North American GHG Regulation
- Where Do We Stand? -

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ICF International

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Agenda

- ICF Overview
- Update on US legislative/regulatory developments
- Status of Canadian GHG regulation
- SEC reporting guidance
- Questions

ICF History, Experience and Climate Services

ICF History

- Founded in 1969 – Forty years of experience
- Headquarters in the Washington, D.C. area; global presence with 50 offices throughout the world
- Working throughout the energy and environment space
  - Fuel and emission markets, environmental assessment and compliance, policy analysis
  - Air, water, waste
- More than 3,500 employees

Highlights of Climate Experience

- Over 230 professionals with climate-related expertise
- Provided climate policy advice to > 60 governments
- Providing climate strategy advice to > 65 companies in the FT Global 500

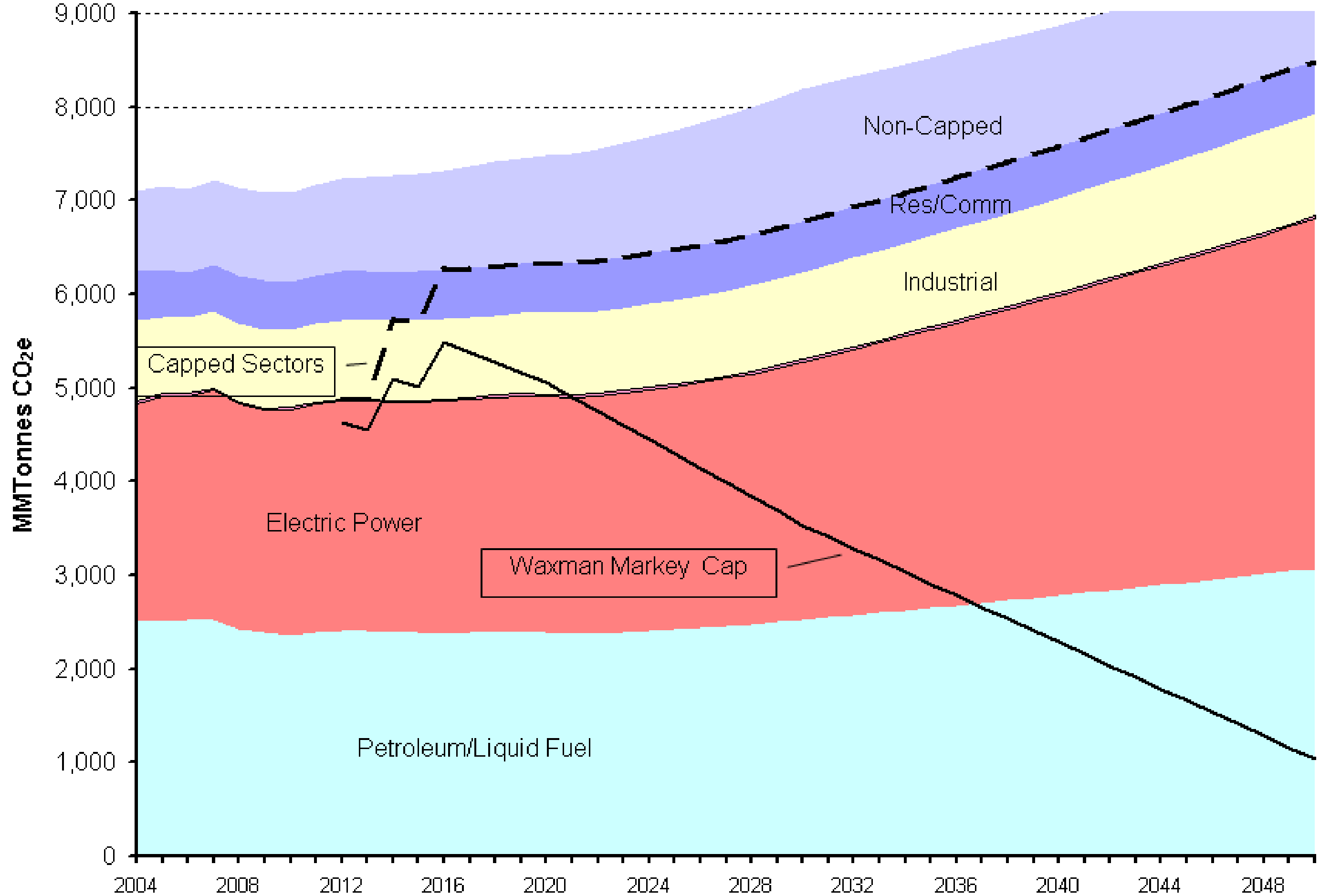
Climate Service Offerings

- **Carbon market pricing analysis**
- **Compliance analysis**—how will legislation/regulation affect a company's operations/business
- **Energy efficiency**—portfolio assessment
- **Voluntary strategy support**—companies not likely to face compliance constraints
- **Value-at-risk**—how will various lines of business be affected by action on climate?
- **Financial industry**—investment portfolios, carbon offset businesses, etc. they are/have been developing
- **Carbon offset projects**—project feasibility, project support (PDDs), due diligence, market analysis
- **Carbon footprinting**—initial entrée leading to broader environmental/sustainability strategy

Current Legislative Proposals

- Waxman/Markey Bill – HR 2454 passed June 26, 2009. Kerry/Boxer Senate bill passed out of committee in November.
- National, economy-wide cap and trade program starting in 2012. Reductions from 2005 levels:
  - 17% by 2020 (20% in Senate bill)
  - 42% by 2030
  - 83% by 2050
- Large emitting facilities covered directly: Electric generators (2012) and industrial facilities that emit >25,000 tons GHG/year (2014)
- CO_2 emitted from petroleum and small natural gas users (residential, commercial) regulated at point of production or import (upstream).
  - Petroleum refiners and importers (2012)
  - Natural gas liquid producers (2012)
  - Gas LDCs (for deliveries to non-capped entities) (2016)
- Extensive use of domestic and international emission offsets.

Waxman-Markey Cap



U.S. Legislative Outlook

- With the Senate bill out of committee, the Senate is now free to pursue active discussion on a modified bill.
  - Targets and timetables not changing.
- Cantwell/Collins bill proposed with regulation at point of production, 100% auction, limited trading and offsets, most revenue allocated to consumers.
- Kerry, Graham, Lieberman developing an integrated, revised proposal. Could include some Cantwell provisions as well as:
  - Fuel tax instead of cap for transportation emissions.
  - Support for nuclear and oil and gas development.
- Progress this Spring could allow passage in the Fall or early next year.
- Most likely driver is industry desire for an alternative to direct regulation.

Direct EPA Regulation - Background

- April 2007 – Supreme Court rules that EPA can regulate $CO_{2=}$
- July 2008 – EPA releases Notice of Proposed Rulemaking exploring regulatory options but suggesting that legislation would be a better approach
- Sept 30, 2009 – EPA proposes NSR/Title V "Tailoring Rule" addressing implementation of CAA limits on GHGs.
- December 2009 – Final Endangerment Finding signed by Administrator, took effect January 14^{th} 2010
- March 29, 2010 – "Johnson Memo" reconsideration establishes driver and schedule for required permitting of GHG emissions for new and modified facilities.
- April 1, 2010 – National Emissions & Corporate Average Fuel Economy Standards (CAFÉ) finalized by EPA and NHTSA.

Direct Regulation - PSD

- The EPA has announced that the Endangerment Finding and CAFÉ standards will trigger regulation of GHGs from stationary sources under Prevention of Significant Deterioration – PSD starting in 2011.
- PSD is part of the New Source Review (NSR) process, which requires emission reductions from new and modified sources.
- PSD requires new and modified stationary sources to adopt Best Available Control Technologies (BACT).
- BACT is determined on a case-by-case basis often by a state permitting agency and must be demonstrated and commercially available and meet some measure of cost-effectiveness.
- Historically, regulators have not been allowed to require a fundamental change in project design, for example, to require a source to change the type of combustor or fuel in the project proposal. Not clear whether this will change.

Implications of Direct Regulation

- The direct requirements under PSD may not be strict initially but the delay and uncertainty are likely to be significant and could affect financing for all kinds of large projects.
- Other forms of regulation such as New Source Performance Standards are being developed and other requirements such as Title V permit updates will be triggered.
- The overall effect on large emitters could be very costly and disruptive and could drive support for a legislative solution. This is already starting to happen in the power sector.
- There are legal and legislative challenges to these regulations but:
  - Their success is unclear.
  - Further delay is not helpful to industry.

Possible Future Scenarios

- Clean Air Act regulation – currently happening
- Federal GHG legislation – stalled now but moving forward later?
- Intermediate options
  - Power sector only cap
  - Energy bill only
  - Four-P power sector bill
- Delay/continued uncertainty could be most difficult outcome

But Wait, There's More…

- Coal-fired powerplants should be planning now for compliance on SO_2, NO_x, air toxics, ash, water (316 a/b).
- Gas prices are lower and likely to stay that way.
- Can coal plants pay for the criteria pollutant controls and survive long enough to be replaced by cleaner technologies? Does GHG regulation put them over the edge?
- Lack of certainty dries up capital and creates delay. Regulatory delay makes it worse.
- The calculation is relatively straightforward under cap and trade. Under direct regulation, it may be the uncertainty that kills them.

Canadian GHG Policy: Update and Federal Policy Shift

- Policy Shift:
  - "Alignment" with US GHG policy,
  - Intensity-based system to a federal economy-wide cap and trade approach
  - 2020 reduction target of 20% below 2006 levels.
- Compliance Mechanisms:
  - Limited details, the government has focused on the design and roll-out of the domestic Offset System.
  - Policy discussions with several provinces focused largely on information sharing, policy harmonization issues/challenges and building equivalency agreements.
  - Bilateral meetings with thermal electricity and oil & gas sectors.
- Emissions Reporting:
  - Canadian emitters (50,000 tCO_2e+) have until 1 June 2010 to report their 2009 GHG emissions to Environment Canada.
  - Most of the Provinces have similar (but not identical) requirements to report as well (BC, AB, SK, ON)

North American Climate Change Commitments & US/Canadian Alignment

- Main Challenge – Different Country Profiles:
  - Major issue is around the relative differences between the size, cost and composition of the emissions reduction challenges between Canada and the US.
  - Canada is exposed to significantly higher costs within certain sectors and industries than the US (e.g. manufacturing and oil sands).
  - The means of setting targets and allocation distribution (gratis vs. auction) will establish the relative level of emission reduction effort by sector and by country.
- Canada-US Policy Alignment:
  - If Canada and the US fail to properly align policy designs, there exist significant risks to competitiveness, particularly for trade-exposed sectors.
  - Without appropriate policy alignment, or opportunities for alignment, valid concern around the imposition of border tax adjustments and "green protectionism".
- Clean Energy Dialogue:
  - Cross-border dialogue include: CCS; Clean Energy Systems; and Smart Grid.
- Low-Carbon Fuel Standard (LCFS):
  - Federal: limit the procurement by federal entities of transportation fuel derived from "C-intensive" unconventional oil.
  - California: LCFS for transportation fuels aimed at reduction in the carbon intensity of the fuel mix.

Investor Relations, Reporting and Disclosure

- There were a record 68 climate-related shareholder resolutions filed by U.S. investors during 2009 proxy season, including a first-ever majority vote (51.2 percent) with IDACORP, an electric utility in Idaho.
- Virtually all major accounting standards bodies (e.g. IFRS, IASB, FASB, US GAAP, etc.) have created task forces to provide comprehensive guidance on how corporations should account for emission allowances.
- On February 2, 2010, the SEC published interpretative guidance intended to clarify the duty public companies have to disclose business risks and opportunities posed by climate change.
- SEC's guidance highlights the following areas where climate change may trigger disclosure requirements:
  - Impact of Legislation and Regulation
  - Impact of International Accords
  - Indirect Consequences of Regulation or Business Trends
  - Physical Impacts of Climate Change
- Companies who have not done so should establish a process for assessing whether and to what extent climate change matters are material to the company and, if so, include appropriate disclosures in their SEC filings

Conclusions

- We are far from the end of the process of regulating GHGs. It will not be done soon, but it is not going away.
- Direct federal regulation and regional regulation may precede federal legislation but will then precipitate it.
- The need for certainty may eventually drive industry to demand legislation.
- Current bills represent a good depiction of most of the characteristics of future federal legislation.
- Investors should be evaluating how companies are responding to and planning for these outcomes.

Appendix

Award-Winning Performance

ICF INTERNATIONAL

- Recognized year after year for excellent client support by *Environmental Finance* readers survey
- Best Advisor in four categories plus one Runner-Up in 2009

MARKET SURVEY 2009 Environmental Finance PUBLICATIONS
Best Advisor - EU Emission Trading Scheme

TWO YEARS RUNNING

MARKET SURVEY 2009 Environmental Finance PUBLICATIONS
Best Advisor - Kyoto Project Credits (JI & CDM)

TWO YEARS RUNNING

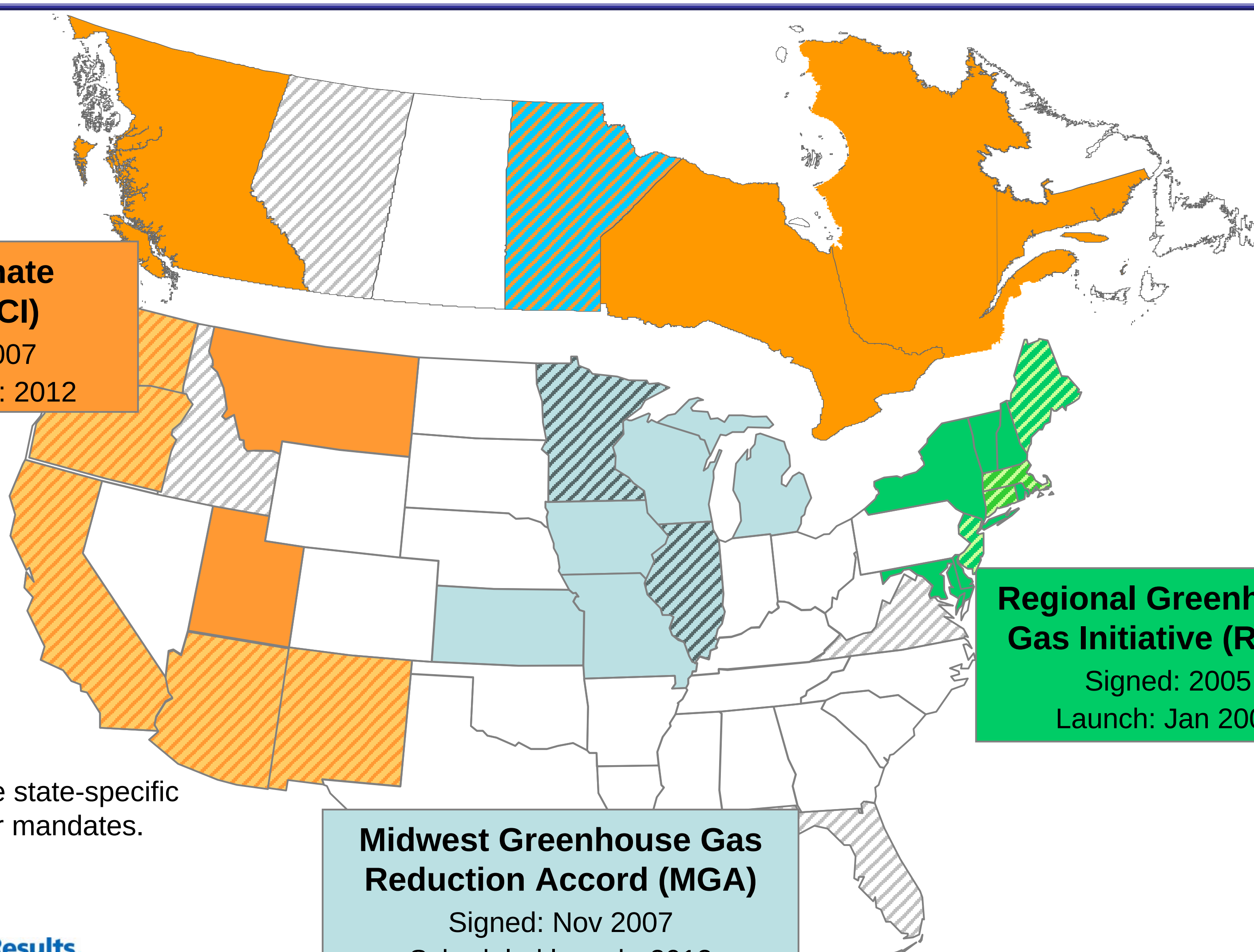
MARKET SURVEY 2009 Environmental Finance PUBLICATIONS
Best Advisor - North American Mandatory Markets

FOUR YEARS RUNNING

MARKET SURVEY 2009 Environmental Finance PUBLICATIONS
Best Advisor Runner Up - Renewables Finance North America

MARKET SURVEY 2009 Environmental Finance PUBLICATIONS
Best Advisor - U.S. Emissions

State Initiatives on GHG Regulation

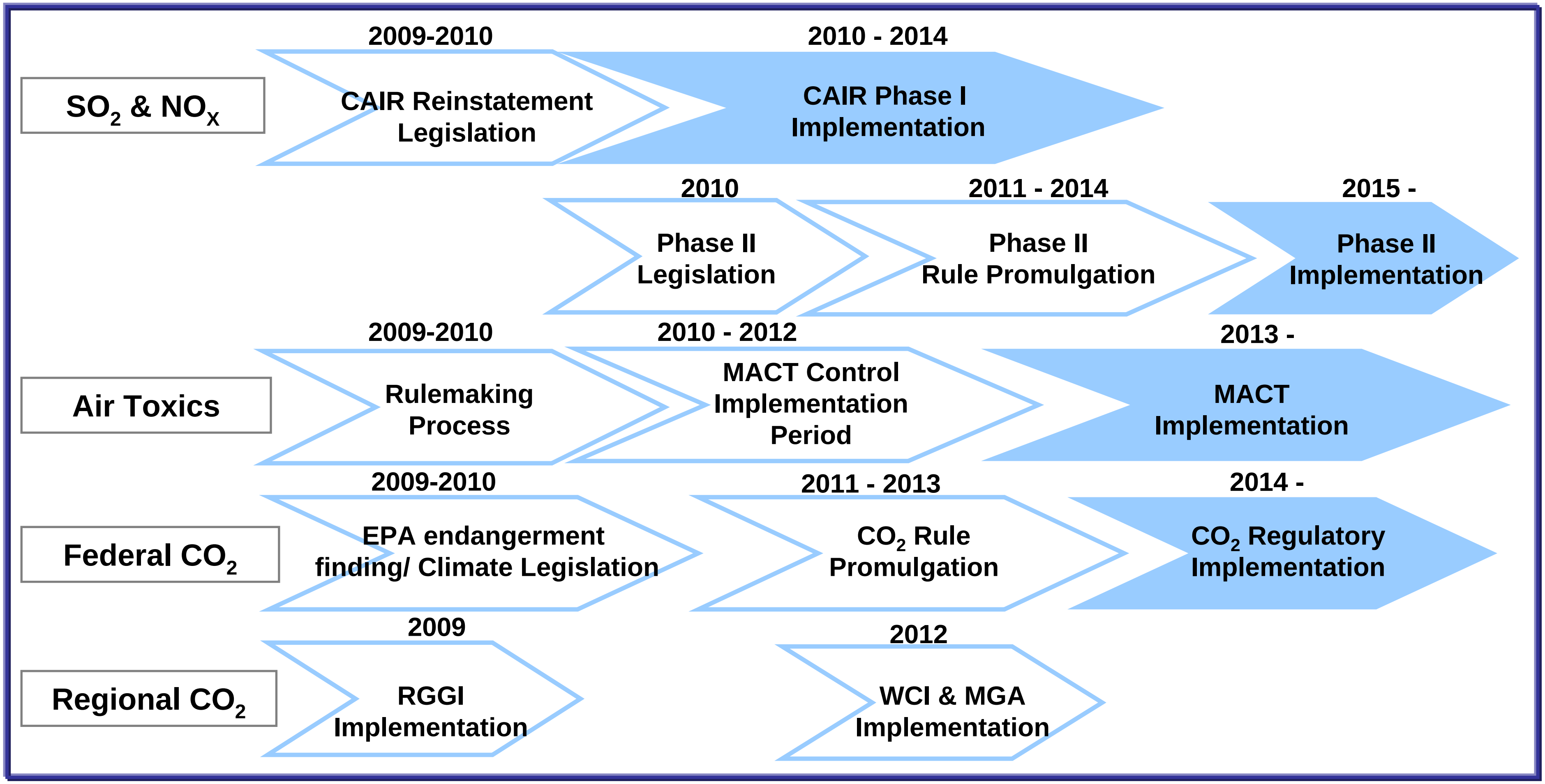


States with stripes have state-specific GHG reduction goals or mandates.

2010 Regional Outlook

- RGGI – Power sector cap and trade continuing but over-allocated. More actions by NE states – Low Carbon Fuel Standard (LCFS) MOU signed on Dec 30th; some discussion of expanding coverage under RGGI to other sources
- WCI – continues to move forward, released draft guidance for establishing allowance budgets for WCI partner jurisdictions on Nov 25, 2009; currently in the process of harmonizing the WCI reporting rules with the Federal rules; a number of upcoming meetings scheduled. Some states may withdraw.
- MGGRA – draft model rule released in Oct 2009
- Linking of Regional GHG Initiatives – Representatives of RGGI/MGGRA/WCI met in 2009 to discuss linkage

Regulatory Uncertainty Across Multiple Air Emissions



Does not include other media and issues - Water, Ash Ponds