



Energy Issues for the CEM

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The background of the slide features three overlapping wireframe globes in a vibrant green color. The globes are semi-transparent, showing a grid of latitude and longitude lines. The text 'Three Priority Areas for Analysis' is overlaid on the central globe in a bold, yellow, sans-serif font.

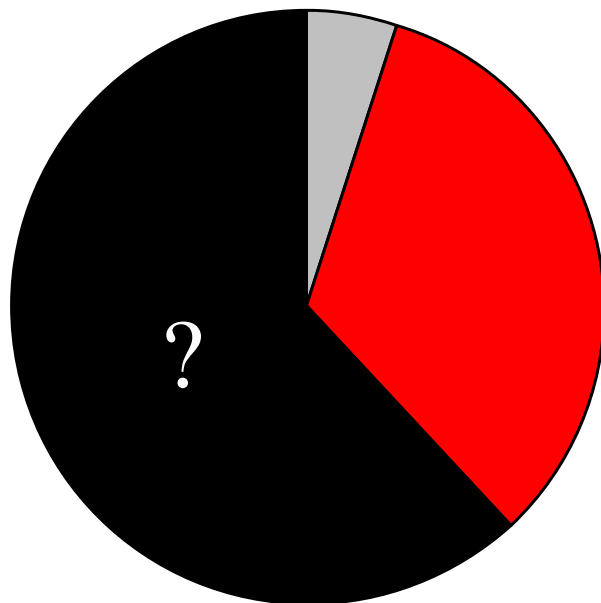
Three Priority Areas for Analysis

1. Sustainability
2. Efficiency
3. Prices

Sustainability I

Over the last 15 years, the North China Power Grid increased capacity six-fold.

Over the next 15 years, it will nearly triple capacity.



■ 1990 ■ 2005 ■ 2020

27 July 2006

North China Power Grid			Annual
	Installed MW	Cumulative	Growth
1940-1950	360		
1950-1960	730	1,090	
1960-1970	657	1,747	4.83
1970-1980	2,848	4,595	10.15
1980-1990	6,893	11,488	9.60
1990-2000	27,416	38,904	12.97
2000-2005	32,410	71,314	12.88
2005-2010	-	104,784	8.00
2010-2020	-	206,125	7.00

This implies:

200MMT additional coal

(19% of total US use in 2005)

560MMT additional CO₂

(25% of US total emissions)

220KMT additional SO₂ (@ 95% efficiency)

(one third of China's current total)

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Sustainability II

- The 11th Plan enunciates a goal of 20% reduction in aggregate energy intensity.
- This appears to be a reaction to the fact that projected resource use for 2010 was attained instead by 2005.
- To give substance to this objective, much stronger empirical evidence is needed.



Efficiency

- In both industrial and residential energy use, Chinese efficiency levels can be improved substantially.
- Policies that promote energy efficiency will stimulate economic growth by re-directing expenditure to more labor intensive, higher value added goods and services.
- A GE model can produce detailed estimates of these macroeconomic efficiency benefits.

- Oil price scenarios can be useful, but coal price trends could exert more substantial aggregate and compositional effects on the Chinese economy. For example, coal will fuel 90% of NCPG capacity.
- Prices at each stage of the energy supply chain are becoming increasingly uncertain.