



Carbon Policy When There Is No Carbon Policy

Seth D. Jaffe

Foley Hoag LLP

Presentation to the Harvard Electricity Policy Group

December 9, 2010



EPA's Real Climate Change Policy

- An Paraphrase of Recent Remarks By Gina McCarthy – The regulations under development by EPA that are likely to have the biggest impact on GHG emissions are not the Tailoring Rule and other programs directly focused on GHG; everything else is much more important.



What's Here and What's Next

- Regulation of Greenhouse Gas Emissions:
 - Tailoring Rule
 - BACT for Greenhouse Gases
 - Carbon Capture and Storage
 - Regional Cap-and-Trade
 - State Climate Initiatives

- Other Regulation that May Impact CO₂ Emissions:
 - Transport Rule
 - Mercury MACT
 - Coal Ash Regulation
 - Coal-Specific rules on Clean Water Discharges
 - Mountain Top Mining

Tailoring Rule

- *Massachusetts v. EPA*: regulation of GHG under Clean Air Act required, absent other Congressional action
 - Climate Change Legislation
 - Legislation to preempt regulation of GHG under Clean Air Act

- Tailoring Rule: Finalized in May, 2010
- Estimated 15,500 sources affected
- January 2, 2011: “Anyway” sources needing PSD permits for other pollutants + GHG emissions increase by $\geq 75,000$ tons/yr CO_{2e}
- July 1, 2011: New facilities with $\geq 100,000$ tons/yr CO_{2e}
 - Modified facilities: increase $\geq 75,000$ tons/yr CO_{2e}
- July 1, 2012 – Rulemaking on smaller sources (to implement in April 2016)
 - EPA committed to not regulate sources with GHG-only below 50,000 tons/yr CO_{2e}

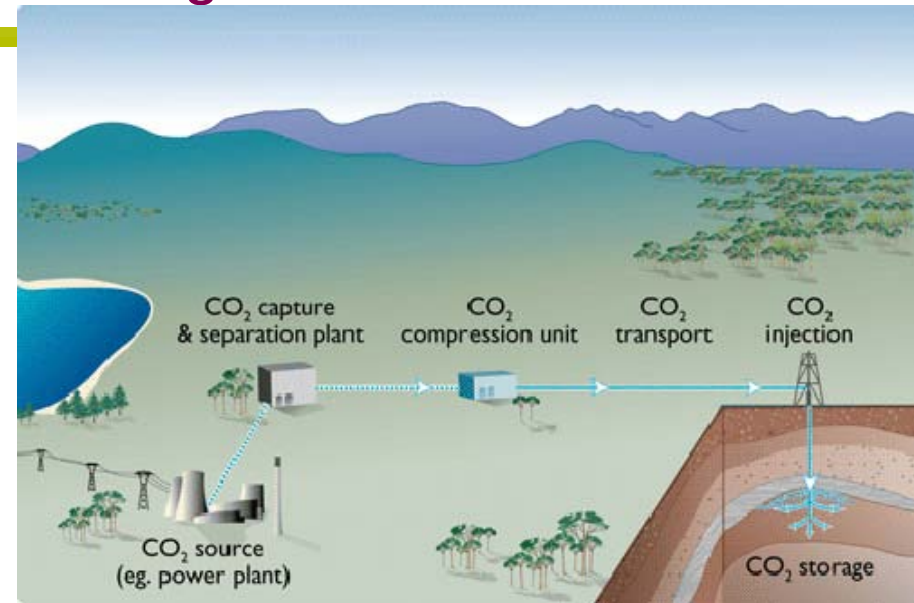
- PSD permits issued after January 2, 2011 must include BACT for greenhouse gas emissions – but what is that?

Best Available Control Technology (BACT)

- “PSD and Title V Permitting Guidance for Greenhouse Gases” released 11/2010
- EPA recommends usual 5-step BACT process:
 - Identify all available control technologies
 - though “need not include an assessment of each and every conceivable improvement that could marginally improve the energy efficiency of the new facility”
 - Eliminate technically infeasible options
 - Rank remaining control technologies
 - Evaluate most effective controls and document results
 - Select the BACT
- Heavily emphasizes use of energy efficiency measures: performance benchmarking
- One Issue: Control Technology v. Redefining the Source -- Is the best way to control emissions from a coal plant to burn natural gas instead?
 - Guidance says permitting agencies must take a ‘hard look’ at the proposed design to discern which elements are inherent and which may be changed to achieve emissions reductions without disrupting the basic business purpose
 - January 2010 EPA decision granting objection to permit for coal plant in Arkansas on ground that it did not consider Integrated Gasification Combined Cycle as BACT

Carbon Capture and Storage

- Interagency Task Force (August 2010)
 - Cost-effective deployment will only occur if technology is scale-able and supportive national policy framework is in place
 - Continual oversight of CCS regulation by federal agency roundtable
 - Industry financed trust fund to support long-term stewardship and monitoring
- Class VI Injection Well (Safe Drinking Water Act)
 - Requirements for siting, construction, operation, and closure
 - Individual companies' 50-year post-closure monitoring program
- GHG Reporting Rule
 - Report and verify CO₂ sequestered using mass-balance approach
 - Could provide format for CCS to become offsets

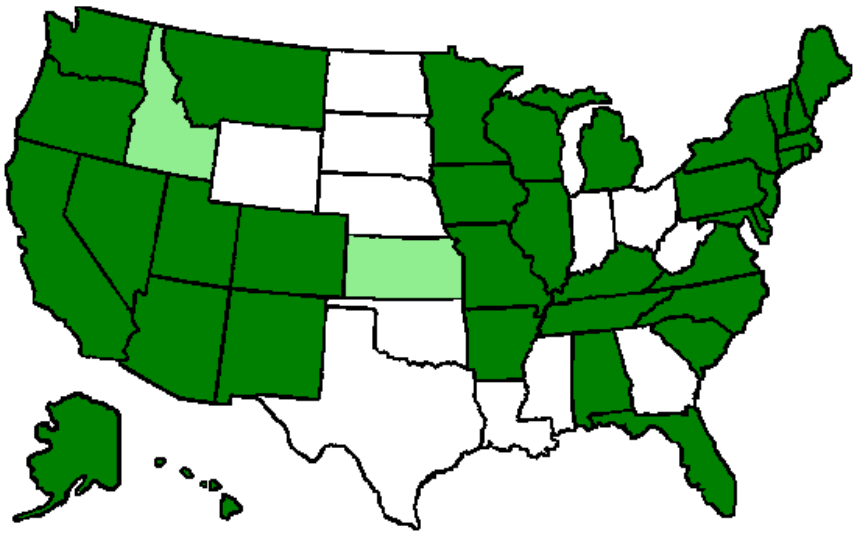


“Frank is into carbon sequestration”

Economy-wide State Initiatives

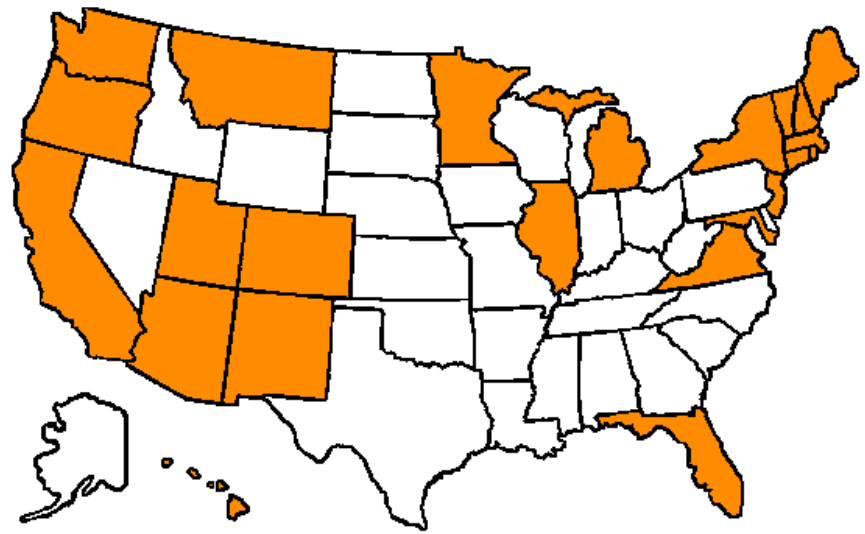
- California's Global Warming Solutions Act (AB 32, 2006)
- Climate Action Plan, 2008:
 - Cap-and-trade program: covers 85% of emissions (in conjunction with WCI)
 - Transportation (Pavley) Standards: 30% reduction in vehicle emissions by 2016, followed by further reductions from 2017
 - Renewable Energy: 33% by 2020
 - California Solar Initiative
 - Plans addressing efficiency in industry, high global warming potential gases, forestry, agriculture, and waste and recycling
- Timeline:
 - 2009: Mandatory Reporting Begins
 - Jan, 2010: Early Action Reduction Measures (primarily low carbon fuel standard) in effect
 - November, 2010: Climate Change Plan survives Proposition 23 challenge
 - 2011: Major Rulemakings complete
 - 2012: Regulations and Cap-and-Trade Final
 - 2020 Goal: 1990 levels (25-30% reduction from business as usual)
- Massachusetts' Global Warming Solutions Act (2008)
 - Economy-Wide Reductions:
 - 19-25% below 1990 levels by 2020
 - 80% below 1990 levels by 2050
 - Mandatory Reporting (5,000+ tons)
 - Adaptation and Green Economy Programs
- Green Communities Act (2008)
 - Grants and Guidance to facilitate municipal investment in efficiency and renewable energy
 - Renewable Portfolio Standard: 5%, increases 1% annually
 - Alternative Energy Standard
- Low Carbon Transportation Initiative
 - Along with 9 RGGI states and Pennsylvania
- Timeline:
 - 2009: Mandatory Reporting Begins
 - Dec. 2010: 1st triennial GHG inventory
 - 2011: 2020 Target and Plan finalized
 - 2013: 2020 Regulations take effect

Climate Action Plans and Targets



■ In Progress
■ Completed

States with Climate Action Plans



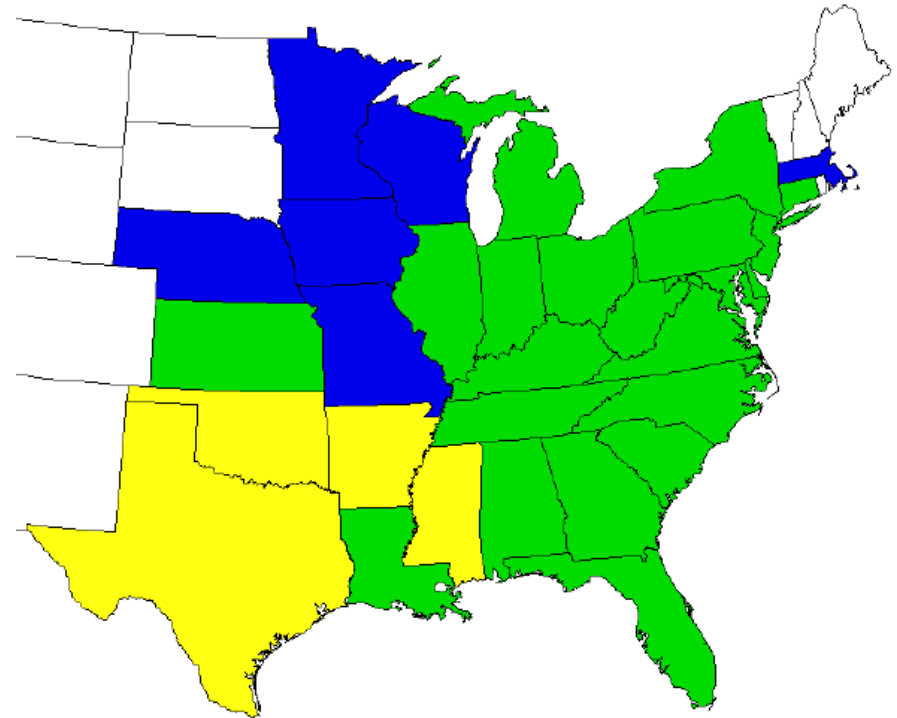
■ States with GHG Emissions Targets

States with Targets for GHG Reductions

http://www.pewclimate.org/what_s_being_done/in_the_states

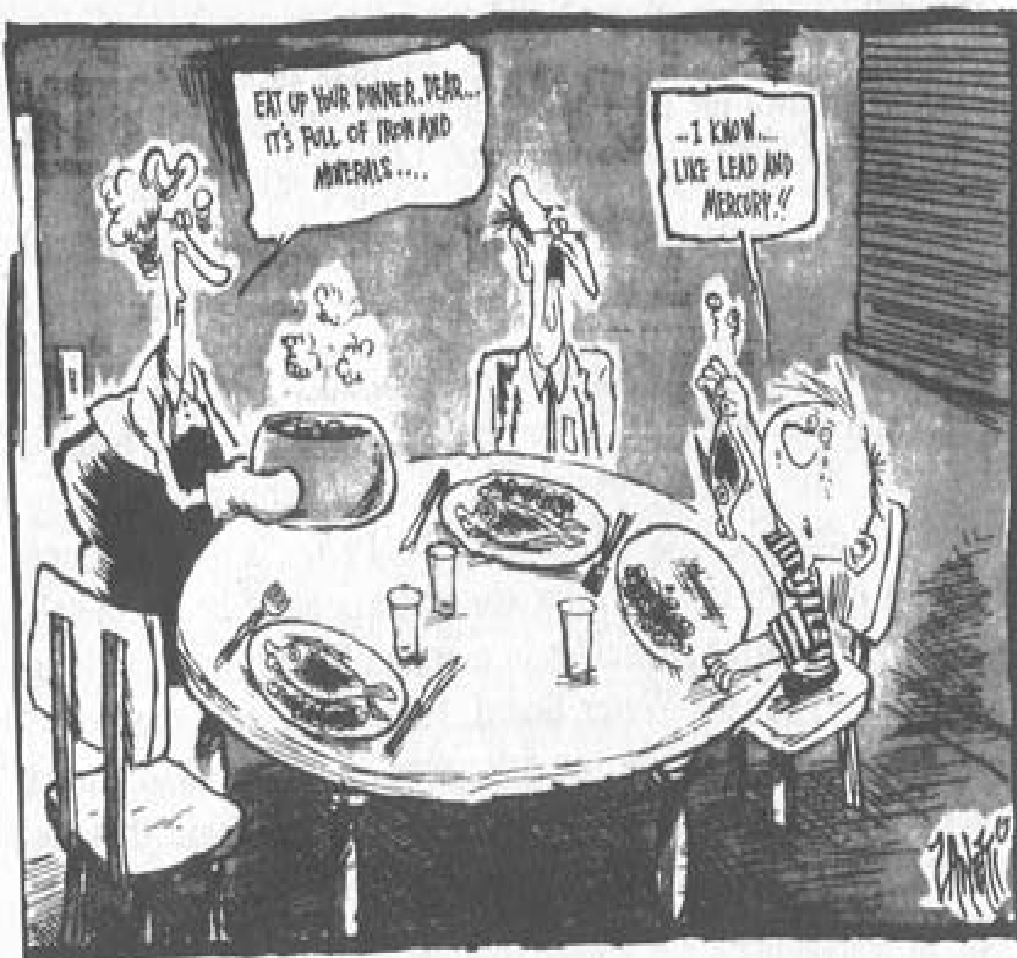
Clean Air Transport Rule

- Target: power plant emissions contributing to ground-level ozone and fine particle pollution
- Replaces 2005 Clean Air Interstate Rule (CAIR), struck down in 2008
- Proposed in July 2010
 - 31 states and DC
 - Require reductions in sulfur dioxide (SO₂) and nitrogen oxides (NO_x) that cross state lines
- EPA Preferred Approach: Pollution limit (budget) for each state (limited trading)
- Big issue – Basis of CAIR decision was that interstate trading in in this context is not authorized by the CAA – Efficiencies of CAIR are largely lost.



	Fine Particles (annual SO ₂ and NO _x) (6 states)
	Both Fine Particles + Ozone (21 states + DC)
	Ozone Season NO _x only (4 states)

Mercury Maximum Allowable Control Technology (MACT)



- Air Toxics standards for coal- and oil-fired electric generating units under CAA §112(d)
- Replaces 2005 Clean Air Mercury Rule (CAMR), vacated by DC Circuit in 2007
- EPA currently collecting data on emissions: Electric Utility MACT Information Collection Request
- Consent decree (*American Nurses Association et al v. EPA*) creates timetable for MACT rulemaking developments
- Proposed Rule due March 10, 2011
- Final Rule due November 16, 2011
- Compliance on facility-specific basis
- More expensive than CAMR

Economic Impact of Regulations

- Credit Suisse Report (October, 2010):
 - Bottom line: Invest in clean plants in dirty markets
 - 50-69 GW of coal plants retire between 2013-2017 due to CATR and MACT
 - 100 GW of capacity will require significant additional investment to comply
 - Trade-offs: Installation of scrubbers for SO₂ and NO_x increases GHG emissions because they require additional station service and make the plant less efficient
 - Methodology looked at small plants needing scrubbers as candidate for closure

- MJ Bradley Report (August, 2010):
 - Bottom line: Transport rule won't threaten electric reliability
 - Emissions rules could lead to retirement of 25 – 40 GW through 2015
 - But power sector added 4 times that capacity (160 GW) from 2001 to 2003
 - Predict already have excess capacity of 107.3 GW in 2013
 - Roughly ¼ of coal-fired fleet must add pollution controls, switch fuel or retire

Coal Combustion Residuals: To Be Hazardous Or Not To Be Hazardous?

- EPA proposed rule in May to regulate Coal Combustion Residuals under RCRA
- 2 Options:
- Special Wastes subject to subtitle C of RCRA
 - Effectively phases out use of surface impoundments
 - Magnitude of costs to address CCR present in existing impoundments
 - Requirements for permits, liners, special storage containment, groundwater monitoring
 - Potential for direct federal enforcement
- Not Hazardous, subject to subtitle D of RCRA
 - Goes into effect sooner (6 months)
 - Optional for states to establish permit programs
 - Retrofitting liners for existing impoundments and groundwater monitoring
- Both would impose oversight and safety requirements for impoundments
- Keeps Beneficial Use: Bevill Exemption
- Raises concerns on appropriate regulation for unencapsulated CCR (loose/sludge form)



2012 Clean Water Act Changes

- EPA plans to create new effluent guidelines for Steam Electric Power Generating industry by 2012
 - Current regulations issued in 1982: not kept pace with changes in industry
 - Scrubbers to reduce air emissions can significantly increase pollutants in wastewater, as well as volume
 - For more information: http://water.epa.gov/scitech/wastetech/guide/steam_index.cfm
- EPA predicts that in 2011, roughly 50% of coal-generated electricity will come from plants with water-driven scrubbers
- NY Times found that 90% of the 313 coal-fired power plants with NPDES violations since 2004 have not been fined or otherwise sanctioned by regulators

Mountain Top Mining + Water Quality

- EPA veto of W.Va. Spruce No. 1 Mine under CWA authority
- Issued guidance strengthening permit requirements under Sections 402 and 404 of Clean Water Act
- Numeric water quality based effluent limits (WQBELs) for surface mining projects
 - Modeling shows in-stream conductivity levels at or below 300 micro Siemens per centimeter (uS/cm) will meet water quality standards
 - Permits must include WQBELs that will ensure in-stream levels do not exceed 500 uS/cm
- Widespread Impact: Administrator Jackson predicted there are “no or very few valley fills that are going to meet this standard”
- Transparency: permit tracking website so public can determine status of mining permits
- Also recommending expansion of NEPA to surface coal mining projects permitted by Army Corps of Engineers
- Effective immediately (as of April, 2010), but EPA took comments until December 1



The Wild Card – Citizen Enforcement

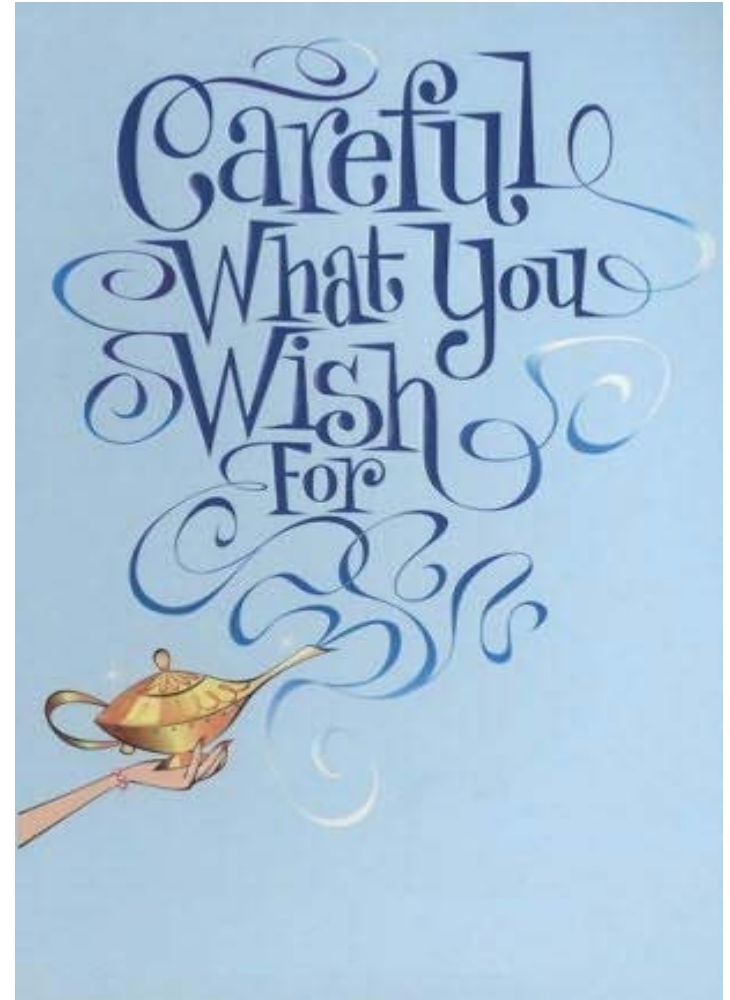


Agoraphobic activists do what they can
to help save the rain forest.

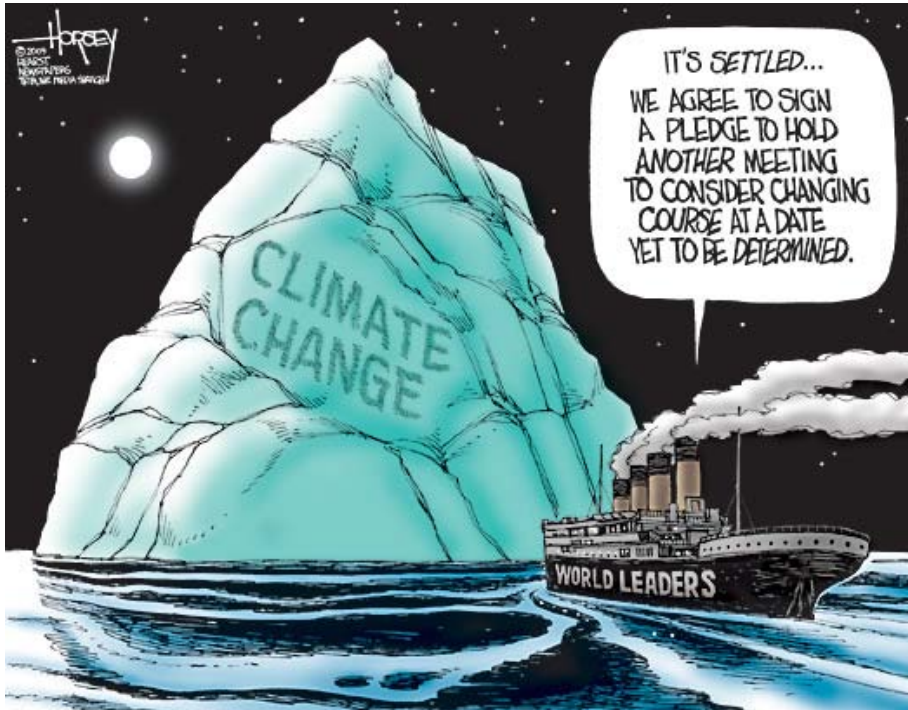
- Several Citizens Groups Are Working to Make Life Difficult For Large CO₂ Emitters
 - Law suits challenging permits to individual coal facilities.
 - Litigation concerning mountaintop mining
 - Litigation concerning coal ash and disposal and NPDES permits

Be Careful What You Wish For

- In The Absence of Climate Legislation, EPA Will Regulate
- In the Absence of EPA Regulation, Citizen Groups Will Step In to Fill the Gap
- This Includes Public Nuisance Litigation, Which Is Likely To Be Precluded If There Is A Federal Program
- Most of the Regulatory Programs Discussed Above Are Mandated By Existing Legislation – In Other Words, They Cannot Be Stopped Without Legislative Changes



The Bottom Line



- Don't Expect Regulatory Certainty For Decision-Making About Capital Projects Any Time Soon
- The More Extreme Anti-Regulation Efforts Are Likely to Increase Uncertainty Rather Than Decrease It

Contact Information



Seth D. Jaffe

Chair, Administrative Law Department

Coordinator, Environmental Practice Group

Boston

617.832.1203 (t)

617.832.7000 (f)

sjaffe@foleyhoag.com

www.foleyhoag.com

www.lawandenvironment.com