



Emerging Greenhouse Gas Regulation: Policy Environment for Carbon Recycling

Doug Smith

Van Ness Feldman, P.C.

1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, DC 20007
(202) 298-1800

Millennium Tower
719 Second Street, Suite 1150
Seattle, Washington 98104
(206) 623-9372

**Carbon Recycling
Forum**

**Scottsdale, Arizona
September 17, 2008**

About Van Ness Feldman

- 80 professionals in Washington DC and Seattle
- Exclusive focus on energy, environmental and transportation/infrastructure law and policy
- One of the first law firms to have an active climate change regulatory practice
- Longstanding relationships with electric power and natural gas sectors
- Represent participants throughout the value chain of alternative energy and renewable fuels
- International recognition:
 - Top-ranked climate change practice, *Chambers USA 2008*
 - Leading renewable energy practice, *Chambers USA 2008*
 - Top 2 Law Firm, U.S. Emissions Markets, *Environmental Finance*, 2007 and 2008

How will climate policies affect carbon recycling?

- Federal climate change regulation
 - Comprehensive cap and trade proposals considered in Congress
 - Regulation under the Clean Air Act
- State/regional climate regulation
- Utility regulation and climate change
- Funding for advanced technologies
- Renewable fuel policies

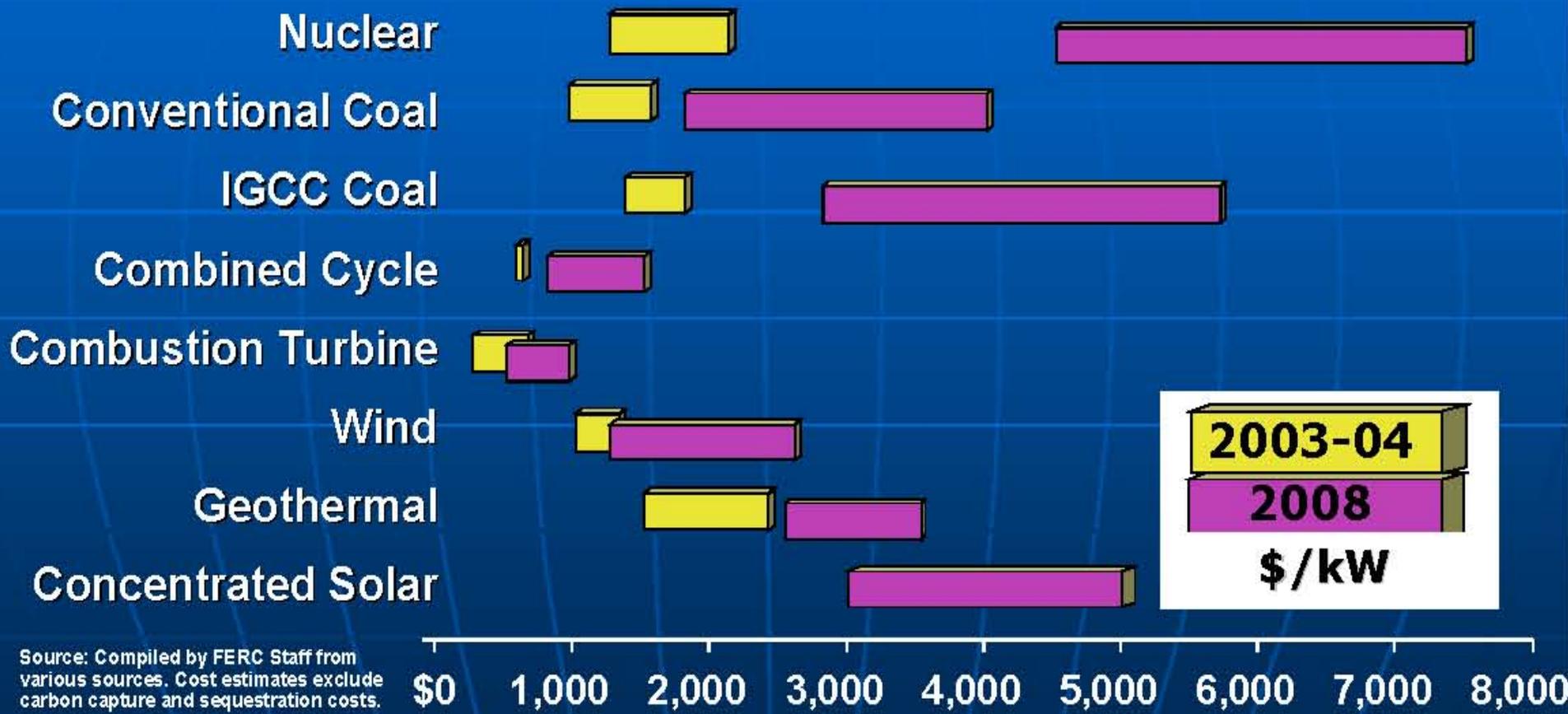
Drivers: GHG Issues Are Coming at Utilities From All Directions

- State and regional initiatives
- Legislative proposals in Congress
- Presidential election
- Supreme Court decision in Massachusetts v. EPA
- EPA rulemaking under Clean Air Act
- Listing of polar bear under Endangered Species Act
- GHG issues in plant-specific permitting and certification decisions
- Shareholder initiatives
- Lawsuits
- Customer demand for green energy
- Competitor action on climate change
- International carbon markets and voluntary markets

Concurrent Pressures on Utilities

- Growing demand for energy
- High fuel prices
- Rapidly rising costs for new plants

Estimated Cost of New Generation



Source: Compiled by FERC Staff from various sources. Cost estimates exclude carbon capture and sequestration costs.

GHG Regulatory Initiatives

- Proposals in this Congress
 - Bingaman-Specter
 - Lieberman-Warner
 - Boxer Substitute
 - Markey
 - Doggett
 - No GHG bill yet from Dingell or Boucher

- Clean Air Act
 - Possible “endangerment finding” and regulatory consequences
 - Permitting actions

- State Initiatives, e.g..
 - California A.B. 32 (takes effect 2012)
 - Regional Greenhouse Gas Initiative (takes effect 2009)
 - Western Climate Initiative (under development)

Design of GHG regulatory policy will determine utility risks and opportunities

■ Key questions:

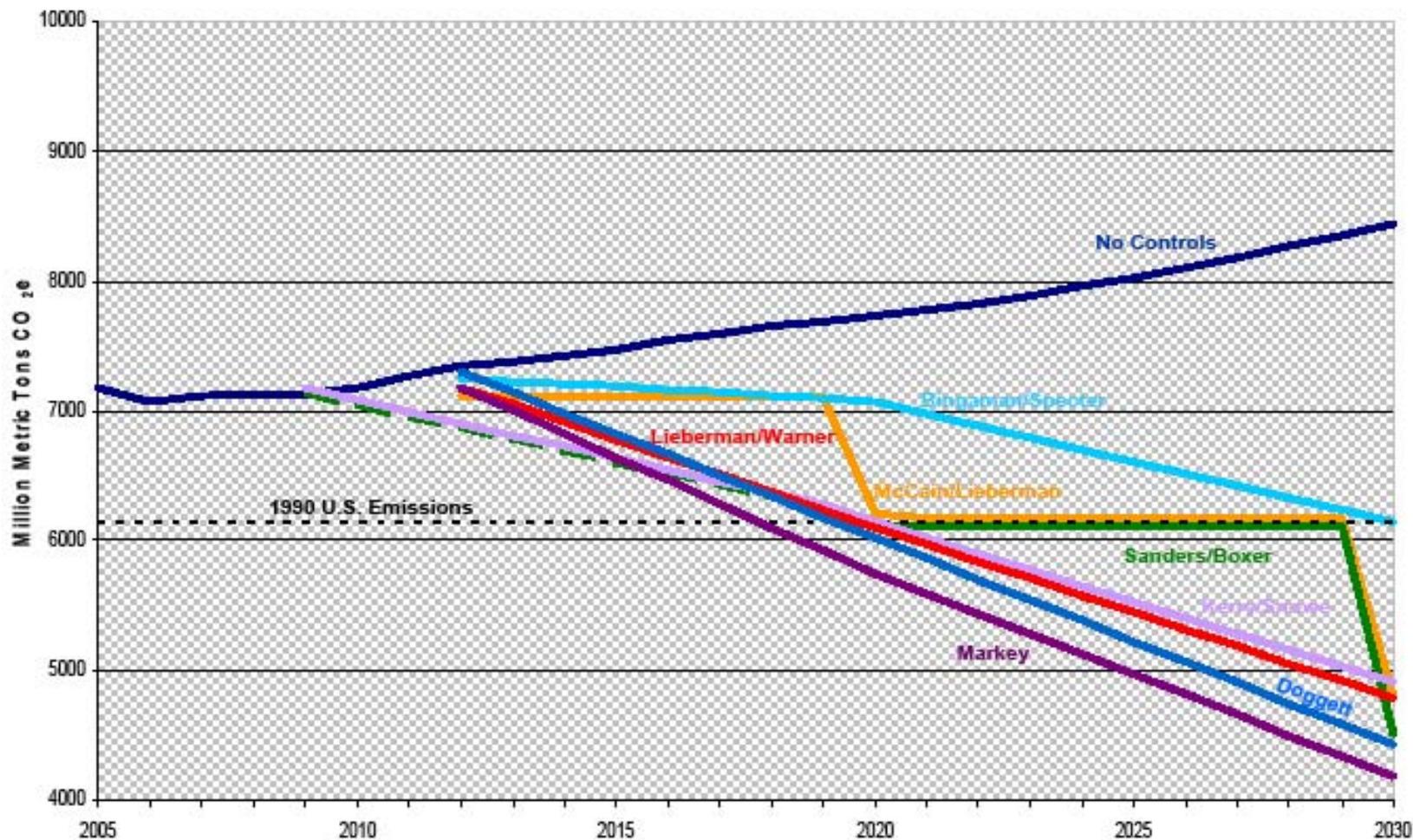
- Will the policy be market-based?
- How stringent will it be?
- What sectors will be regulated?
- What entities will be regulated?
- How will allowances be distributed?
- Are there compliance cost control measures?
- What types of offset projects will be allowed?
- Will there be overlapping regulatory requirements?

Will the legislation create market-based programs?

- Leading proposals use a cap-and-trade design
- Cap-and-trade
 - Cap total emissions from a group of sources
 - Distribute allowances equal to the cap
 - Each allowance authorizes emission of one ton CO₂e
 - Each covered source must submit allowances equal to its emissions
 - High-cost sources can purchase allowances from low-cost sources
 - Acid rain program as a prototype
- Project-based (offset) trading
 - GHG sources outside the cap system
 - Investment in emissions reduction project at uncovered GHG source
 - Government entity certifies resulting credits
 - Kyoto Clean Development Mechanism (CDM) as a prototype

How stringent will the program be?

Legislative Greenhouse Gas Regulatory Proposals (total U.S. greenhouse gas emissions)



EIA analysis of Lieberman-Warner impacts on electricity

	2006	2020		2030	
		Reference Case	With Program	Reference Case	With Program
Total US emissions (MMT CO₂e)	7014	7729	6770	8441	5429
Emission reductions from reference case			959 (~12%)		3012 (~35%)
Allowance price (2006 dollars)			30		61
Delivered electricity price – (cents/kWh)	8.91	8.61	9.06	8.85	9.82
Electricity generation (billion kWh)	4051	4723	4595	5235	4966
Coal-fired electricity generation	1988	2357	1890	2838	703
Nuclear power electricity generation	787	868	979	917	2877
Renewable-based electricity generation	385	588	918	657	920
Natural-gas-fired electricity generation	806	833	761	741	427

Source: EIA, Energy Market & Economic Impacts of S.2191 (April 2008)

What entities will be regulated?

- Scope of program - sectors to be regulated
 - Economy-wide v. specific sector(s)
 - Demise of EPA's CAIR rule could lead to consideration of utility sector GHG limits

- Point of regulation - where is each sector regulated?
 - Factors
 - Share of emissions covered
 - Administrative costs
 - Number of entities
 - Size of entities
 - Ability to pass through carbon price to end users

- Downstream, upstream, hybrid designs

Point of Regulation: Lieberman-Warner Example

- Downstream for coal users
 - Regulates sources using 5,000 tons of coal/yr.

- Upstream petroleum and natural gas
 - Regulated entities must surrender allowances to cover the carbon content of the fuel they sell
 - Petroleum refiners and refined product importers
 - Natural gas processors and importers

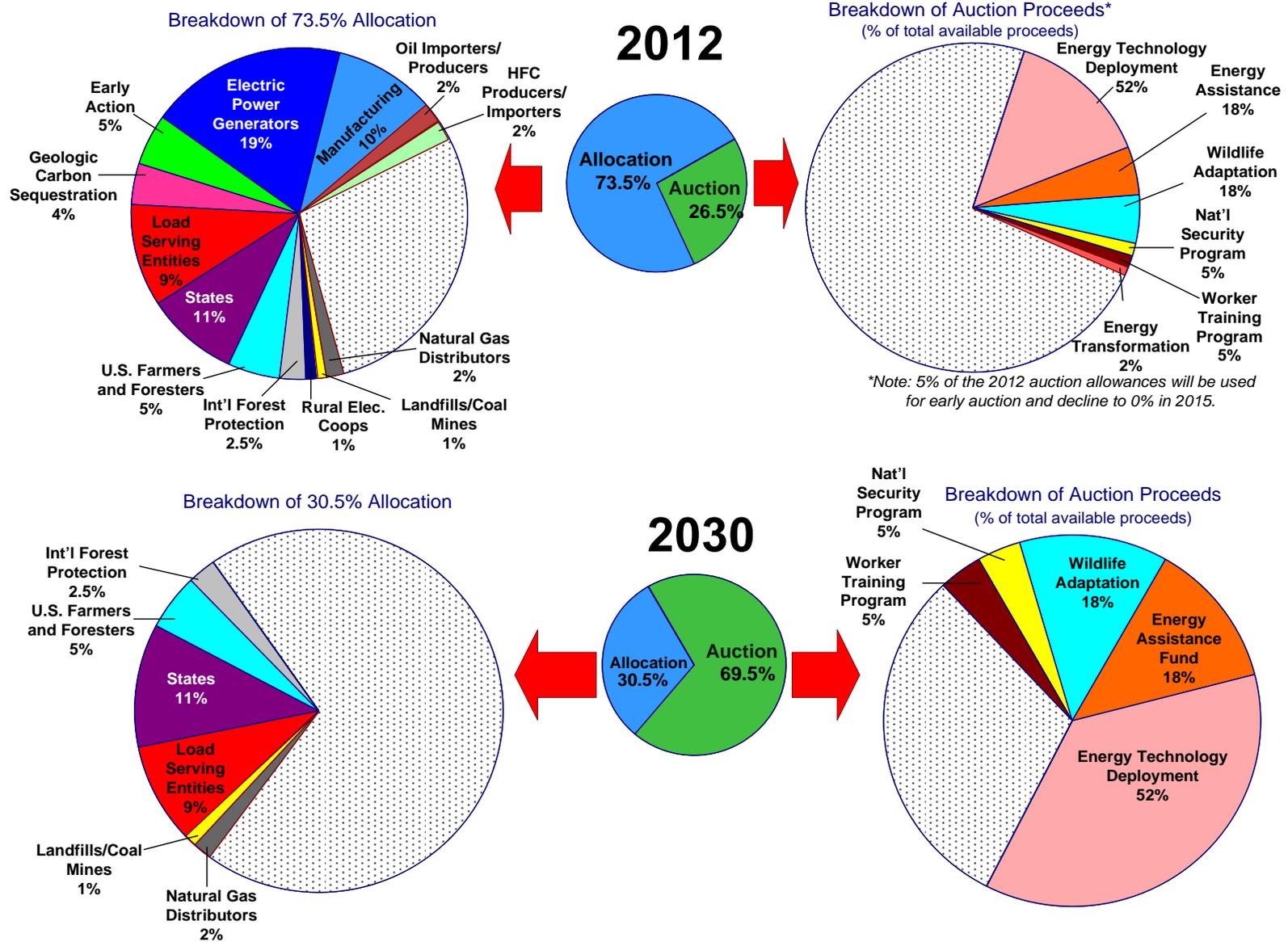
- Electric Utilities
 - Directly regulated for coal-related emissions
 - Pay higher natural gas prices that reflect upstream approach for gas sector

How will allowances be distributed?

The \$100+ billion (per year) question

- Allocation vs. auction
 - What share auctioned? What share allocated for free?
 - How are auction revenues used?
- Who gets the allocated allowances?
 - How many to each sector?
 - How are they distributed within the each sector?
- “Old school”
 - Acid Rain program
 - Distribute 90+% of allowances for free to regulated generators
- “New School”
 - Emphasis on auction
 - Phase-down free allocation in favor of auction over time
 - Use of allowances like money
 - Transitioning fossil generators
 - Promotion of clean energy
 - Bonus allowances for CCS
 - Moderate impacts on rate payers

Allowance distribution in Lieberman-Warner



What approach is taken on project-based offsets?

- Possibility of developing emission reduction projects to earn credits
 - Credits can be used like allowances
- The rules matter
- Project categories
 - Precedents may be set in state-level programs
 - California, RGGI
- Offset policy is an important element of larger cost containment debate

What kind of cost control measures will the program include?

■ Bingaman-Specter

- Safety valve:
 - Regulated entity may pay fee in lieu of submitting allowances
 - Price starts at \$12/mt CO₂e, and rises 5% (real)/year
 - Acts as a ceiling on market allowance prices

■ Boxer

- Reserve allowances available for auction with initial minimum price set at \$22-30/ton
- Borrowing
- Carbon Markets Efficiency Board can liberalize rules on borrowing and offsets

Will there be overlapping regulatory requirements?

- Will mandatory standards be overlaid on top of cap-and-trade program?
 - Examples:
 - Emissions Performance Standard for new electric power generators
 - Low Carbon Electric Generation Requirement
 - RPS and energy efficiency portfolio standards for retail providers

- Will new climate change legislation modify or eliminate Clean Air Act requirements that may be promulgated in light of *Massachusetts v. EPA*?

- Will Federal legislation preempt or constrain state GHG policies?
 - Preemption?
 - Grandfathering?
 - Parallel operation?

State and Regional Regulation of GHG

- California A.B. 32
 - Aggressive State emission caps
 - “Economy-wide” program
 - Implementation largely delegated to agency decisions
 - Effective in 2012
- Regional Greenhouse Gas Initiative
 - Multi-state
 - Power sector only
 - Effective in 2009
 - Initial allowance prices in the \$5 – 7/ton range
- Other state and regional initiatives
 - Western Climate Initiative
 - Midwestern Regional Greenhouse Gas Reduction Accord

Administrative Action under Clean Air Act

- Massachusetts v. EPA – Supreme Court holds EPA has authority to regulate GHG emissions under Clean Air Act
 - On remand, EPA issued an ANOPR on GHG emission regulation for mobile sources (7/11/08).
 - “Endangerment finding” under CAA could lead to regulation of new/modified stationary sources
- Longleaf – Georgia court finds BACT analysis needed for CO₂ emissions
- D.C. Circuit invalidated Clean Air Interstate Rule (CAIR) on cap and trade SO₂ and NO_x regulation
 - Congressional response could include utility sector GHG regulation (so-called “4P bill”)

Utility Regulation and GHG

- Have you tried to build a new coal plant recently?
 - PUC consideration of carbon prices in IRP
 - Risk of prudence questions on conventional coal investments
 - PUCs and State air regulators may reject proposals or impose significant conditions

Timeline

- Federal GHG legislation?
 - Enacted 2010?
 - Effective 2014?
- State GHG regulation
 - RGGI – effective 2009
 - California – effective 2012
- Clean Air Act regulation?
 - New administration to decide
- Technology Funding
 - Potentially massive funding for technology in Federal GHG bill
 - Interim funding/subsidies
 - Appropriations
 - Tax credits
 - Possible utility sector fee (Boucher bill)

What has happened on biofuels in the 110th Congress?

■ **Energy Independence and Security Act of 2007**

- Requires U.S. biofuel production to reach 36 billion gallons – ¼ of current U.S. petroleum consumption – by 2022
 - In 2006, U.S. biofuel production totaled just under 5 billion gallons

■ **Food, Conservation, and Energy Act of 2008 – The Farm Bill**

- Creates a \$1.01 per gallon tax credit for cellulosic biofuels
- Provides \$320 million in mandatory funding for loan guarantees for biorefineries
- Provides \$300 million in direct payments to producers of advanced biofuels
- Provides \$118 million in biomass R&D

Thank You

■ Questions?

Doug Smith

dws@vnf.com

(202) 298-1902

■ Tracking Climate Developments

- Van Ness Feldman publishes a free weekly Climate Change Update
- Updates available on www.vnf.com
- Sign up to receive Update by e-mail at <http://www.vnf.com/news-signup.html>