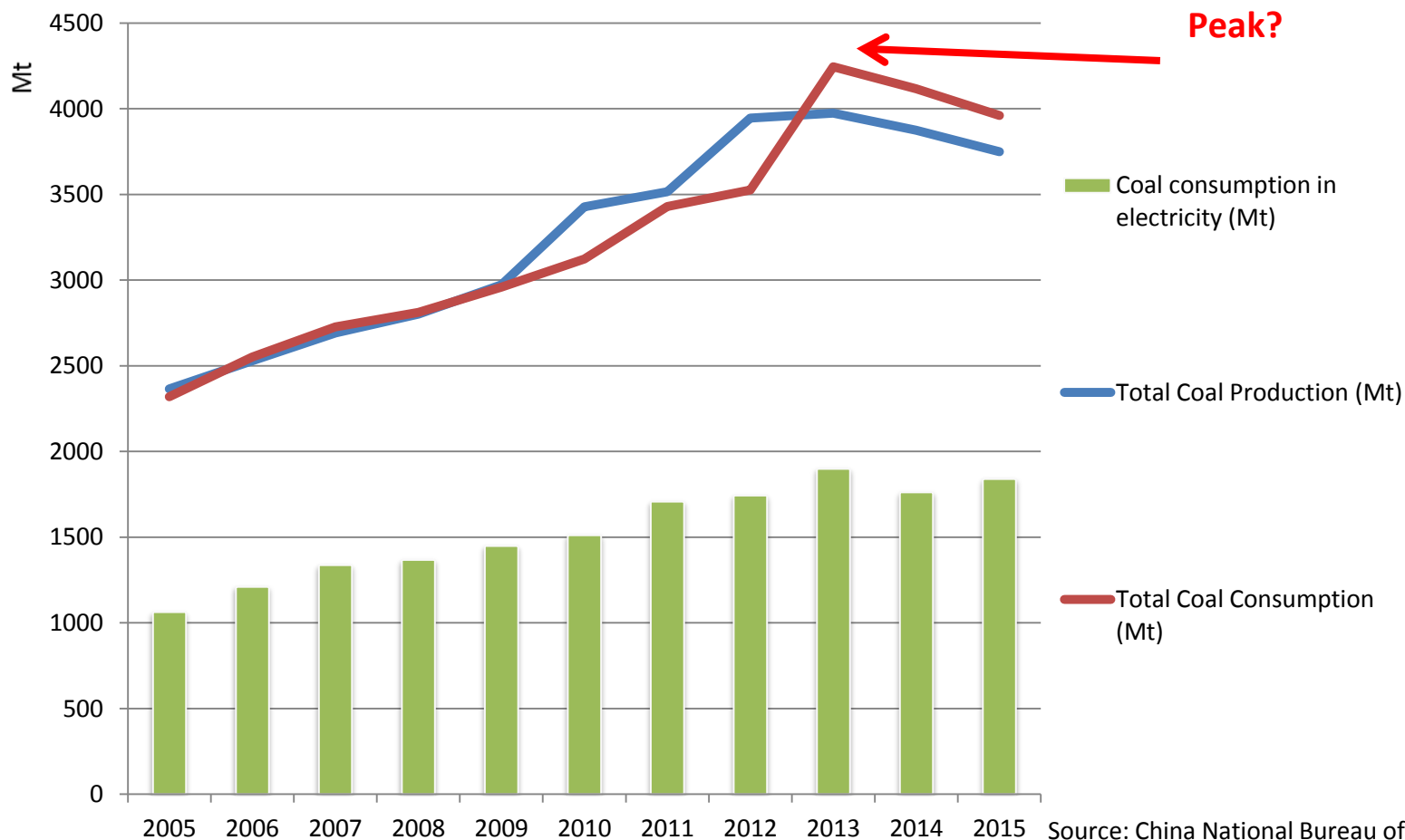


IEA World Energy Outlook (2015)

*Along with energy efficiency, structural shifts in China's economy favouring expansion of services, mean less energy is required to generate economic growth*

# Has China reached a coal peak?

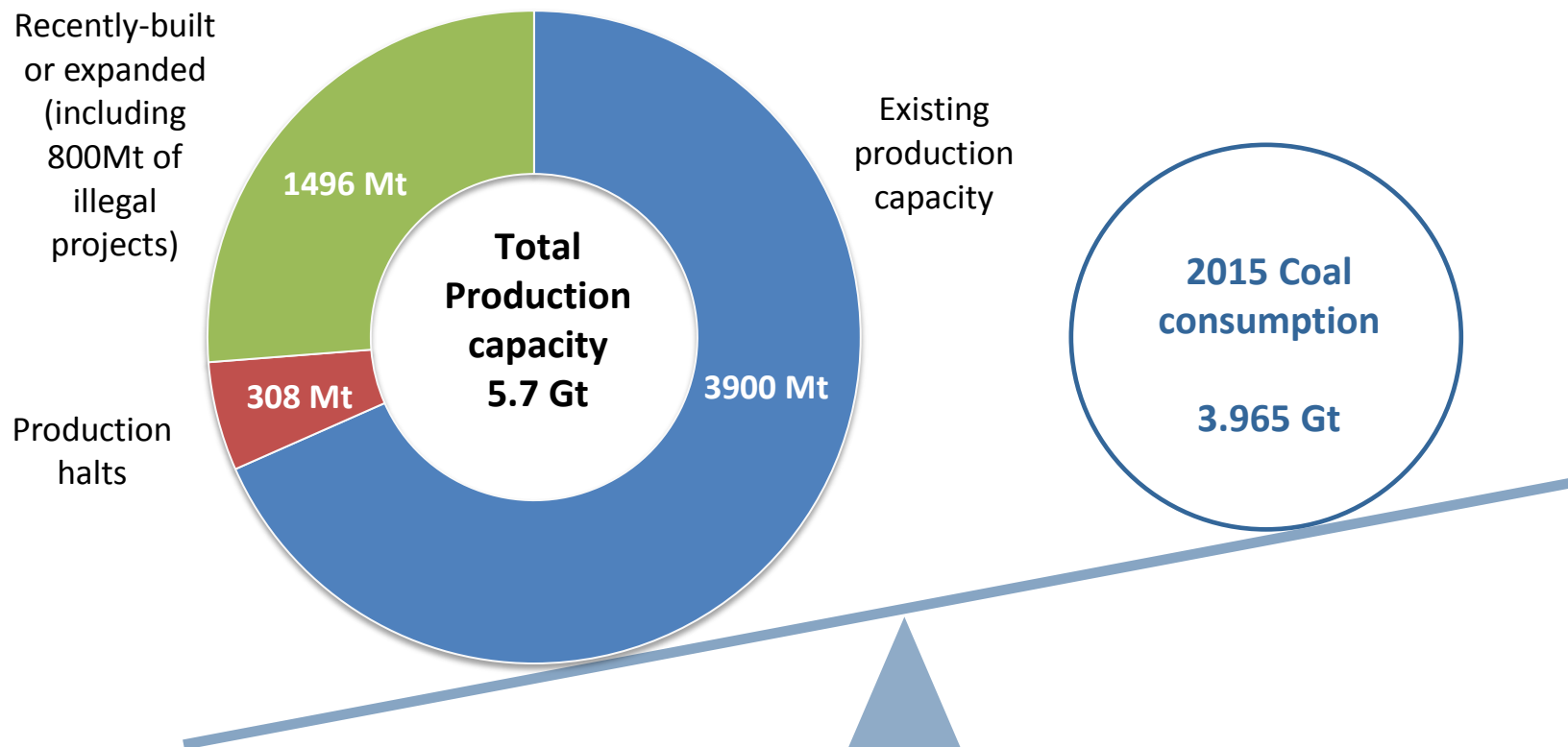
## Coal Production and Consumption in China



*As China faces overcapacity across heavy industry, coal consumption in China declined for two consecutive years in 2014 and 2015, featuring structural changes*

# Coal production overcapacity

## China's coal production capacity vs. coal consumption in 2015

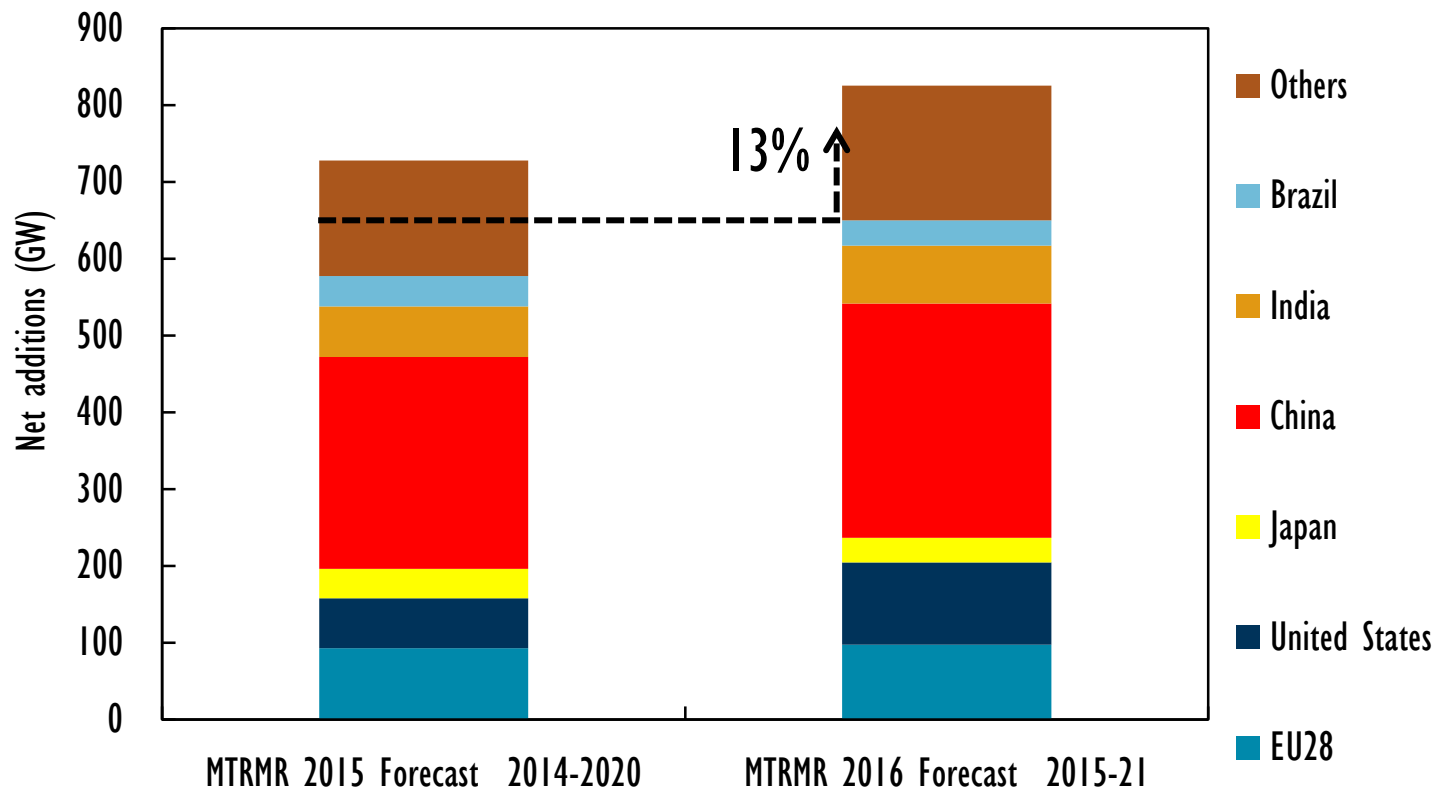


Source: People's network

***Coal is one of the main industries facing severe overcapacity, followed by steel, cement and flat glass***

# New policies underpin a more bullish forecast for renewables

## Renewable electricity capacity growth (GW) in MTRMR's main case

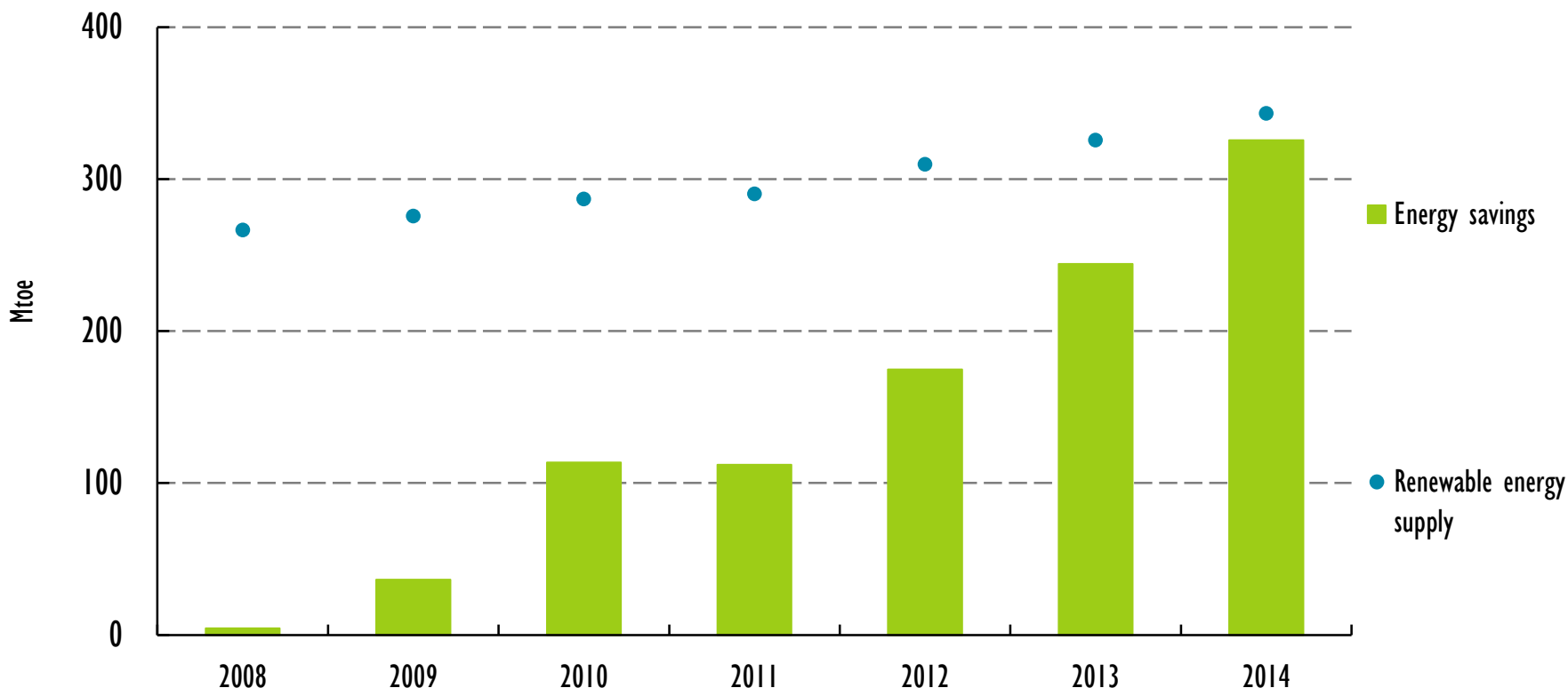


*China remains key growth market for renewable capacity, while the United States surpasses the EU for the first time*



# China is an energy efficiency heavyweight

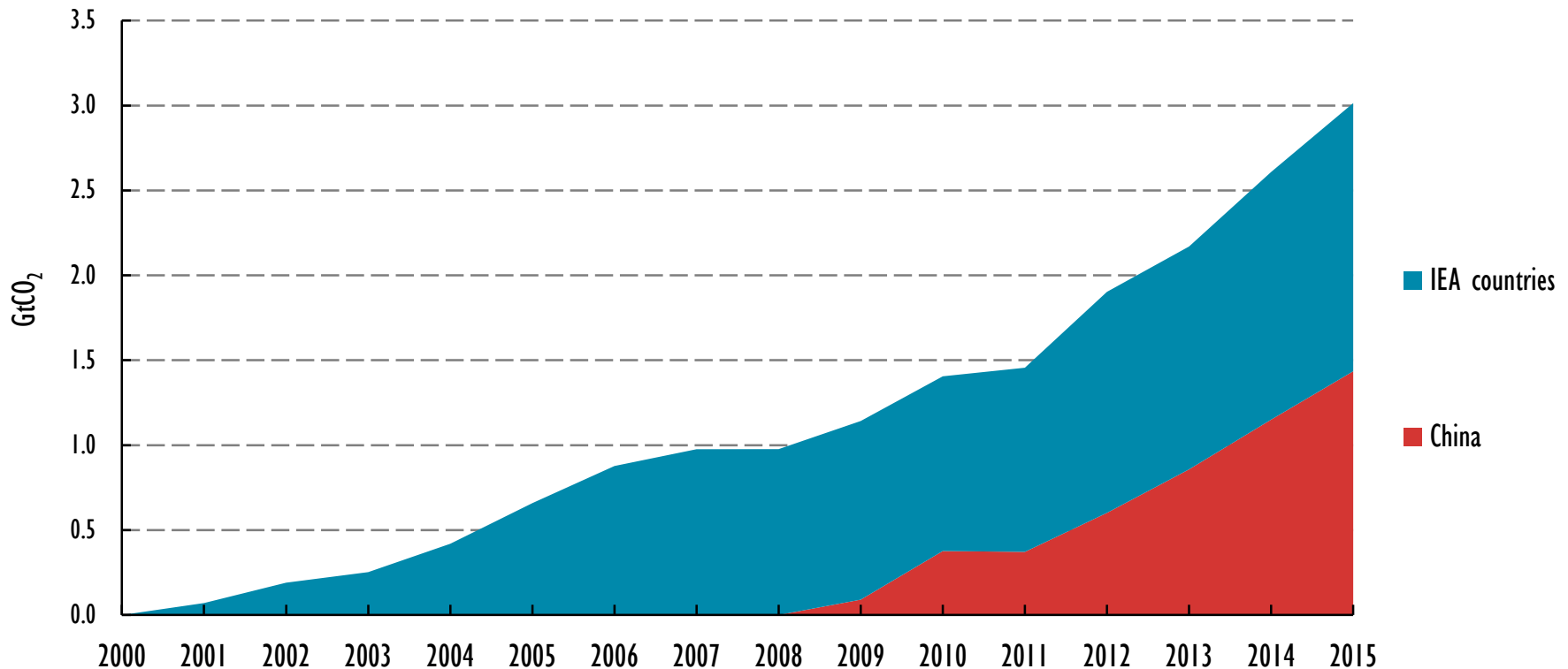
Primary energy savings from efficiency gains since 2000 and renewable energy supply in China



***Dramatic progress on energy efficiency saved 350 million tonnes of coal in 2014. Energy savings are as large as China's renewable energy supply.***

# Energy efficiency is saving CO<sub>2</sub> emissions

CO<sub>2</sub> emissions savings from efficiency improvements since 2000  
in IEA countries and China



*In 2015, efficiency gains in IEA and China reduced their combined emissions by 15%.*

# Concluding remarks

- Investment flows signal move towards cleaner energy
- An integrated policy approach is needed, covering market design, CO<sub>2</sub> pricing & system integration, including storage & demand response
- Policy makers need to heighten their commitments, providing clarity and certainty to investors
- IEA contributes to the energy transition by its work on renewables, system integration & global clean-energy technology collaboration