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

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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

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 CO₂ 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.
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\textsubscript{x}, NO\textsubscript{x}, Hg, & PM
  - Could shut some coal plants (w/o any CO\textsubscript{2} requirements)
- **Energy Policies** (variety of standards & subsidies, not targeted at CO\textsubscript{2})
  - National renewable electricity standard
  - Federal financing for “clean energy” projects
  - Energy efficiency measures

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 …**
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)

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)
**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.

**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
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.

For More Information

Harvard Project on International Climate Agreements
www.belfercenter.org/climate

Harvard Environmental Economics Program
www.hks.harvard.edu/m-rcbg/heep/

www.stavins.com