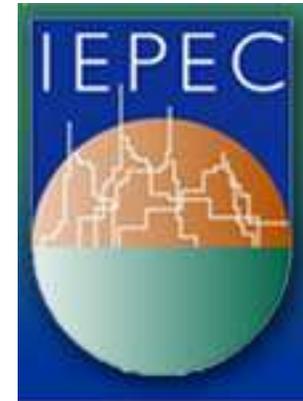


International Energy Program Evaluation Conference 2012

June 12-14, 2012 – Rome, Italy



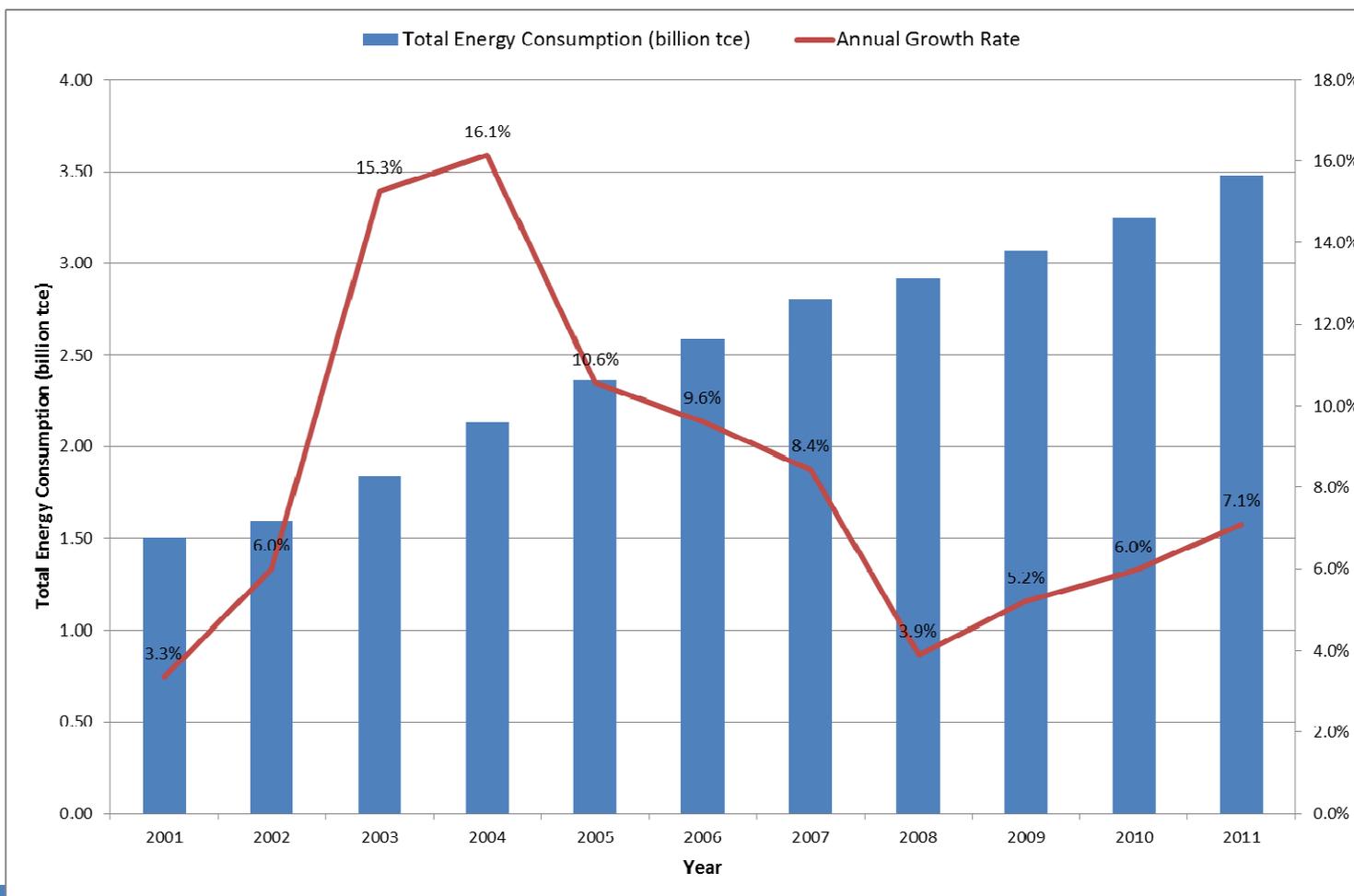
Using Evaluation to Manage Risk in a Changing World From China's Perspective

Li Pengcheng

China National Institute of Standardization

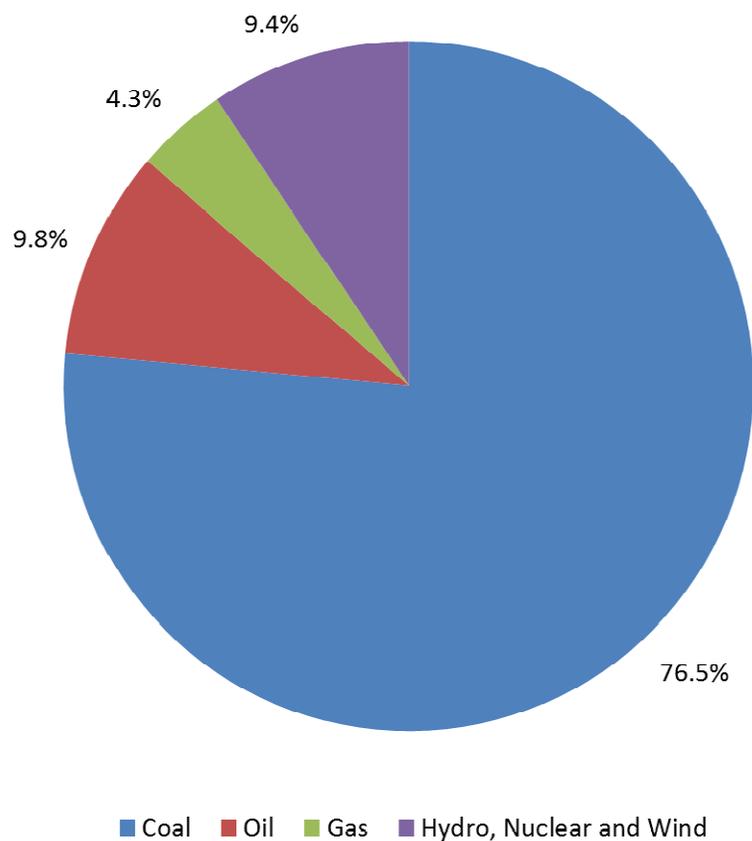
The general energy situation in China (Consumption)

- In 2011, China consumed 3.4 billion tce, almost 1/5 of global TPES.

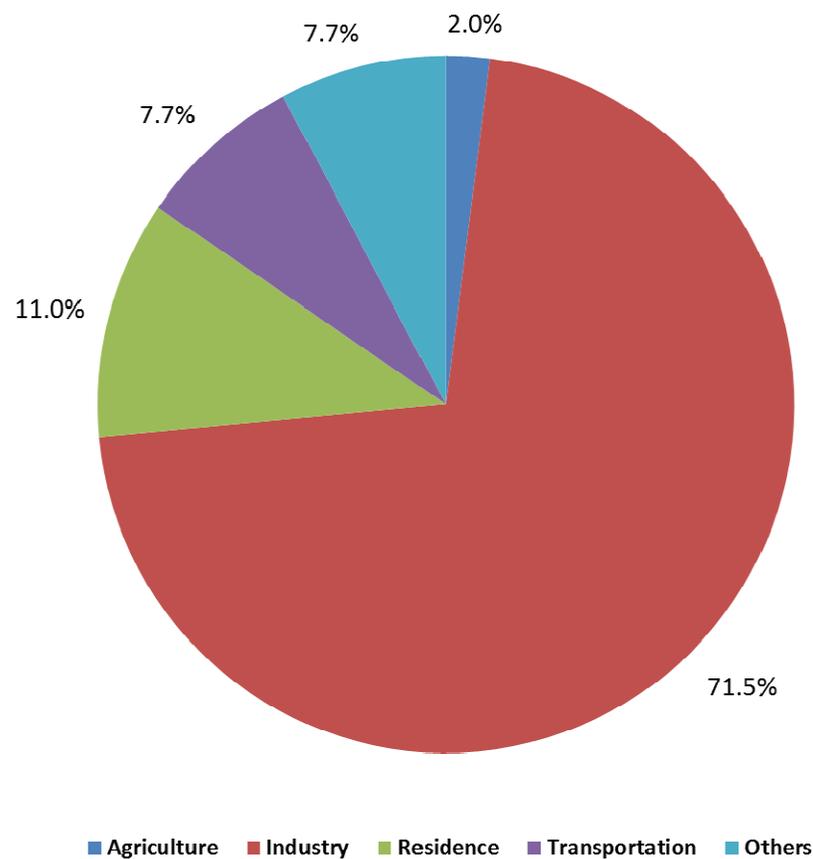


The general energy situation in China (Framework)

Energy Supply



Sectoral Energy Consumption



The general energy situation in China's industry

- In 2010, China produced 627 million tons of crude steel, more than 40% of the worldwide production
- In 2010, China produced 1.9 billion tons of cement, more than 60% of the worldwide production
- In 2010, more than 180 million of new vehicles were sold in China. It is the highest sales in history
- In 2011, China produced 100 million LCD TVs and 320 million PCs. More than 82% of global household appliances in 35 product groups were made in China.
- In 2011, exported air conditioners, refrigerators/freezers, washing machines, and TV/monitors from China occupied 47% of worldwide export.

Importance of Energy Efficiency in China

- In fact, energy consumption per capita in China is only about the 1/5 of USA
- Resources and environment are the two main constrained factors for China's future development
- The only choice of China: **Energy efficiency**
- Since 1980s, energy efficiency has been selected as the basic strategy for China's energy policy
- During 2006 – 2010 (11th Five-Year Plan), China made big efforts to improve energy efficiency
 - It is the first time that reduction of energy intensity (energy consumption/GDP) by 20% was set as the mandatory target of national five-year plan for economic and social development
 - The reduction of energy consumption per GDP by 19.1% was achieved finally
- During 2011 – 2015 (12th Five-Year Plan), the reduction of energy intensity by 16% is expected

The key energy programs linked to evaluation in China in 12th FYP

- **Mandatory target and accountability of provincial governors for energy efficiency**
- **Key energy efficiency programs (anticipated energy savings of 300 million tce)**
 - Energy saving retrofitting , demonstration and industrialization of energy saving technology, financial incentives of energy efficient products, promotion of ESCOs, capacity building
- **10,000 key enterprises program (anticipated energy savings of 250 million tce)**
- **Energy efficiency assessment of fixed assets investment projects**
- **Supervision and inspection**

Overview of energy evaluation in China

- **Regional Level**
 - **Country:**
 - **Objects:** reduction of energy intensity
 - **Methodology:** statistics
 - **Evaluators:** central government, research institutes
 - **Provinces:**
 - **Objects :** reduction of energy intensity, activities adopted to improve energy efficiency
 - **Methodology:** interview, rating sheets of actions
 - **Evaluators:** officials from central government
 - **National Energy Efficiency Program**
 - **Objects:** energy savings
 - **Methodology:** customized methodologies/Standard of Methods for Calculating and Evaluating the Economic Value of Electricity Saving Measures (GB/T 13471-2008)
 - **Evaluators:** research institutes, universities, etc.

Overview of energy evaluation in China

- **Organization level**
 - **Objects:** energy savings, energy performance (central government allocated the special energy savings target for 16,078 enterprises)
 - **Methodology:** standard of Calculating Methods of Energy Saved for Enterprise (GB/T 13234-1991)
 - **Evaluators:** self-report, local administrations or 3rd party bodies
- **Project level**
 - **Objects:** energy savings (RMB 300/tce will be subsidized by government to owners or ESCOs of retrofitting projects)
 - **Methodology**
 - Standard of General Technical Rules for Measurement and Verification of Energy Savings
 - Guidelines published by ministries
 - **Evaluators:** 3rd party bodies endorsed by central government

China's participation in international standards regarding energy evaluation

- **Scope of ISO/TC 257: standardisation in the field of energy savings through general technical rules and specific methodologies for the calculation of energy savings in projects, organisations and regions, and guidance on measurement, verification, and assessment of data quality as it relates to these calculations**
- **Working items for international standards:**
 - **General methods: methodological framework for calculation and reporting on energy savings (France convened)**
 - **Regions: Calculation on energy efficiency and savings for countries, regions or cities (Netherlands convened)**
 - **Organizations: General calculation methods on energy efficiency and savings for organisations and other enterprises (UK and India proposed)**
 - **Projects: Measurement, calculation and verification of energy savings of projects (China convened)**
 - **Joint work with ISO/TC 242: Measurement and verification of organizational energy performance – general principles and guidelines (South Africa and Germany convened)**



Conclusions

- **Situation of energy evaluation in China: still in early stage**
 - Low awareness of stakeholders (policy-makers, professionals, users, etc.)
 - Lack of mature methodologies
 - Short of qualified evaluators
 - Poor data quality
- **Recommendations**
 - Improvement of awareness of stakeholders
 - Development of training materials, courses, etc.
 - Make IEPEC to be a real international community
 - Liaise with international activities: ISO, EVO

Thank you for your attention!



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