



Center for
Clean Air Policy

Sectoral Approaches to the Post-2012 Climate Change Policy Architecture

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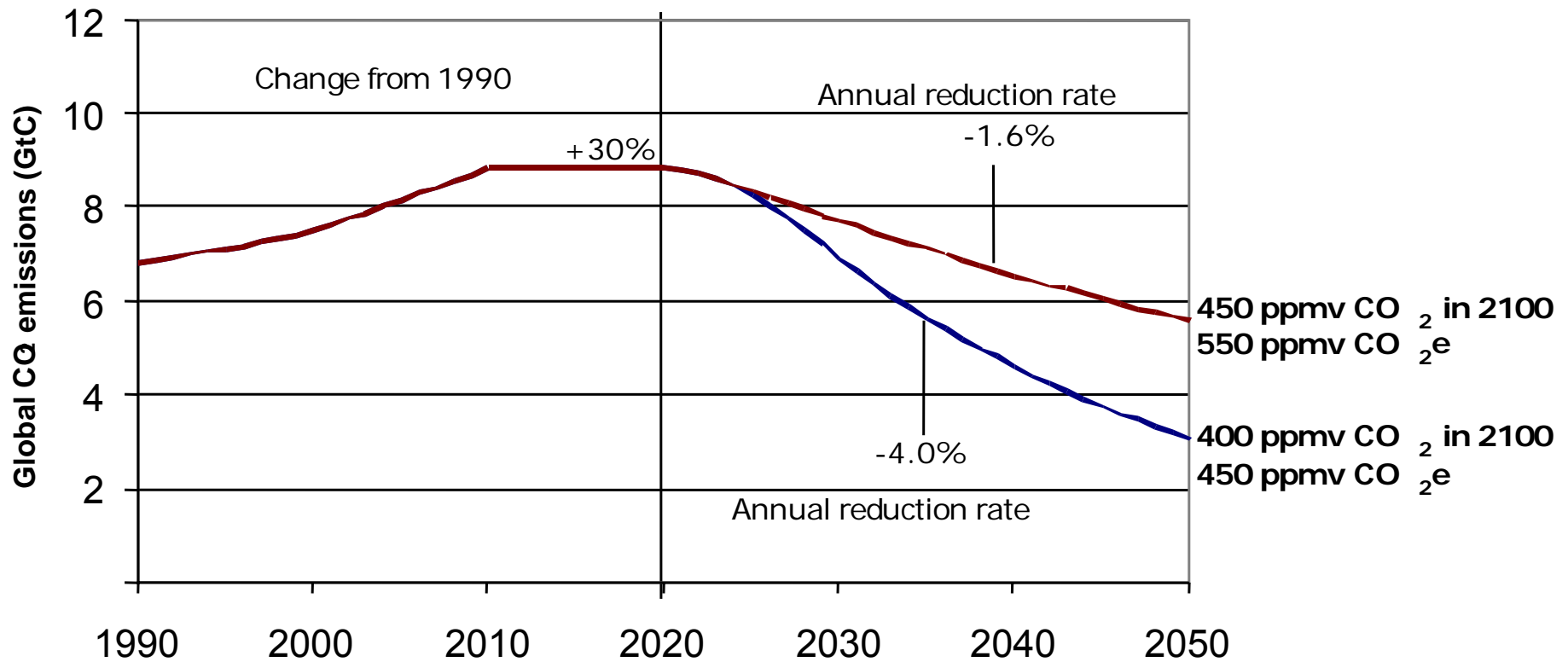
Sectoral Workshop
Paris, France
16 April 2008

About the Center for Clean Air Policy (CCAP)

- Washington and Brussels-based environmental think tank
- Committed to advancing pragmatic and cost-effective climate and air quality policy through analysis, dialogue, and education
- CCAP's 30-country climate policy dialogue has produced agreements on emissions trading, design of Clean Development Mechanism, now focused on post-2012 climate policy
- Working with key developing countries (China, India, Brazil, Mexico) and U.S. states to design climate policies
- Helped design the EU CO₂ emissions trading program
- Running multi-stakeholder dialogues in the U.S. and the EU to build agreement on elements of a US national climate policy package and EU strategy
- Active participant in past and current negotiations on land-use change and forestry under the UNFCCC and other fora



We Need a Global Emissions Budget to Insure Stabilization at 450 - 550 ppm CO₂e in 2100



Global CO₂ Emissions in 2003 = +21% above 1990

Global CO₂ Emissions in 2015 = +56% >1990



Why focus on internationally competitive sectors?

- Internationally competitive sectors like cement, steel, paper, and aluminum account for roughly 8% of global emissions BUT
 - » are disproportionately important politically because of fears of loss of competitiveness, leakage, and jobs/plant migration
- EU ETS allocation problems have demonstrated the importance of these sectors to competitiveness
 - » study showed that competitiveness in EU was more adversely affected by allocation decisions by Member States than by potential leakage to nearby developing countries
- Decisions on auction vs. grandfathering have profound competitiveness implications
 - » A1 countries need to first harmonize these decisions among themselves before addressing developing country issues



* Doesn't include emissions from LULUCF; Only direct emissions, which don't account for emissions associated with electricity use in these sectors

Carbon Regulation and Competitiveness

- Leveling the carbon playing field within Annex I and between developing countries and A1 will not eliminate job and plant shifts because of differences on taxes and labor costs etc – but can minimize the impact of carbon regulation on those shifts
- Once these sectors are addressed, it will be easier for A1 countries to set aggressive national reduction targets

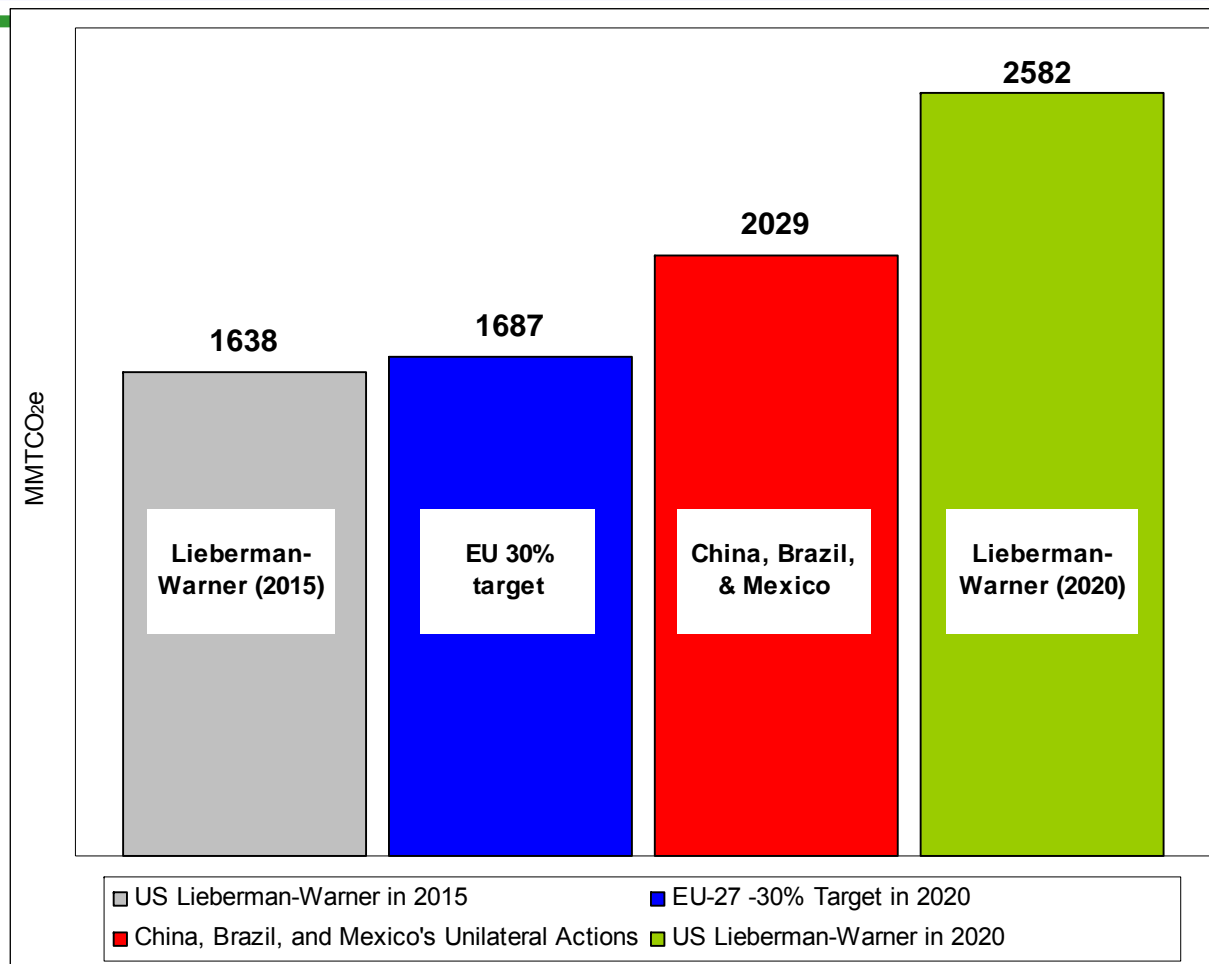
Developing Country Mitigation Framework

- Developing countries would create comprehensive national strategies based on the following elements:
 - » Countries outline “unilateral actions” to achieve sustainable development and reduce GHGs
 - » Outline other additional actions they are willing to undertake with assistance from developed countries, the UNFCCC or KP mechanisms, or new post-2012 frameworks, and **specify the technologies needed**
 - » Developed countries provide assistance to developing countries to undertake these additional measures
- Each country’s plan quantifies the sustainable development impacts and GHG reductions below BAU in key sectors

Developing Country Mitigation Framework

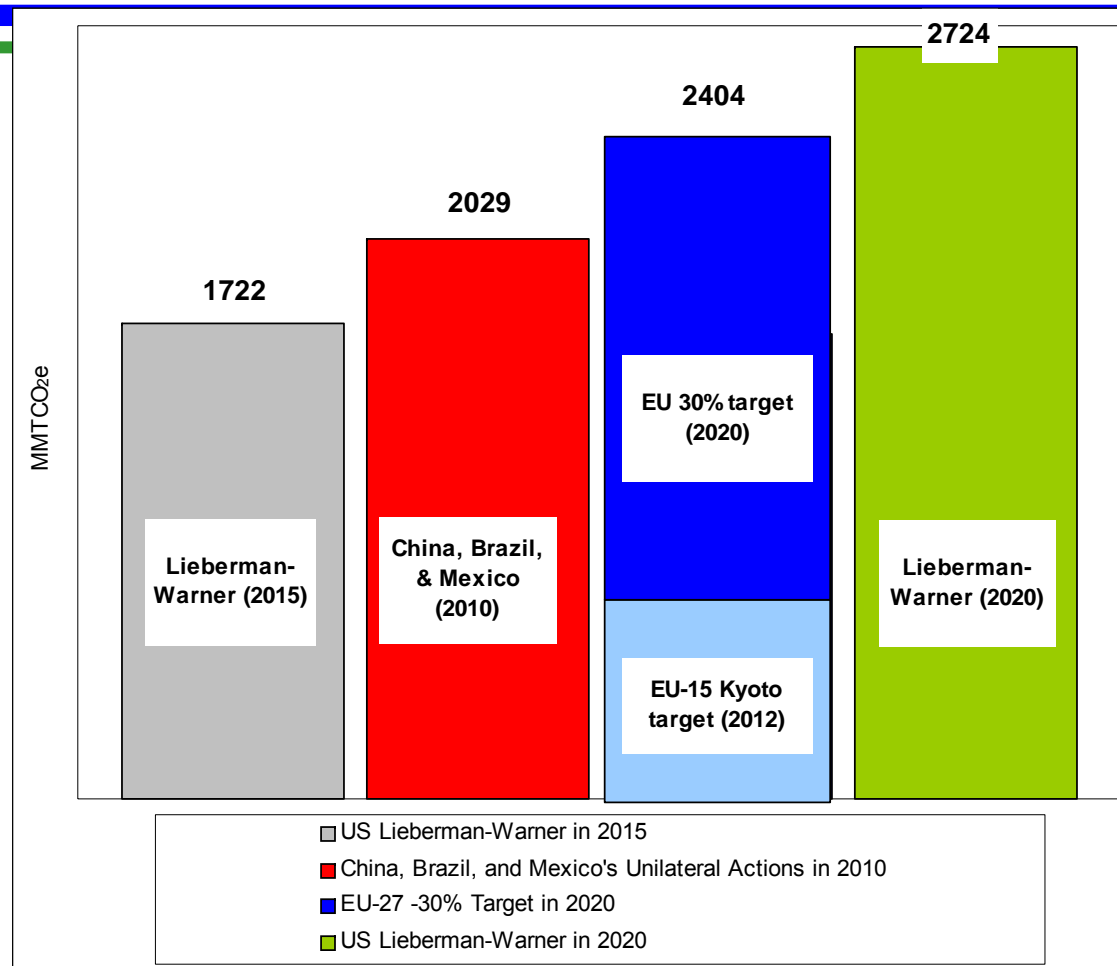
- Developing countries specify policy actions they intend to take and the expected results. Could be undertaken under existing programs/mechanisms (e.g., UNFCCC), or new ones within the post-2012 framework
 - » Unilateral actions and SD-PAMs to reduce GHGs (existing and new)
 - » Policy-based lending to build capacity to develop/implement policies
 - » **Sectoral no-lose targets for selected sectors** (new)
 - » Sectoral CDM, program of activities, and traditional CDM (new and existing)
 - » Reducing emissions from deforestation (new)
 - » Technology demonstration and deployment (new and existing)
 - » Financing (new and existing)

Unilateral Actions Compared to US and EU Efforts



- Reductions from BAU

Unilateral Actions Compared to US and EU Efforts



Reductions from BAU

Source: CCAP, updated

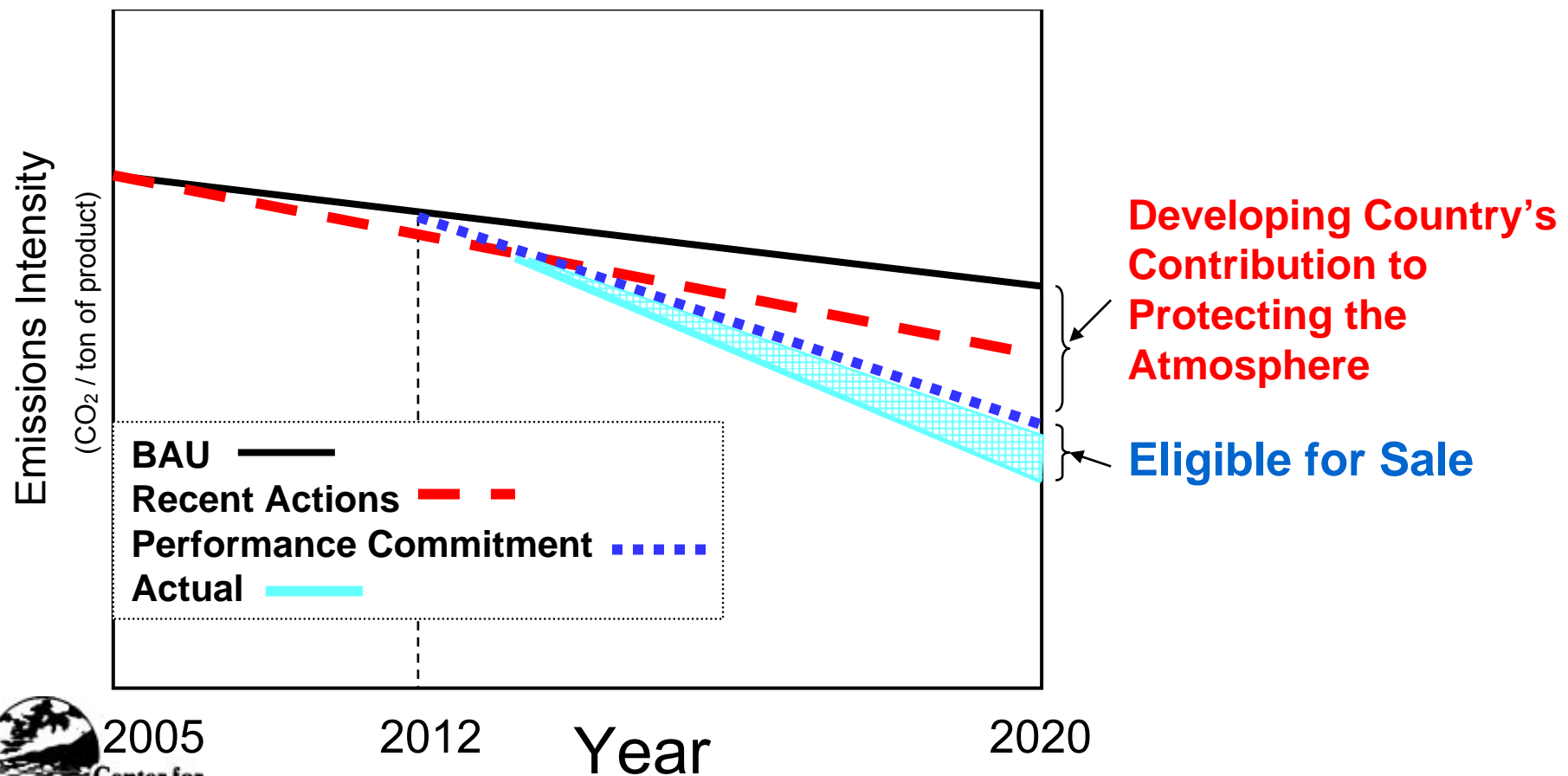


What is a Sectoral Approach to Post-2012 GHG Reductions?

- Method for encouraging sectoral emissions reduction contributions in non-Annex I countries (e.g. steel, cement, electricity) post 2012. Designed to:
 - » Build on previous unilateral actions and offer up-front technology finance packages to encourage more stringent targets
 - » Analyse what is technologically feasible and economically cost-effective in each industrial sector in each country
 - » Encourage deployment of low carbon technologies in these sectors in all countries
 - » Move toward leveling the playing field for carbon in internationally competitive sectors
- For Annex I countries, national carbon reduction targets could be developed in part via bottom-up sectoral intensity – one possible approach to “comparable effort”

“No Lose” Sectoral Approach

- Emissions reductions beyond the performance commitment are eligible for sale

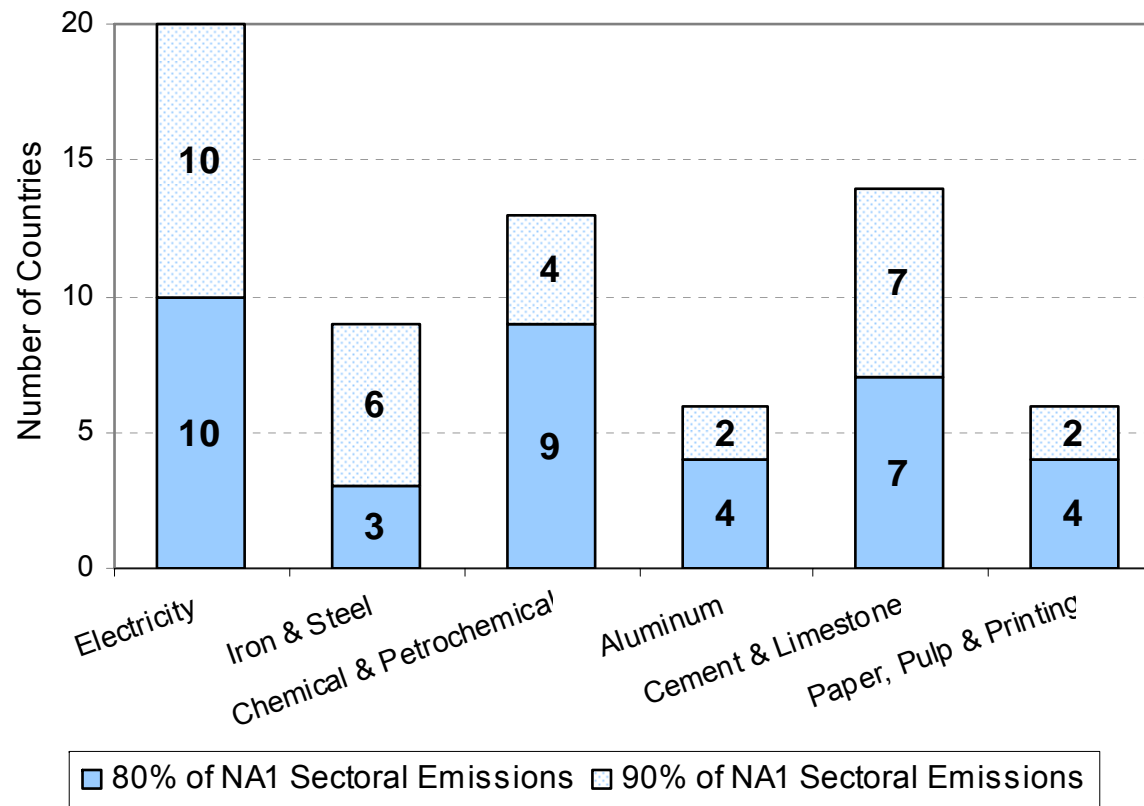


“Technology Financing and Assistance Package”

- Industrialized countries, International financial institutions (IFIs), Export credit agencies (ECAs) provide:
 - » A package of technology finance and assistance incentives to help participating non-Annex I countries establish and meet more aggressive “performance commitment” and increase deployment of advanced technologies
- Could be financed through the allowance values or auction revenues in developed country emissions reduction programs
 - » e.g., through an international set aside (i.e., portion of allowances taken out from the outset) to a fund like Mexico has proposed OR
 - » Countries setting aside portion of allowances or auction revenues in domestic trading system (e.g., as Germany is doing with 30% of the auction revenues for the EU ETS sectors)

How Many Developing Countries Need to Play ?

- Top 10 developing countries in each sector



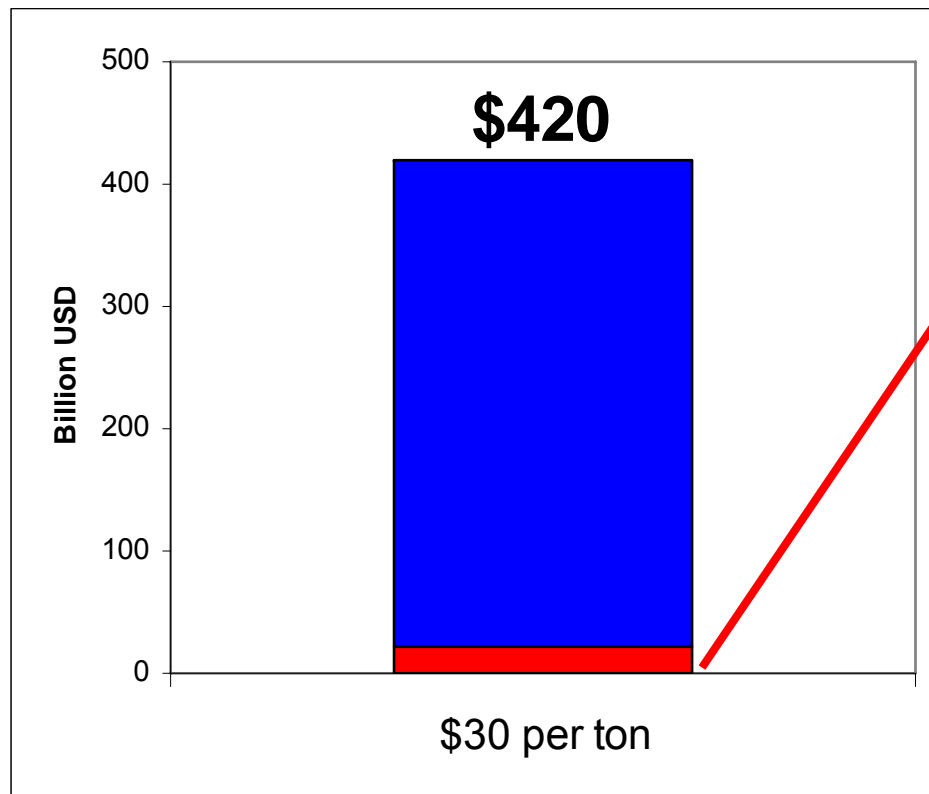
Source: Author's calculation; see Schmidt et al., 2006

Which Sectors Should Be Covered?

- Start with electricity and major industrial, internationally competitive sectors
- These sectors are roughly 1/3 of developing country (excluding LULUCF) GHG emissions and ***1/3 of global emissions***

How Much Money Could be Generated: An Example*

Value of A1 Allowances in 2020 per year



- If 5% of A1 allowance value set aside for advanced technology deployment could generate
 - » \$21 billion per year

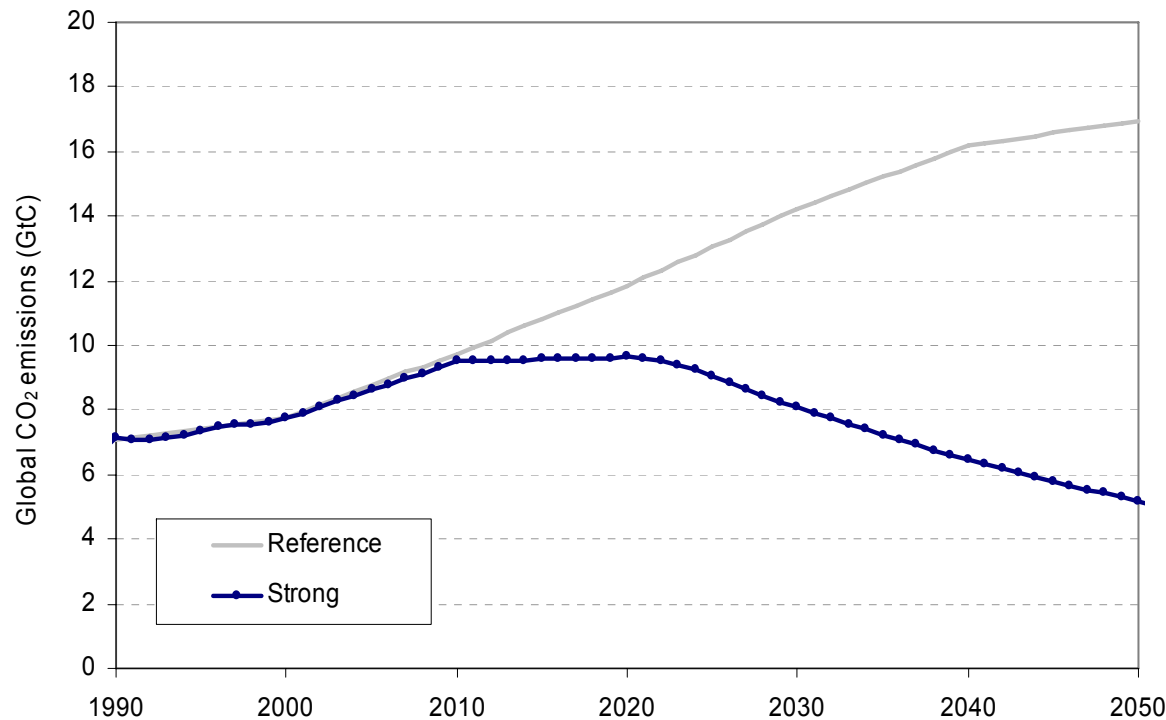


* Based upon 20% below 1990 levels target for all Annex I emissions

Developing Country Mitigation Framework: UNFCCC Implementation

- The successful development, adoption and implementation of this framework will require consideration of the following:
 - » Procedures for the development of and format for each sectoral or SDPAMS strategy
 - » Procedures for negotiation of international support and technology assistance
 - » Measurement, reporting and verification requirements for developing country action
 - » Measurement, reporting and verification requirements for Annex I financing and technology assistance

Sectoral Approach + Stringent Annex I Targets in 2020 = 550 ppm CO_{2e} possible



Source: Schmidt et. al., 2006

- If the six highest-emitting developing countries follow a sectoral approach in three key sectors and:
 - » EU et al achieve emissions 30% below 1990 levels by 2020
 - » US achieves 1990 emissions level by 2020
- And, 450 ppm CO_{2e} in reach if additional sectors (e.g., deforestation and transport) make “contributions to protection of the atmosphere”

Top-down Sectoral Designs

- Some have suggested a Montreal Protocol approach:
 - » Set an international intensity target for a given sector
 - » **differentiate** among developing countries thru financing incremental costs and setting different deadlines
- One key difference with Montreal Protocol, however, is that underlying natural resource base (coal, oil, renewables etc) was not a factor – setting single standard for carbon in sectors will have much broader economic implications than MP chemicals
- Likely to be less attractive to developing countries



Lessons for International Policy from the Sectoral Approach

- **Build on developing country unilateral actions**
- **Build targets from the bottom-up and provide incentives for going further**
 - » Encourage developing countries to take actions without penalties
 - » Maintain “common but differentiated responsibilities and respective capabilities”
- **Place equal importance on encouraging sustainable development and achieving GHG reductions**

Conclusions

- Post-2012 mitigation framework needs to include elements that:
 - » Provide a structure for developed countries to provide targeted technology financing for deployment
 - » Move the int'l process forward toward a carbon “level playing field”
 - » Bends developing country emissions curve in the near-term
 - » Set global emissions level for 2020 that preserves potential to achieve stabilization of long term atmospheric concentrations at a safe level
 - » Set more stringent developed country commitments for 2020