



China's Energy and CO₂ Emission Scenario Analysis

Toward 2050



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Background-Economic

- China is one of the biggest developing countries in the world. Its economic is increasing rapidly. In the next five years, it is estimated that the GDP annual increase rate will be more than 8%
- So Energy demand and CO₂ Emission is also increasing rapidly with the economic.

Background-Population

- China has the biggest amount of population. About 1/5 of the world's human beings live in China.
- It is estimated that China's population will arrive at 1.46 billion in 2003. After this amount keeps steady for some period, it will decrease slowly

Background-Energy

- China is paying great attention to energy saving. The Chinese has promised that energy intensity will be decreased by about 20% by the end of 2010
- Renewable energy developing is also put on the schedule

Basic Scenario Supposition

- ✓ Benchmark Year: 2002
- ✓ Sectors considered in the model
 - Industry
 - Agriculture
 - Mining
 - Manufacturing
 - Construction
 - Commercial
 - Residential
 - Transportation

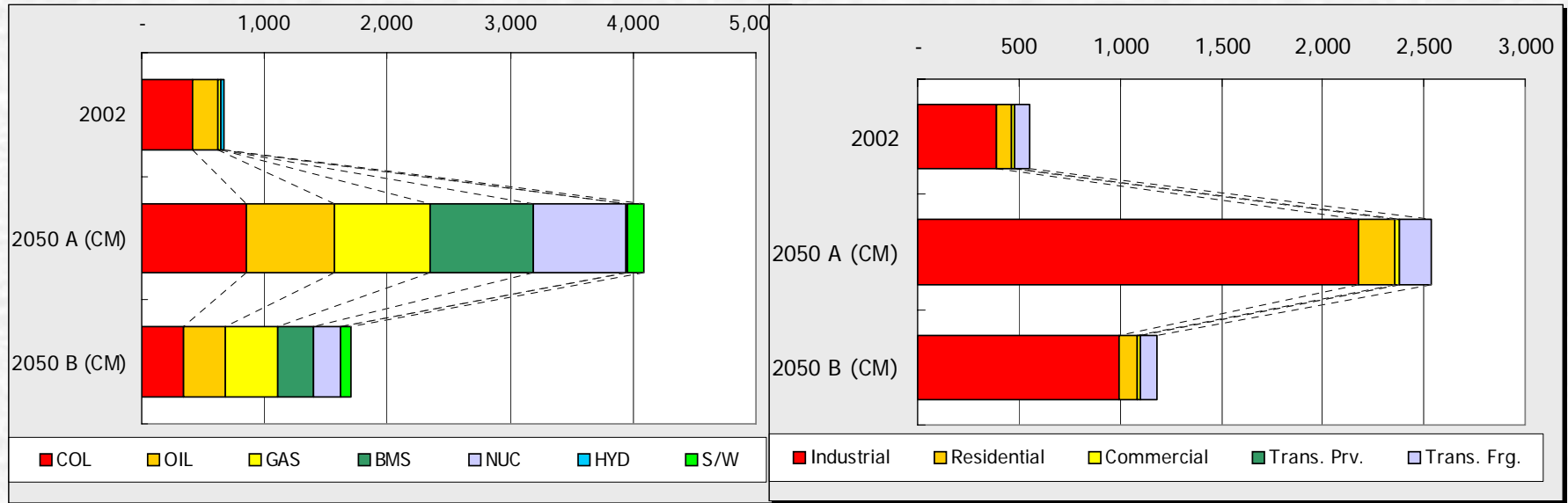
Basic Scenario Supposition

- New energy is considered in the target year: Biomass, Wind/Solar. The ratio of hydrology electricity will increase.
- Feedstock in coal, oil and gas is also considered in the model

Basic Scenario Supposition

- ☛ Scenario A: Energy demand will grow up with the GDP increase rate
- ☛ Scenario B: Energy demand will grow up so rapidly. The energy demand is about 2/3 of Scenario A.

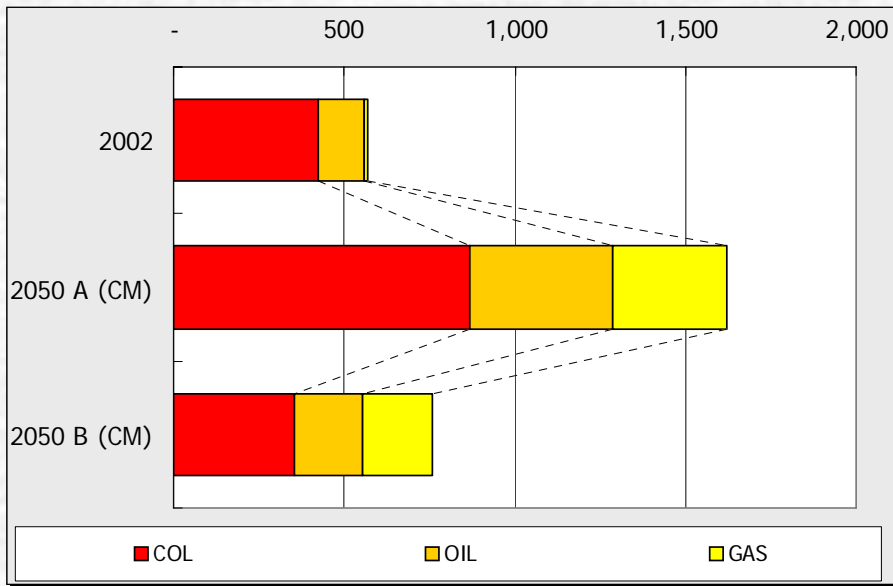
Model Results-Energy Consumption



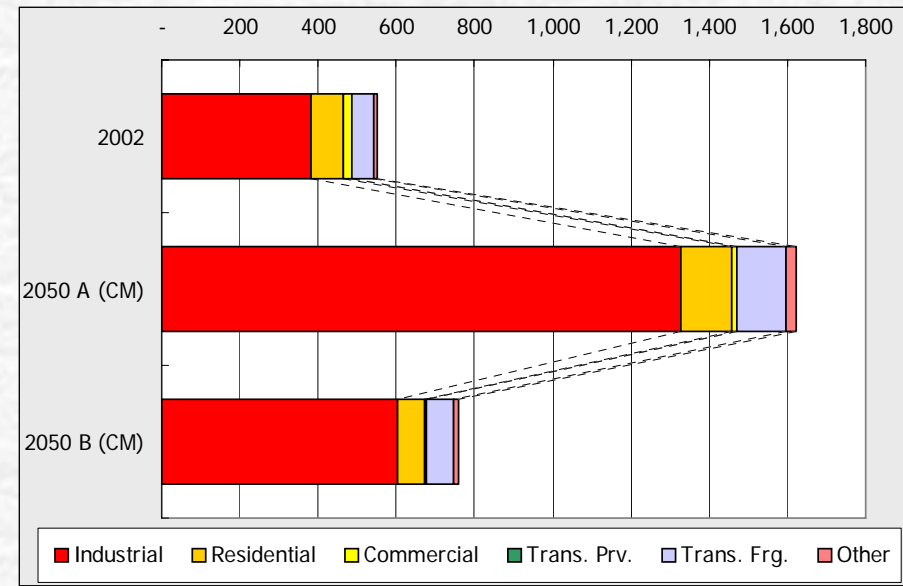
Primary Energy
Consumption

Secondary Energy
Consumption

Model Results-CO2 Emission

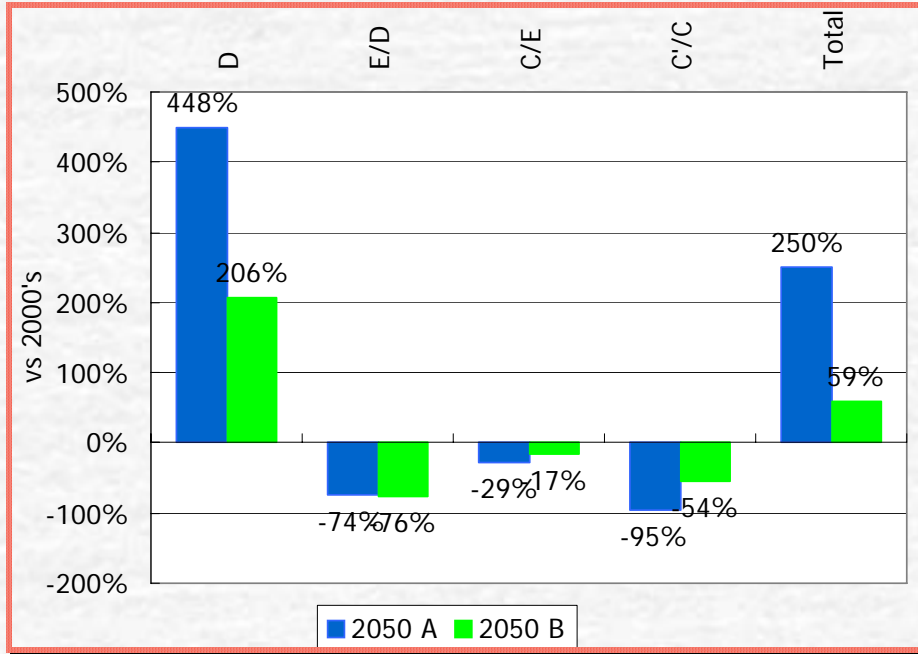


CO2 Emission by Fuel

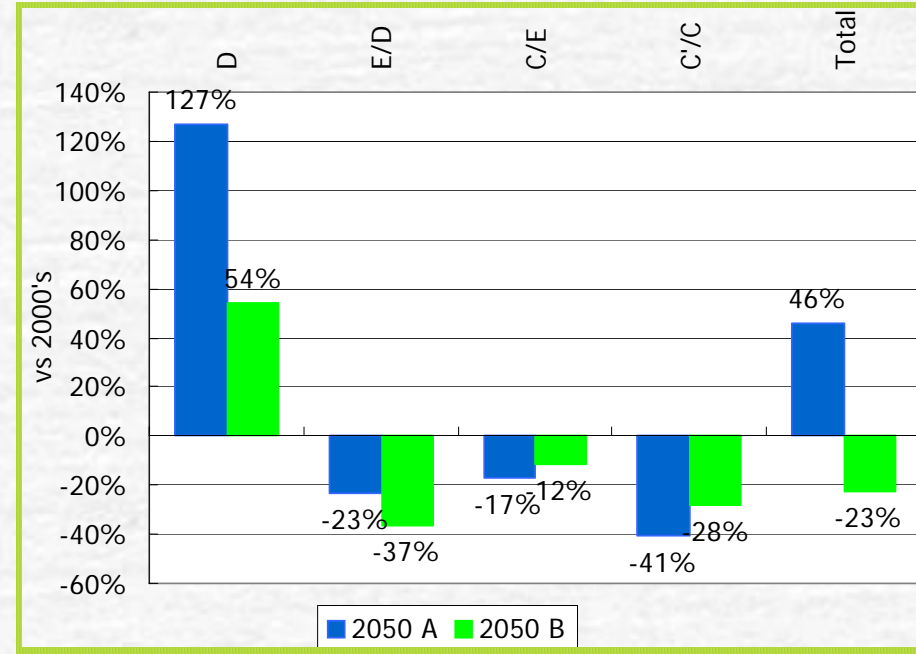


CO2 Emission by Sector

Model Results-factor analysis

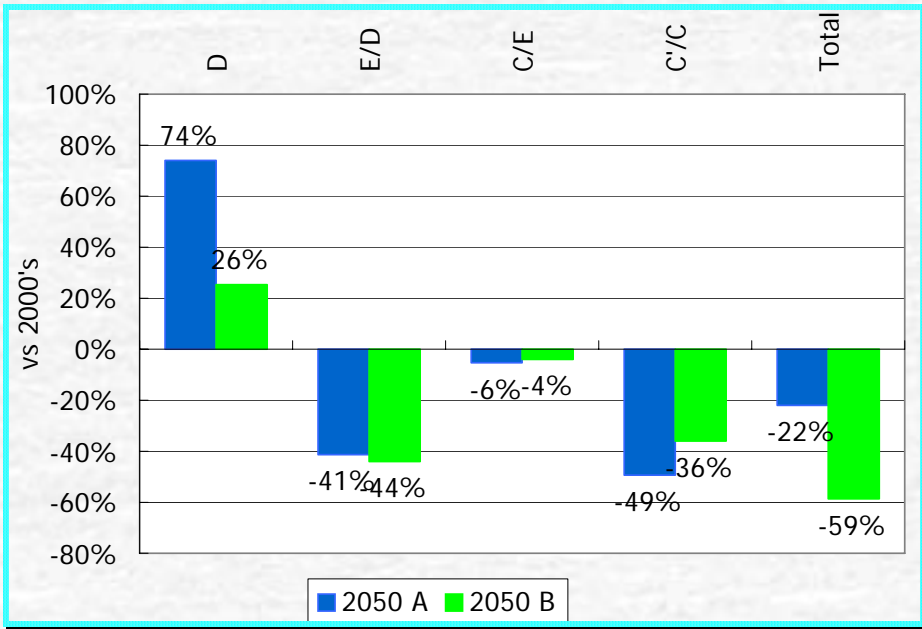


Industrial sector

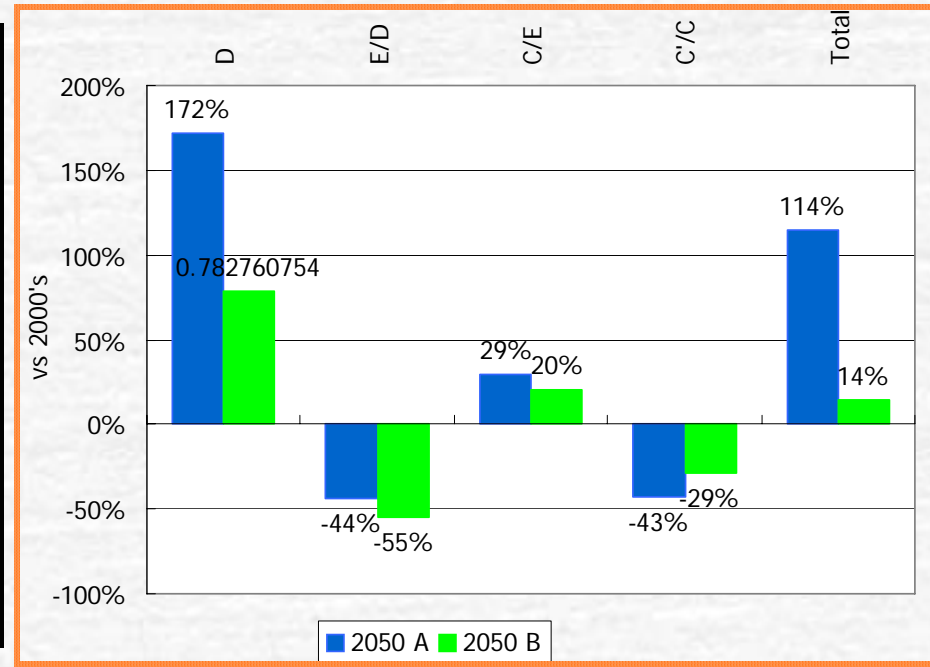


Residential sector

Model Results-factor analysis

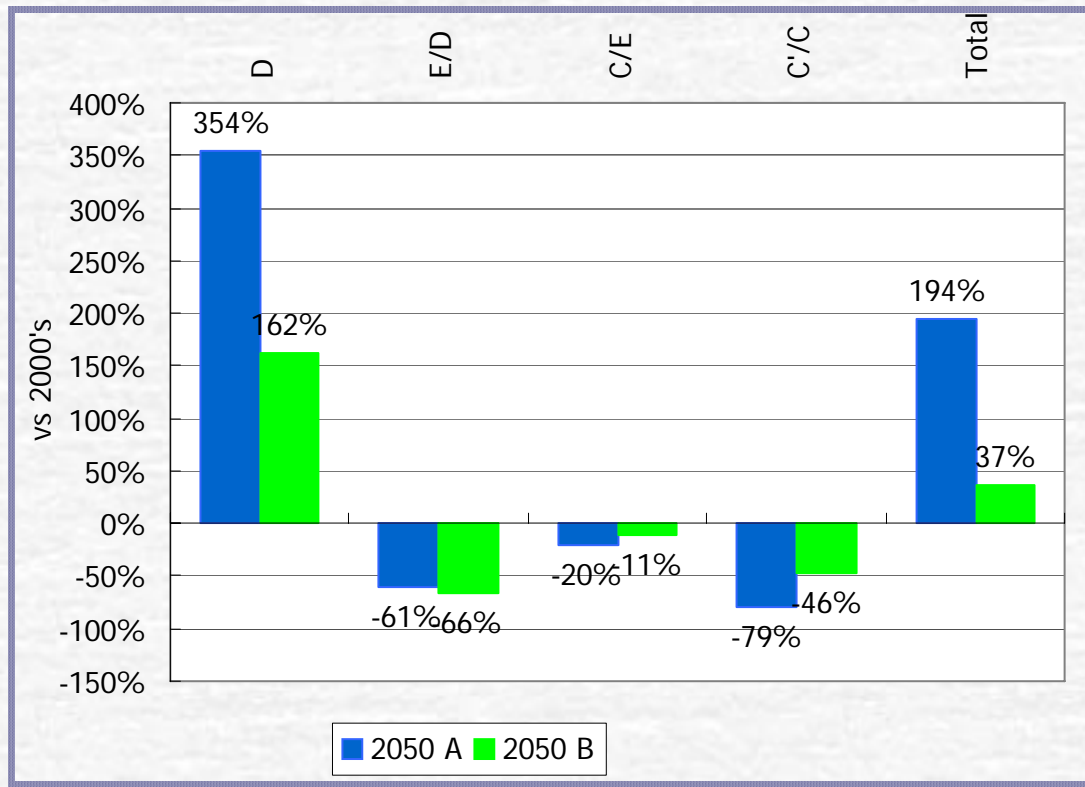


Commercial sector



Transportation sector (Freight)

Model Results-Total



Total