

A Comprehensive U.S. Cap-and-Trade System: A Sensible and Practical Approach to Reduce Greenhouse Gas Emissions

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INTRODUCTION

- There's a *growing impetus* for a domestic U.S. climate policy to provide *meaningful* reductions in CO₂ and other greenhouse gases
- And general consensus among policy analysts that a *market-based instrument* targeting CO₂ emissions should be a central element
- While there are *tradeoffs* between two MBIs – cap-and-trade system and carbon tax – *best and most likely* approach for short to medium term in the United States is a *cap-and-trade system*
- *Three criteria for policy assessment:* environmental effectiveness, cost effectiveness, and distributional equity

Key Merits of a Cap-and-Trade Approach

- Provides a *cost-effective* means of achieving *meaningful* emissions reductions
- Offers an *easy means of compensating* for the inevitably *unequal burdens* imposed by a climate policy
- Provides a *straightforward means to link and harmonize* with other countries' climate policies
- *Unlikely to be degraded* – in terms of *environmental performance and cost effectiveness* – by political forces
- Has a *history of successful adoption and implementation* in the United States over the past two decades

Proposal for a U.S. Cap-and-Trade System

- *Upstream, economy-wide* CO₂ cap-and-trade system, with gradual inclusion of other greenhouse gases (and offsets for carbon capture & storage)
- Gradual downward trajectory of emissions ceilings over time, to minimize disruption and allow firms and households time to adapt
- Mechanisms to *reduce cost uncertainty* (price volatility): banking, borrowing, and a sensible cost-containment mechanism
- Initially, half of the program's allowances allocated through auction and half through free distribution, moving to *100% auction* within 25 years
 - Free distribution targeted at entities *most burdened* by policy -- helps limit potential inequities while bolstering political support
 - Auction *generates revenue for worthwhile public purposes*: compensation, R&D, reduction of Federal deficit, and/or reduction of distortionary taxes
- Linkage with international emission reduction credits, and harmonization over time with cap-and-trade systems in other countries
- Appropriate linkage with actions taken abroad to maintain a level playing field between imports and import-competing domestic products.

Comparison with Alternatives

- Alternative to cap-and-trade *most frequently considered by policy makers* for CO₂ & other GHG reductions is *standards-based policy*
 - *Inferior* to CAT (and carbon taxes) in terms of environmental effectiveness, cost effectiveness, and distributional equity
- Among some economists and other policy analysts, there is interest in use of *carbon taxes*
 - Most of the critiques of cap-and-trade use straw-man caricatures
- Environmental effectiveness: tax does not guarantee achievement of emissions target (but provides greater certainty regarding costs) – fundamental *tradeoff*
 - Taxes provide automatic temporal flexibility; need to build in to CAT
 - But, political economy forces strongly point to *less severe targets* if carbon taxes are used, rather than cap-and-trade – *not* a tradeoff
 - This is *why* environmental NGOs are *opposed* to taxes.

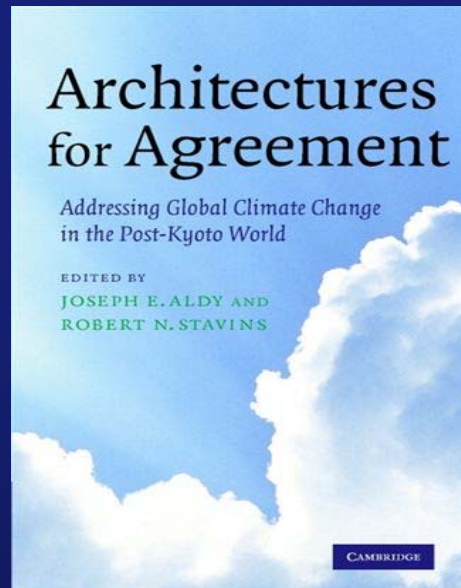
Comparison of Cap-and-Trade & Carbon Tax

- In principle, *both* can achieve *cost-effective* reductions.
- *Distributional consequences* of two approaches *can be identical*
 - *But* political pressures on *carbon tax system* lead to *exemptions of sectors/firms*, which *reduces environmental effectiveness and drives up costs*
 - Political pressures on *cap-and-trade system* lead to different *allocations of allowances*, which affect *only* distribution, *not* environmental effectiveness, *not* cost effectiveness
- So, some observers worry about propensity of political process under a CAT system to compensate sectors (through free allowances allocations)
- But a carbon tax is sensitive to the same pressures, and may be expected to succumb in ways that are ultimately more harmful.
- It is important to design policy that is “optimal in Washington,” not just from perspective of Cambridge, New Haven, or Berkeley.

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Harvard Project on International Climate Agreements

www.belfercenter.org/climate

Proposal for a U.S. Cap-and-Trade System

www.brookings.edu/papers/2007/10climate_stavins.aspx

or

The Harvard Environmental Economics Program

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www.stavins.com