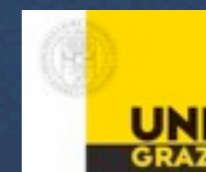


P.R.C. Energy Agenda with Special Focus on Nuclear Power

Fiser R., Rozic M.

2010



Content

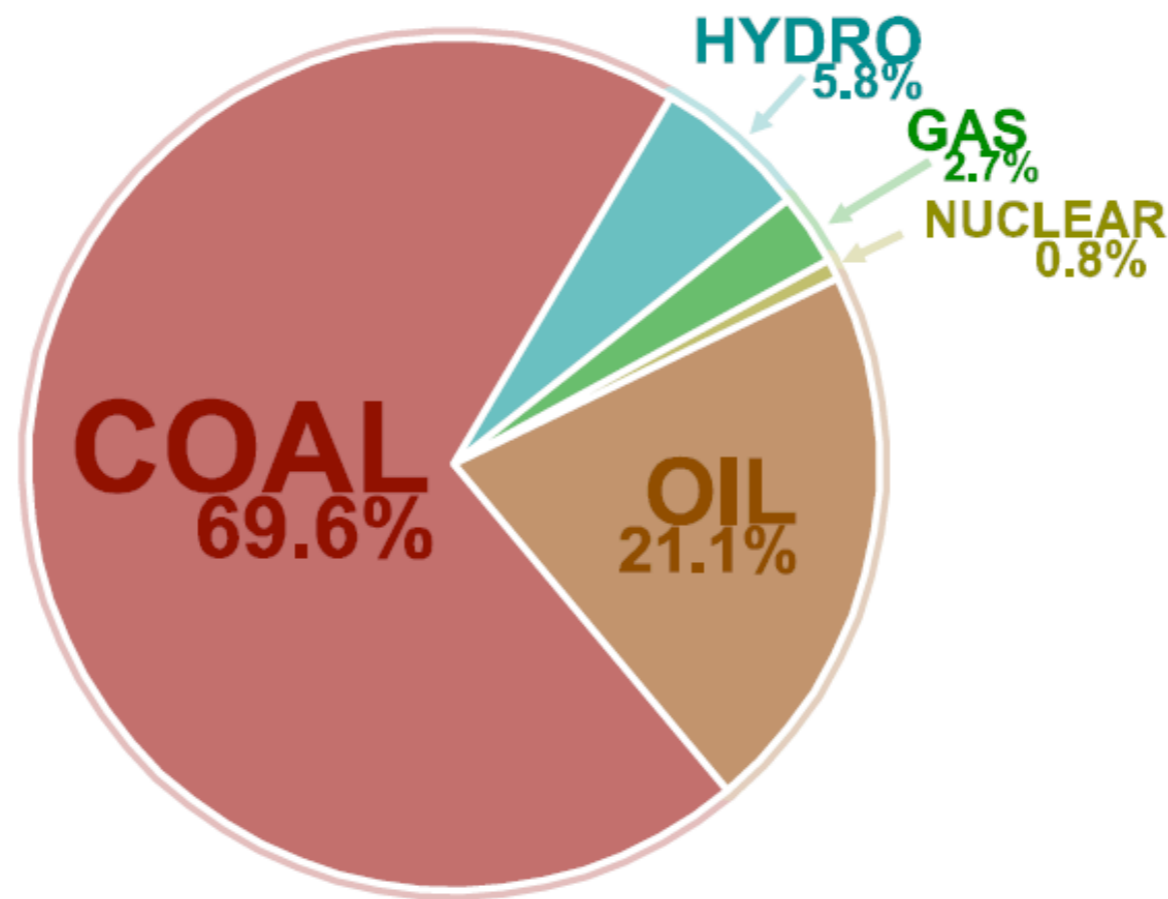
- ✿ *Evolution of Energy Demand & Supply in P.R.China*
- ✿ *Energy Security Challenges*
- ✿ *Nuclear Power in China*
- ✿ *Building New Power Plants and Safety Issues*
- ✿ *Prospects*

The Evolution of Energy Demand

- ✦ - 1958 *The Great Leap Forward*
- ✦ 1978 *Reform period*
- ✦ 2002 *Energy trend reverses (energy intensive industry)*
- ✦ *“future consumers”*



Energy Supply by Fuel Type (2005)



Source: CEIC from China Statistical

Energy Security Challenges

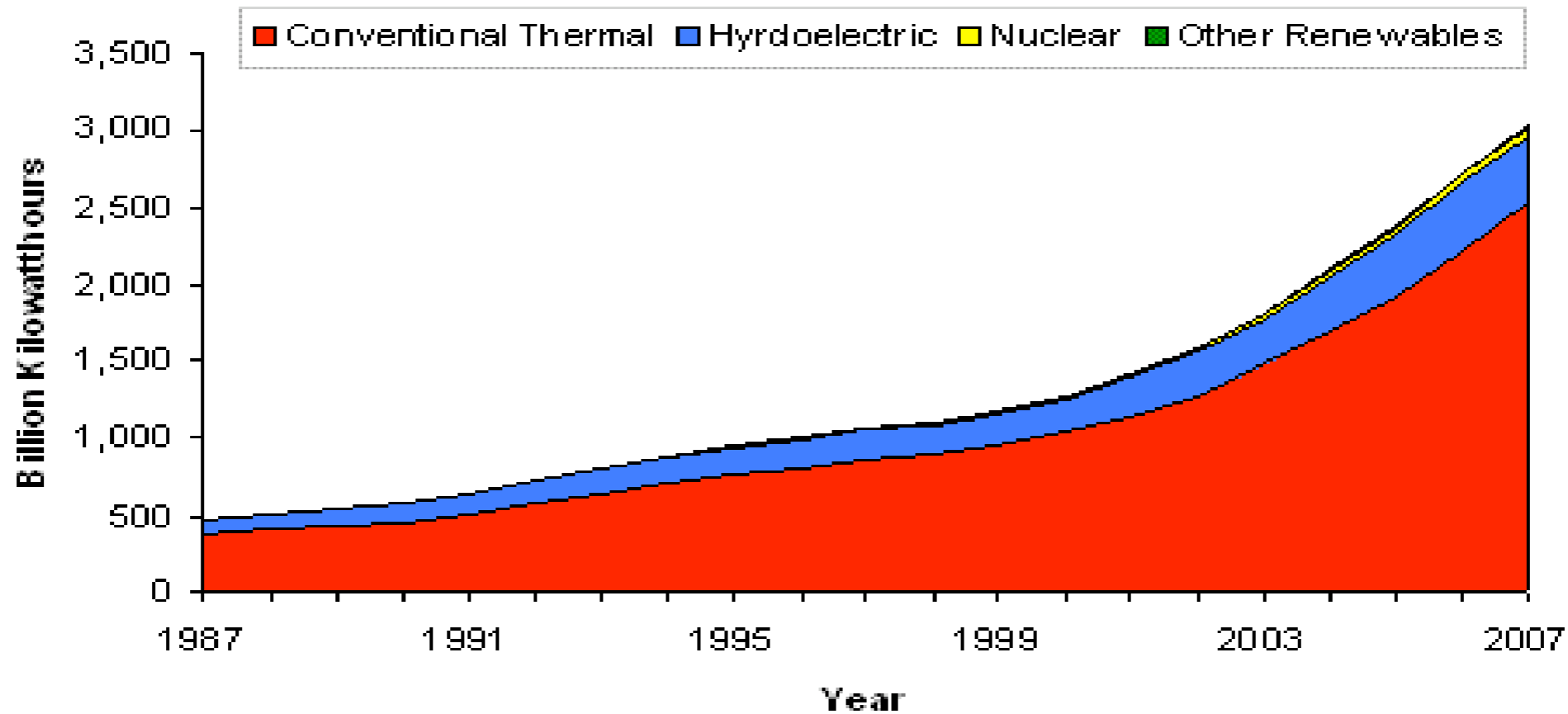
- ✦ *growing GDP that needs cheap electricity*
- ✦ *growing GHG emissions (World Bank calculated the loss due to pollution by coal plants at almost 6 % of Chinese GDP)*
- ✦ *growing population: 1.321.000.000 (2007) - ? (2030)*
- ✦ *growing living standard*
- ✦ *Solution?*
 - ✦ *nuclear energy plants*

Nuclear reactors in China (2007)



China's Electricity Generation by Type

China's Electricity Generation by Type, 1987-2007



Source: EIA International Energy Annual

Building new power plants (I.)

- ✿ *Today – 11 reactors working, 23 reactors at construction*
- ✿ *120 proposed reactors*
- ✿ *Plan: Today 8 GWH, 2020 – 60 GWH, 2050 – 200 GWH.*
- ✿ *China is rapidly becoming self-sufficient in producing reactor design and construction. (licenses from USA)*
- ✿ *Plans to upgrade grid for 600 billion US dollars.*

Building new power plants (II.)

- ✿ *Problems with shortages in Central Provinces.*
- ✿ *State-owned companies that runs Nuclear power plants and care about safety.*
- ✿ *Challenge to keep an eye at “an army” of contractors*
- ✿ *China welcomed foreign inspectors from AEA in Vienna*

Safety Issues

- ✿ *Vienna based agency will send specialist to assess training and staffing.*
- ✿ *Western experts regard Daya bay nuclear power plant in Shenzhen as evidence that China can run reactors safely.*
- ✿ *In 2020 there will be still 9,7 percent from NPP.*

Prospects

- ✦ *The challenge persists to run these plants safely and insure “Atom World Security”.*

Thank you !