



Center for
Clean Air Policy

Sectoral Approaches: Proof of Concept

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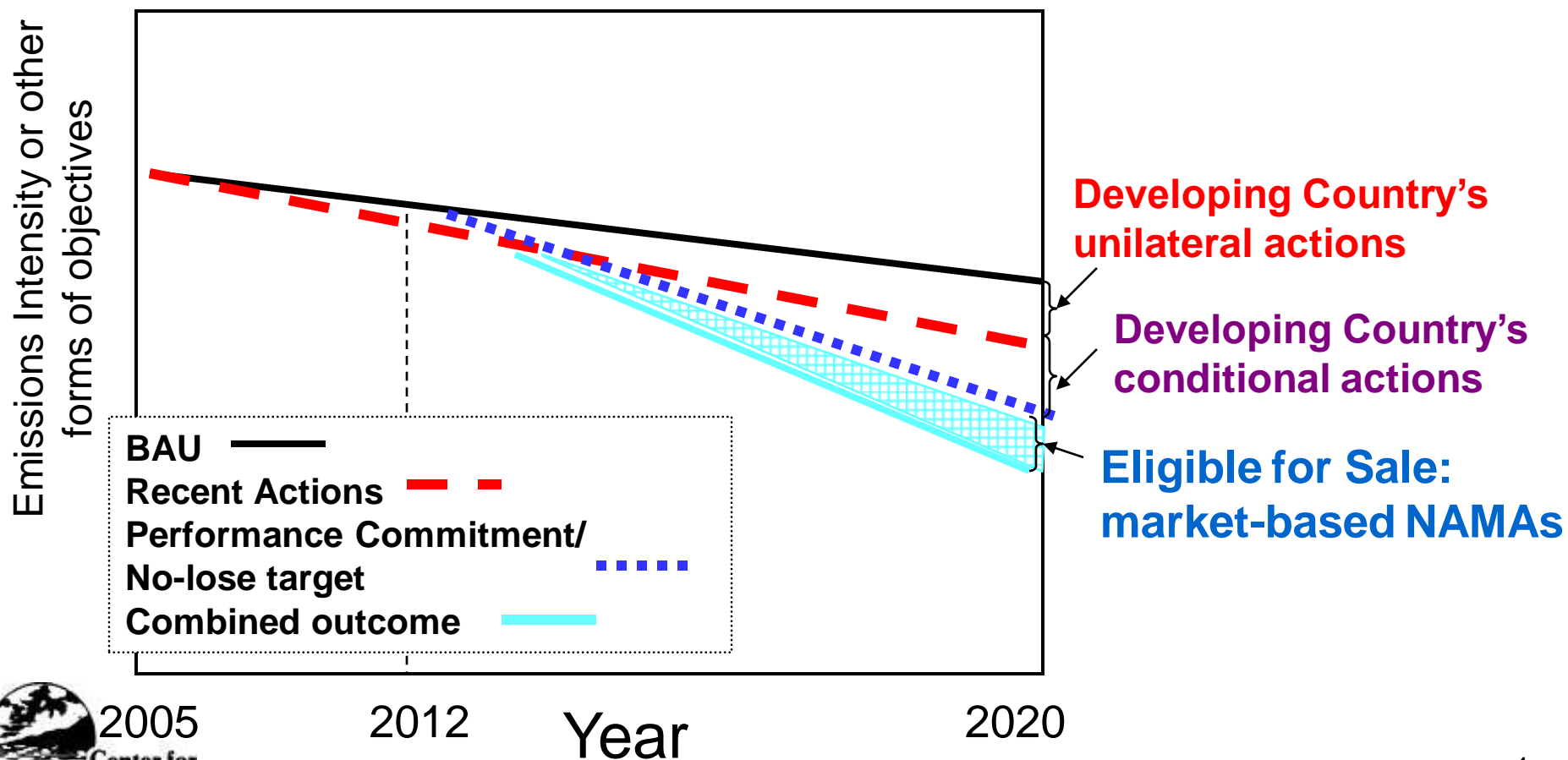
Outline of Presentation

- Sectoral approaches in the context of climate negotiations
- CCAP work on sectoral approaches
- Sectoral Study Lessons Learned to Date

Sectoral approaches in the international climate debate

- Developing countries are expected to contribute to the global GHG mitigation effort
 - » Bali Action Plan calls for verifiable nationally appropriate mitigation actions (NAMAs) by developing countries supported and enabled by verifiable technology, financing, and capacity-building from developed countries
- A bridge strategy for the next commitment period (2012–2020) to encourage further developing country actions
- Sectoral approaches fit into NAMA concept
 - » NAMAs could be grouped to achieve broader objectives, such as sectoral program goals
 - ➔ A sectoral approach can be made up of a single NAMA or a group of NAMAs

Developing country contribution to GHG mitigation: three categories of NAMAs



Conditional NAMAs

- Provide incentive to “race to the top”
- Create strong technology finance incentives in key internationally competitive sectors (e.g., steel, cement, electricity) to:
 - » deploy advanced low carbon technologies (such as CCS that are not market ready and cost effective) in developing countries
- Help insure “low hanging fruit” stays in developing countries
- Facilitate contribution by developing countries to protecting atmosphere
- Help in setting a more realistic crediting baseline

Technology Finance Assistance to Encourage Stronger Actions

- Technology & finance assistance could be provided:
 - » To build first-of-a-kind advanced technologies which are not cost effective
 - » To accelerate deployment by bringing down the cost of advanced technologies
 - » As incentive for participating developing countries to establish more aggressive “performance goals”
- To receive incentives, developing countries would have to meet “performance metrics”, such as adopting binding national emission reduction programs

Sources for Technology Finance

- Countries could provide financing by setting aside a portion of allowances or auction revenues in domestic trading systems, e.g.,
 - » German Parliament has earmarked 30% of auction revenues
 - » European Commission has proposed that at least 20% of auction proceeds should be used for CCS deployment, int'l EE/RE, and measures to avoid deforestation.
 - » Norwegian Finance Minister has proposed use for international programs including adaptation, technology, and reducing deforestation
 - » Lieberman-Warner bill uses such an approach for int'l forestry
 - 5% of allowances set aside

Sectoral Study Status Report: Analysis

- China
 - » Case studies complete for electricity, cement, iron and steel (I&S) sectors
 - » Aluminum sector case study being revised
 - » Initial work on technology-based approach for cement and iron & steel complete
- Mexico
 - » Case studies near completion (electricity, cement, I&S)
 - » Initial proposal for sectoral goals in cement and oil refining undergoing revision, electricity and steel ahead
- Brazil
 - » Case study for cement sector complete
 - » Case study for electricity sector in progress

Sectoral Programs in Mexico — Implementation

- Working w/ Mexico, CCAP developed potential sectoral intensity targets for oil refining and cement sectors
- In Poznan, Mexico announced that it will pursue a trans-sector cap-and-trade program to include the electricity, oil, cement, and iron and steel sectors
 - » Initiation slated for 2011 (iron and steel may be later)
- Hard caps for the 2011-2020 period will be derived from the sectoral emissions intensity goals and expected production levels and be adjusted in subsequent periods
- Mexico is also putting some complementary policy reforms (NAMAs) in place:
 - » Energy Reform – provides more budgetary flexibility for PEMEX and permits some degree of private investment
 - » New law that allows CFE to consider externalities in its pricing decisions and gives CRE more control over contracting terms with independent power producers

Setting Goals for China's Cement and Iron & Steel Sectors

- Tsinghua team performed a preliminary analysis of China's cement and iron & steel industries to estimate their GHG emissions reduction potentials through 2025
- The analysis involved estimating:
 - » BAU emissions through 2025, based upon expected growth in production and projected changes in production capacity, energy intensity, electricity intensity, fuel mix, industry practices
 - » Current penetration of key technologies in the sectors
 - » Impacts of recent and potential industry policies
 - » Maximum deployment of mitigation options, both individually and as packages of options
 - » Implementation cost of improving technology penetration to different level

Setting Goals for China's Cement and Steel Sectors

- The most promising mitigation options for China's cement sector are:
 - » Installation of waste heat recovery systems
 - » Increased use of fly ash, slag, and other supplemental cementitious materials to produce low-clinker blended cements
 - » Accelerated replacement of older and less efficient capacity (particularly the vertical shaft kilns) w/ state-of-art replacements
- The most promising mitigation options for China's iron & steel sector are:
 - » increasing the share of facilities using coke dry quenching (CDQ) technology
 - » using Combined Cycle Power Plant (CCPP) to recover overflowed blast furnace gas (BFG)
 - » accelerated retirement of older and less efficient production facilities w/ state-of-art replacements

Broad Sectoral Approach Lessons

- Sectoral approaches should be built on ongoing unilateral mitigation actions
- Accounting for **national circumstances** is the key to setting equitable and feasible sectoral goals.
- Goals should not be rigidly limited to sector-wide carbon-per-ton-of-production goals
- Key is implementation – what policies and measures will country adopt to achieve the sectoral goals?
 - » Mexico chose trans-sector cap-and-trade system + policy reform
- Sectoral approaches provide incentive to set up cap and trade programs. The system guarantees that companies benefit from investments immediately. Without cap and trade, decisions are needed on how to create incentives for private investors.
- Supply smaller than potential
 - » Missing data in developing countries
 - » Reluctance against international verifiers
 - » Lack of administrative capacities
 - » Most of the reductions are needed to fulfill no-lose target, only part of it generate CERs

Thank you!

For more information:

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