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International climate change: Latest developments

November 13th 2008

Rob Bradley

World Resources Institute

http://www.wri.org

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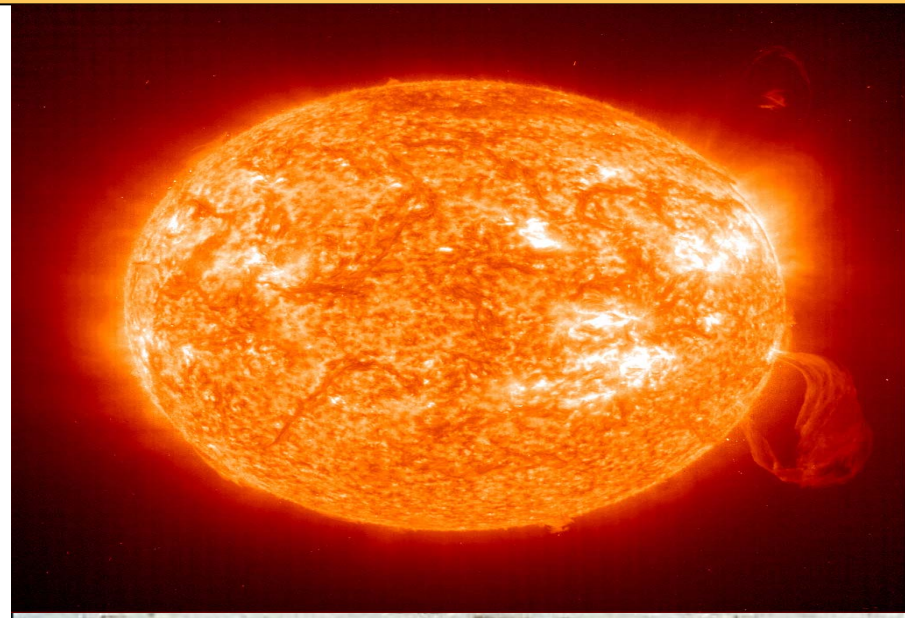
The head that wears the crown…

- Science is back
- The climate policy consensus
- Technology
- US policy
- Back to the world



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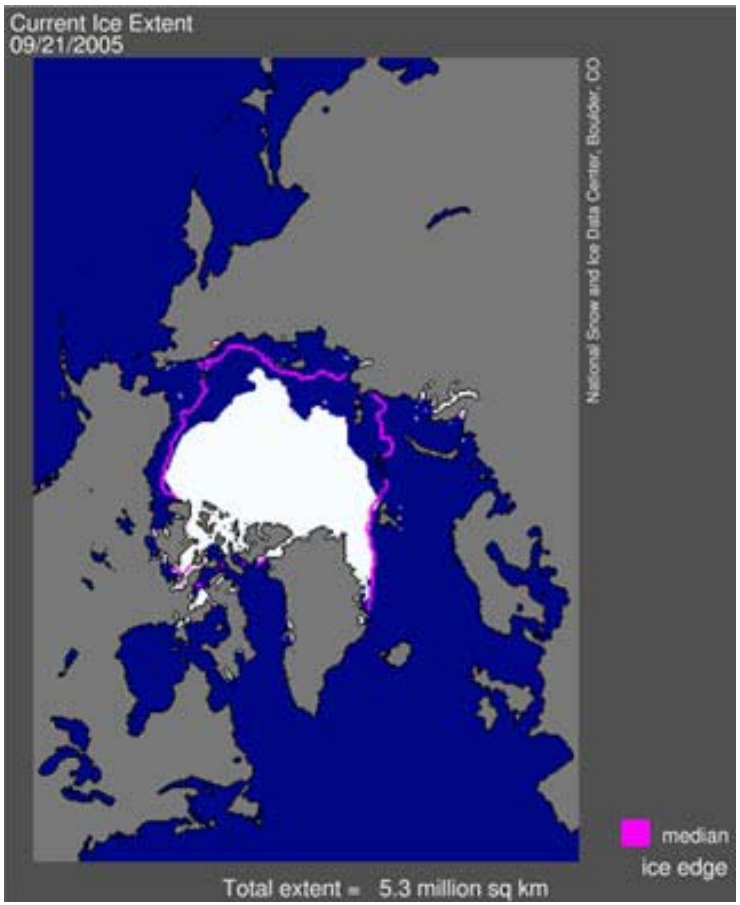
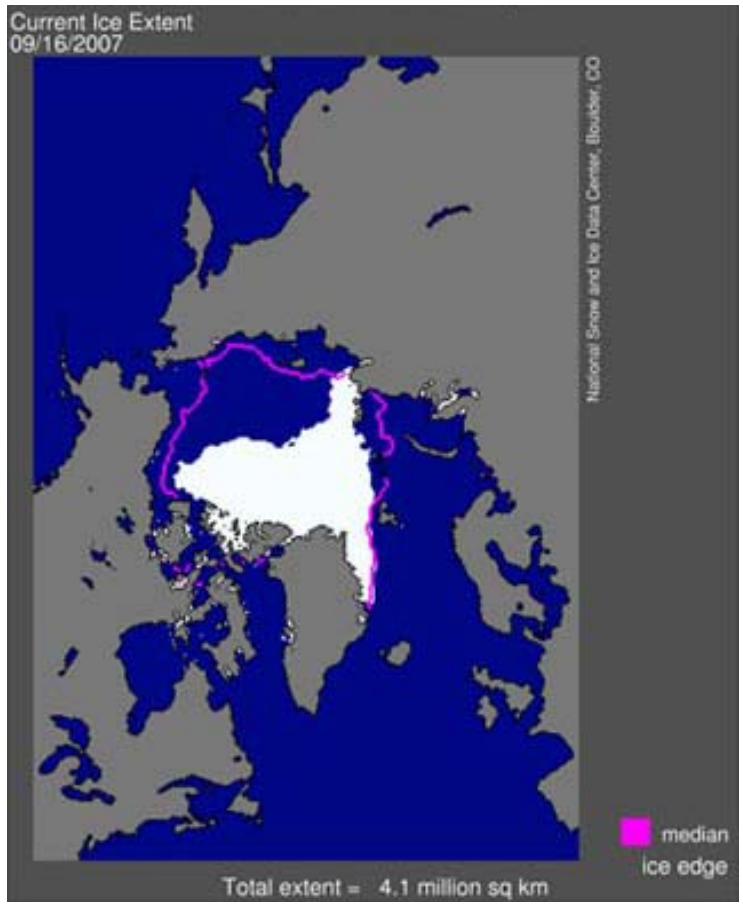
Arctic Sea Ice Melt:

(460,000 square miles less than the previous minimum record, roughly the equivalent of the area of Texas and California combined)



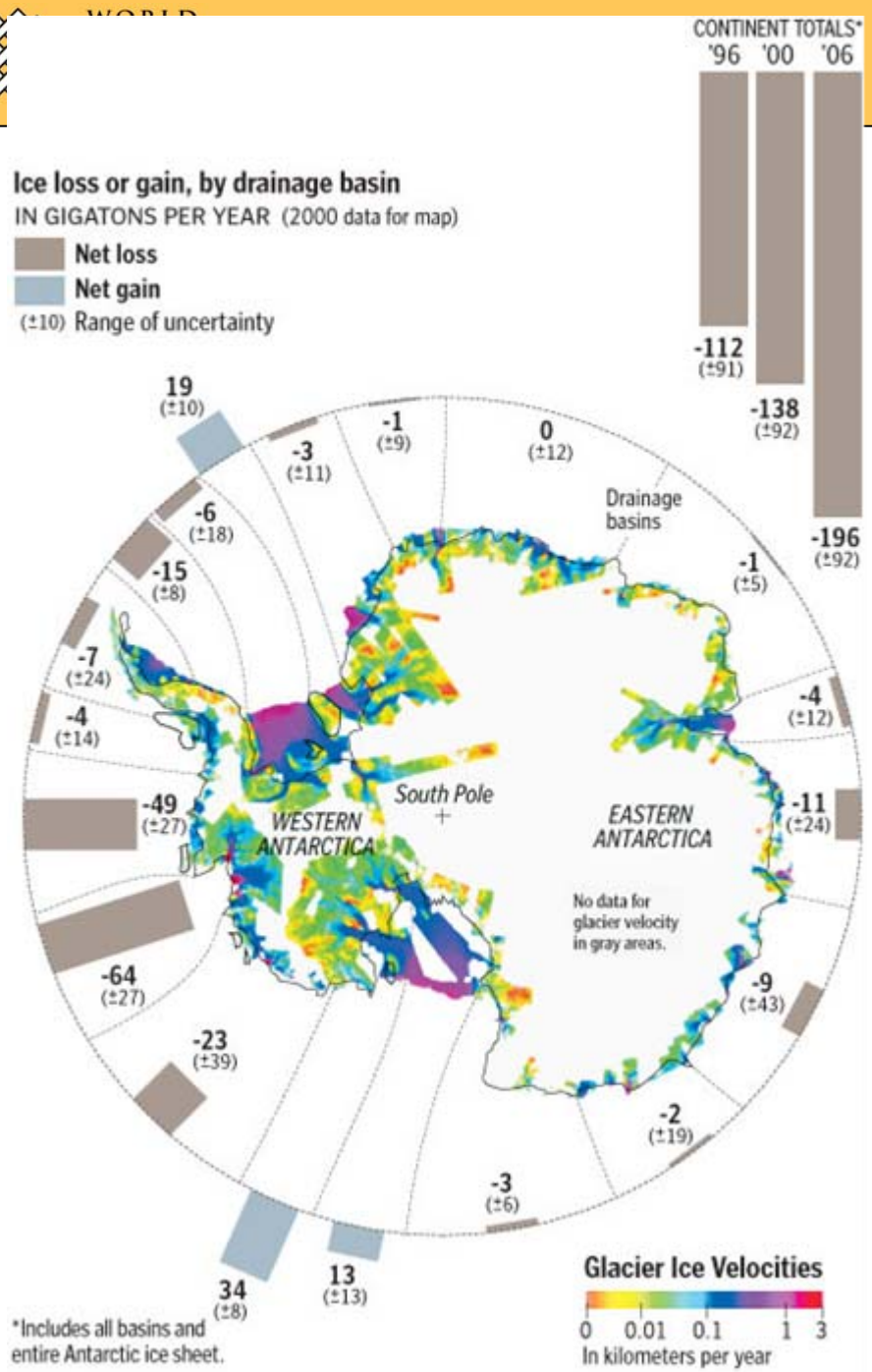
2005 (previous minimum)



2007 (new minimum)

Source: Arctic Climate Impact Assessment, 2004

Melting of Antarctica



- Melting is related to ocean warming, not temperature increase in Antarctic interior
- Antarctic ice sheet loss is comparable to Greenland ice sheet loss
- Melting of West Antarctica would raise total sea level by 5-6 m

SOURCE: Nature; Eric Rignot
GRAPHIC: BY Patterson Clark, The Washington Post - January 14, 2008

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A Multiplier for Instability


Water Scarcity


Demography


Crop Decline


Hunger


Coastal Risks


Recent Conflicts

Reductions Needed to Stabilize Concentrations

CO_2 Concentration at Stabilisation (2005=379 ppm)	**CO_2-equivalent Concentration at Stabilization** (includes aerosols; 2005=375 ppm)	**Year in which global emissions peak**	**Global average temperature above pre-equilibrium**	**Change in global CO2 emissions in 2050** (% of 2000 emissions)
350 – 400	445 – 490	2000 – 2015	2 - 2.4 ºC	-85 to -50
440 – 485	535 – 590	2010 – 2030	2.8 - 3.2 ºC	-30 to +5
570 – 660	710 – 855	2050 – 2080	4 - 4.9 ºC	+25 to +85

Source: IPCC AR4

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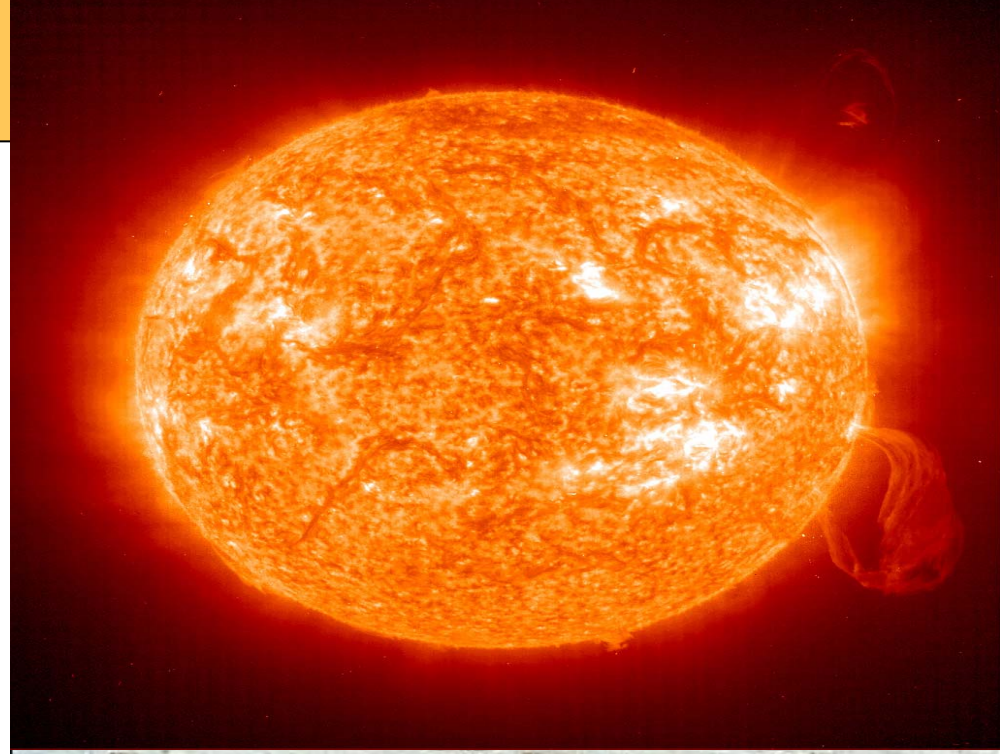


>Nobel prize
>Oscars
>Slowly improving journalism

USCAP
United States Climate Action Partnership

"We are committed to a pathway that will slow, stop and reverse the growth of U.S. emissions while expanding the U.S. economy."

USCAP Proposal

- Call for a cap and trade program
- Establishment of a national GHG inventory and registry
- Credit for early action
- Aggressive technology research and development
- Policies to encourage new investments in low-emitting facilities
- Policies to accelerate deployment of zero and low-emitting technologies and energy efficiency

ALCOA
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Duke Energy®
DUPONT®
ENVIRONMENTAL DEFENSE
finding the ways that work
FPL GROUP
LEHMAN BROTHERS
PG&E Corporation.
PEW CENTER ON Global CLIMATE CHANGE
PNM Resources
NRDC
THE EARTH'S BEST DEFENSE

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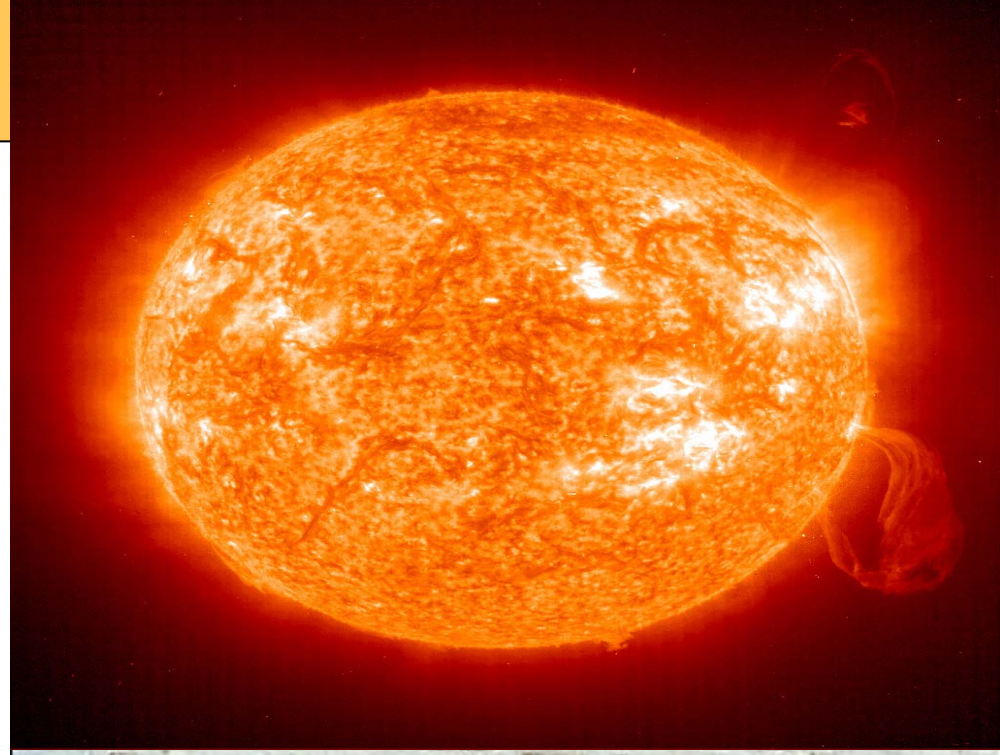

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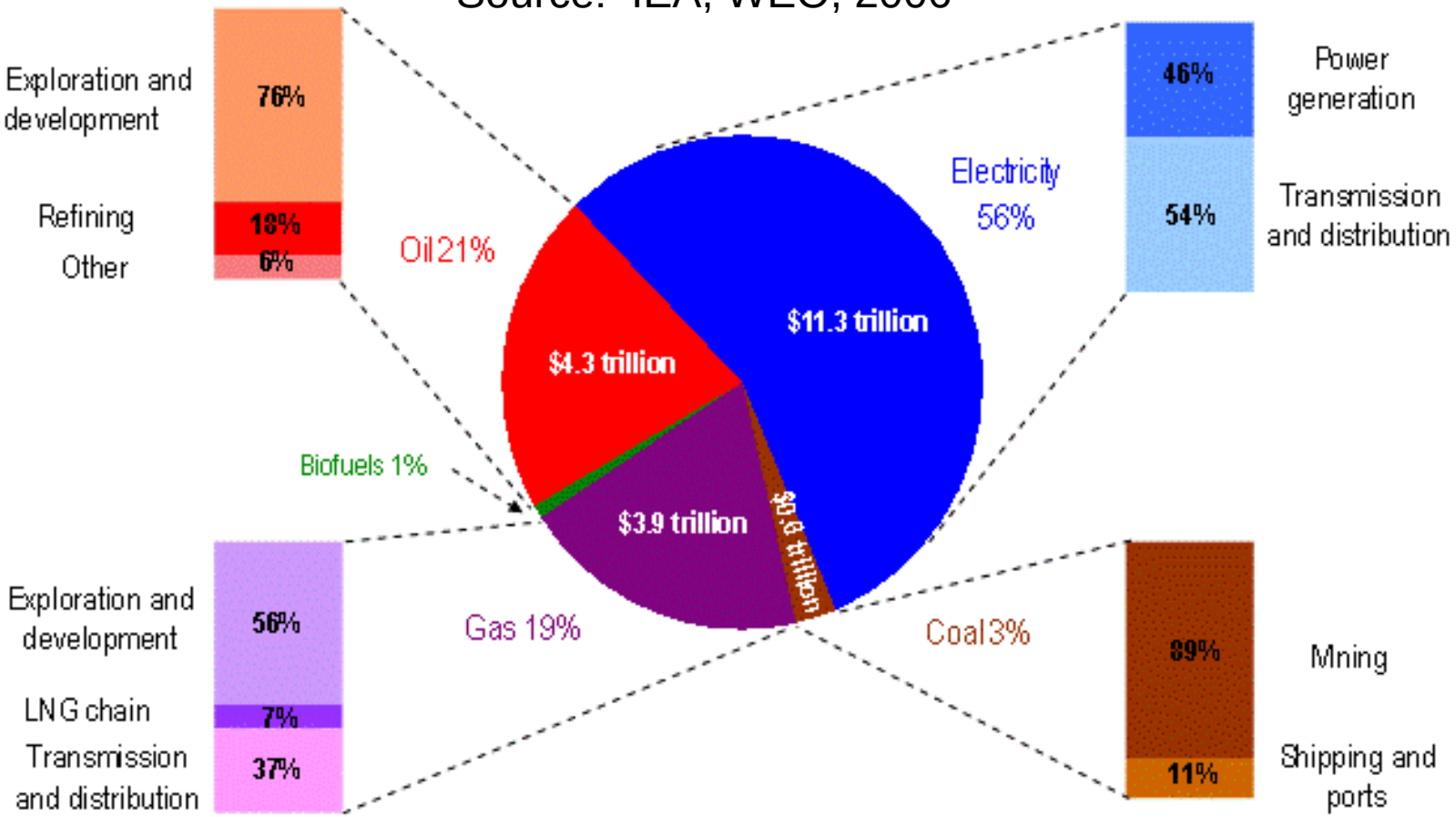
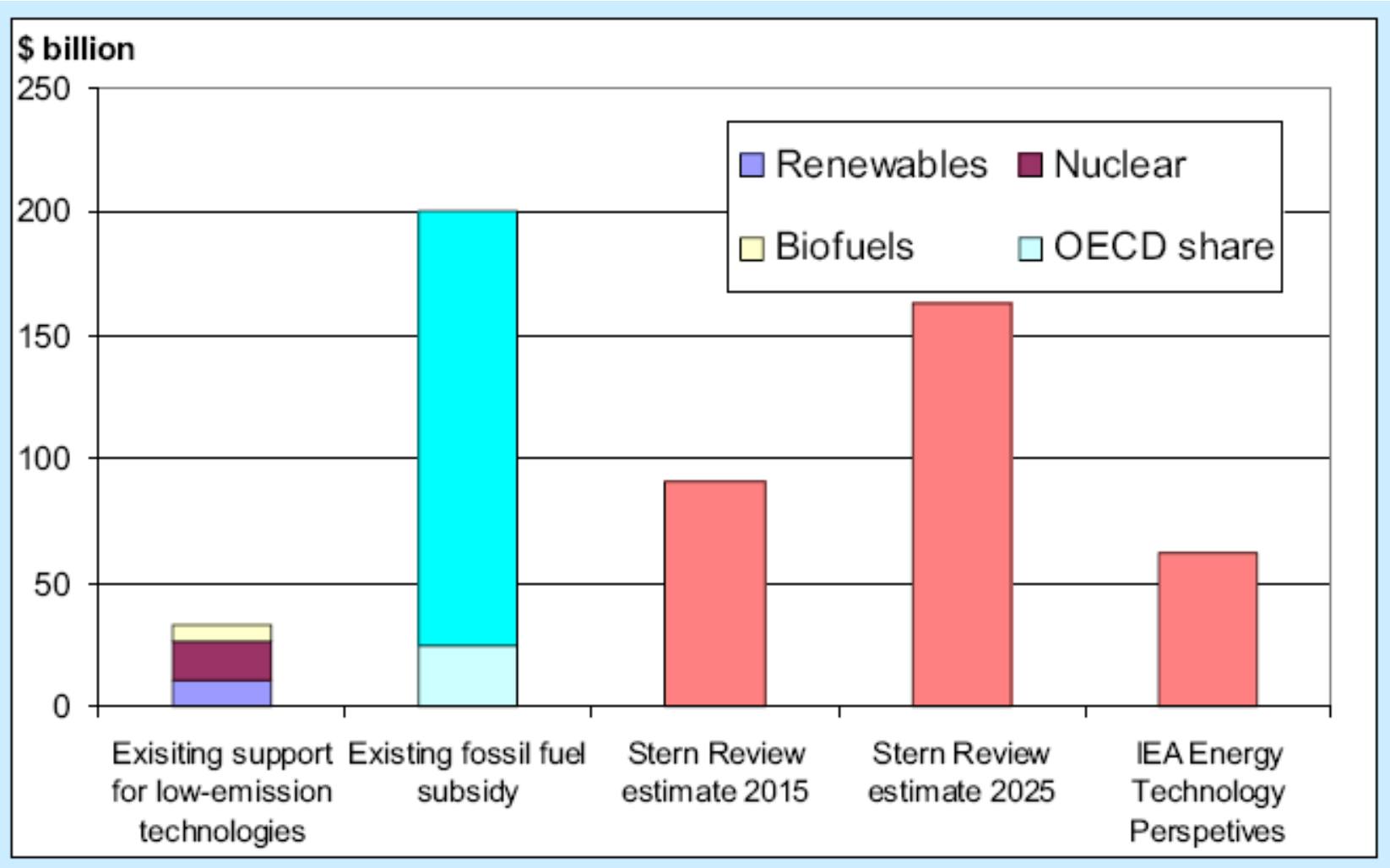
Cumulative Energy Investment

Source: IEA, WEO, 2006



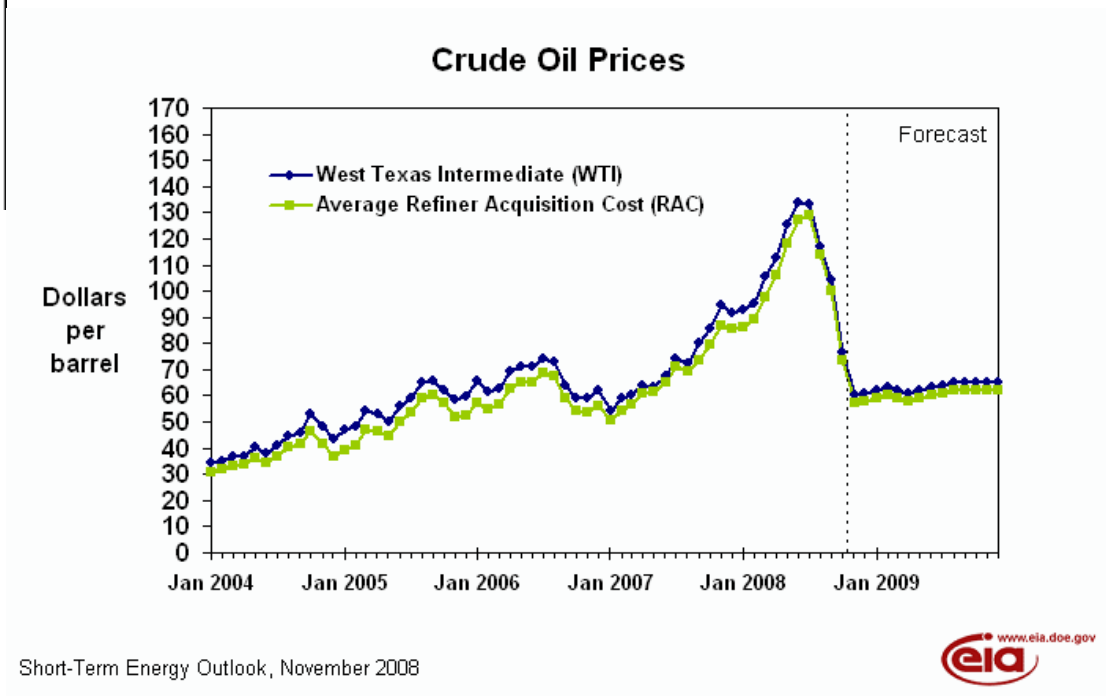
Total investment = $20.2 trillion (in $2005)

Scale of current/necessary deployment

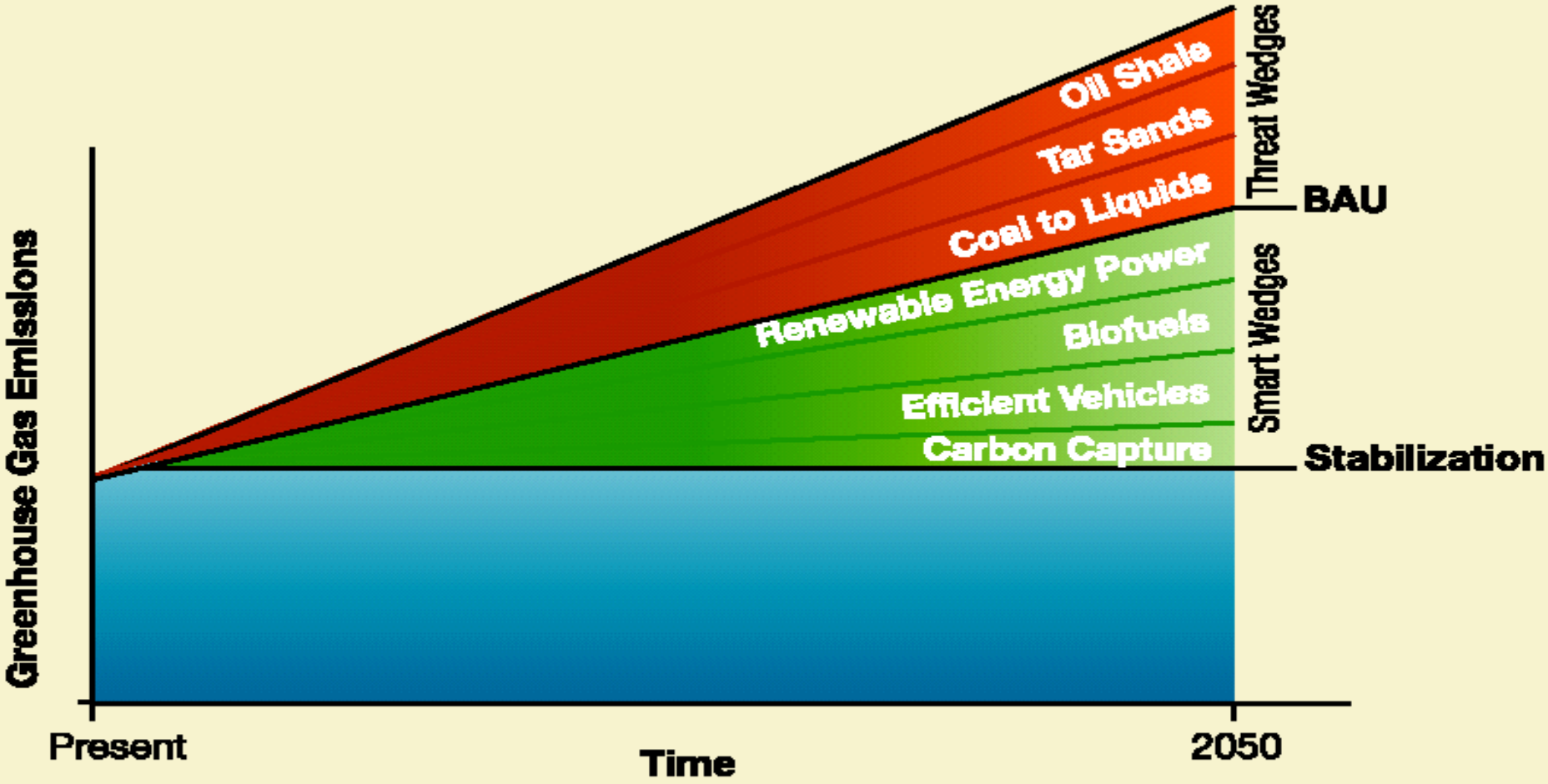


Source: Stern Review

Investment in Sustainable Energy



High carbon threats



Source: World Resources Institute. Note that the wedges are schematic, indicative, and not drawn to a specific scale.

Plants at the Pump

Biofuels, Climate Change and Sustainability

Britt Childs

Rob Bradley

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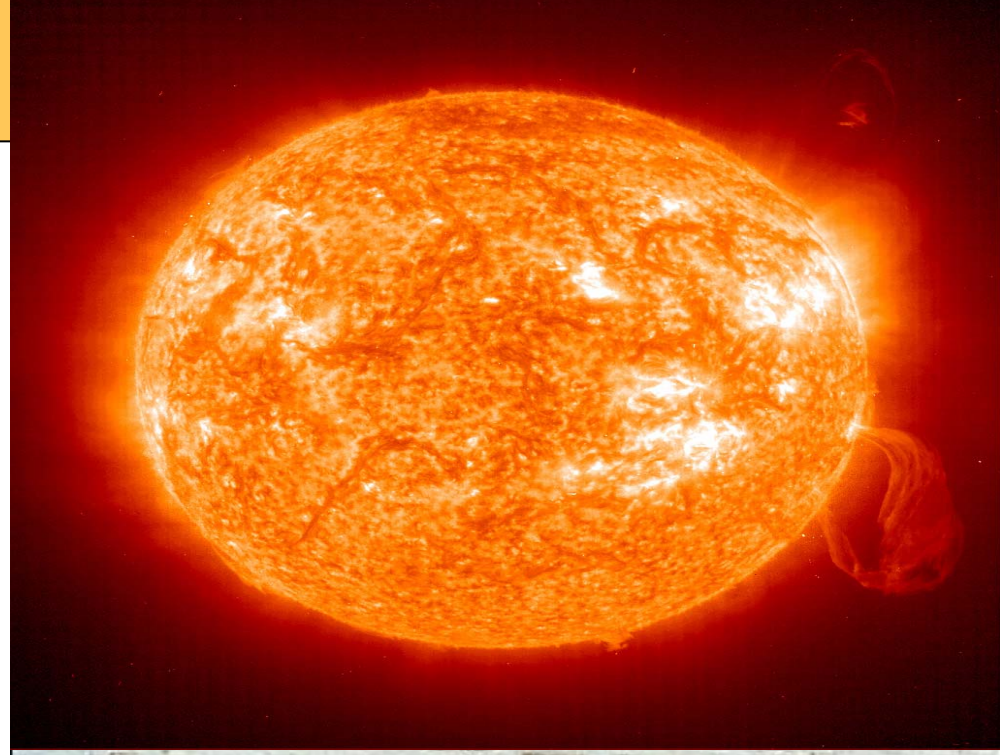

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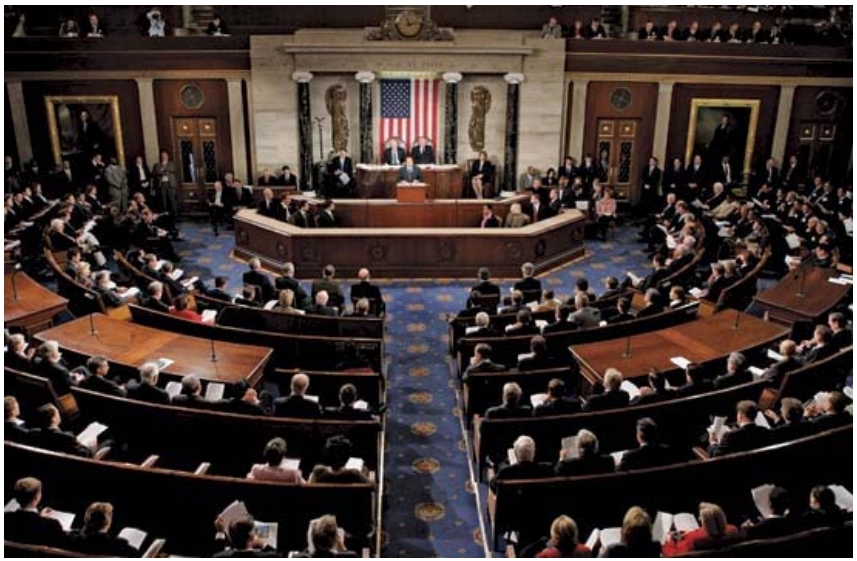
US climate policy takes shape



- Cap and trade increasingly likely
- Breadth of sector coverage
- Interaction with state level systems
- Trade protection measures
- Auctioning feeding frenzy

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Public Finances

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Messages from the financial collapse

Have we seen the back of the bull market for good?

- The rise of regulation
- A growing role for public sector spending
- The implications of more costly capital
- Choice of policy instruments: whither loan guarantees?
- A change to how the US engages abroad?

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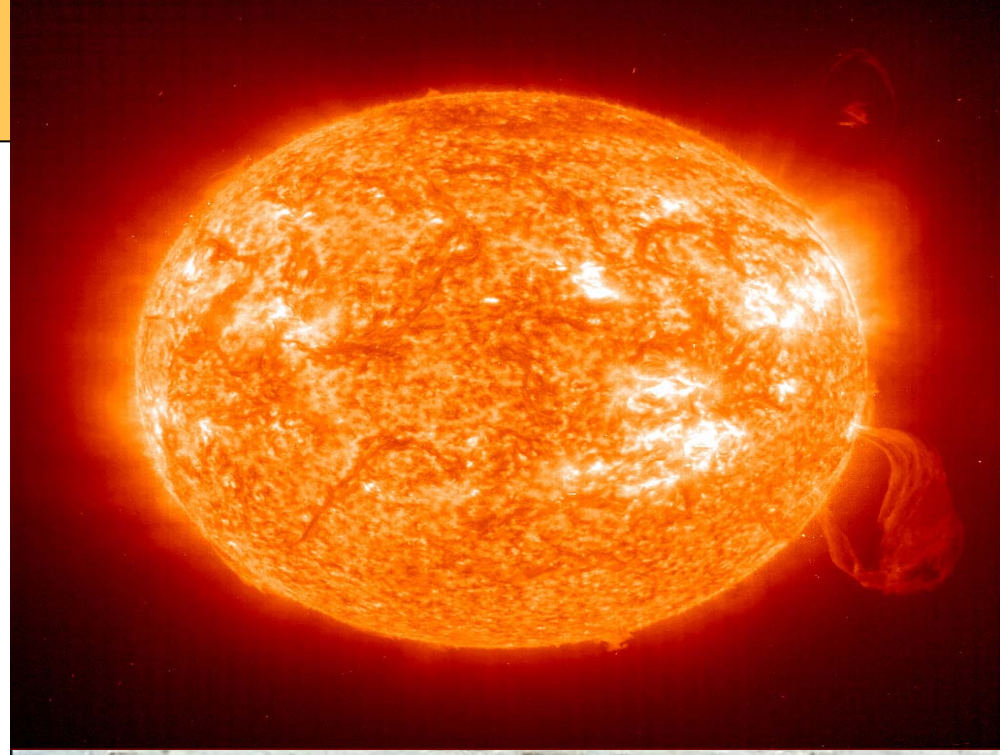
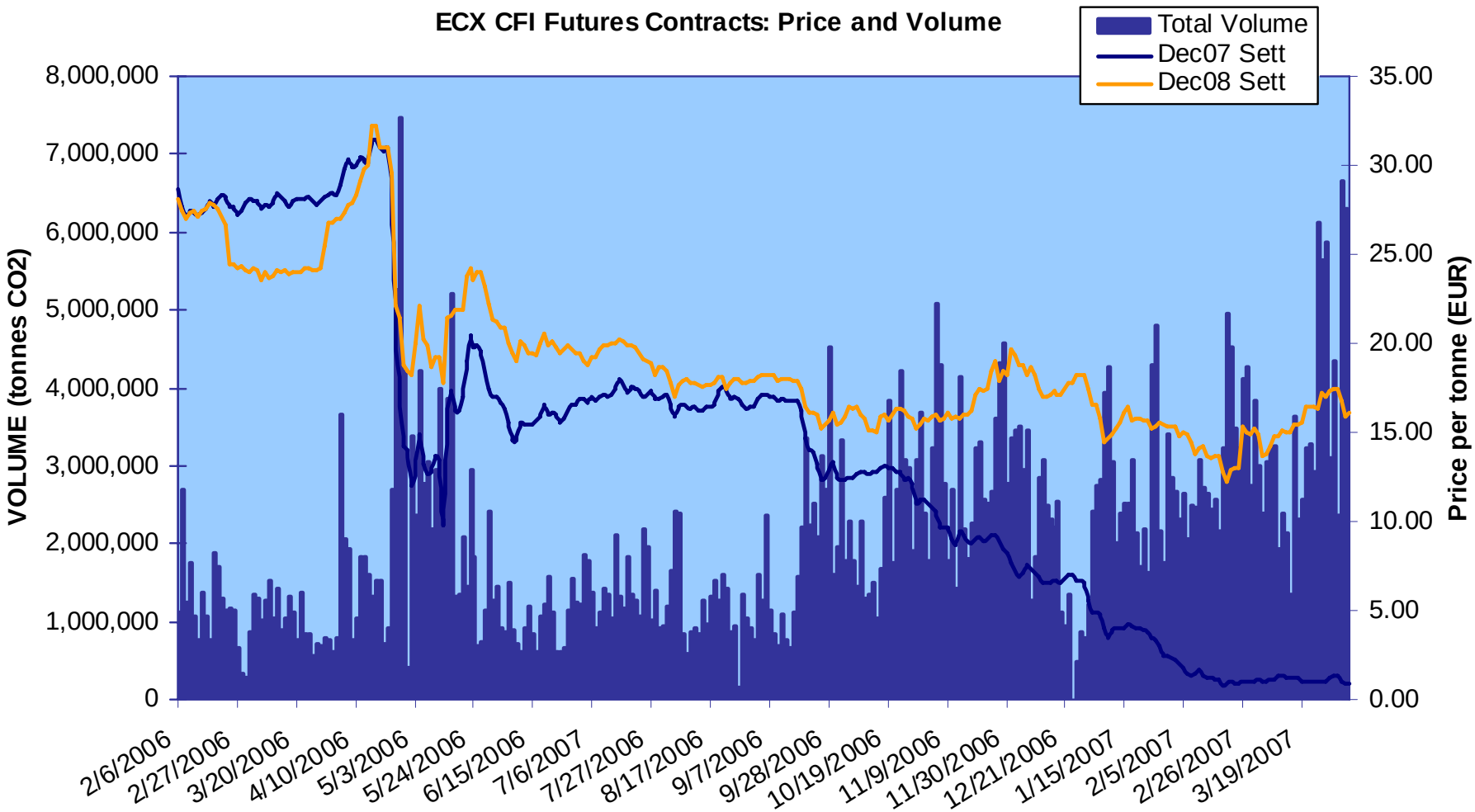


EUA closing prices: 2006 - Present



Source: ECX.com

Changes in ETS post 2012

- A single target for the covered sectors at EU level – no more NAPs.
- Allowances will be auctioned 100% to the power sector
- Allocation to other sectors largely auctioned, but with partial exemptions where international leakage is a threat.
- Slightly broader coverage of sectors (Aluminum, Chemicals) and gases (PFCs from Al, N2O from some chemicals.
- Aviation will be included.

…unless Poland gets its way

China and climate

"China is a big country, inhabited by many Chinese."
Charles de Gaulle

June 2008.
China publishes its first National Climate Change Program

- Chinese policy makers have a better understanding of the climate science than their US counterparts.
- China faces major threats from climate, particularly water stresses and sea level rise.
- China has a set of policies and activities that compare well with most developed countries.

- Implementation will be the challenge, and the opportunity for collaboration.

So what's the deal?

- Developed AND Developing country mitigation
- Technology
- Forests
- Adaptation
- Financing
- Sector based actions

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The rush to Copenhagen

International expectations of a deal by December 2009 in Denmark.

They may have to get used to disappointment.

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The future

- Climate policy is coming, but perhaps not immediately
- Sustainable energy investment likely to be robust after a brief slump
- Public sector spending important in the near term

Issues to watch include:

- Carbon intensity of stimulus spending
- Trade protectionism
- An even quicker shift to Asia
- Greater regulatory activity