Market-based Approaches To Address Climate Change: Myths And Reality

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Carbon Dioxide: The Ultimate Externality?

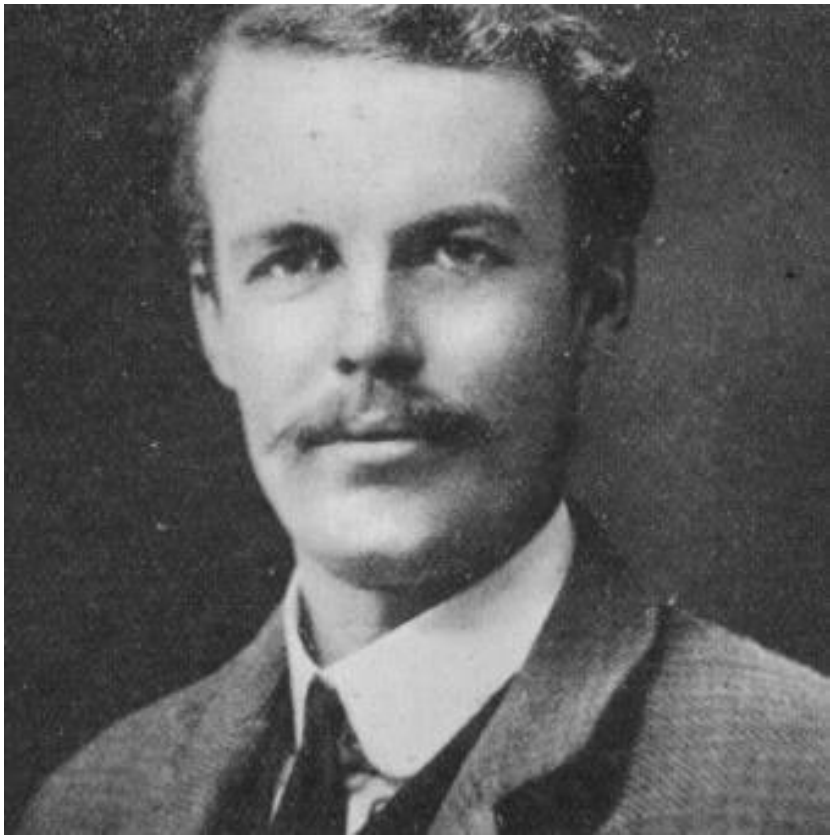
- CO2 is *easier* to deal with than many other externalities.
  - No local impacts
  - (Relatively) easy to monitor emissions
- So are there market solutions?
  - Yes, in theory
  - Yes, in practice

Market-Based Policies: 2 Approaches

- Get the **price(s)** right: Taxes
- Get the **institutions** right: Property rights

Get Price Right: Pigouvian Taxes

- Incorporate “external” costs of pollution into price of energy.
- Tricky part: Estimating “demand” for cleaner air to set optimal tax level.
- Trickier part: “Tax” is a four letter word in politics (or used to be)



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Tax Examples

- Gas tax
- “System Benefit Charges”
  - Very small carbon taxes on electricity bills for ratepayers in many states.
  - Money used to fund energy efficiency, other programs.

Get “Institutions” Right: Property Rights

- Creating property rights for “unowned” natural resources.
- Can be “sources”
  - *fish, range forage, etc*.
- Can be “sinks”
  - *to “absorb” pollution – atmosphere, trees, etc.*

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Cap…

- To create scarcity, gov't caps total emissions (not rate).
- Creates an "allowance" = property right to emit a unit of pollution.
- How to distribute allowances?
  - *Less interesting to economists, but the central political question.*

…and Trade

Trading allowances to equalize (marginal) costs

Plant X: Cost to reduce emissions = $100/ton

Plant Y: Cost to reduce emissions = $200/ton

- Plant X can reduce emissions and sell surplus allowance to Plant Y for $150, saving Y's owner (and the economy) $50 in compliance costs.

Flexible Compliance

- Encourage experimentation at each source for cheapest ways to reduce emissions.
- For example, fuel switching vs. scrubbing for sulfur dioxide.
- More important than trading?

“The Grand Policy Experiment”

- **1990 Federal Acid Rain Cap and Trade Program**

  - Cap: ~8.9 mil. tons SO2 (50% of 1980 emissions) for electricity generators
  - Nearly perfect compliance (!)
  - Extremely low enforcement and allowance costs.
  - Benefits far greater than costs. Flexible compliance – via fuel switching – a key.

Cap & Trade Myth #1

C&T requires high allowance prices.

> "Right now, because of the recession in European manufacturing, the cost of…carbon credits has fallen fantastically, rendering the cost of carbon emissions low. That doesn't do much for reducing emissions."
>
> - Ben Stein, NY Times, Feb 21, 2009

Wrong: C&T keeps compliance costs /allowance prices as low as possible. Adjusts (unlike tax) for new econ conditions.

Cap & Trade Myth #2

C&T is overly complex.

> "This is the problem with politicians trying to create a market for something that the free market otherwise doesn't value…"
>
> - Max Schulz, Fox News 12.19.09

Wrong: 1990 CAAA was success because it was so cheap and easy to enforce. Worries about fraud are no different than for any other valuable financial asset.

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Cap & Trade Myth #3

Cap & Trade is the solution to all problems (The cap and trade "fetish")

Wrong: Cap & Trade allows compliance costs to fluctuate. Also may concentrate emissions locally into "hot spots." Only one of many policy tools, with its own pros and cons.

But why are you talking about this?

(**Myth #4:** Cap and trade / energy taxes are dead politically).

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Maybe not…

Are rumors of cap and trade's demise "exaggerated"?

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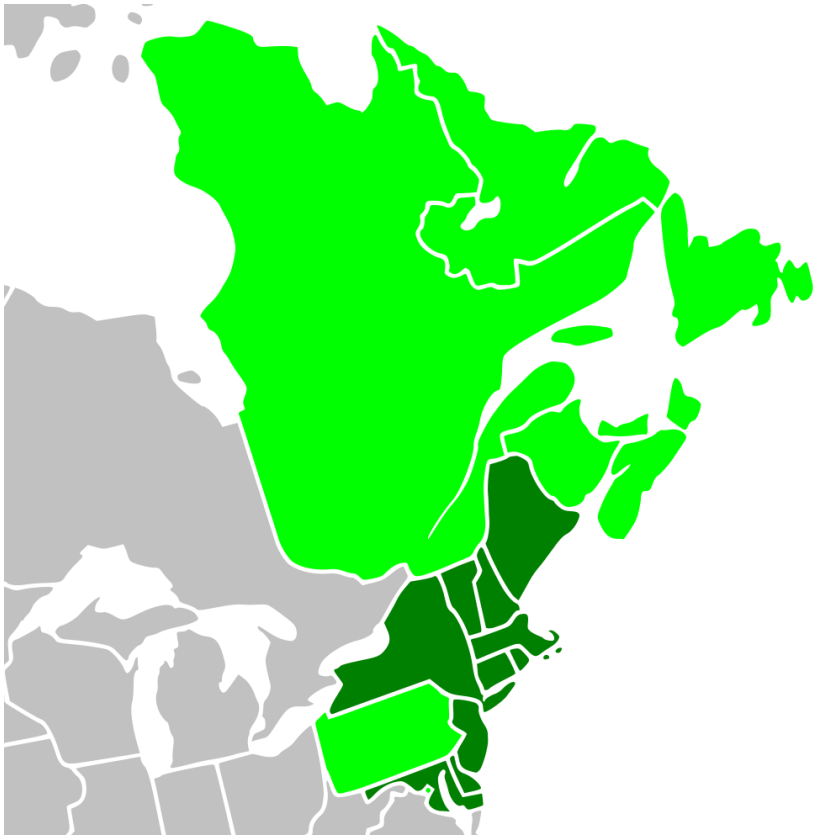
The “Old” Cap-and-Trade Model

- Private rights to public resources created with reluctance
- Initial allocation of little interest to environmental advocates
- Default to “squatters’ rights” to allowances based on prior resource use

THIS idea is pretty much dead.

The “New” Model: the Regional Greenhouse Gas Initiative (RGGI)

- Partnership 10 northeastern states
- Observer states/provinces as well
- Creates CO2 cap and trade for utility sector starting 2009
  - Image source: Commons.Wikipedia.org



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The RGGI "Revolution"

- Not only did 10 states manage to do what federal government still cannot (enact a climate policy)…
- But also they ***forced polluters to pay for their use of the "atmospheric commons" for first time*** by auctioning nearly all allowances.
- Cap and trade with auction ***remains the most common global approach*** to energy / climate policy today.

How did this happen?

1. Realization that in **deregulated energy market**, generators will charge consumers for allowances even if they are given away.

2. "**Normative reframing**" – advocates promoted idea of *atmosphere as public asset*, and emissions trading as subject to *"polluter pays"* norm.

1. **Weakness of status quo arguments** giving away allowances based on prior pollution – *"right of prior abuse"*.

How did this happen (2)?

4. **Auctions as way to protect consumers** from higher energy prices and reduce emissions more cheaply.

   - Decision to invest revenue in energy efficiency / ratepayer relief programs (including programs started by system benefit charges!)

   - Crucial difference with SO2 – lack of obvious scrubbing technology – added support for this approach.

Allowances as public asset

"To insure this gets broad support, we need to create a program that produces a tangible benefit. We need to show that this program addresses the very serious problem of global warming and pollution but does it in a way that produces a benefit people can get their arms around."

- Seth Kaplan, Conservation Law Foundation, Comments at RGGI Stakeholder Meeting, 9.21.05

Cap & Trade Myth #5

Allocation to existing emitters for free is politically inevitable(and/or desirable)

Wrong: Allowance auctions have gone from "unthinkable" to default option.

"**Public ownership" is the new norm.**

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Conclusions

1. Cap and trade **does not require high allowance prices**; offers many ways to limit and mitigate higher energy costs.
2. Cap and trade **lowers administrative costs with better compliance record**.
3. Charging for pollution from fossil fuels is common approach for new climate policies in world today, and **will become more popular in future**.

Conclusions

Idea of public ownership is transforming policy discussion on market-based approaches to carbon dioxide

"The page is turned so that you can't just give these [allowances] away any more."

Thanks and look forward to your questions!

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