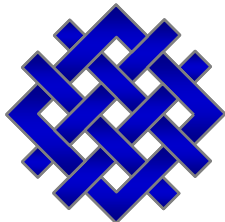


Linking domestic ETS and the post-2012 international climate policy

*IEA – EPRI – IETA 8th Annual Workshop on
Greenhouse Gas Emission Trading*

**September 2008
PARIS, FRANCE**



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Key Messages

- New international agreement may not be like Kyoto (i.e., differentiated international targets with national implementation flexibility and trading); more likely to call for P&M (only one of which is ET) and technology
 - Over the medium term (15 years), it is implausible to imagine major developing countries joining a global ET regime (perhaps not even through offsets).
 - Currently proposed/enacted efforts seem highly unlikely to meet scientifically established targets
- Linking existing (and some new) regimes highly likely – in spite of the divergent structures
 - New global agreement not likely to significantly alter emerging global market



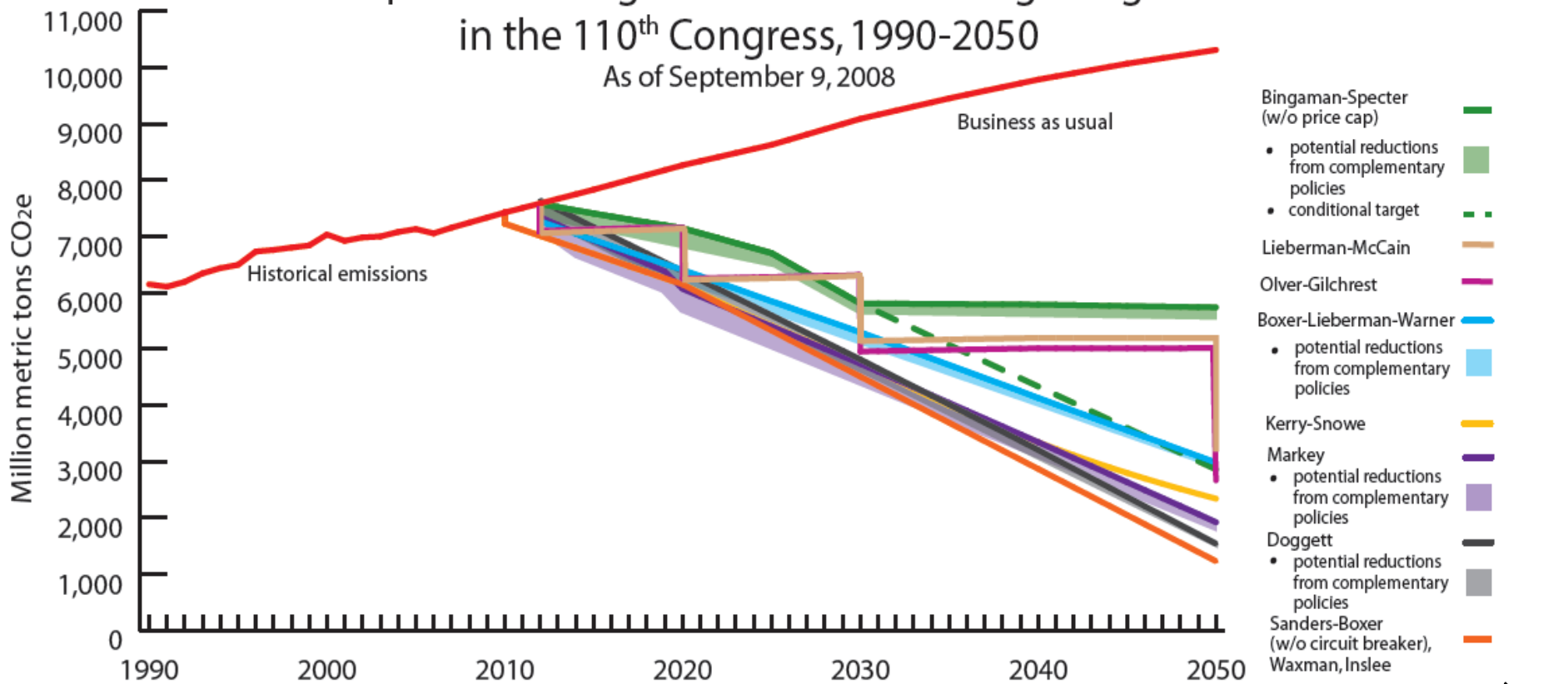
National Positions: US

- No change in Bush Administration position
- Obama/McCain have supported reductions of 80/65% below current levels by 2050, and seek (approximately) return to 1990 levels by 2020. Both seek to re-engage internationally (but no details provided)
- Congressional legislation not likely to pass to support aggressive new US domestic or international policy in near term – particularly in absence of similar agreements from key developing countries

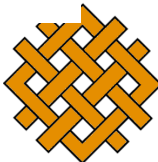


US Legislative Proposals

Comparison of Legislative Climate Change Targets
in the 110th Congress, 1990-2050
As of September 9, 2008



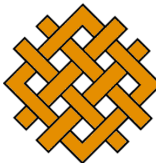
Source: WRI



W R I

National Positions: EU

- Call for 20% reduction below 1990 levels by 2020 (30% if others take comparable efforts); at least a 50% reduction by 2050
- Individual countries in various states of compliance – although overall EU effort appears approximately adequate to meet Kyoto obligation, even if not yet sufficient to meet new stated commitments
- Phase III of EU ETS likely to proceed with or without similar efforts by other countries; complementary policies increasingly being developed



National Positions

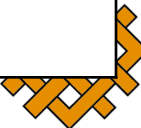
- China
 - Is not currently engaged in, and has indicated it is not prepared to accept absolute targets or to participate in international trading regime
 - Has set specific targets on greenhouse gas emission control to be met in 2010, including cutting energy intensity of GDP by 20% from 2005 levels and freezing industrial emissions of nitrous oxide at the 2005 level
 - Calls for technology (including technology transfer)
- India:
 - “India will not curb its greenhouse gas emissions as long as the West continues to treat it as a 'second class global citizen' with less right to pollute than the developed world” -- *Prodipto Ghosh, former Env't Sec'y*
 - Calls for per capita emissions to grow to average OECD levels before reductions would be required



Future Action: What Countries Say

Country	Domestic Targets	Global C&T	Technology R&D	Fin./Tech. Transfer	Adaptation
USA	Emerging GHG, energy, transport	No*/??	Yes	Limited	Yes
China	Energy, transport	No	Yes	Yes	Yes
EU	GHG, energy, transport	Yes	Yes	Yes	Yes
Brazil	Energy	No	Yes	Yes	Yes
India	Energy, local transport	No	Yes	Yes	Yes
Japan	GHG, energy	With Others	Yes	Limited	Yes

* Current Administration



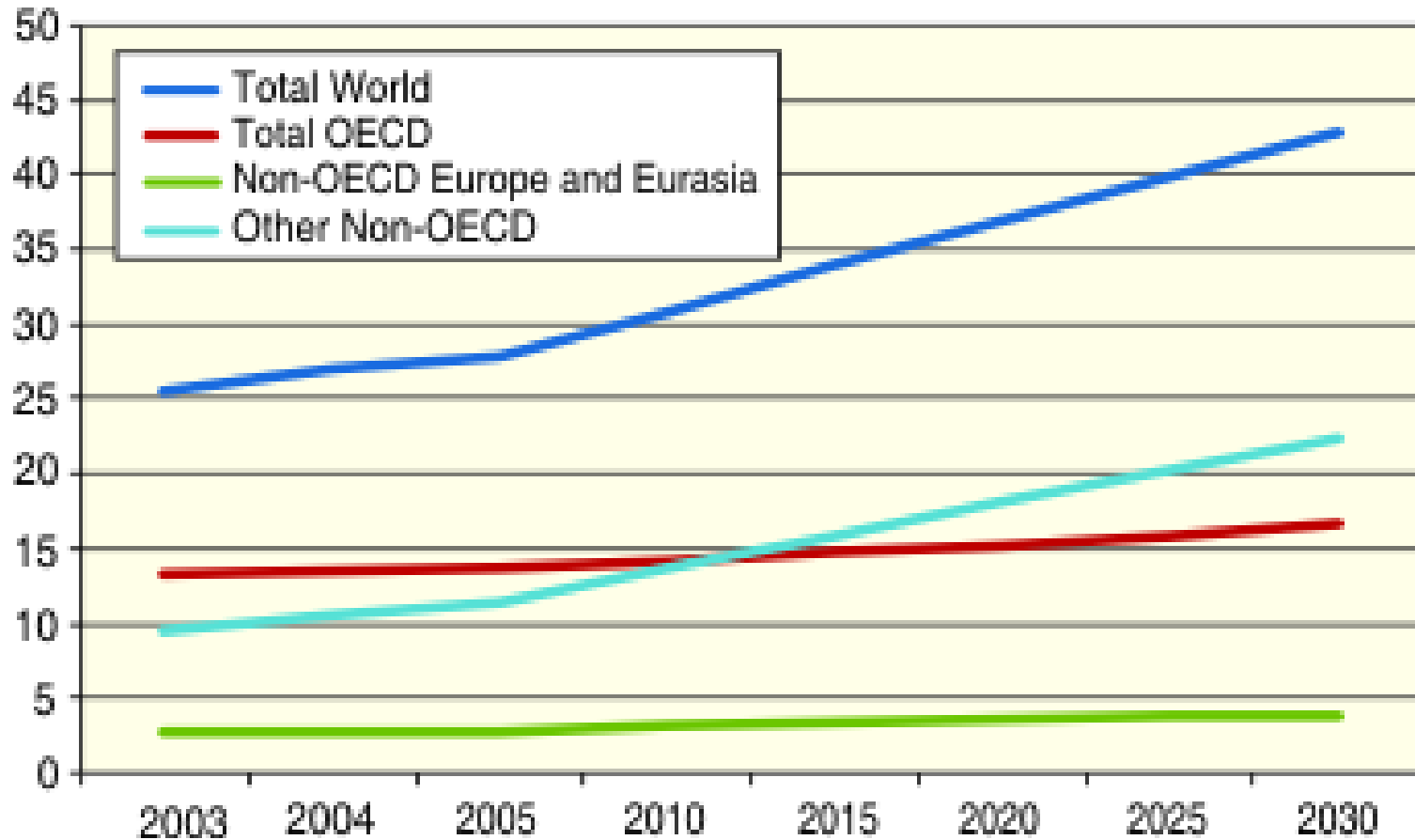
Targets: The IPCC

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 CO ₂ emissions in 2050 (% of 2000 emissions)
350 – 400	445 – 490	2000 – 2015	2 - 2.4 °C	-85 to -50
440 – 485	535 – 590	2010 – 2030	2.8 - 3.2 °C	-30 to +5
570 – 660	710 – 855	2050 – 2080	4 - 4.9 °C	+25 to +85

Scenario category	Region	2020	2050
A-450 ppm CO ₂ -eq ^b	Annex I	-25% to -40%	-80% to -95%
	Non-Annex I	Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia	Substantial deviation from baseline in all regions
B-550 ppm CO ₂ -eq	Annex I	-10% to -30%	-40% to -90%
	Non-Annex I	Deviation from baseline in Latin America and Middle East, East Asia	Deviation from baseline in most regions, especially in Latin America and Middle East

Source: IPCC AR4 W R I

Global CO2 Trends

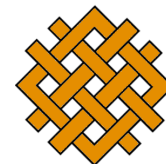


Source: US DOE/EIA, 2008



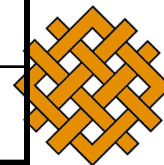
Variations between systems will create
substantial room for arbitrage ...

... but linking of regimes /S likely.



Issues in Linking ET Programs

Allocation	Key elements must be in common between regimes
• Sectors	May be left to individual programs, but requires mutual recognition
• Up- vs down-stream	Not critical
• Absolute vs relative targets	Must be common
Price/Stringency	Need not be common, but will lead to arbitrage – and possible political conflict
Links to other regimes	Must be common, including regarding offsets
Future periods	Key elements must be in common between regimes
• Borrowing	Must be common
• Banking	Must be common
Compliance	Must have comparable consequences

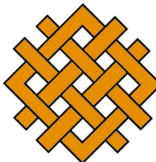


Existing/Developing Trading Systems

Regime	Gases and sectors	Stringency	Offsets
EU-ETS	CO2 for energy and industry; aviation after 2010; no sinks	7% reduction below 1990 by 2012	Allowed (with formal review if >6%)
RGGI	CO2 from electricity only	Stabilize through 2014; 10% reduction below 2005 by 2018	Only some types; limit of 3.3% (up to 10% above \$10)
WCI	6 gases, most sectors	15% below 2005 by 2020	Less than 10%; most within region – perhaps some CDM
Canada	Major industrial sectors; facilities >100,000 tons CO2e	intensity 18% below 2006 by 2010; -2% per year through 2015	10% CDM
Australia	6 gases; 75% of emissions (excludes Ag and Forests)	60% reduction by 2050; near term targets TBD	Limited domestic offsets; no non-Kyoto compliance units

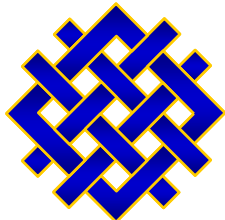
Linking will occur in spite of systems differences...

- Rationale:
 - Cost savings
 - Political value (global engagement)
 - Technology/behavior drivers (including in key developing countries)
- Mechanisms (direct and indirect)
 - One way (systems accept units – but reciprocal relationship does not exist: CDM → RGGI)
 - Two way (systems formally acknowledge each other: none yet established)
 - Arbitrage (external broker creates options value: EU ETS ↔ RGGI)



...but based on national positions, while Annex I ETS systems will grow, they will not likely formally converge – or be expanded to non-Annex I countries. Neither can it be anticipated that new or revised ETS under a post-2012 regime will provide ‘*adequate*’ global emissions reductions on their own.





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