CARBON TRADING IN CHINA

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China's Carbon Emissions Growth

- Annual CO_2 emissions now ~ 8300 $MtCO_2$; 28% of global total and more than US & EU combined
- China accounts for more than 60% of the increase in global emissions over the last decade
- Per capita emissions now higher than those of the EU and 45% higher than global average
- China is developing on a more carbon-intensive path than average, yet 16% of emissions associated with exports

Sources: Global Carbon Project, CO2 Scorecard

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When Will China's CO_2 Emissions Peak?

- Vice Premier: "As soon as possible"
- China will announce post-2020 actions in early 2015
- Possible target in 13^{th} Five Year Plan (2016-2020)
- At current rate, China's' CO_2 emissions could rise to 12.7 billion by 2019
- Yet coal consumption already dropping and may peak as soon as this year

Sources: Reuters, US Climate Change Summit, Greenpeace

China's Climate Change Efforts

- Implementing arguably the world's largest energy efficiency and renewable energy programs
- National climate change plan to 2020 and targets for carbon intensity, reforestation, non-fossil energy, energy intensity, caps on energy/coal consumption
- Strong measures to curb air pollution through cuts in coal consumption and vehicle emissions; most but not all will also reduce CO_2 emissions
- Carbon trading launched; possible carbon tax

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Overview of Carbon Trading in China

- Seven regional pilots launched and eighth program to launch in 2015; now the world's 2nd largest carbon market, covering 1,115 $MTCO_2e$
- China has announced plans to launch national carbon market in 2016, second in Asia
- National market would cover 40% of economy, regulate 3-4 billion tonnes of CO_2 by 2020 and be worth up to $65 billion, largest in world
- Will bring in more emitting sectors in 2020 and seek ties to international markets in next decade

Source: Reuters, Bloomberg, NY Times

Strengths/innovations of China's carbon trading efforts

- If China sets a national price on carbon, others will follow
- Regional pilots allow experimentation with different systems
- In September, China bank lent $6.5 million to a chemical company using 4 million carbon permits as collateral
- Granted license to Finnish carbon trading firm to operate in three markets, second foreign company

Weaknesses of China Pilot Markets

- Lack of cap/unambitious emission reduction targets
- Lack of accurate data availability, especially # of permits and amount of CO_2 reductions
- Overallocation of free permits; could worsen in 2014
- Lack of strong legal foundation
- Weak monitoring, reporting and verification
- Capacity building needed

Carbon trading pilot 1-Beijing

- Pilot began in Nov 2013, Beijing reports that CO_2 emissions from the city's major polluters fell 4.5 % in 2013 - did not say how many tonnes were emitted or no. of permits issued
- About 2 million permits traded in 2013-2014; Total market value of just over $16.3 million; Average costs reportedly fell 2.5%
- Reported compliance 97.1% - inspections drove up prices to $11.94 in July, highest in world
- Will add 120 companies including public transport, universities, data centers, banks

Source: Reuters

Carbon pilot 2 – Guangdong Province

- China's biggest carbon market
- 2 million permits sold at auction in September at $4.20 each, 4% higher than minimum bidding price of 25 RMB
- Three more auctions to be held in this compliance year, mid-2014 to 6/2015
- 27 companies and 6 speculative private investors bid for 322 million permits
- Will hand out 6% more permits in 2014

Source: Reuters

Carbon trading pilots 3-Shanghai

- Launched in 2013
- Issued 160 million permits to around 200 covered companies,
- Denied access to trading houses but said it will soon grant licenses to qualified trading companies
- Only 1.5 million permits traded in first year, none since June 30

Source: Reuters

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Carbon trading pilot 4- Shenzhen

- Smallest and oldest pilot market; annual cap around 33 million permits
- Launched in June 2013, but only 1.55 million permits traded, around 60-70 RMB each
- Allows trades to be settled in foreign currencies, handled by Bank of China, to attract foreign traders
- Vows to impose sanctions and fines on companies that fail to comply with targets

Source: Reuters

Carbon trading pilot 5 - Tianjin

- Covers 114 energy and industrial firms
- Twice extending compliance deadline
- Allocated permits covering 90 percent of allocated emissions to power and heat facilities
- Slow trading; 250,000 permits

Source: Reuters

Other pilot markets

- Hebei
- Chongqing
- Qingdao approved to launch in 2015

Carbon Offset Market

- Companies covered by pilots can use offsets (CCERs) to meet 5-10% of compliance requirements
- China agreed to let 14 projects generate 6 million offset credits and sell into pilot carbon markets
- CCERs will likely be eligible for use in national market after 2016
- Will sharpen competition between local exchanges, since national market will probably only have one or two exchanges

Source: Reuters

Thank you!

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