

# Coal in China

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# Agenda

1. Intro
2. Overview. China's coal
3. Understanding the 12<sup>th</sup> Five Year Plan
4. Who can supply coal to China?
5. Conclusions

# About the IEA

- Established in November 1974 in order to:
    - Promote energy security
    - Provide analysis to ensure reliable, affordable and clean energy
  - Current objectives have evolved;
    - Secure member countries' reliable energy supply
    - Promote sustainable policies
    - Improve transparency of energy markets
    - Support global co-operation on energy technology
    - Find solutions through engagement and dialogue
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# Overview. The take off

- Around 2001 (WTO membership) China switched to a capital and energy intensive development path: industrialization and building up capital stock
- This triggered a great and sustained economic growth, which demanded energy
- The pattern of this demand is different from OECD economies, more intensive in industrial use and, therefore, in electricity
- In a place with important coal reserves, this triggered coal consumption

**China almost trippled their coal demand in the last decade**

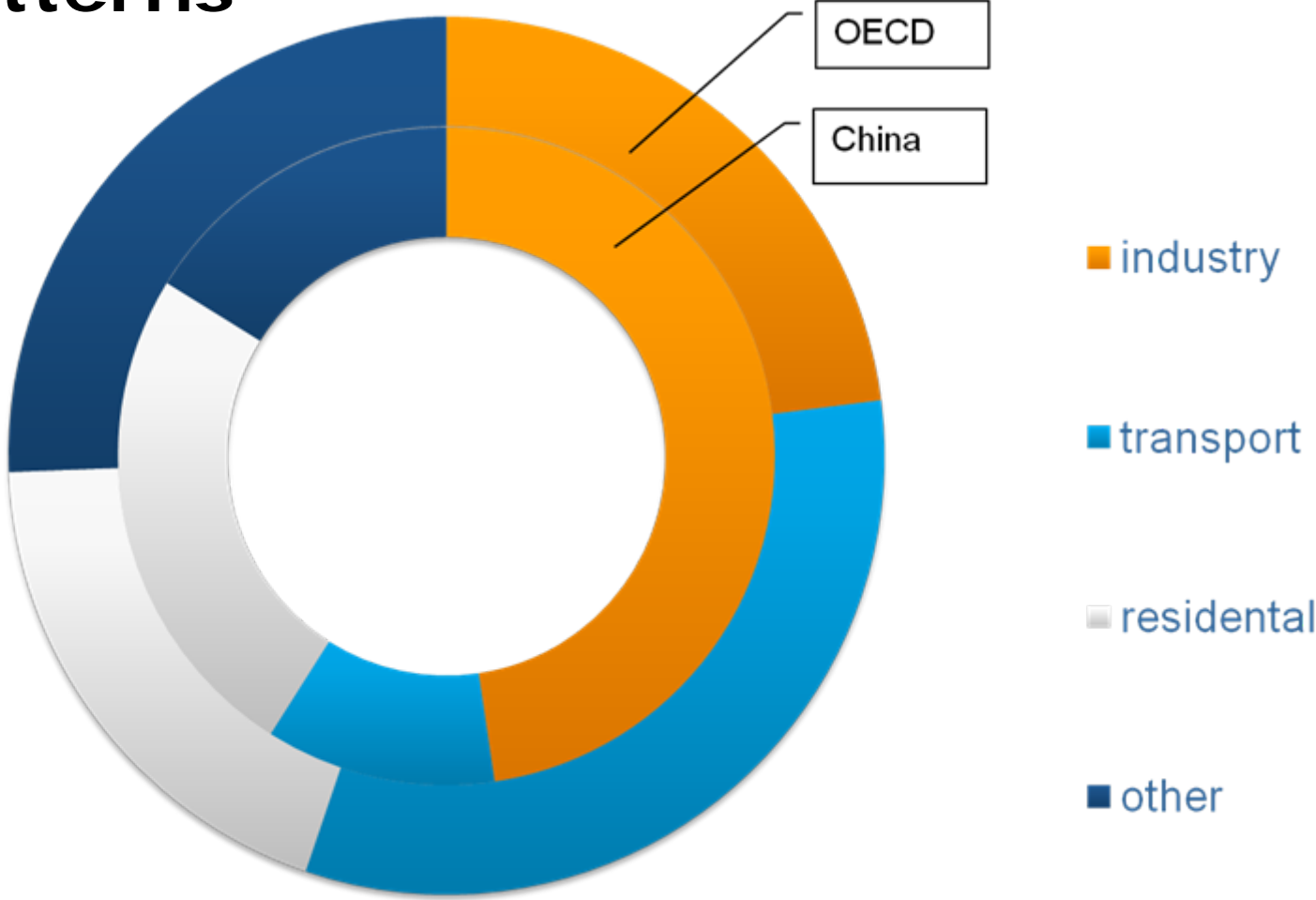
# The usual image on Chinese energy growth ...



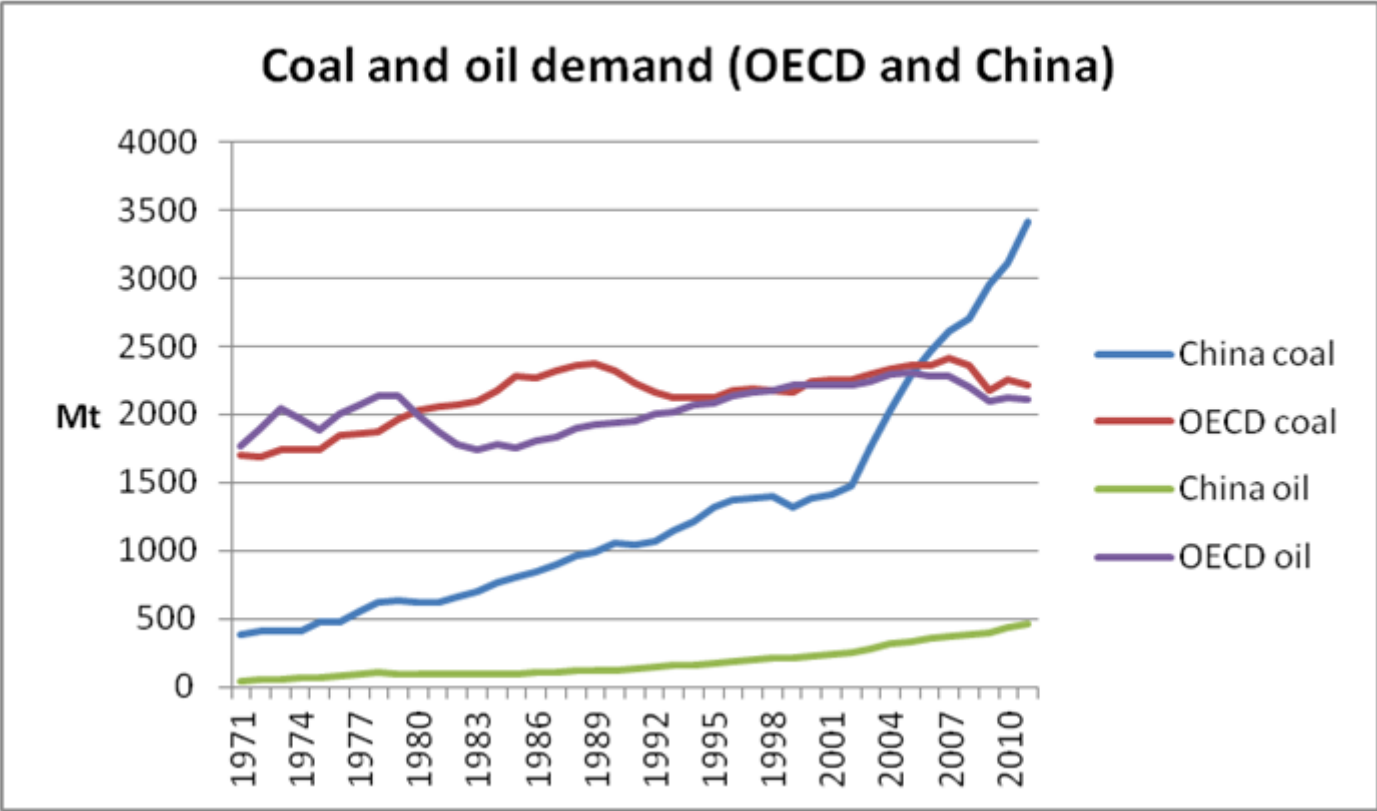
**... is less important than this:**



# “Workshop of the world” – industrial revolution leads to very different energy use patterns



# Coal fuelled the economic growth

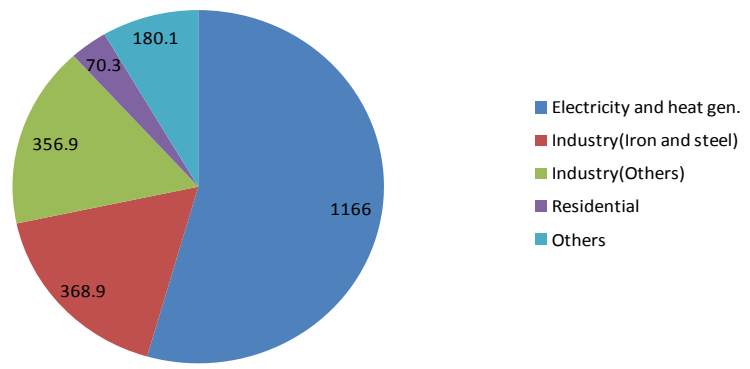


Source: IEA  
Note: This chart does not represent energy contents

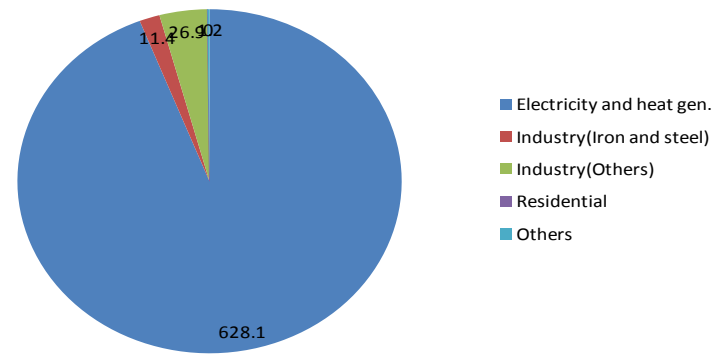


# Different consumption patterns

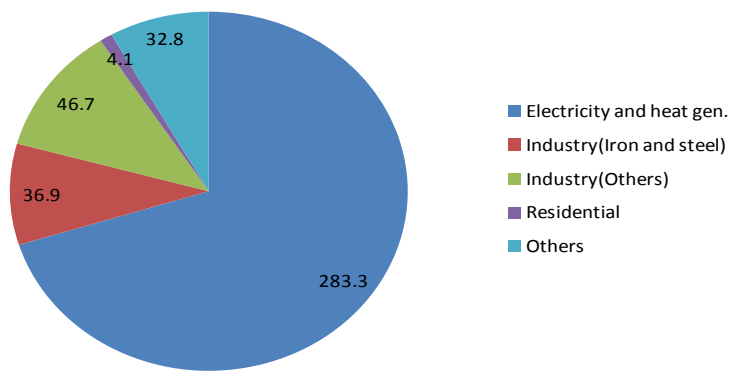
PEOPLE'S REPUBLIC OF CHINA



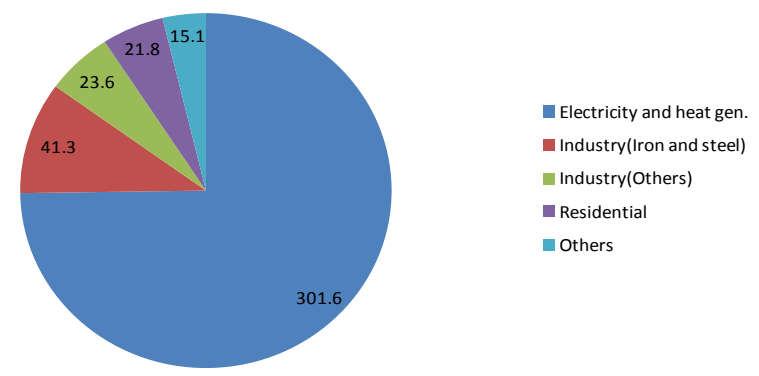
UNITED STATES



INDIA



OECD EUROPE



# Overview. A new coal sector emerged

- Wild growth of coal mining during the 10<sup>th</sup> Five Year Plan (2001 - 2005).
    - High siniestrality at work
    - Negative environmental impact of coal mines
    - Pollution from the coal-fired power plants
  - 11<sup>th</sup> FYP (2006-2010) restructured coal sector
    - Closure of mines < 300,000 tpa
    - Only mines > 1mtpa could survive
    - Company mergers and acquisitions were fostered, as well as the presence of state-owned companies
    - The aim was 100 % mechanization
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# The 12<sup>th</sup> FYP. Where 's China going to?

- Economic growth is slowing down (8 %)
- Plans for gas, renewables, and nuclear enlargement, plus energy efficiency gains
- Coal consumption growth will decline down to levels near 4 %, still a challenge for domestic coal producers
- Big coal bases and coal conversion are part of the strategy



**Chinese coal imports growth will decline,  
but big uncertainties remain**

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# Regional approach

- The production growth is expected in Shanxi, Shaanxi, Inner Mongolia and Xinjiang
- This can impulse underdeveloped regions, although Xinjiang development is especially challenging
  - Long distance to the consumption centers in a region with no infrastructure
  - Water shortage
- Production is getting deeper and further from the consumption centres.



## Is cheap coal in China over?

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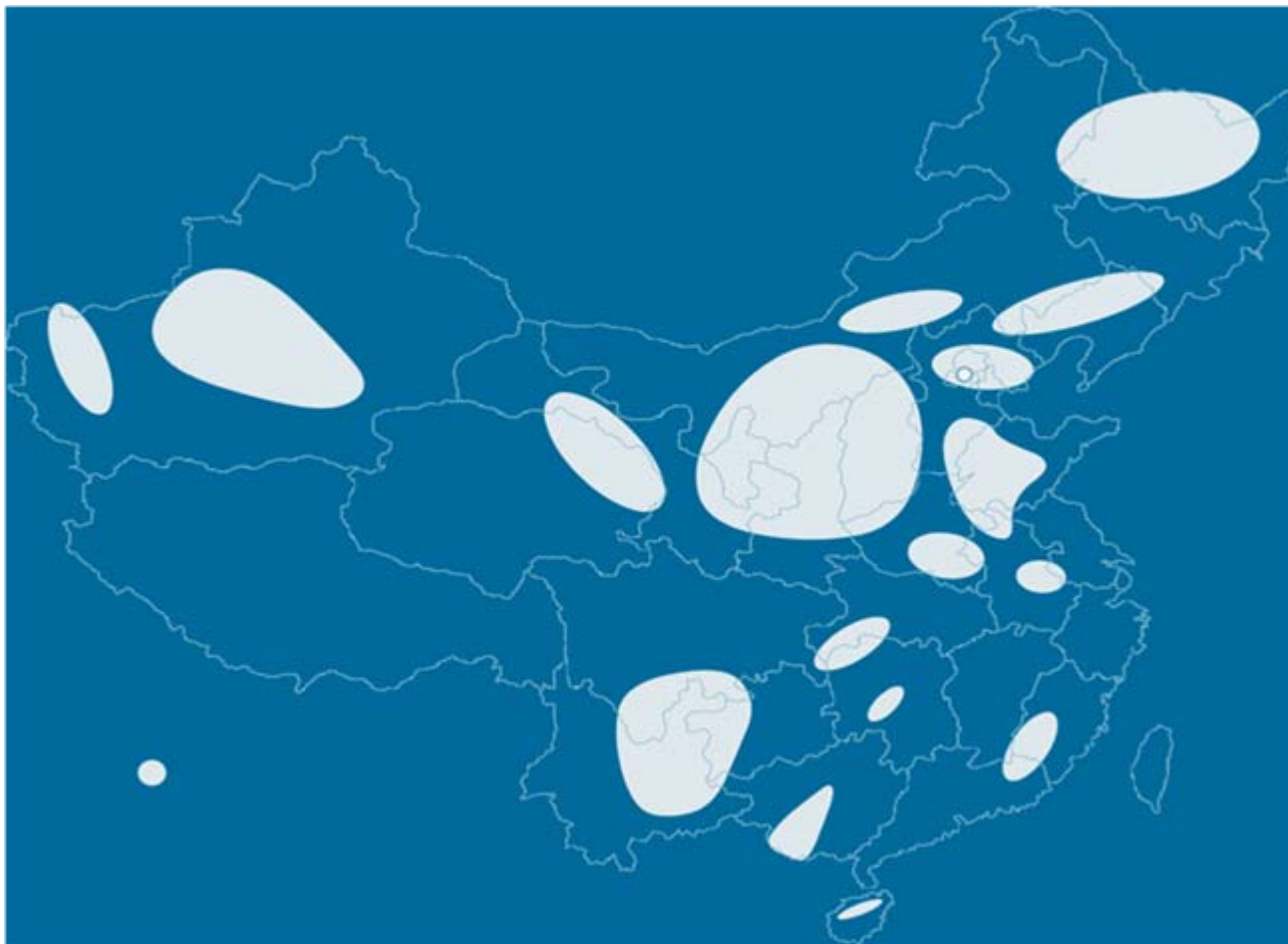
# Important diversification efforts are in place

The current investment drive is  
5 times the French nuclear ramp up of 1980-85  
9 times the US investment in wind power 2005-2010

Which together equivalent to 3%  
of China's coal demand



## A lot of reserves, but not in the best places



# Coal moving everywhere



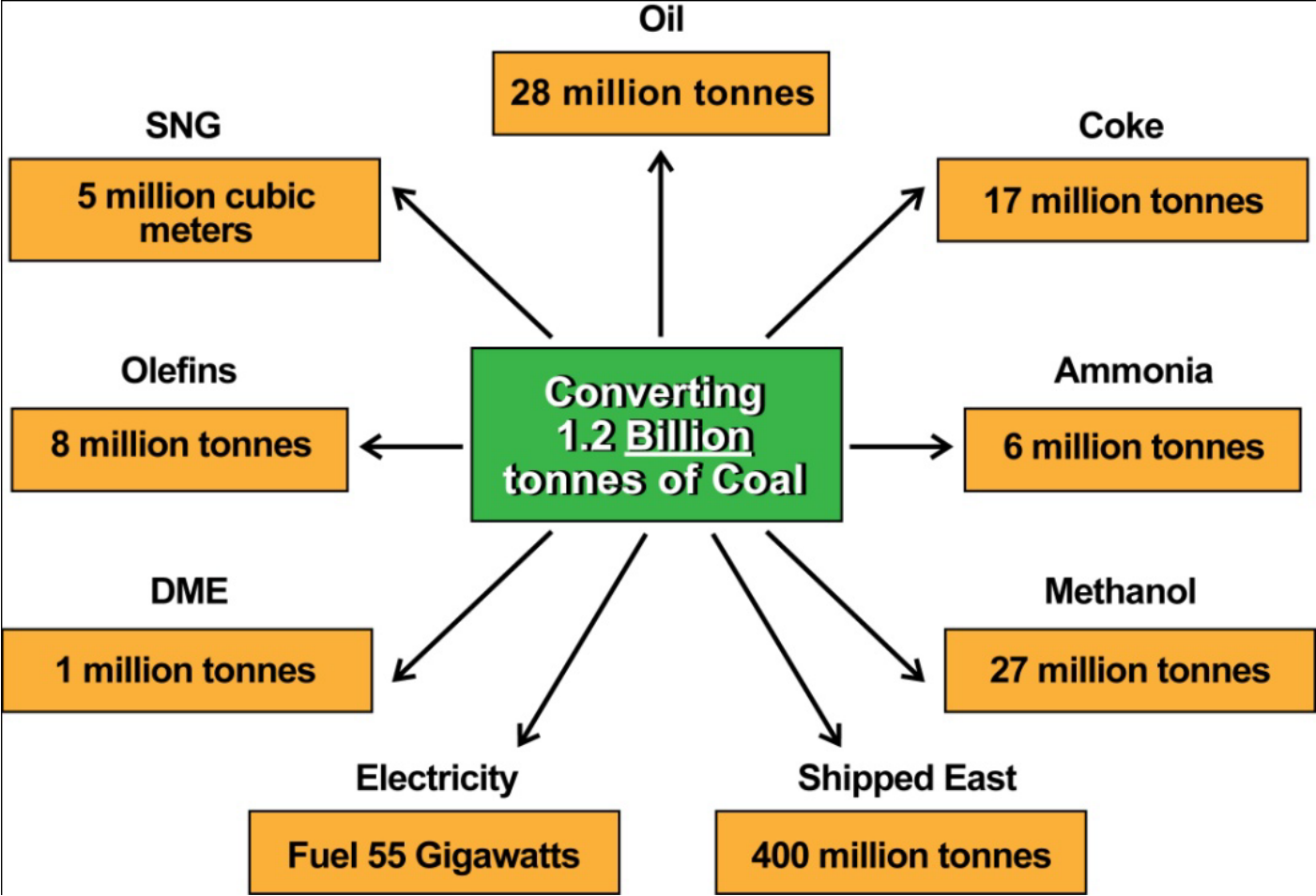
This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

# But flow is from North West to South East

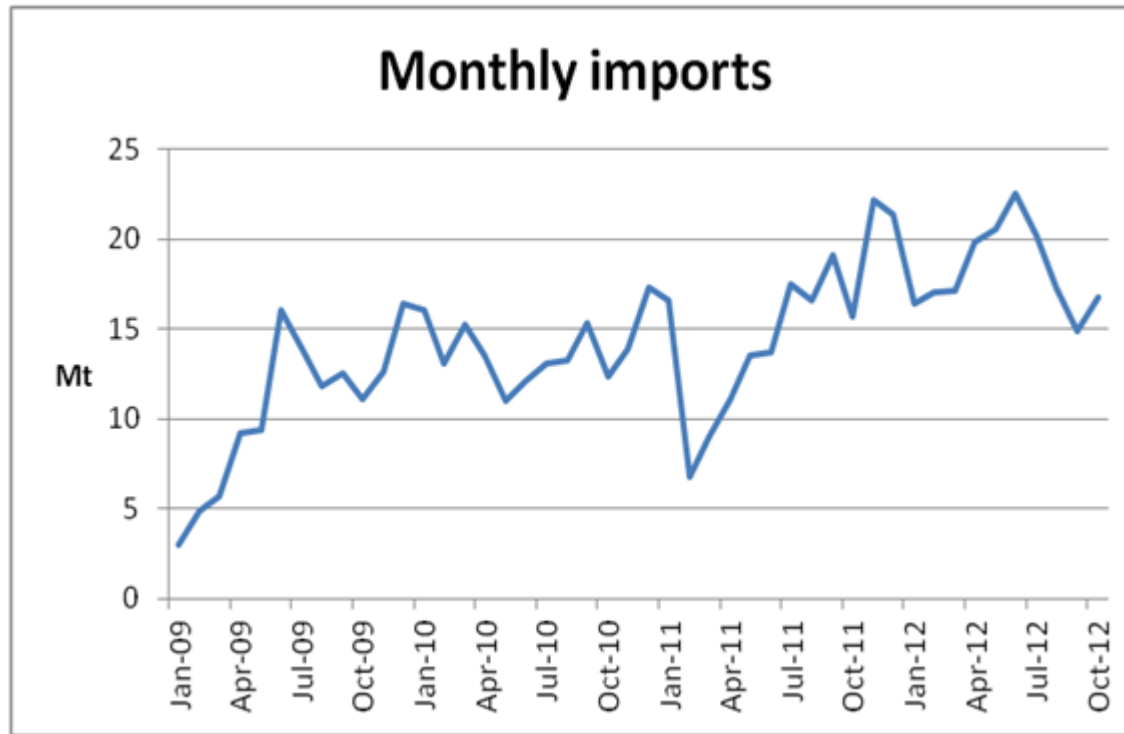




# Xinjiang development plans



# Imports slowing down? Not yet



# Potential suppliers

## ■ Indonesia

- Good geological conditions, infrastructure.
- Government plans and increasing costs

## ■ Australia

- Big reserves, friendly environment for investors.
- Infrastructure is challenging, costs are ramping up

## ■ South Africa

- Still a lot of low cost coal
- Rail capacity

# Potential suppliers

## ■ Mongolia



- Huge cheap high quality coal reserves.
- Deadlock country without any infrastructure.



## ■ The United States



- China needs high quality coking coal. PRB is competitive.
- Infrastructure saturated. PRB is a risky business.



## ■ Russia



- Big reserves, cheap mining.
- Transportation is an issue



# Key messages

- Chinese economic growth fuelled by coal has triggered coal consumption globally.
- This trend, at slower pace will continue in the coming years despite diversification
- Chinese coal is getting deeper and further. Coal will not be cheap in southern coastal China anymore, with implications in the global coal prices.
- Potential suppliers need massive infrastructure investment, some of them in progress.

■ Merci beaucoup de votre attention