

# AB 32 and Global Climate Change: The National Context of State Policy for a Global Commons Problem

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## California's Climate Change Policy: The Economic and Environmental Impacts of AB 32

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## Why talk about the national context of a state policy?

- **Climate change is a global commons problem**
  - Any jurisdiction taking action – a country, state, or city – incurs the costs of its actions
  - But the benefits (averted climate change) are distributed globally
  - Hence, for virtually any jurisdiction, the benefits it reaps from its actions will be *less* than the costs it incurs ....
    - despite the fact that the global benefits may be *greater* – possibly much greater – than the global costs
- **This presents a classic free-rider problem, ....**
  - which is why the highest levels of effective government should be involved, i.e., sovereign states (nations), ....
  - and this is why *international*, if not global, cooperation is essential.

## The National Context

- **Federal Climate Policy**
  - Pricing Instruments
    - Cap-and-Trade, Cap-and-Dividend
    - Carbon Taxes, Subsidies
  - Other Instruments
    - Regulation Under the Clean Air Act
    - Energy Policies Not Targeted Exclusively at Climate Change
    - Public Nuisance Litigation, and Other Interventions
- **Sub-National Climate Policy**
  - Interactions of Regional & State Policies with Federal Policies
  - Sub-National Policies in the Absence of Federal Policy
    - Future Linkage of Sub-National Policies as *de facto* National Policy

2

## National Carbon-Pricing Policy

- **Most economists & other policy analysts favor this approach. Why?**
  1. No other feasible approach can provide truly meaningful emissions reductions (such as an 80% cut in national CO<sub>2</sub> emissions by 2050)
  2. It's the least costly approach in short term (heterogeneous abatement costs)
  3. It's the least costly approach in the long term (incentive for carbon-friendly technological change)
  4. It's a necessary – but not sufficient – component of sensible climate policy
- **But, carbon-pricing is a hot-button political issue**
  - It makes the costs transparent (unlike conventional policy instruments), and is easily associated with the T-word; indeed, in Washington, cap-and-trade has been *demonized* as “cap-and-tax”
  - A meaningful, national, economy-wide carbon-pricing policy is unlikely to be enacted before 2013
- **Does that mean there will be no Federal climate policy? No.**

3

## Other Federal Regulations in Place or On the Way

- **U.S. Supreme Court decision, EPA endangerment finding, & CAA**
  - Mobile source standards
  - Stationary sources (January 2, 2011, with or without “tailoring rule”)
- **Air pollution policies for correlated pollutants under CAA**
  - Five rules in the regulatory pipeline – SO<sub>x</sub>, NO<sub>x</sub>, Hg, & PM
  - Could shut some coal plants (w/o any CO<sub>2</sub> requirements)
- **Energy Policies** (variety of standards & subsidies, not targeted at CO<sub>2</sub>)
  - National renewable electricity standard
  - Federal financing for “clean energy” projects
  - Energy efficiency measures

4

## Other Legal Mechanisms

- **Public Nuisance Litigation**
  - Lawsuits pursuing injunctive relief and/or damages
  - In flux – recent court decisions
- **Other Interventions**
  - Intended to block permits for new fossil energy investments
    - Power plants
    - Transmission lines
  - Some NIMBY, some strategic
- **But, with delay in Congressional action on carbon-pricing, attention is increasingly turning to the states ...**

5

## Sub-National Climate Policies

- Regional, state, & local policies continue to emerge
  - Regional Greenhouse Gas Initiative (RGGI)
  - California's Global Warming Solutions Act (AB 32)
  - Western Climate Initiative
  - In fact, more than half of 50 states are contemplating, developing, or implementing climate policies
- In presence of Federal policy, ....
  - Will state efforts achieve their objectives?
  - Will state efforts be cost-effective?
  - Answer: interactions can be *problematic, benign, or positive, ...*
    - *depending* on relative scope and stringency, and policy instruments used (Goulder & Stavins, NBER Working Paper 16123, June 2010)

6

## *Problematic Interactions*

- If Federal policy limits emissions *quantities* or uses nationwide *averaging* of performance, ...
- Then, emission *reductions* accomplished by “green state” (more stringent policy than Fed) reduce pressure on other states,
  - thereby freeing – indeed, *encouraging* (such as through lower allowance price) – emission *increases* in other states
- Result: 100% leakage, and loss of cost-effectiveness nationally
- Potential examples (can depend upon details of regulations)
  - AB 32 cap-and-trade *and* Federal cap-and-trade (HR 2454) or some U.S. Clean Air Act performance standards
  - State limits on GHGs/mile *and* Federal CAFE standards
  - State renewable fuels standard *and* Federal RFS; or state renewable portfolio standard *and* Federal RPS
- Partial solution: carve-out from Federal policy (but not c/e)

7

## *Benign Interactions*

- Example #1: Regional Greenhouse Gas Initiative (RGGI)
  - RGGI (state) policies are less stringent than assumed Federal policy
  - Result: state policies become non-binding and largely irrelevant
- Example #2: Federal policy sets price (not quantity)
  - A carbon tax, or a binding safety-valve/price collar in cap-and-trade
  - More stringent actions in green states *do not lead* to offsetting emissions in other states induced by a changing carbon price.
  - *However*, there will be *different* marginal abatement costs across states, and so aggregate reductions are *not* achieved *cost effectively*.

8

## *Positive Interactions*

- States can address market failures not addressed by a Federal “carbon-pricing” policy
  - Example: principal-agent problem re. energy-efficiency investments in renter-occupied properties → state or local building codes
- States can be “laboratories” for policy design
  - Can provide useful information for development of Federal policy
  - But will state authorities allow their “laboratory” to be closed after the experiment has been completed and the information delivered?
- States can create pressure for more stringent Federal policy
  - Example: Pavley I standards and subsequent change in Federal CAFE
  - Desirable if previous Federal policy is insufficiently stringent, ... but that is an empirical question

9

## Sub-National Climate Policies in *Absence* of Federal Action

- In the *absence* of meaningful Federal action, sub-national climate policies could become the *core* of *national action*
- Problems
  - Legal obstacles: possible preemption
  - Not national in scope
  - Not cost-effective (if there are different carbon shadow-prices)
- Is there a (*partial*) solution?
  - Yes, state & regional carbon markets can be linked
  - Linkage reduces costs, leakage, price volatility, and market power
  - A possible future for U.S. climate policy: linkage of state & regional cap-and-trade becomes the *de facto* post-2012 national climate policy
- So, Sacramento could take the place of Washington as the center of *national* climate policy.

10

## For More Information

### Harvard Project on International Climate Agreements

[www.belfercenter.org/climate](http://www.belfercenter.org/climate)

### Harvard Environmental Economics Program

[www.hks.harvard.edu/m-rcbg/heep/](http://www.hks.harvard.edu/m-rcbg/heep/)

[www.stavins.com](http://www.stavins.com)