2006

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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

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What Does UNIDO Do?

Thematic Areas and Activities

1. Industrial governance and statistics
2. Investment and technology promotion
3. Industrial competitiveness and trade
4. Private sector development/SMS
5. Agro-industry/Food safety
6. Sustainable energy and climate change
7. Montreal Protocol (Ozone)
8. Stockholm Convention (POPs)

UNIDO and associated programs in China

UNIDO REGIONAL REPRESENTATIVE OFFICE, Beijing

Associated Programs:

ITPO: Investment Technology Promotion Center

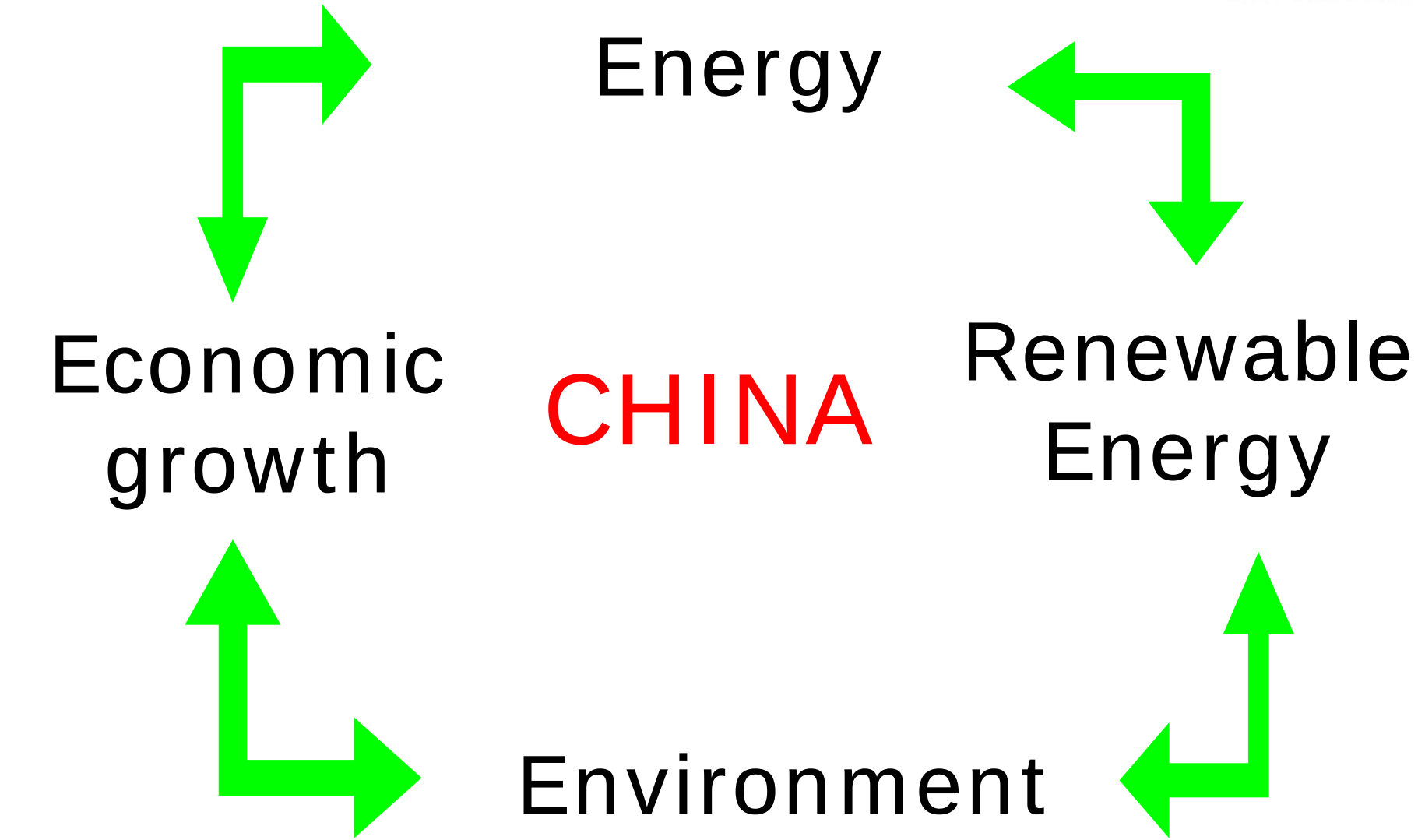
SPX: Industrial Subcontracting and Partnership eXchange

ICSHP: International Centre for Small Hydro Power

ITPC: International Technology Promotion Centre

ICM: International Centre for Materials Technology Promotion

ISEC: International Center for Promotion and Transfer of Solar Energy Technology


Energy
Economic growth
CHINA
Renewable Energy
Environment

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Why

Energy

Economic growth

and

Environment (CO_2 emissions)

are an Issue in China?

Energy consumption in China

- With a demand of 2,200 Mtce in 2005 (Million Tons of coal equivalent), China is the world's second biggest energy consumer, after the US.
- China is foreseen to overtake the US before 2025

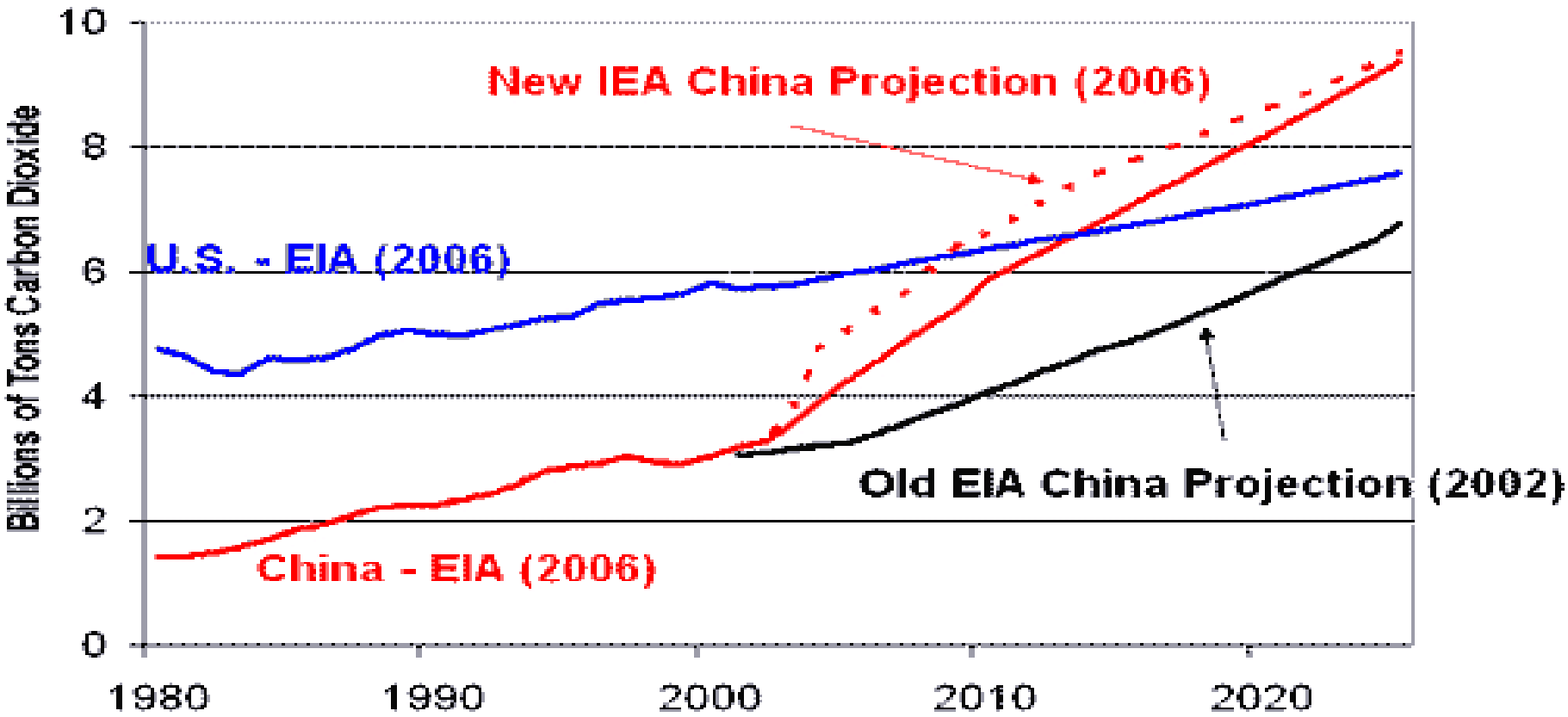
Source: China Statistical Yearbook, 2006

Coal consumption in China

- In the last 10 years coal consumption has risen by 57% to 2.1 billion tons in 2005 and, as per the 11th five-year plan, it will increase 14% by 2010
- Coal is and will remain the main source of energy for at least the next two decades. It will still provide over half of China's energy needs in 2030

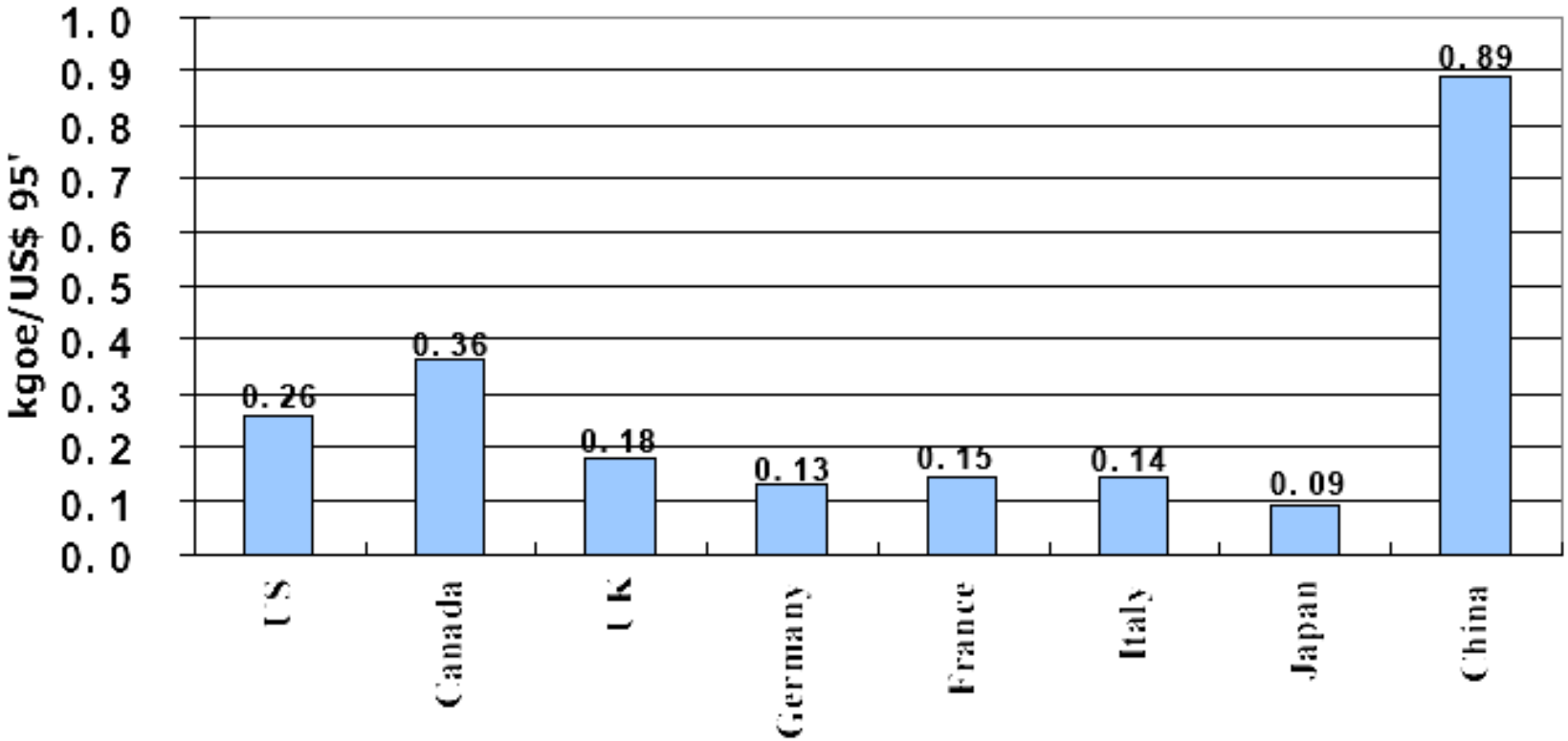
Source: China Statistical Yearbook 2006

CO_2 Emissions - China Vs. USA



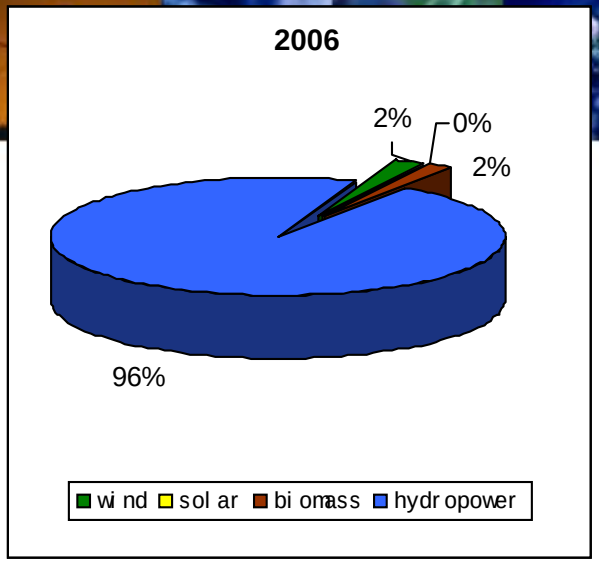
Source: US Energy Information Administration, Energy Outlook 2006, World resource Institute, Oak Ridge National Laboratory

Energy Consumption per Unit of GDP
China Vs. OECD countries (2000)



Source: World Bank "World development indicators" and IEA "Energy Balance of OECD countries" 2000 (Organization for Economic Co-Operation and Development)

Energy sources (electricity) in China 2005 and 2020



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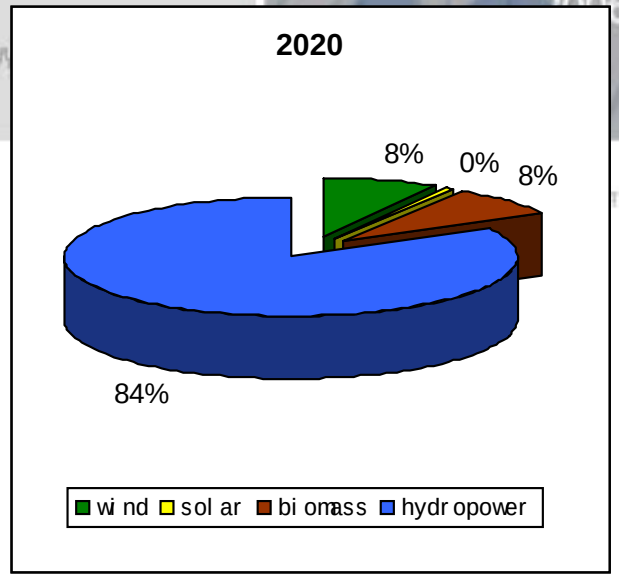

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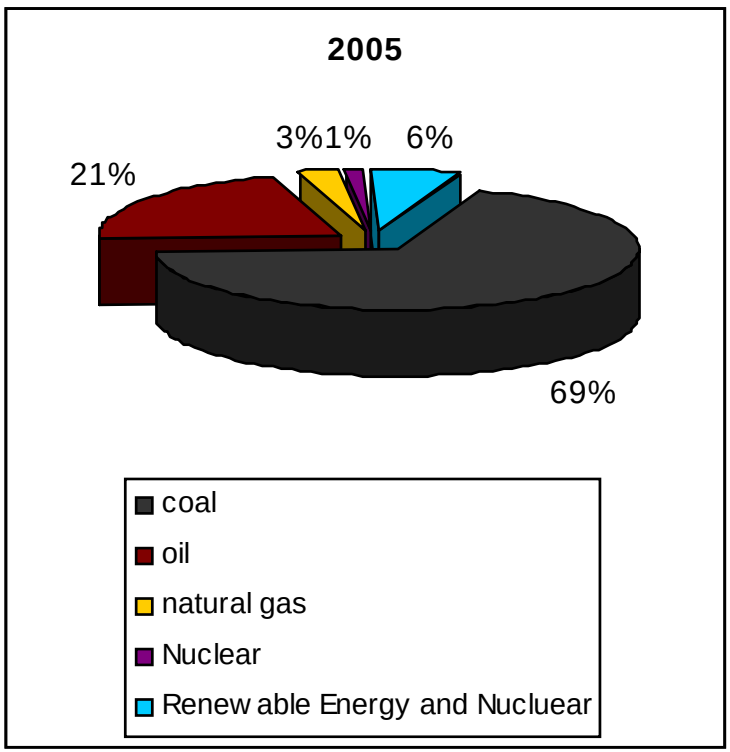

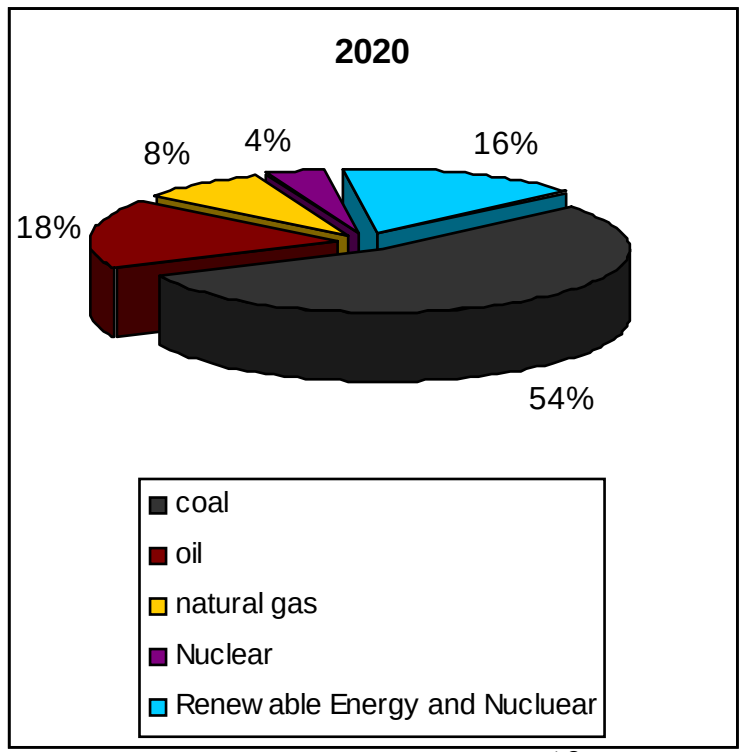

Source: China Statistical Yearbook 2006, China Daily news, China atomic authority, re-elaboration.

Energy cost (electricity)

- Wind energy: ~0.63 Yuan/KWh

  average investment of 9,000 Yuan/KWh and 2,000 full load hours

- Thermal power energy: ~ 0.30 Yuan/KWh

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Value for money

Renewable energy Vs. Energy efficiency/saving

The balance is, by far, in favour of energy efficiency/saving

WHY?

- Electricity represents 11% of the total energy consumption
- Energy is cheap, so far!
- Most of energy comes from coal, now and in the next two decades

Some considerations

- Renewable energy share (not including hydropower) of the overall energy consumption is minimal, 0.026% in 2006, 0.28 in 2020
- CO_2 emission reduction due to renewable energy is and will be negligible in the next two decades
- Slight investments and increases in energy efficiency have massive impacts on CO_2 emission reduction
- So far, investing in clean coal technologies is, in terms of CO_2 emission, more profitable then investing in renewable energy