



Government figures show that by the end of China's 11th Five-Year Plan in 2010, the country achieved a 19.1 percent energy consumption reduction, narrowly missing the 20 percent target. To meet further reduction targets, the 12th Five-Year Plan (5YP) is investing heavily in the low-carbon economy and sustainable development.

China's climate change response and sustainable development

Based on China's longer term pledge to reduce greenhouse gas (GHG) emissions per unit of GDP by 40 percent to 45 percent by 2020 compared with 2005 levels, the government has issued emissions reduction targets at both provincial and sector levels. It has devoted significant resources in communicating the targets and monitoring progress. Other measures include the designation of low-carbon pilot provinces and cities and fiscal measures to incentivise energy efficiency efforts.

Further reducing energy consumption and carbon emissions during the 12th 5YP period looks set to be a significant challenge. Key steps may include:

- Enforcing low-carbon regulations, i.e. from encouraged to mandatory implementation
- Implementing performance accountability, i.e. emphasise measurement
- Implementing value chain restructuring, i.e. speed up disposal of high emission assets
- Investing in energy-efficient technology and increasing the proportion of renewable energy used
- Improving policy measures on energy and natural resources pricing to level the playing field
- Promoting "green" consumption
- Introducing new reduction targets for carbon dioxide, ammonia nitrogen, and nitrogen oxide (NO_x)
- Introducing a carbon pricing scheme.

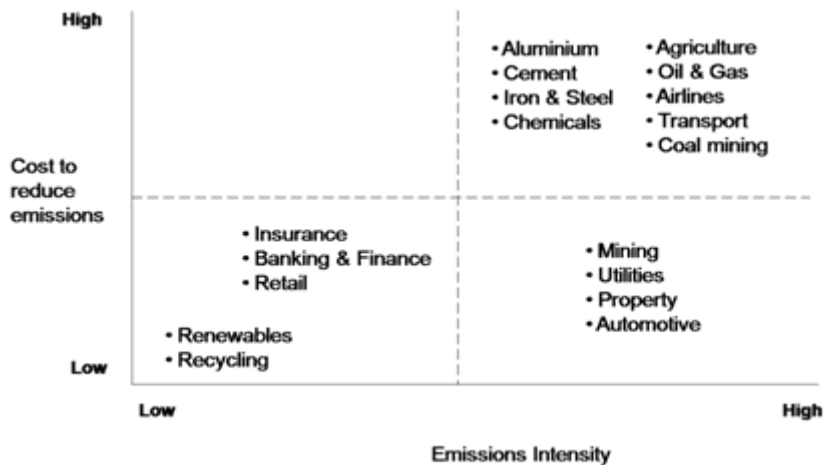
Indicator	Binding target at the end of 2015 (%)	
Water usage reduction per unit of industrial added value	-30	
Non-fossil fuel consumption vs. total primary energy consumption	+3.1	
Energy reduction per unit of GDP	-16	
CO ₂ emissions reduction per unit of GDP	-17	
Emissions reduction of key pollutants	COD	-8
	SO ₂	-8
	Ammonia nitrogen	-10
	NO _x	-10
Forest coverage	+1.3	

Businesses are increasingly concerned about climate change and sustainability as a result of pressure from regulations and stakeholders.

In the wake of a series of highly-publicized global climate conferences and China's public commitment to emissions reduction targets, businesses are being forced to shift their attention inwards.

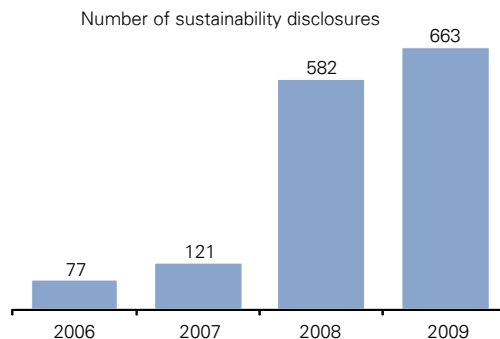
- China aims to cut the amount of energy and carbon dioxide emissions needed for every unit of economic output by 16 percent and 17 percent, respectively, over the five years to 2015. This is consistent with China's long-term plan to cut carbon intensity by 40 percent to 45 percent by 2020, relative to 2005 levels.
- Companies are paying more attention. Most industry leaders already have or are developing a sustainability/CSR strategy that is in line with their overall business strategy.
- Companies and their stakeholders are recognising challenges and opportunities brought by climate change.
- Some sectors (such as iron and steel, airlines, and cement) have both high emissions intensity and a high cost to reduce emissions.
- An increasing number of companies are building carbon inventory specifically in preparation for carbon reporting.
- Although sustainability and climate change have been gradually moving onto the board agenda, they remain for the most part at the project level with a technology focus.

Impacts of climate policy on business sectors



Source: The CEO guide to carbon report, KPMG Australia

In 2009, Chinese companies and subsidiaries of multinational companies in China disclosed 663 sustainability reports, up from only 77 in 2006.



Sources: (1) Research on CSR reporting in China 2009, Syntao ; (2) Research on Corporate Social Responsibility Reporting in China 2010, WTO Tribune



Implications and insights

The transition to a low carbon economy marks the most significant change to business in decades:

- More businesses are starting to put in place a carbon strategy and establish a carbon reporting system
- Businesses are increasingly expected to disclose their carbon and sustainability information
- More companies are likely to establish a management structure to monitor the achievement of low-carbon and sustainable development objectives, including internal audit and/or external independent assurance
- As carbon pricing is being considered, businesses will need to design a marginal carbon abatement cost curve based on current emissions sources, emissions intensity, carbon pricing forecasts, availability and cost of abatement options
- Further consolidation in the carbon-intensive sectors, for example natural resources, iron and steel, as smaller and older plants are being shut down
- Sustainability is increasingly seen as a must-have strategic tool to create company value to meet both internal and external stakeholder demands.

Responses from selected industry participants

Company	Sector	Current status of carbon management
Baosteel	Iron & Steel	<ul style="list-style-type: none"> • Has a sustainability strategy and management system in place; plans to develop a strategy for low-carbon development and CO₂ emissions data collection • Conducting research and development on low-carbon technologies, CO₂ recycling, utilization, absorption and solidification; promoting the use of advanced technologies for energy conservation and emissions reduction • Participating in Clean Development Mechanism (CDM) and the Asia-Pacific Clean Development and Climate Partnership (APP)
China Construction Bank	Banking	<ul style="list-style-type: none"> • Promoting "Green Financing" • Strengthening the green credit approval process based on potential borrowers' environmental and energy track records • Preparing for the implementation of the Equator Principles • Implementing measures to reduce its own carbon footprint
China Shenhua Energy	Power	<ul style="list-style-type: none"> • Has a CSR strategy and management system • Has an energy and emissions data collection, measurement and monitoring system • Conducting R&D on low carbon and clean coal technology • Participating in CDM
Sinopec	Oil & Gas	<ul style="list-style-type: none"> • Improving energy efficiency by eliminating outdated production capacity and upgrading technology at key facilities • Switching refinery gas flaring to recycling • Strengthening R&D on low carbon technology, including CO₂ capture and use, and new energy • Participating in CDM
State Grid	Utility	<ul style="list-style-type: none"> • Has a sustainability strategy and management system in place • Established a Smart Grid development strategy • Publically disclosed its CO₂ emissions data • R & D in renewable energy technologies • Increasing power generation capacity from renewable energy sources

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Potential "green" opportunities

- Create competitive advantage by strategically implementing energy efficiency and/or clean energy measures ahead of carbon pricing
- Energy Performance Contracting related energy efficiency services, products, and financing
- Create product differentiation by training and working with suppliers and creating a sustainable supply chain
- Energy efficiency, new energy, and clean energy cars are three key investment areas (among seven special sectors) identified in China's 12th 5YP
- Financial investors have investment opportunities given the significant capital expenditure (CAPEX) needed for clean energy
- Low carbon pilot city initiatives create multiple opportunities in city planning, CDM project portfolios, and technology innovation.

Potential risks and barriers

- Loss of license to operate for energy inefficient assets/plants
- Unfavourable cost structure due to imminent carbon pricing
- Fraud in green financing portfolios
- Unrecognised carbon/environmental liability in targets or newly acquired assets
- Unclear monitoring, reporting and verification (MRV) mechanism for carbon emissions
- Unsophisticated local suppliers lack sustainability knowledge, framework, models, and systems

CEO checklist

- Is your business involved in "high risk" sectors with significant greenhouse gas emissions, particularly mining, energy, manufacturing and transportation?
- Does your supply chain include greenhouse gas intensive goods and services?
- Is your business sensitive to a tax or a cap on greenhouse gas emissions?
- Are you considering acquisitions, mergers or JV partnerships that may require you to consider the impact of carbon emissions?
- Do you feel confident about explaining your organisation's climate policy and reporting at a shareholders' meeting?
- Do you plan on upgrading to cleaner technology?

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