

Energy situation and Energy Saving Activities in China

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Outline

- Background
- Energy Situation
- Facing Big Challenges
- Energy Saving Activities
- Experiences and Challenges



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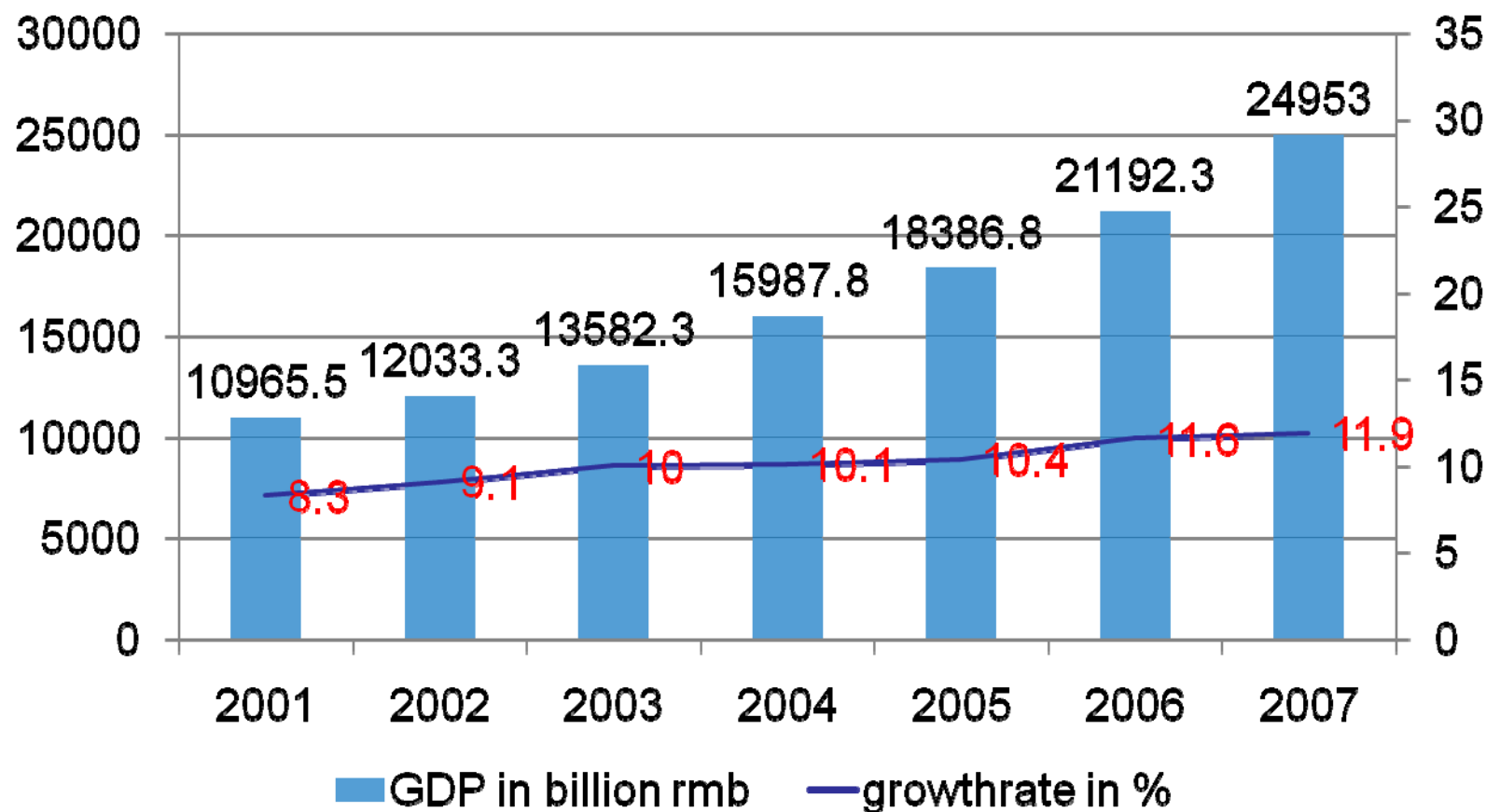
Background

- Booming economy
 - Average annual growth rate of GDP exceeds 10%
- Quick urbanization
 - 15 million people migrate from rural to urban area each year
- Fast growth of energy-intensive industries
 - Over capacity in many industrial sectors
- Soaring export
 - Energy embodied in export products accounts for 20-40% of total energy consumption
- Expanding building and transportation sectors
 - Newly-built building area exceeds 2 billion square meters
 - Possession of civil motor vehicles increased 6.6 million in 2007



Background

Fast economic growth in China – unprecedented and overheated

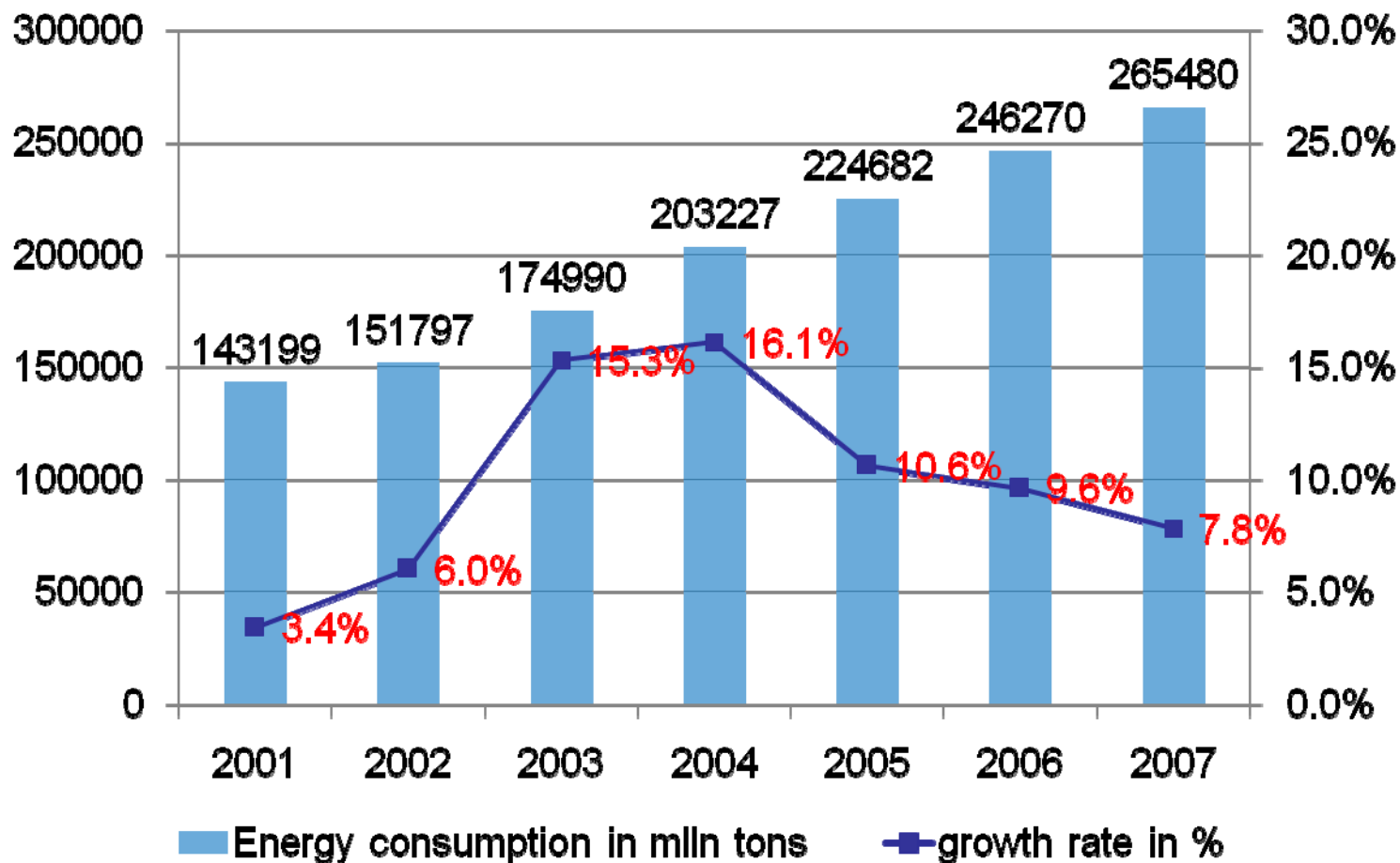


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Energy consumption grows even faster

- Almost doubled since 2001

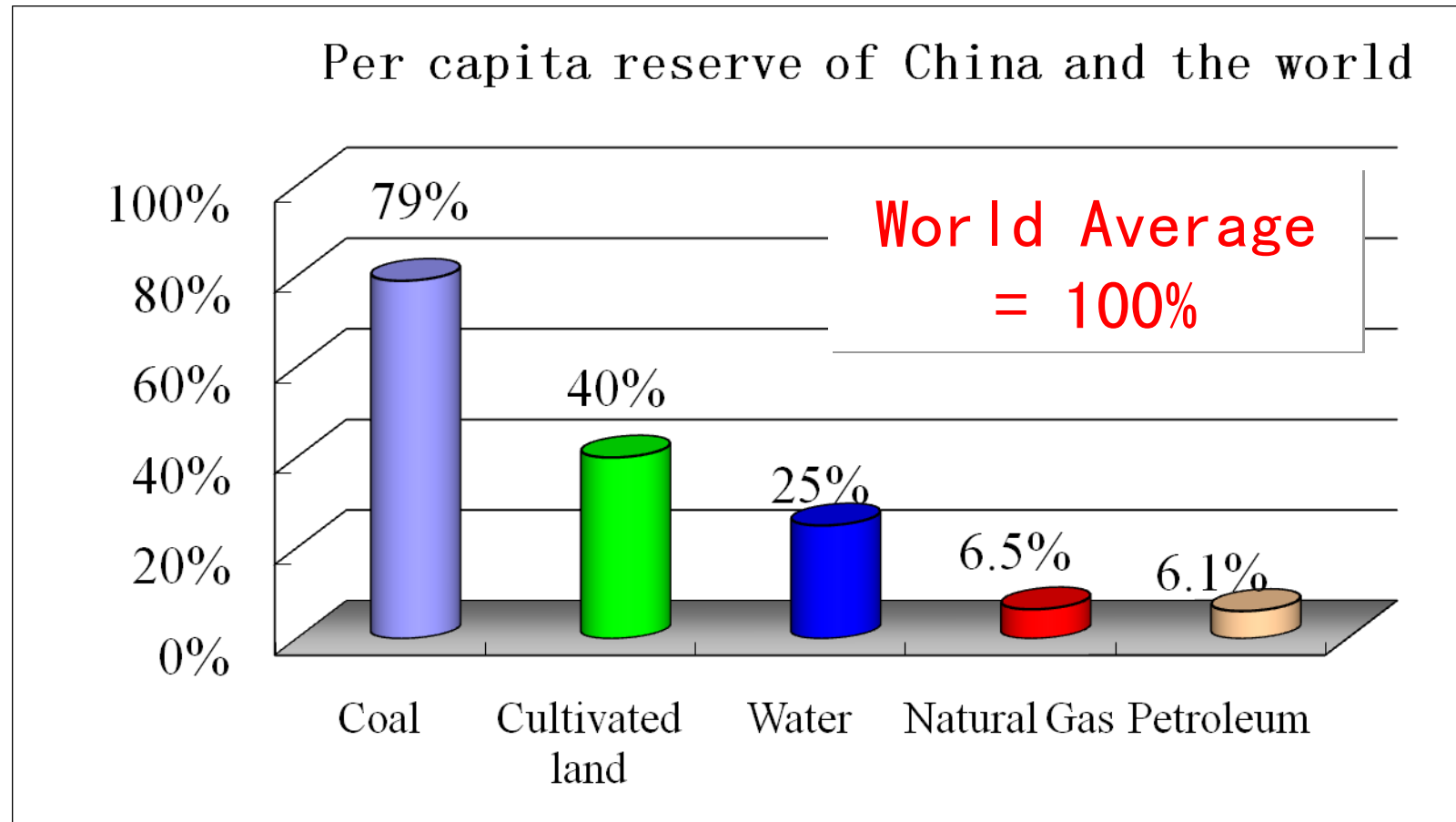


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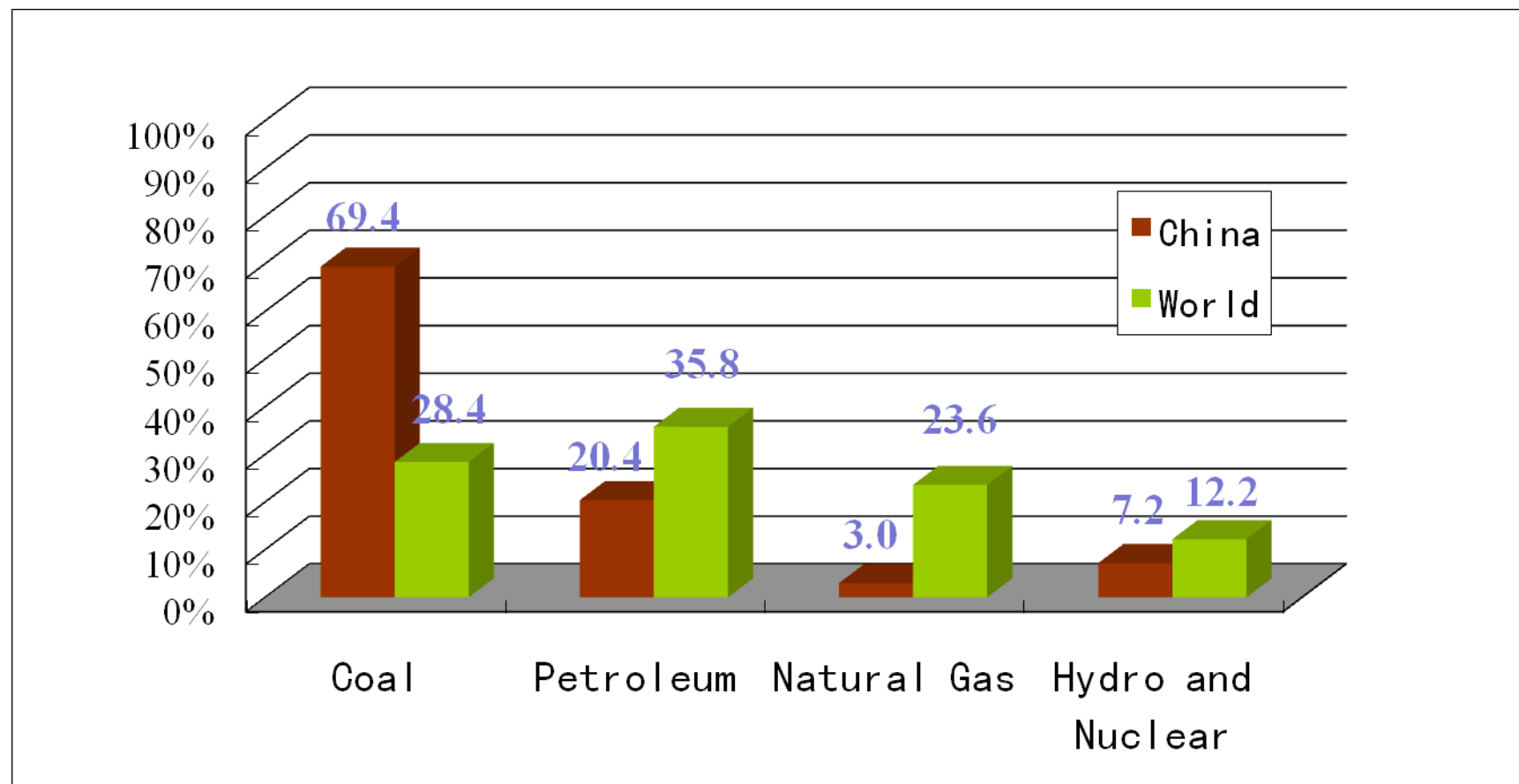
Facing big challenges

Energy reserve per capita is less than that of the world



Energy Supply by Source

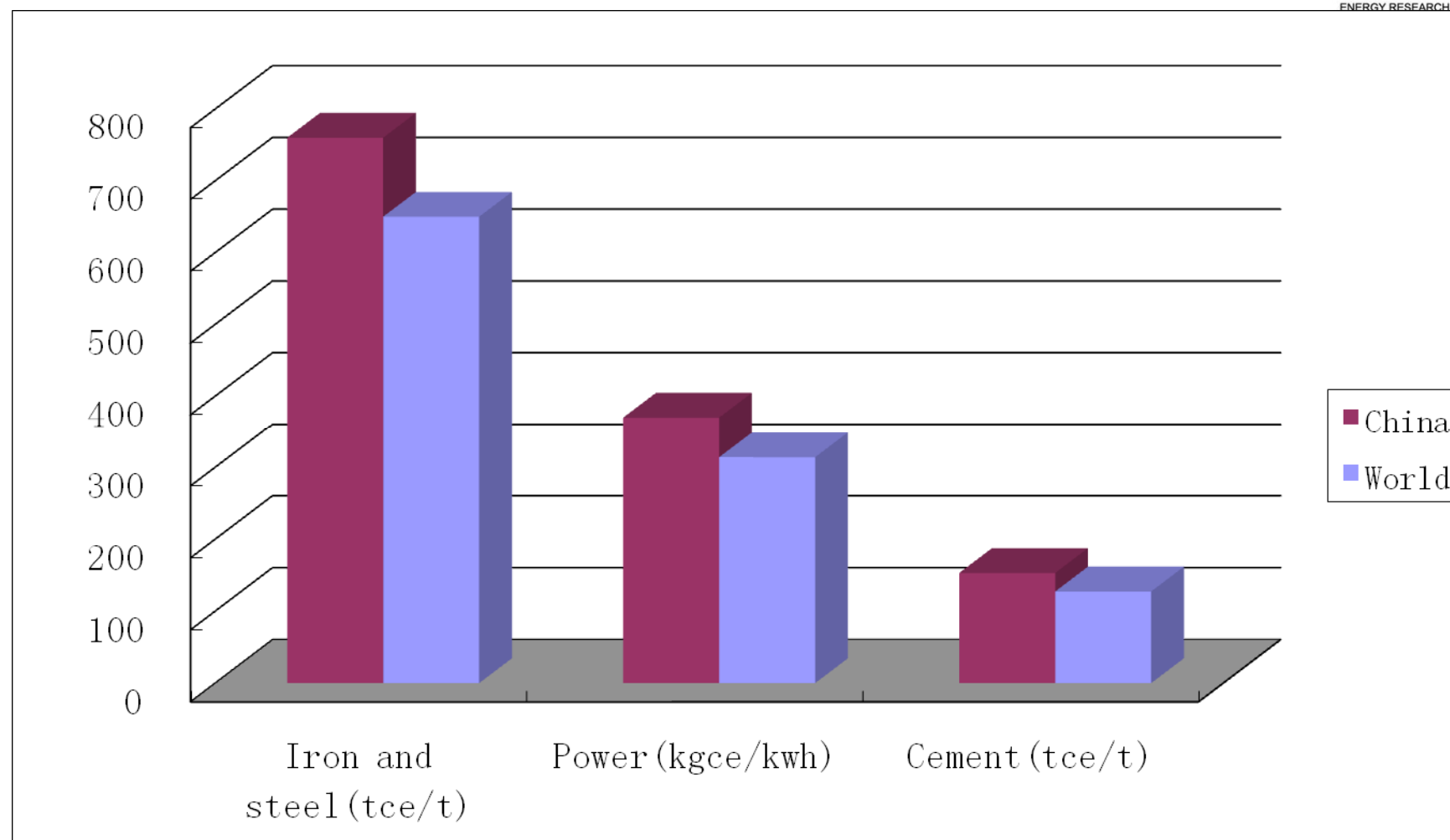
China and World Average in 2006





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Low energy efficient



Coal Mining Safety Problems

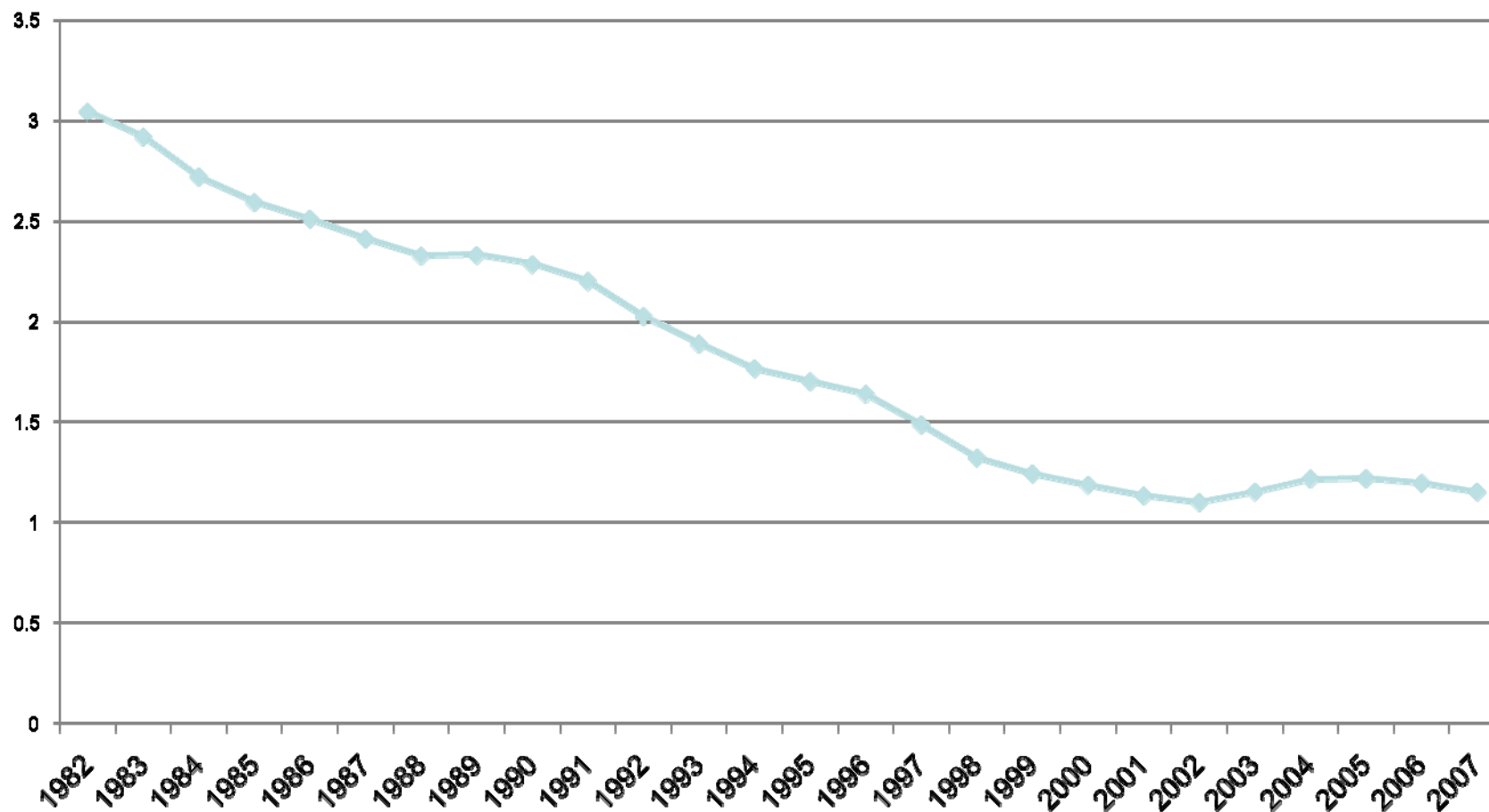
Country	Death rate of million tons output	Annual death toll
China	2.04	4746
Russia	0.46	113
India	0.42	107
Poland	0.27	28
South Africa	0.085	11
The US	0.039	38
Australia	0.023	3



Deteriorating Environment



Energy Intensity of GDP



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Energy Saving Goals

- National Goal
 - 20% reduction of energy intensity (TPES/GDP) from 2006 to 2010
- The 20% reduction goal is decomposed
- MOUs of accountability have been signed
- Indicators to evaluate and examine officials' performance



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Loose Sector-specific Goals



- Building sector
 - The Ministry of Construction commits to conserve 200 million TCE by 2010 in building sector
- Transport Sector
 - The Ministry of Communication raised a similar 20% goal in transport sector
- Industry Sector
 - Unlike the situation in Japan
 - A loose association of enterprises
 - No voluntary energy conservation goals yet



Energy Saving Policies



- National Action Plan for Energy Conservation
 - Issued by the State Council
- Revised and enhanced Energy Conservation Law
 - Enforce from April 1, 2008
- High on the agenda
 - Central and local governments must develop long-term and annual energy conservation action plan
 - Adopted unprecedented actions
 - Annual examination and evaluation



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Top-1000 enterprises EC Action



- Industry sector is playing a pivotal role
 - Consume 70% of energy consumption
 - Have big energy conservation potential
- Learn from Japanese experiences
- Top-1000 Energy Conservation Action
 - Include enterprises which consumed over 0.18 million TCE annually
 - Account for 46% of total industrial energy consumption
- Energy Saving Target
 - 100 million TCE in 5 years
 - Improve average energy efficiency level remarkably



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Ten Energy Conservation Projects



- Target
 - To form energy conservation capability of 240 million TCE in 2010
- Ten EC Projects
 - Coal based Boiler (Furnace)
 - Co-generation
 - Waste heat & pressure recovery
 - Oil saving and substitution
 - Motor system energy conservation
 - Energy system optimization
 - Green light
 - Building energy conservation
 - Energy conservation in government agencies
 - Capacity building of energy conservation technical assistant



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- Eliminate capacity in 2007
 - Small coal fired power plants: 21.57GW
 - Small coal mines: 11.2 thousands
 - Iron production capacity: 46.59 million tons
 - Cement production capacity: 87 million tons
- Specific funds for energy efficiency
 - 5.58 billion Yuan in 2007, 720% higher than that of 2006
 - Soft loans and financial rewards
 - Adopt rewards rather than subsidies



Other policies

- Energy efficiency assessment for new project approval
- Regular release energy efficiency indicators
- Building Energy Conservation Bill
- Energy Conservation power generation scheduling
- Enhanced energy efficiency standard
- Raising social awareness
- Reinforce organizing capacity
- Fiscal and tax incentives
- Accountability
- Complementary support



Energy Saving experiences

- Compulsory energy saving goal suits China's condition
 - A centrally-planned economy
 - Market failure is much severer than advanced economies
 - Organize capacity and law enforcement capability in government
- Strong government commitment creates policy expectation
- Decompose target in provinces and take examinations
- Consolidate organizational structure and accountability system
- Incentive and compensation measures



Future Challenges



- Market-based approaches is relatively weak
 - Energy pricing and taxation system
 - Incentive measures
- The decompose method needs improved
 - Reflect EC potentials in different regions
 - Encourage strong EC willingness
- Establish long term EC mechanism
 - Government force & Market force & Act voluntarily
- Negative drivers
 - Downturn economy
 - Over capacity of production
 - Lower fuel prices



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Thank you for your attention

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