

Can't say exactly what: Post-Kyoto proposals for and from China

Stephen Howes

Crawford School for Economics and Government
The Australian National University

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"China has to make a substantial commitment, though I cannot say what exactly the nature of that commitment ought to be."
- Todd Stern, US Climate Change Envoy, February 2009

Structure

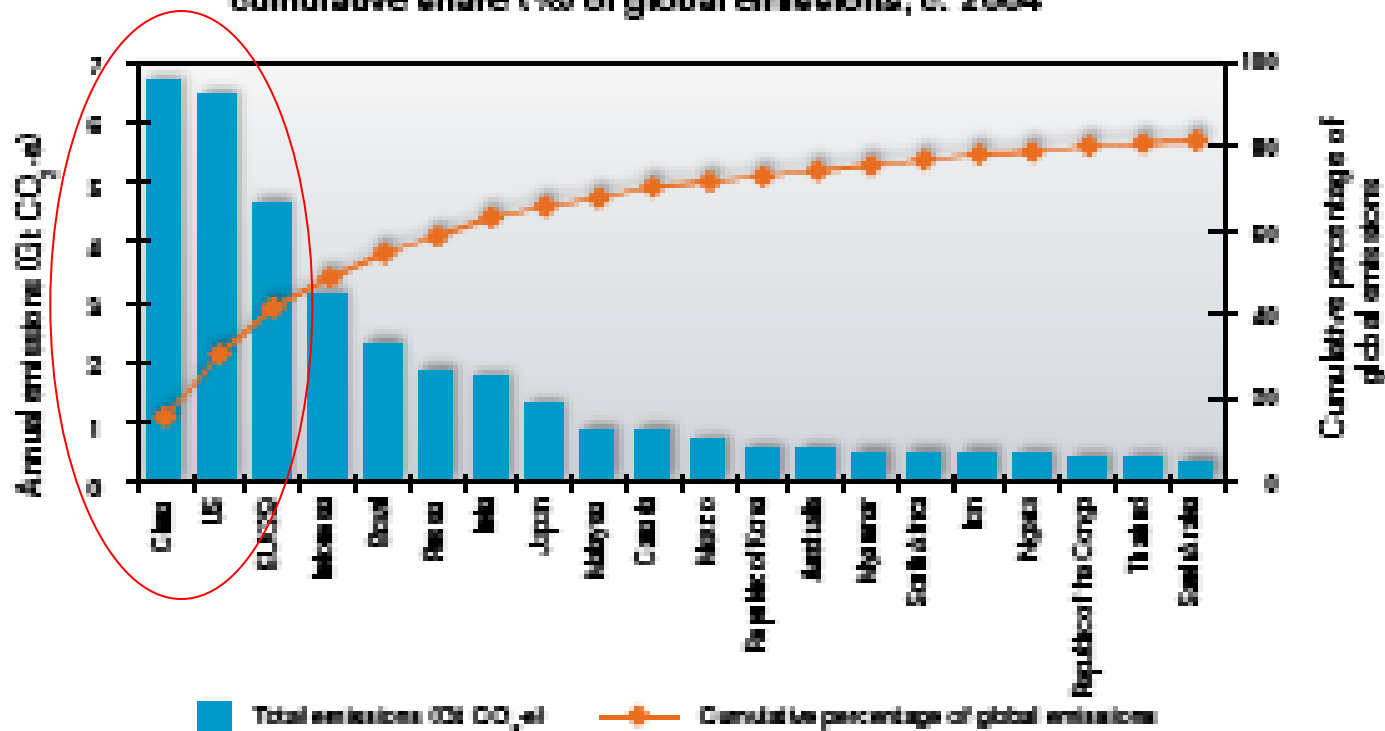
- China's importance
- Continuity and change in the international climate change negotiations.
- The current negotiating framework
- Recent official and non-official proposals from China.
- Conclusion

China's importance

- China is one of the big three emitters:
 - China, EU and US constitute 50% of global emissions.
- China is a superpower, and a leader among developing countries
 - Developing country emissions already exceed 50% of total global emissions.
- Actions by China to reduce emissions will have large direct and indirect environmental benefits.

China: the world's largest emitter

Figure 3.1 The 20 largest greenhouse gas emitters: total emissions and cumulative share (%) of global emissions, c. 2004



Sources: UNFCCC (2007) 2004 data for US, EU (25), Russia, Japan and Canada; Department of Climate Change (2008) 2004 data for Australia (using UNFCCC accounting); and World Resources Institute (2006) for other countries (2000 data except for CO₂ emissions from fossil fuels, which are for 2004).

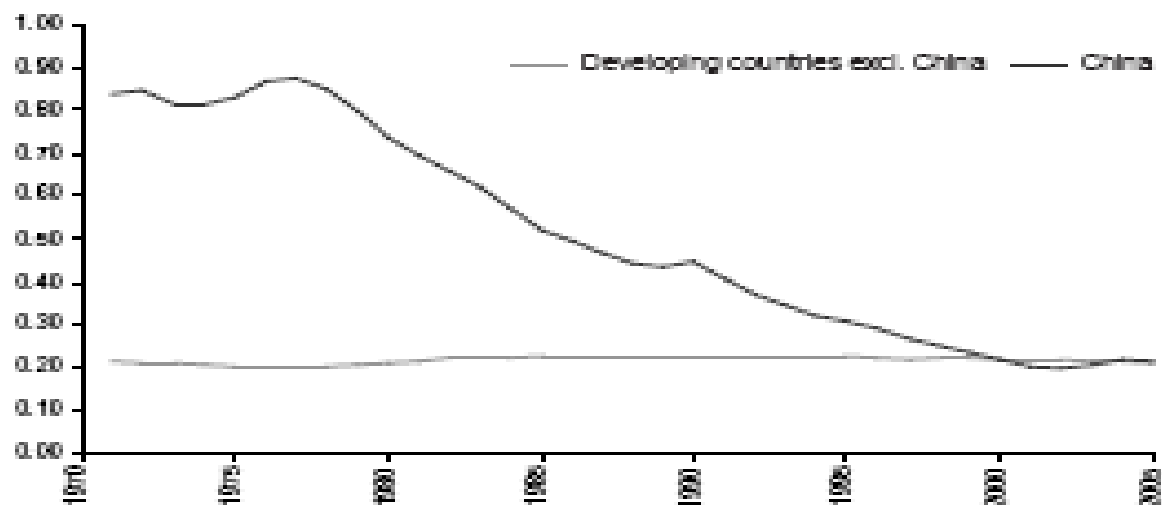
Recent rapid growth of emissions in China has had a global impact

World	1971-1990	1990-2000	2000-2005
Emissions growth	2.1%	1.1%	2.9%
GDP growth	3.4%	3.2%	3.8%
Energy growth	2.4%	1.4%	2.7%
China			
Emissions growth	5.5%	3.2%	10.6%
GDP growth	7.8%	10.2%	9.4%
Energy growth	4.3%	2.5%	9.1%
World minus China			
Emissions growth	1.8%	0.8%	1.5%
GDP growth	3.2%	2.6%	3.0%
Energy growth	2.3%	1.2%	1.7%

Source: own calculations based on IEA data

Post-2000 energy intensity in China has stabilized

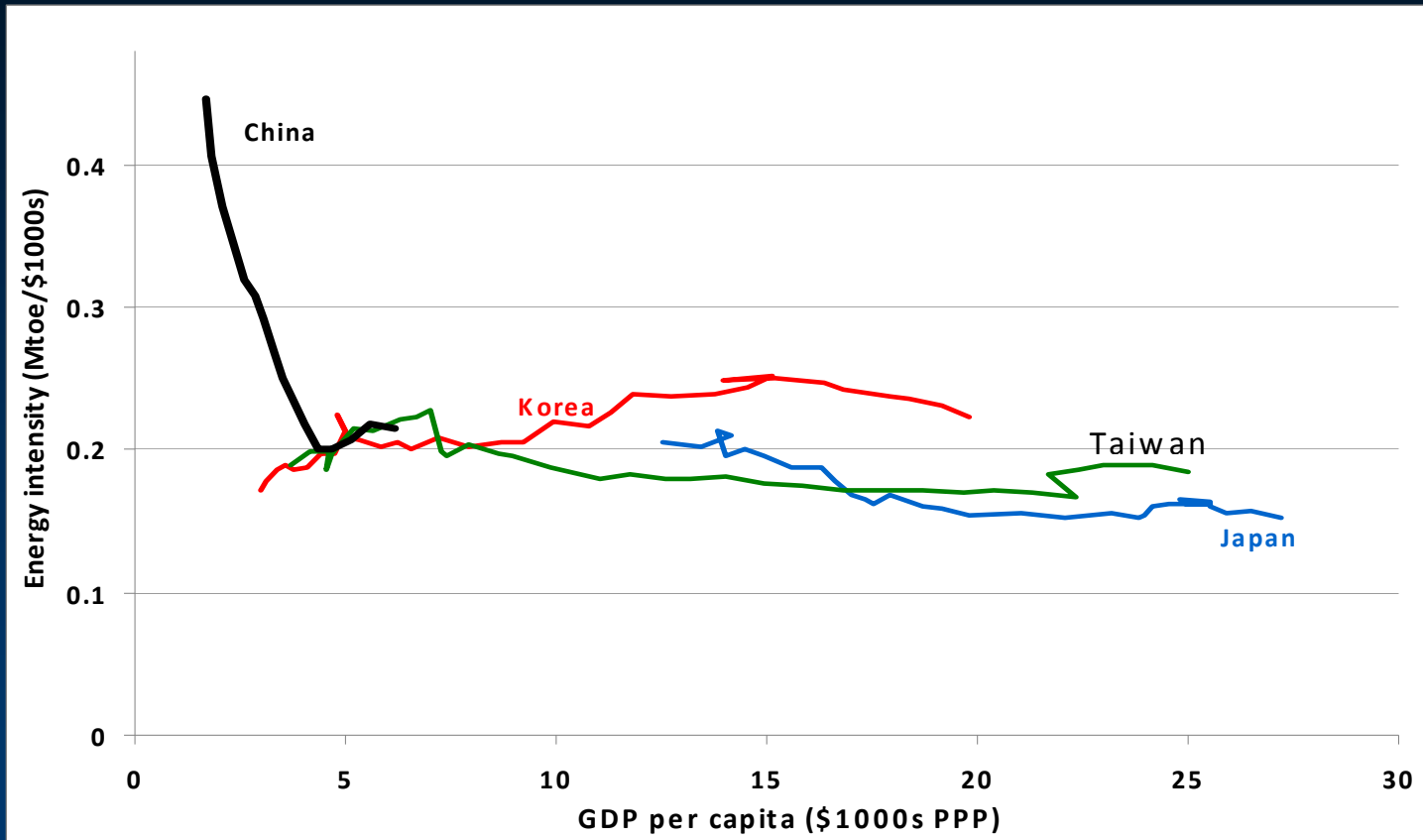
Figure 8.3 Energy Intensity In China and other developing countries, 1971–2005



Note: Energy intensity is defined as the ratio of primary energy supply (in million tonnes of oil equivalent) to GDP (in billions of 2000 US\$ purchasing power parity).

Source: International Energy Agency (IEA), 2007b. *CO₂ Emissions from Fuel Combustion*, International Energy Agency, Paris.

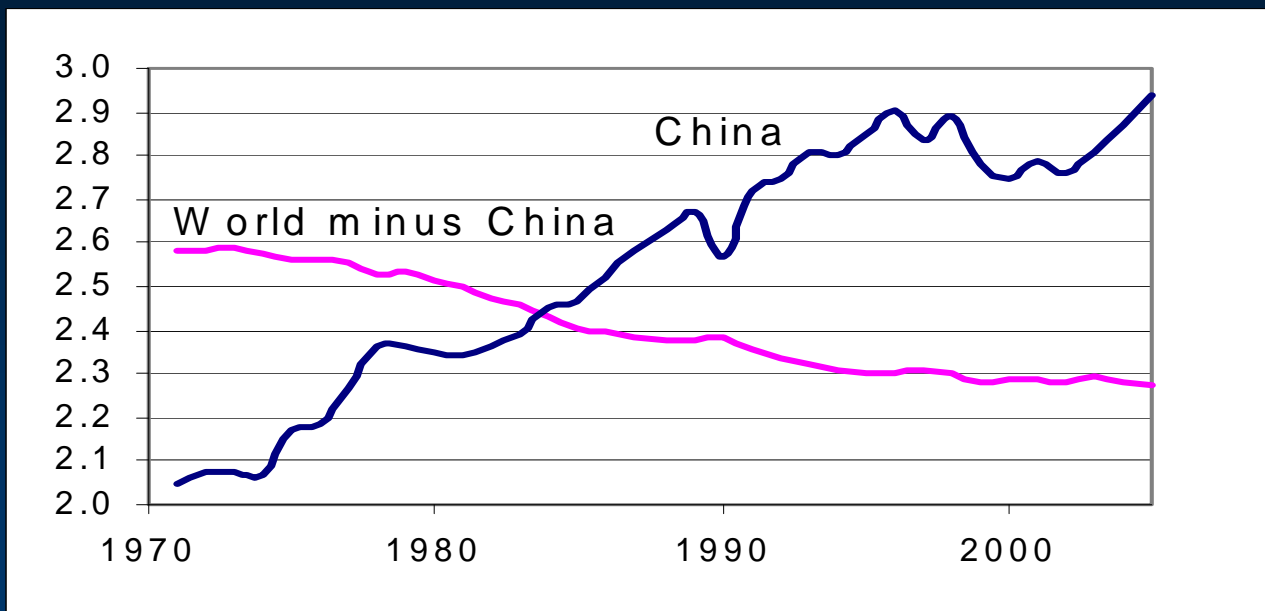
Experience in the rest of Asia suggests post-2000 energy intensity trend will continue into the future



Source: Garnaut et al Ch 8 in 2008 China Update

This energy story is such bad news for global warming because China runs (increasingly) on coal

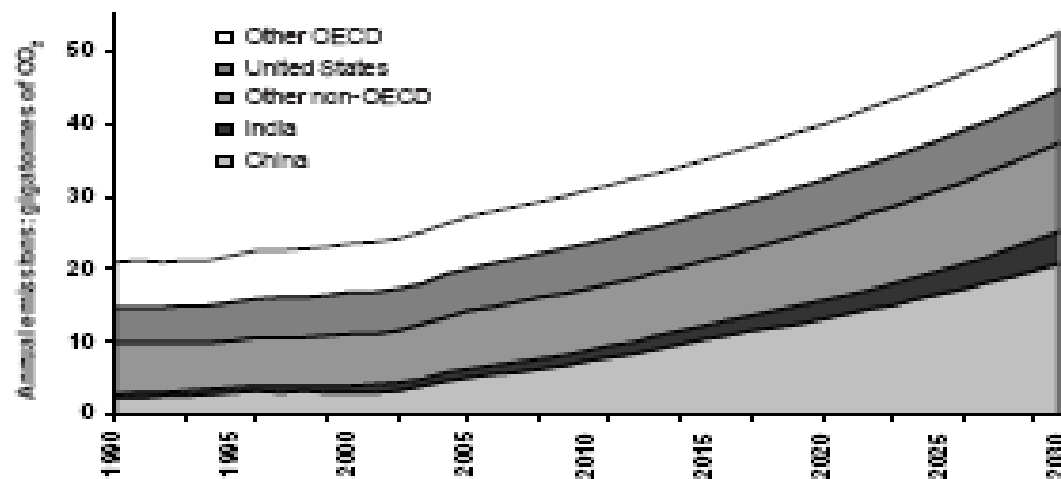
China's emissions intensity of energy



Source: own calculations based on IEA data

Continuation of these trends will result in China dominating global emissions

Figure 8.5 Historical and projected carbon dioxide emissions levels, 1990–2030

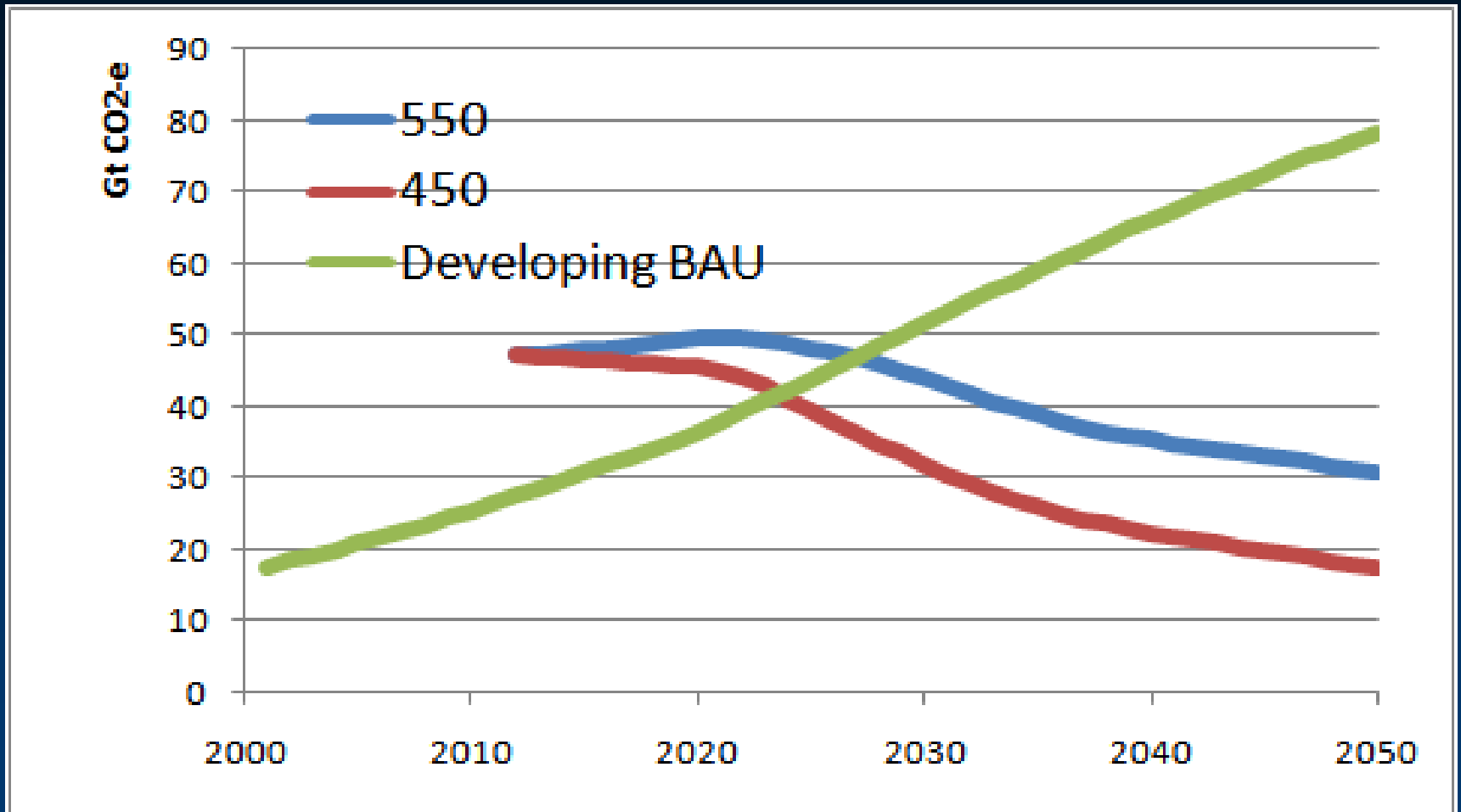


Sources: Data for 1990–2005 from International Energy Agency (IEA), 2007b, *CO₂ Emissions from Fuel Combustion*, International Energy Agency, Paris; Platinum Age projections from Garnaut, R., Howes, S., Jotzo, F. and Sheehan, P., 2008, *Emissions in the Platinum Age: the implications of rapid development for climate change mitigation*, Background Working Paper for the Garnaut Climate Change Review, forthcoming in *Oxford Review of Economic Policy*.

The status of international climate change negotiations

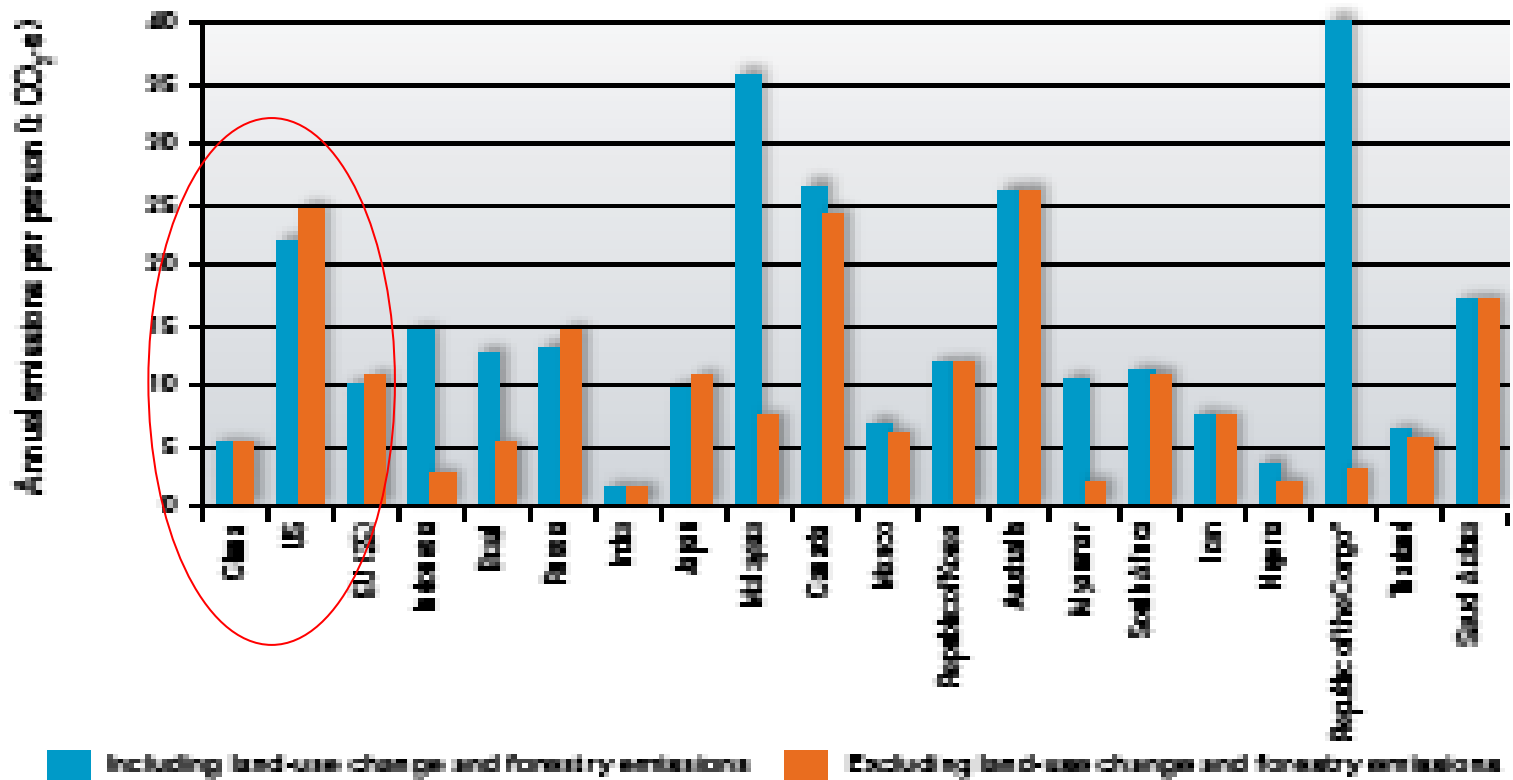
- Today's negotiating environment is (eerily/sadly) similar to that of 10 years ago.
 - In 1997, the Kyoto Protocol was concluded, but the US stated that it would not ratify the treaty without "meaningful participation" from developing countries.
 - This became the main issue in international climate change until the election of George Bush.
 - Today, the "Copenhagen Protocol" hasn't been signed, but the main issue is already developing country participation.

The developed country perspective: developing countries need to do more



The developing country perspective: it's not our problem

Figure 3.2 The 20 largest greenhouse gas emitters: per capita emissions including and excluding emissions from land-use change and forestry, c. 2004



Public positioning, then ...

"...[W]e are not, as the President's made clear, intending to submit the treaty for Senate ratification until we have a greater level, meaningful level of participation from developing countries, which we don't have yet.

- Todd Stern, President's Coordinator for Climate Change, June 3 1999

"To confuse the different responsibilities between developed and developing countries, to impose new obligations on the latter and even take this as a condition for the Protocol's ratification, will lead to nothing but fierce political confrontations. This, undoubtedly, is a catastrophe for the international community in their efforts to combat climate change."

- Liu Jiang, Head of China's Delegation to COP6, 2000

... and now

“I think that the most fundamental issues in this negotiation in general have to do with how to think about, capture and express the actions and the level of the undertakings to be taken by major developing countries ...”

- Todd Stern, US Climate Change Envoy, March 29, 2009.

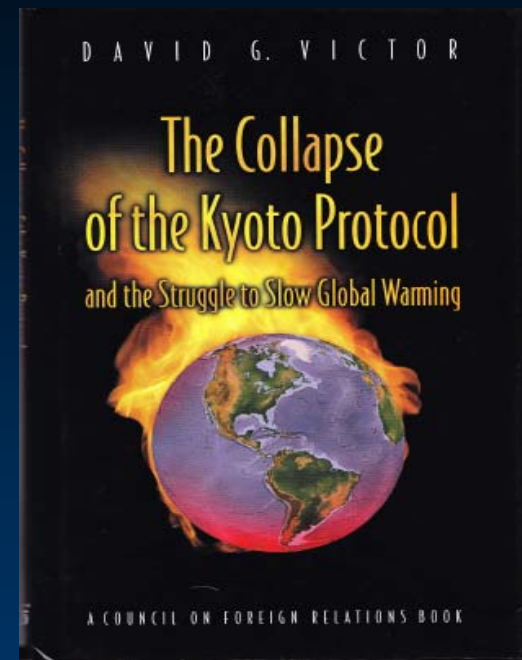
“ The key to a deal in Copenhagen lies in the political will of the developed countries.”

- Su Wei, Head of China's Delegation to UN climate change talks in Bonn, April 2009

Why so little progress?

Plan A (developed countries take the first step) never got implemented.

- Plan A was the UNFCCC (1992, ratified by the US) and implemented by Kyoto (1997, not ratified by the US).
- Under Plan A, developed countries were to move first “as a first step towards comprehensive response strategies at the global, national and, where agreed, regional levels” (UNFCCC).
- The US walking away from Kyoto sunk Plan A.



We are now trying to move to Plan B (the global strategy).

- Which is a worse deal for developing countries (they have to do more, and have less of a guarantee of compensation)
- Even though developed countries didn't stick to Plan A, and so lack credibility.
- While staying (or pretending to stay) within the confines of the UNFCCC (which mandates Plan A).

Some signs of hope

- Change in US position critical
- More constructive/pro-active positioning from developing countries on mitigation.
 - “We, on our part, are committed to undertaking nationally appropriate mitigation and adaptation actions which also support sustainable development. We would increase the depth and range of these actions supported and enabled by financing, technology and capacity-building with a view to achieving a deviation from business-as-usual.”
 - Hokkaido Toyako Summit G5 statement July 2008 (Brazil, China, India, Mexico, South Africa).
- For a number of reasons:
 - Developing country emissions too big to ignore (For CO₂ from fossil fuels only, 26% of global total in 1990; 40% in 2005 – IEA)
 - Greater appreciation of climate change risk.
 - Change in US position.
 - Fears of trade retaliation.
 - Desire for good global citizenship.

The current negotiating framework

- A “Kyoto-plus” approach, revolving around three key propositions, agreed at Bali (2007)
 - Caps for developed (& transition) countries.
 - Mitigation actions by developing countries.
 - Financing to be provided by developed countries.

Developed and developing country positions

	Developed country views	Developing countries view
Economy-wide cuts for developed countries	10-20% by 2020 over 1990	25-40% by 2020 over 1990
Mitigation actions by developing countries	Commitments to plans of action, with some quantification of emissions reduction, possibly some link to financing, and with some sort of international recognition.	
Financing of developing country mitigation actions	Largely by the private sector. Unquantified	Largely by the public sector Quantified & large

Sources: Howes (2008), recent submissions by the Parties to UNFCCC

The official view from China (May 2009)

- Developed country targets:
 - “All developed country Parties to the Convention shall commit to reduce their GHG emissions by at least 40% below 1990 levels by 2020.”
- Developing country actions:
 - “subject to the determination of each developing country” and “supported and enabled by technology, financing and capacity building from developed countries.”
- Developed country financing:
 - “Developed country Parties shall make assessed contributions by a percentage of annual GDP, e.g. 0.5-1%, in addition to the existing ODA.”
 - “Private sector approach and market-based mechanism can only play a complementary role in addressing climate change..”
 - “The emission reduction credits generated from nationally appropriate mitigation actions ... shall not be used by developed country parties to offset their quantified emission reduction.”

The non-official view from China:

(a) Global models

Three recent papers:

- DRC Proposal (Zhang Yongsheng & DRC Project Team) – published in Economic Research Journal (2009)
- Carbon Budget Proposal (Pan Jiahua et al, Research Centre for Sustainable Development, CASS) – published as CASS Working paper, December 2008
- “Reconciling Human Development and Climate Change” (Cao Jing, Tsinghua University) – published in Harvard International Architecture Series (Dec 2008)

Similarities:

- All three are cap and trade proposals with binding targets for China.
- The global emissions budget is divided between countries based on *cumulative* per capita emissions implying radical emission cuts for developed countries, much larger than currently under contemplation.

The non-official view from China:

(b) National targets

CAS March 2009 Sustainable Development Strategy Report

- ...[W]e propose that, by 2020, China's low carbon economic development target be set at 40%~60% reduction of energy consumption per unit of GDP over the 2005 level, and CO₂ emissions per unit of GDP be decreasing by about 50%. With support of reasonable and fair technology transfer and financing mechanism ... China's carbon emissions could be expected to peak between 2030 and 2040, and then stabilize and start to decline afterwards.

Jianq Kejun, "Fuel substitution and diversification in China" (ERI-ANU conference April 2009)

- Energy intensity projected to fall by 50% between 2005 and 2020 under the policy case.

Hu Angang (Tsinghua University and government adviser), "A new approach at Copenhagen" (Web posted article, April 6)

- By 2020 carbon dioxide emissions should have peaked;
By 2030 a return to 1990 levels.
By 2050 half of 1990 levels.

Emerging official policy?

Recent press reports indicate:

- Continued adherence to the Bali Roadmap, so no quantitative targets.
- That China is developing a forward-looking energy intensity or carbon intensity target, similar to the one currently in place.

China Daily (3 May 2009, “Environmentally-sound tech needed”)

- “China is considering a goal to reduce carbon intensity. ‘The goal will be in line with the country’s 11th five-year plan to increase energy efficiency,’ He [Jiankun, deputy director of China’s national climate change expert panel] said, ‘but it definitely won’t be a quantifiable emissions reduction target, as it will depart from the principles agreed in the Bali Road Map.’”

Reuters “China says developing long-term climate change plan”, 20 May 2009

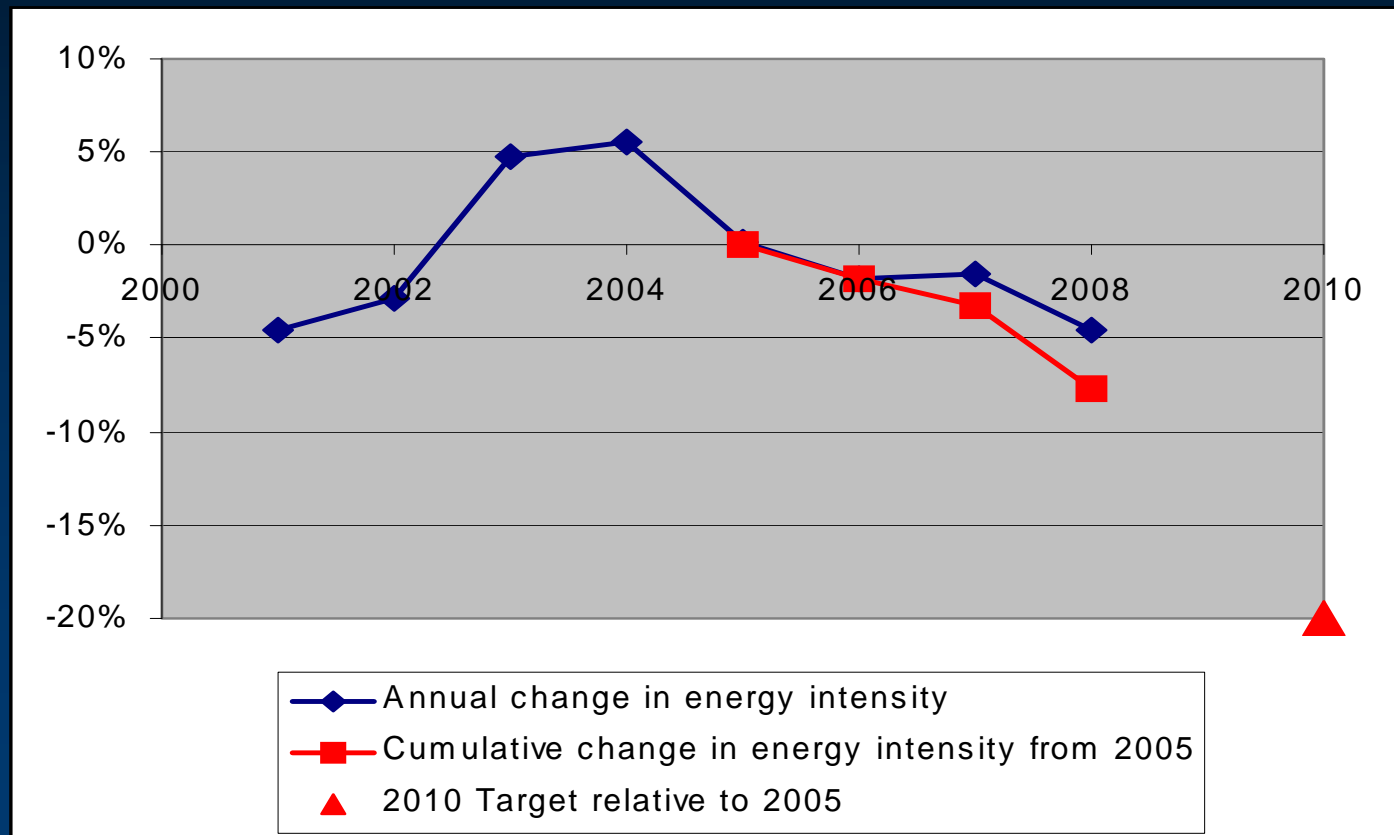
- “China is drafting a long-term plan for climate change that will focus on raising energy efficiency, developing clean-coal technology, and expanding carbon-absorbing forests, a top climate policy official said. Xie Zhenhua, a deputy chief of the National Development and Reform Commission who steers climate change policy said the plan would strengthen China’s ‘capacity to enforce international covenants’”

Reuters “China may extend energy-saving goal to 2020 –paper,” 14 May 2009

- “China might extend through 2020 its goal of improving energy efficiency, the official China Daily reported on Friday. .. “I was told that between 2011-2020, China will probably promise to achieve the same energy-saving target as it is doing during the 2006-2012 period” the source, who was invited to an internal meeting held by National Development and Reform Commission, told the China Daily.

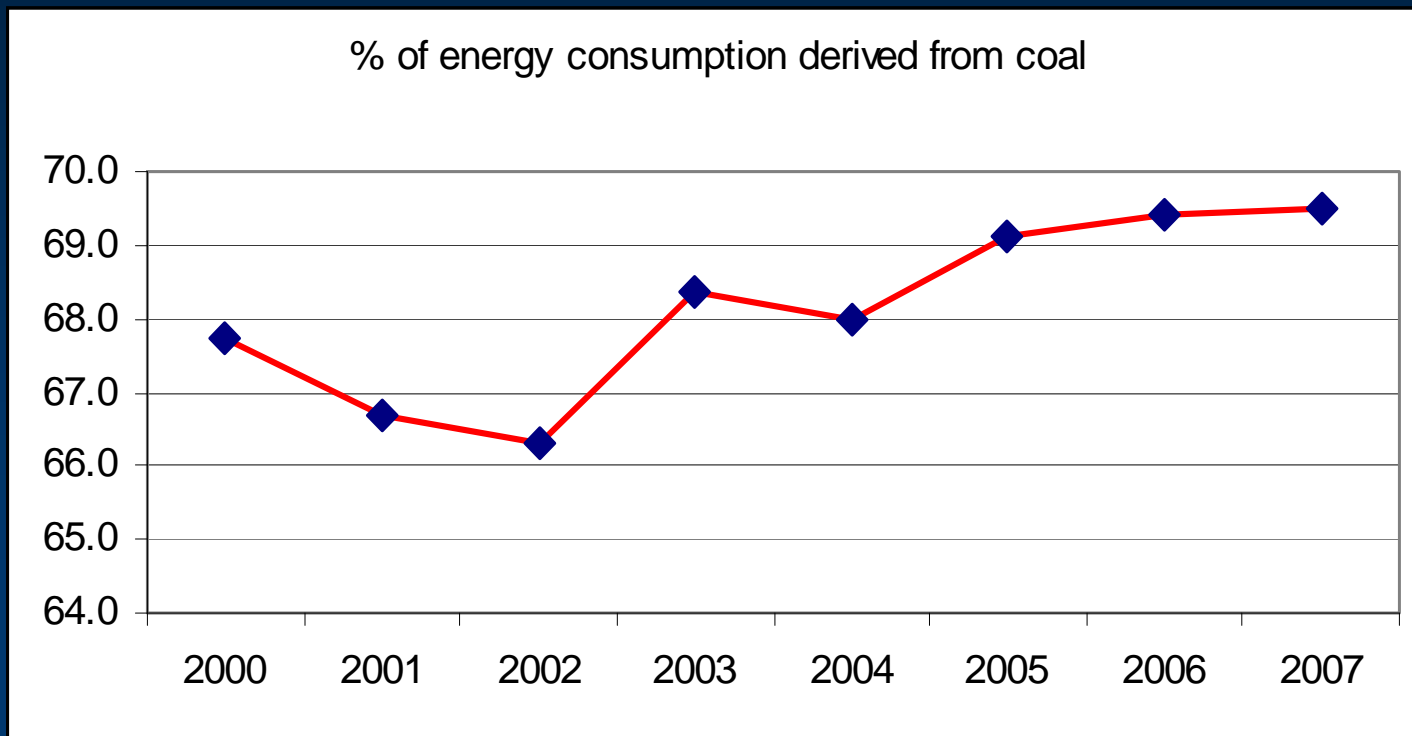
Experience under China's existing energy intensity target

Progress under the existing (11th Five Year Plan) energy intensity target



Coal still gaining share

(Renewable Energy Law of 2005 requires that by 2020, 15 percent of all energy is to come from wind, biomass, solar and hydropower energy, compared to its current 7 percent.)



Ambition of and prospects for continued annual decline of 4% energy intensity (some initial thoughts)

- Continued annual decline of 4% would take cumulative reduction in energy intensity to 47% in 2020 from 2005 base, assuming 2010 target also met. (43% by 2020 if started today)
- **Ambition:** Assuming also no change in emissions intensity, and Garnaut Review GDP growth rates (8%) a 43% drop in energy intensity by 2020 would correspond to about 20% below Garnaut Review BAU.
 - 8% below what the Garnaut Review models as required of China under a 450 agreement.
- **Prospects:** IEA alternative policy scenario (2007) assumes -3.6% annual average reduction in energy intensity (and no change in emissions intensity).
 - Though note Garnaut et al (OXREP, 2008) argue IEA reference case to optimistic (1.8% v 2.7% reduction)

China as a deal maker

- China could unlock negotiations by putting forward an energy or emissions intensity target to 2020.
 - Recent announcements indicate that China is moving in this direction
 - The status of the target, and its link to funding will also be important.
- This could be part of a global deal or an offer conditioned on:
 - More ambitious Western cuts and/or
 - More generous Western public funding.
- Timing is unclear.
 - May not be until US passes climate change legislation.

Implications for Australia

- **Credibility**
 - The developed world is yet to convince the developing world that it takes climate change seriously.
 - Actions speak louder than words.
 - Don't wait for Copenhagen
- **International public funding.**
 - The Government is yet to respond to the Garnaut International Low Emissions Technology Commitment.
 - \$100 billion public-funding developed country commitment based on public funding.
 - 50% expensed in developing country
- **Realism**
 - In terms of both timing and conditions.

The last word

“It’s kind of got to add up to something in the direction of what you need.”

- Todd Stern, April 2009, on what the US is asking developing countries to do.

<http://www.state.gov/g/oes/rls/remarks/2009/122344.htm>