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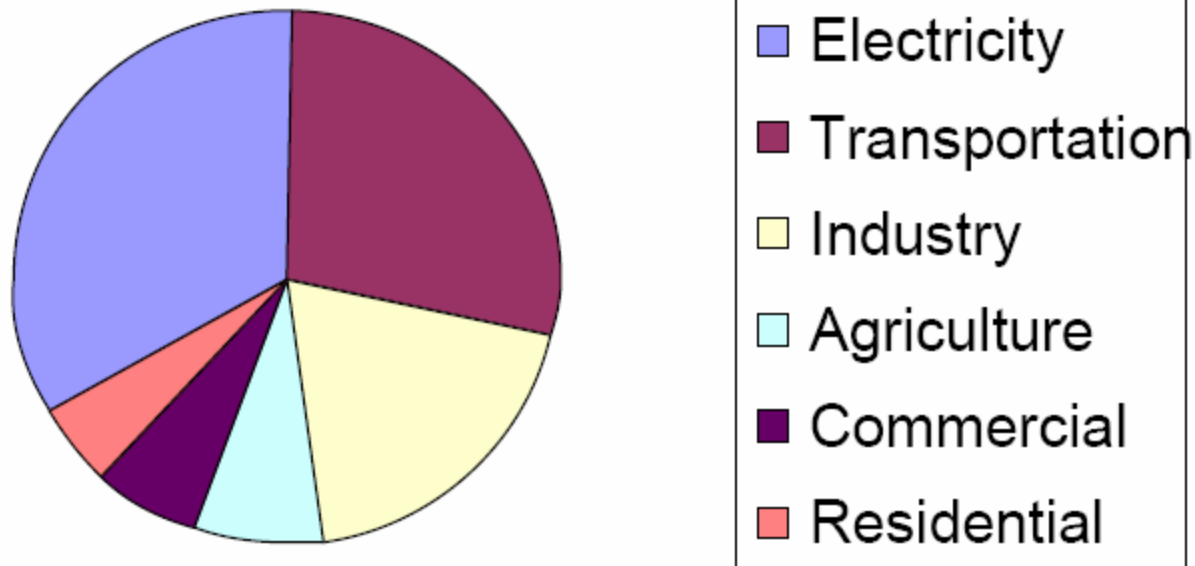
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## Transitioning toward a Carbon Constrained U.S.: The Hill/Obama Action Plan

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**Figure VI-1**  
**U.S. GHG Emissions Allocated to**  
**Economic Sectors (2006)**



# The Transition to a Carbon Constrained U.S. Three Key Questions for the Next Six Months

**(1) Who?**

**(2) What?**

**(3) When?**

# The Transition to a Carbon Constrained U.S. Who will get there first?



EPA's path is a **virtual certainty**.

- President Obama has committed to finalizing the first GHG regulations
- EPA is presently pursuing three climate change rulemakings simultaneously
- Environmental NGOs will use courts to force action

Quick developments in the House,  
but **less certain future**.

- House of Representatives has passed American Clean Energy and Security Act
- Passage by Senate appears more challenging



And then there's Copenhagen...



# The Transition to a Carbon Constrained U.S.

## What will carbon controls look like?



EPA will use **command and control** approach

- Will try to adapt existing Clean Air Act provisions to regulate energy use
- Will develop micro-sector-specific approaches
- Will aim to control energy by requiring technology redesign and workplace standards
- Will lead to unintended consequences under Clean Air Act

Congress will develop **market based system**

- Focus has been on cap and trade, but carbon tax is favored by some
- Will impose industry-wide restrictions on GHGs
- In theory, should be comprehensive and preempt Clean Air Act command and control approach, but ACESA leaves much Clean Air Act authority on the table



# The Transition to a Carbon Constrained U.S.

## When will controls be enacted?



EPA intends to enact and finalize first GHG in **March 2010**

- First GHG rules will apply to cars and light duty trucks, but will trigger regulation for virtually all sectors
- EPA currently laying regulatory foundation for broad Clean Air Act regulation
- Mandatory GHG reporting rule will take effect January 1, 2010

H.R. 2454 would implement **cap on emissions in 2012**

- 2012 emissions could not exceed 97 percent of 2005 emissions
- But 2012 target assumes passage in 2009



# Key issues

- EPA Rulemakings
  - What is the portfolio of EPA rulemakings?
  - What is the timeline for a final rule?
  - What are the ramifications of a final rule?
  - What are the priorities for various sectors?
- American Clean Energy and Security Act
  - What are the prospects for passage and enactment?
  - What industries will be impacted?
  - How will the cap and trade system work?
  - How will allowances be allocated?
  - How will offsets be implemented?
- Overarching
  - How will ACESA passage impact EPA and other climate issues?
  - What happens to coal?
  - What is the environmental NGO strategy?

# Portfolio of EPA Rulemakings

## **GHG Controls**

- Endangerment finding (proposed April 17, 2009; comment period closed June 23, 2009; finalized prior to March 2010)
- Section 202 GHG regulation for cars and light duty trucks (proposed September 2009; finalized March 2010)
- PSD threshold rule (to be proposed October 2009 and finalized prior to March 2010)
- Stationary source permitting for new and modified units (proposed September 2009)

## **Other Rules and Actions**

- Greenhouse gas inventory rule proposal (proposed March 2009; comment period closed June 9, 2009; likely finalized October 2009; implementation January 1, 2010)
- Renewable fuels rule proposal (proposed May 5, 2009; goal of finalizing in fall 2009 and implementation January 1, 2010)
- California waiver decision (Obama Administration reconsidered Bush Administration denial of request for waiver to address GHGs; granted waiver on June 30, 2009)
- Carbon sequestration proposal (public comment period closed; possible final rule in early 2010)



## Timeline for a GHG Command and Control Rule

June 23, 2009	Close of comment period on <b><u>endangerment finding</u></b>
September 2009	Section 202 proposal for <b><u>GHG rule for cars</u></b> and light duty trucks released
September 2009	Proposal to increase <b><u>PSD threshold</u></b> to GHGs to 25,000 tons/year CO <sub>2</sub> e
No later than March 2010	Final endangerment determination Final 202 rule for cars and light duty trucks Final PSD threshold rule

# Ramifications of a Final Rule

- (1) Final endangerment determination arguably will satisfy simultaneously endangerment determination for numerous other Clean Air Act provisions:
- Mobile Sources
    - Section 213 marine shipping vessels
    - Section 231 aircraft and aircraft engines
    - Section 213 nonroad vehicles
  - Stationary Sources
    - Section 108/109 NAAQS
    - Section 112 Hazardous Air Pollutants
    - **But Section 111** New Source Performance Standards focuses on **source categories** and requires **significant contribution** of air **pollution**

# Ramifications of a Final Rule

- (2) Final endangerment determination will trigger mandatory duty to regulate many sources
  - Many provisions say EPA “shall regulate” once endangerment
  
- (3) Final GHG rule will trigger permitting requirements for estimated 1 million+ sources under Prevention of Significant Deterioration program
  - EPA to attempt to raise threshold from 250 tons per year to 25,000 tons per year, but legal authority is uncertain
  - PSD would require Best Available Control Technology

# Regulatory Path Forward

- Mobile Sources
  - EPA response to state and NGO petitions to regulate GHGs due **as soon as this fall**
    - Motor vehicles
    - Aircraft and aircraft engines
    - Marine vessels
    - Nonroad vehicles
  - Impact of ACESA
    - 1/1/2012 deadline for nonroad regulation (Section 821)
    - Authorizes averaging, banking and trading among mobile sources
    - “Sense of Congress” that ICAO process address aircraft emissions (Section 276)
  - Renewable Fuel Standard (final rule as soon as October 2009; implementation January 2010)

# PSD/NSR and Title V

PSD/NSR permits are pre-construction permits

Title V permits are operating permits.

PSD	Title V
Threshold is 100 or 250 tons per year	Threshold is 100 tons per year
Standard is BACT (Best Available Control Technology) (can consider costs); ANPR suggests could require carbon capture and sequestration (486)	Requires a permit contain "all applicable requirements" under the Clean Air Act; EPA anticipates improved energy efficiency and operational changes
Would encompass small industrial sources, "large office and residential buildings, hotels, large retail establishments, and similar facilities"	EPA estimates 550,000 additional sources (compared to 15,000-16,000 current Title V sources)
Would be effective immediately at time GHGs are regulated pollutants	Must apply for permit within 1 year of being subjected to Title V
EPA outlines several suggestions include Congressional fix, "tailoring approaches," legal arguments to craft relief from strict language; streamlined regulatory approaches; general permits; higher thresholds; EnergyStar as "presumptive BACT"	EPA outlines several suggestions including legal arguments to craft relief; higher GHG cutoffs; deferral approach; general permits; adjusted fee structure

# PSD Threshold Rule

- Proposes to raise threshold at the outset to 25,000 tons/year due to administrative necessity.
- Permitting requirements for sources below 25,000 tons/year would be phased in over several additional, presumably through general permits.
- Questions related to legal authority for raising threshold.

# Stationary Source Pathways

Provision	Summary	Preclusive effect	Comments
108/109 NAAQS	Would set ambient GHG standards for nation, thus entire nation would be in or out of attainment; primary standard goes to health concerns, secondary standard goes to welfare; costs cannot be considered in setting standard	Precludes listing under 112 and 111 for existing sources (but not new and modified sources)	ANPR proposes four NAAQS scenarios; likely would take 10 years before any regulatory effect; 10 year horizon to achieve NAAQS "ill suited to GHGs"
111 New Source Performance Standards	Sets performance standards for certain listed "source categories"; provides for consideration of costs and discretion in type and size of facilities regulated; standard is BDT (Best Demonstrated Technology)	Would trigger PSD and Title V permitting	Stationary source TSD addresses specifics for industrial and utility boilers, petroleum refineries, and portland cement facilities; arguably strongest authority for trading programs; likely would combine efficiency and workplace standards
112 Hazardous Air Pollutants	Provides little discretion to distinguish between sizes and categories; costs largely irrelevant; standard is MACT (Maximum Achievable Control Technology)	GHGs would be exempt from PSD program; would preclude 111 standards for existing sources (but not new or modified sources)	10/25 ton threshold for regulation (includes large single family home)

# Regulatory Path Forward

- Stationary Sources
  - Section 111 NSPS appears to be EPA's preferred path forward
    - EPA would use NSPS to regulate energy efficiency for different source categories; would impose technological and work practice requirements
    - NSPS for Electric Generating Units likely highest priority; could propose in late 2009/early 2010
    - NSPS for Industrial Boilers could be path to regulate manufacturing sector wholesale
  - EPA intends to implement far reaching GHG Reporting Rule on January 1, 2010; industry has requested one year stay



# Stationary sources -- NSPS

## i. Greenhouse gas emissions from Industrial Boilers

An industrial boiler is a combustion device that combusts any fuel to produce steam or to heat water or any other heat transfer medium. The term “industrial boilers” generally includes commercial boilers and institutional boilers and, thus, are used in virtually every economic sector. Industrial boilers are used in manufacturing, processing, mining, refining, and any other industry. Commercial/institutional boilers are used in commercial establishments (e.g., stores/malls and laundries), medical centers, educational facilities, etc. Currently, there are approximately 45,000 industrial boilers in the United States, with heat input capacities greater than 10 million Btu per hour, combusting approximately 500 million barrels of oil per year, 68 million tons of coal per year, and 27,000 million cubic feet of natural gas per day.<sup>3</sup> In addition, industrial boilers combust about 169 million tons of biomass per year. Greenhouse gases, predominantly CO<sub>2</sub>, have been estimated to be approximately 1,250 million metric tons per year of CO<sub>2</sub>e, accounting for approximately 20 percent of the total US GHG inventory. GHG emissions are expected to increase in the future as the energy demand increases.

# Stationary sources -- NSPS

From the ANPR stationary source TSD.

- GHG Control Measures
  - “There are numerous demonstrated efficiency improvements that exist, including boiler and steam system optimization, heat exchanger fouling mitigation and optimization, efficiency improvements in process heaters and motors, waste gas and power recovery, and process optimization and process technology improvements.” Thermal efficiency improvements
  - Process improvements to reduce steam and electricity usage
  - Biomass firing/co-firing
  - Waste gas recovery
- Approaches under 111 NSPS
  - Work practices, equipment standards, numerical efficiency standards.
  - Provide flexibility to make improvements and demonstrate they have received reductions through reporting.
  - “Significant” GHG reductions available from new and existing sources.
- NGO Approach
  - Use NSPS to phase to coal by setting standard of 800 lb. CO<sub>2</sub>/MWh.

# Murkowski Rider

- Would permit EPA to regulate greenhouse gases from cars and fulfill mandate in Massachusetts v. EPA.
- Would effectively stay regulation of stationary sources while Congress considers legislation further.
- Fierce opposition from Administration and environmental groups.

# Proposals for GHG Regulations from Specific Sectors

See Sidley Austin Sector Summaries of ANPR

- Stationary sources
- Aircraft
- Cars and light duty trucks
- Marine vessels
- Locomotives
- Nonroad vehicles
- Heavy duty trucks
- Market based approaches

Available at [www.sidley.com/climatechange](http://www.sidley.com/climatechange)

# Carbon Sequestration

Proposed EPA Rule

July 2008

Public comment period

Through November

Final Rule

2010 (?)

August 26 notice of data availability seeks comment on new data from DOE concerning ongoing sequestration projects and modeling to predict potential impacts on groundwater.

## ACESA Timeline

March 31, 2009	Discussion Draft Released
May 21, 2009	House Energy and Commerce Committee Approved H.R. 2454 (33-25)
June 24, 2009	Peterson Amendments are released.
June 26, 2009	House of Representatives passed H.R. 2454 (219-212)
July 7, 2009	Senate EPW Committee kicks off hearings
September 30, 2009	Sens. Boxer and Kerry release legislation
October 27, 2009	EPW mark up begins
????	Action by full Senate

# Non-Capped Sources

- For most non electricity generating sources, ACESA establishes threshold of 25,000 tons/year CO<sub>2</sub>e.
  - **But** Section 811 **mandates** EPA to regulate certain sources between 10,000 and 25,000 tons/year CO<sub>2</sub>e through Clean Air Act Section 111 New Source Performance Standards.
  - **And** Section 722(g) authorizes EPA to **lower the threshold to 10,000** tons/year CO<sub>2</sub>e in 2020.
- **Thus, smaller sources not subject to cap today could face EPA regulation immediately or be subject to cap in future.**

# Offsets

- Permits capped sources to use up to 2 billion offsets of allowances annually (split between domestic and international offsets)
- Title V (Peterson Amendments) apply to domestic agricultural and forestry projects; Title VII applies to other projects.
- Steps to generating offsets
  - (1) USDA or EPA rulemaking;
  - (2) project certification;
  - (3) project verification.
  - **But** ACESA (Section 795) also allows exchange for early action offset credits from certain state and voluntary programs.
- Offsets as cost containment
  - CBO: Together, the provisions allowing the use of domestic and international offsets would decrease the price of GHG allowances by \$35 (69 percent) in 2012.
  - EPA: Without international offsets, costs of allowances would increase 96 percent.



# Legal issues: Preemption: ACESA

**Cap and trade legislation should be comprehensive and preempt other federal, state, and local GHG approaches**

- Section 811(a) **mandates** EPA promulgate **NSPS** for
  - Certain sources emitting between 10,000 and 25,000 tons/year; and
  - Source categories responsible for at least 10 percent of methane emissions.
- Section 821 **preserves** Clean Air Act authority for **all mobile sources**, despite subjecting fuel providers to cap.
- NAAQS and HAPS (Sections 831 and 834) preempt GHG regulation only on the “basis of effect on global climate change.”
- Other federal laws, such as Endangered Species Act, are not preempted.
- State command and control approaches not preempted; state cap and trade permitted after 2017; regional cap and trade may not be preempted at all (Section 861)

# Legal issues: Preemption: EPW

**Cap and trade legislation should be comprehensive and preempt other federal, state, and local GHG approaches**

- No preemption of NSPS or NSR.
- Priority for EPA regulation is on larger sources.
- Thus, sources subject to cap will also be subject to EPA command and control regulation.

# ACESA and EPA State Preemption

- Section 861: state preemption
  - Regarding **state cap and trade systems**, no “state or political subdivision thereof” shall implement a cap and trade system between 2012 and 2017. Leaves open the possibility of states pursuing cap and trade systems *after 2017*, and does not clearly preempt regional cap and trade systems at any time.
  - Regarding **state command and control approaches** (such as performance standards), Section 861 *explicitly preserves* “any other standard, regulation, or program” to reduce GHG emissions.
  - Regarding **renewable and alternative fuels**, Section 861 *explicitly preserves* states’ authority to impose “requirements that fuels, or other products,” meet state renewable standards based on GHG lifecycle emissions. Arguably preserves state authority for **low carbon fuel standards**.

# ACESA and EPA Liability

- Section 723 of ACES establishes penalties for GHG emitters who violate the act. At the same time, Section 723(b)(4) provides that such penalties **do not affect liability under any other law.**
- Section 701 of ACES **could increase the potential for liability and damages** in common law claims by making certain findings that GHGs cause specific harm to human health and property.

# ACESA and EPA

## What happens to coal?

- New Facilities:
  - Section 116 imposes significant new limitations on facilities not “initially permitted” as of January 1, 2009 including:
    - Strict performance standards (as low as 800 tons CO<sub>2</sub> emissions/MwH)
    - Carbon capture and sequestration requirements
  - In the interim, EPA will consider NSPS for EGUs for new facilities
  - Is IGCC BACT?
- Existing facilities
  - While Section 811(b) preempts NSPS for capped sources, environmental NGOs are advocating to retain NSPS and NSR authority for existing EGUs

Thank You!

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