



British Embassy
Beijing



China Regionalisation: Beijing and Inner Mongolia and Other Calculators

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Prepared jointly with Energy Research Institute (ERI)
of NDRC in China
Taipei, 11 Feb.



Overview of the development of the 2050 Calculator in China

Started to build the Inner Mongolia 2050 Calculator, the 1st Provincial Calculator

Participated in building the Global 2050 Calculator

内蒙古自治区能源经济发展战略研究

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2014年11月20日



Updating and refining the Calculators

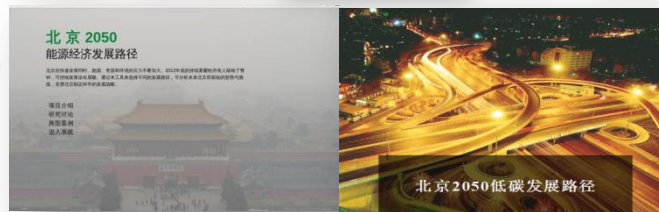
Global 2050 Calculator



2013, started to build Beijing City 2050 Calculator, the 1st City level Calculator

2012, International 2050 Pathways Conference in Beijing

2013, More countries started to build their own 2050 Calculators



Operating and maintenance of the Global 2050 Calculator

2011, China 2050 Calculator: China Energy Economic Development Analysis System



Supporting other countries in building their own Calculators

2011

2012

2013

2014

2015

China 2050 Calculator

2050pathway.chinaenergyoutlook.org

- Started in 2011, developed by Energy Research Institute (ERI) of NDRC, China, supported by FCO Prosperity Programme Fund, and technical support from DECC;
- Launched 'call for evidence' in June 2012;
- Launched in Sep. 2012 in the International 2050 Pathways Conference in Beijing. The Chinese name is called 'China 2050 Energy and Economic Development Modeling System – Transition, Green and Low Carbon'



What are different?

China

- Industrial Sector is divided into high energy intensive, new and other sectors

- Transportation Sector is divided into Intra-city, Domestic, International and Freight transportation sub sectors.

- Household is divided into Urban and Rural household

UK

- No sub-division.

Only Domestic, International transportation

- No sub-division

What are different?



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China

•Agriculture

- The agricultural sector is under-developed and hasn't applied new energy technologies for energy production. Agriculture is not on the energy supply side.

•Traditional Energy

- Oil and gas heavily rely on import. Coal reserve is abundant.
- Energy consumed in the traditional energy extraction is considered in the model

•Energy Supply

- The natural gas supply includes: natural gas, LNG, shale gas, conventional gas, CBM, and coal gas.

UK

- Agriculture doesn't only consume energy but also produce energy

•Traditional Energy

- Rich in natural gas reserve
- Not considered in the model

•Energy Supply

- Less complicated

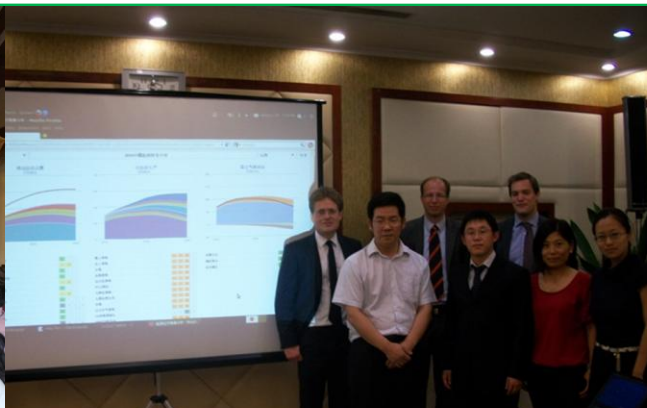
How has the calculator been used?

- Engaging high-level government officials, academics, and business.
- Workshops on energy and climate change discussions and debates.
- Training activities for senior government officials, university students.
- Developed a lecture “China 2050 Pathway” to introduce the new methodology for policy making, and build the understanding on the energy and environmental challenges China is facing.
- Developed cooperation with different Chinese and international organizations.
- Supporting energy research,e.g.
 - Supported Global Carbon Project led by Tyndall Centre on Climate Change Research;
 - Underpinned the analysis in the ‘China Energy Outlook 2014’, flagship Energy publication in China.
- Supporting further research on energy nexus with air pollution, water and land use

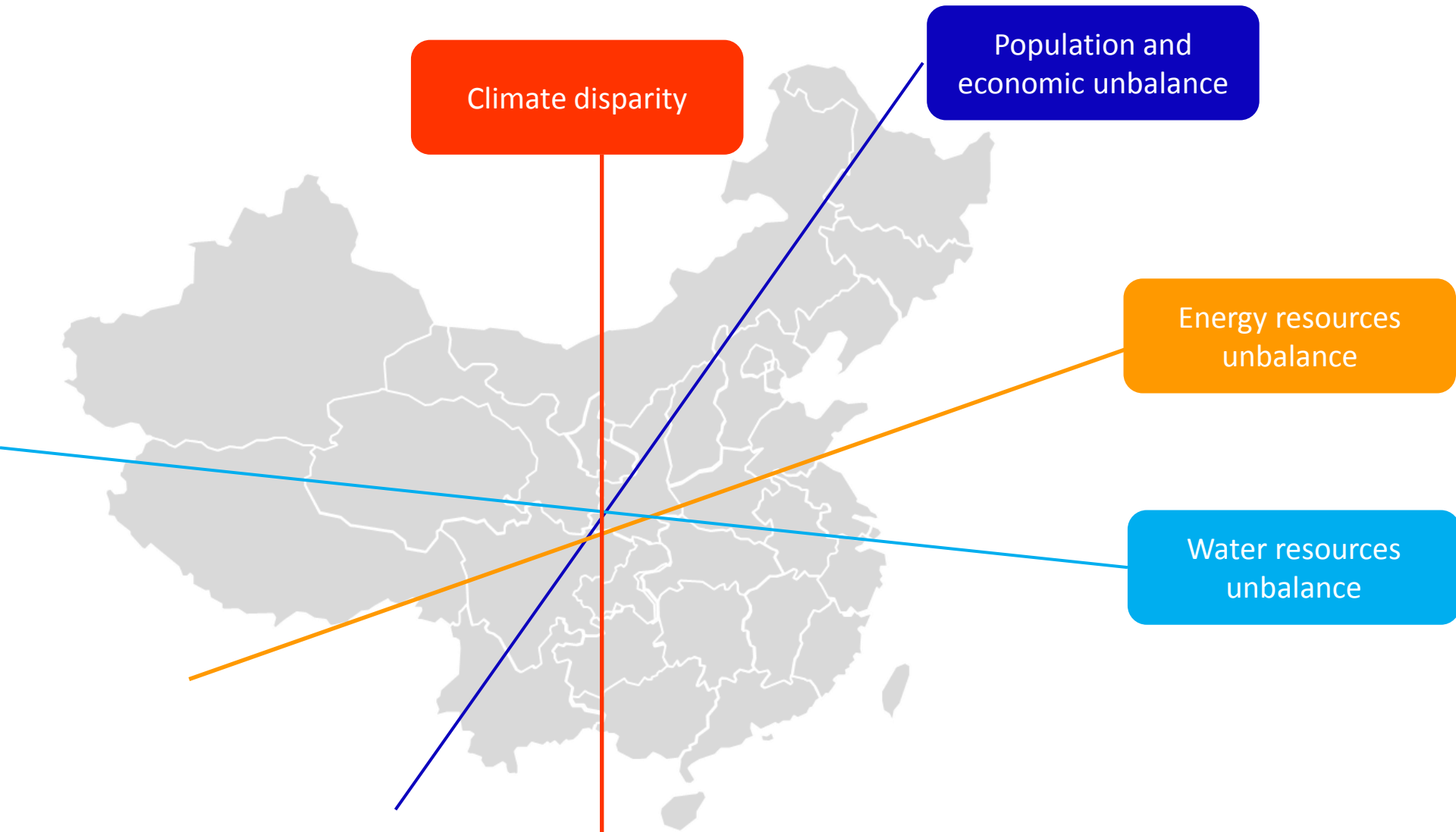
Engaging and outreach activities



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Regionalisation-From national to City and Provincial Calculator



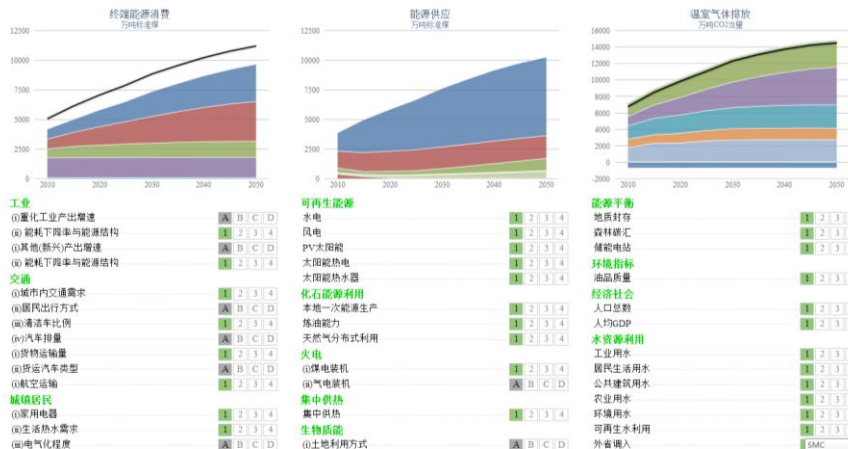
Beijing City 2050 Calculator

beijing.chinaenergyoutlook.org



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论坛 | 功能模块 | 北京2050能源经济发展路径 | 典型路径 | 主



北京 2050 能源经济发展路径

北京市快速城镇化、能源、资源和环境的压力不断加大，2012年底的碳排放量地所有人口，可持续发展面临挑战。通过本工具来得到不同的发展路径，可分析未来北京面临的挑战，支撑北京制定科学的发展战略。

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能源展望 中国能源展望 能源城市 能源观点

情景分析 路径模拟 路径模拟 模型交流

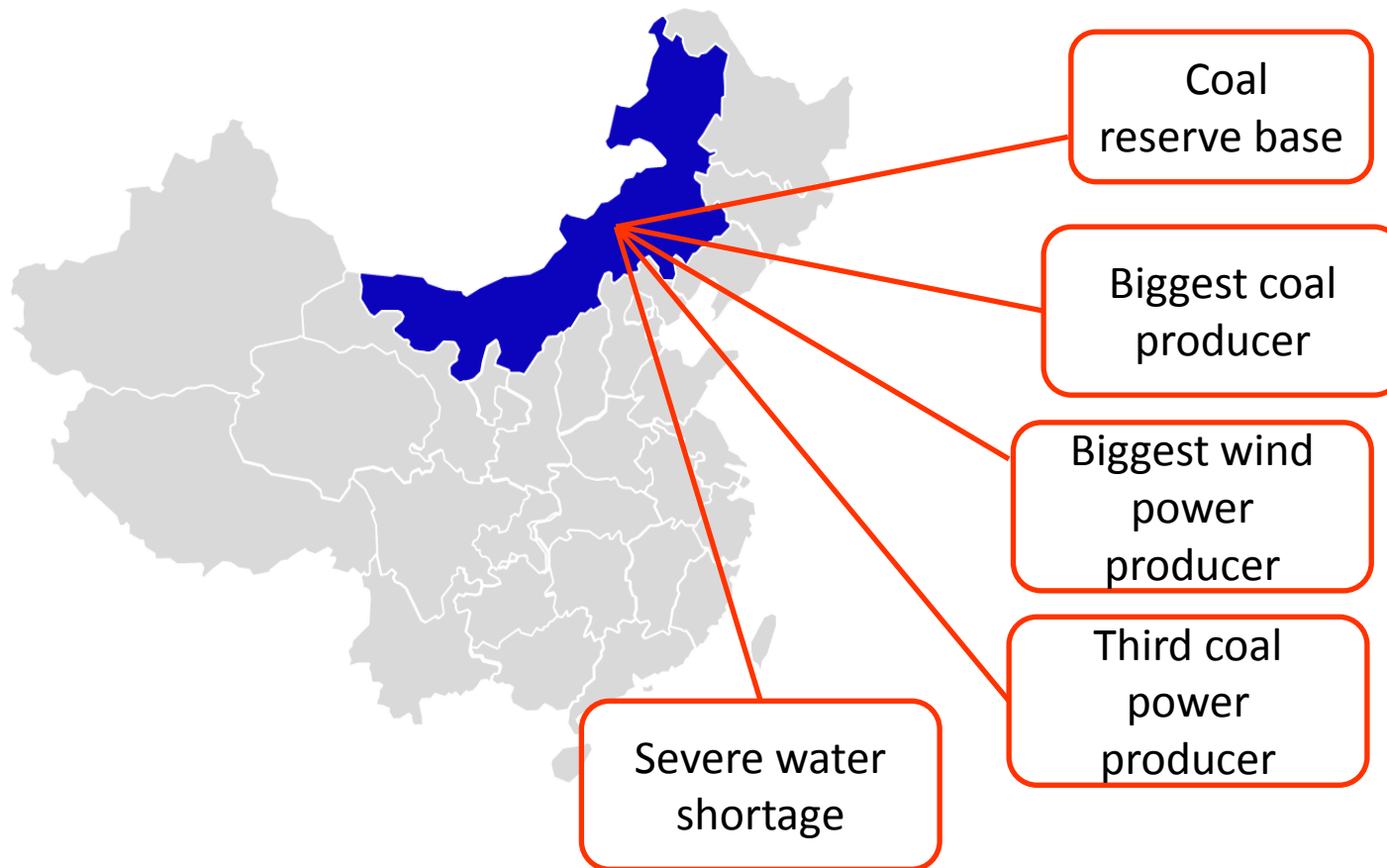
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What have been learned from the Beijing Calculator?

- The pollutants from heating can be significantly reduced in Beijing by coal to gas, and coal to electricity, but far from enough to clean up the air;
- Beijing has a big potential in using the distributed gas energy;
- The impact of the life style in Beijing has huge impact on energy consumption and emissions, more significant than the national average level;
- The waste recycle and reuse can effectively reduce the land use;
- Beijing can meet the target of reducing coal consumption by 7million ton without increase of the cost;

The Beijing calculator built the experiences and approaches on how to analyze the typical region which mainly consumes energy, then the team realized that they have to analyze the region which supplies the energy to get a complete picture.

Inner Mongolia 2050 Calculator



The Inner Mongolian government commissioned ERI to build the Provincial Calculator.

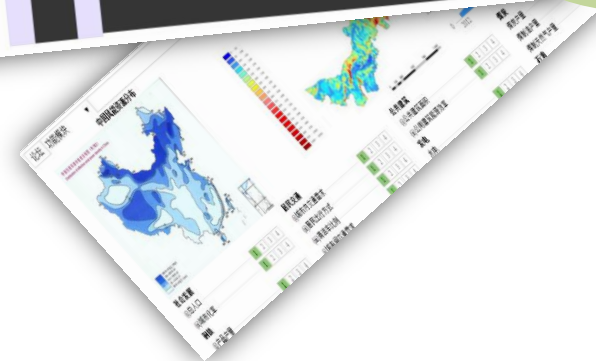
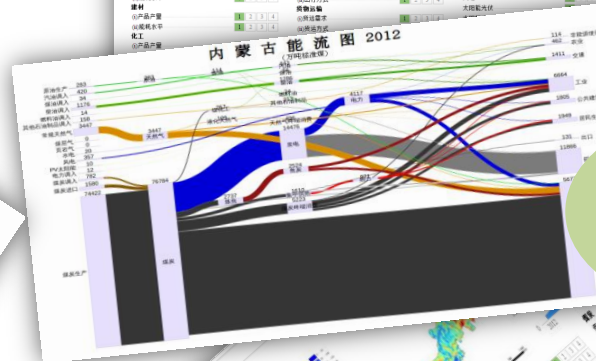
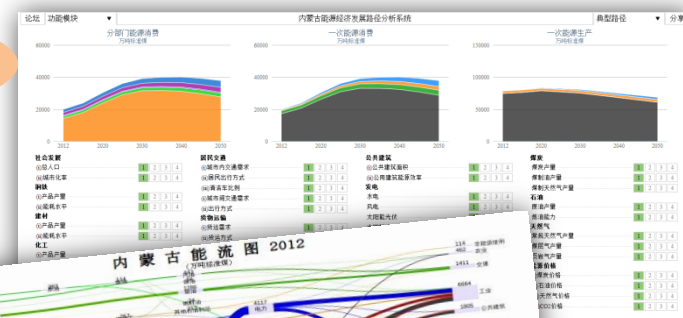
Three breakthroughs - one

The first time, **Strategy Report** and **Analysis** are carried out simultaneously.

Simultaneously

1 Overall Report,
8 reports on Specific
Subjects,
10 Investigation
Reports

27 analysis
modules



Three breakthroughs - two

The first, enabled **real-time** and **dynamic** update on the Strategy report.

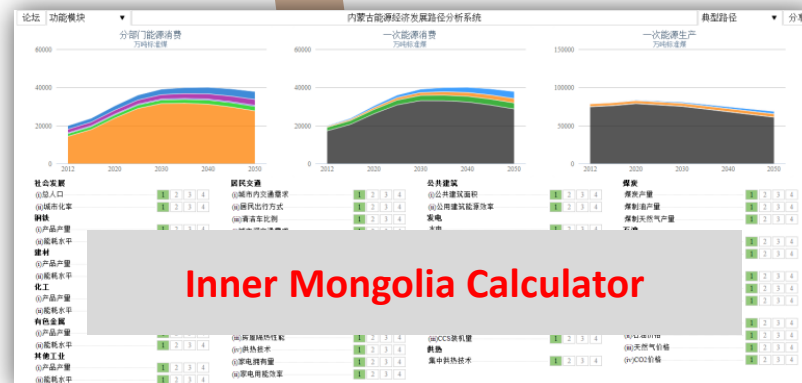
**Support
function**

**Real-time
analysis**

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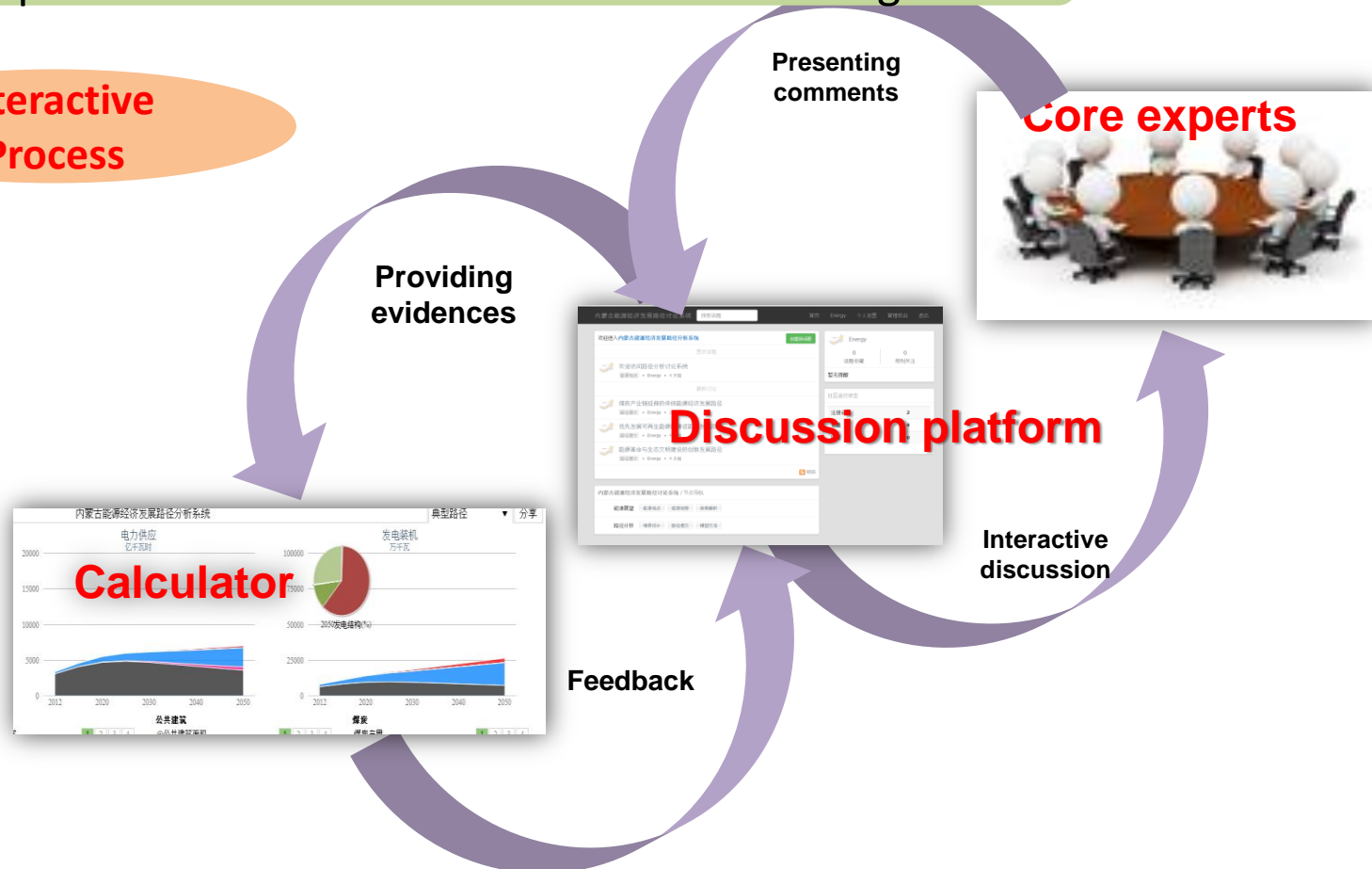


**Latest research
findings**

Three breakthroughs - three

The first time, been able to **extensively** and **sufficiently** absorb experts comments and other research findings.

Interactive Process



Next Steps

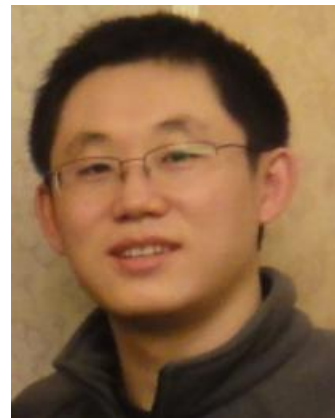
- Continue developing Provincial and regional calculators, focusing on the key energy provinces in Western China, and support the national and regional strategic planning and development;
- Support the Silk Road Economic Belt analysis under the national and international context;
- Play an important role in maintaining the Global Calculator;
- Continue promoting the Calculators;

Thank you!

- If you have any questions, feel free to contact ERI 2050 team:



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