



EPA GHG MRR WHAT'S NEXT?

June 11, 2010

Presentation to the Rice E&C Forum

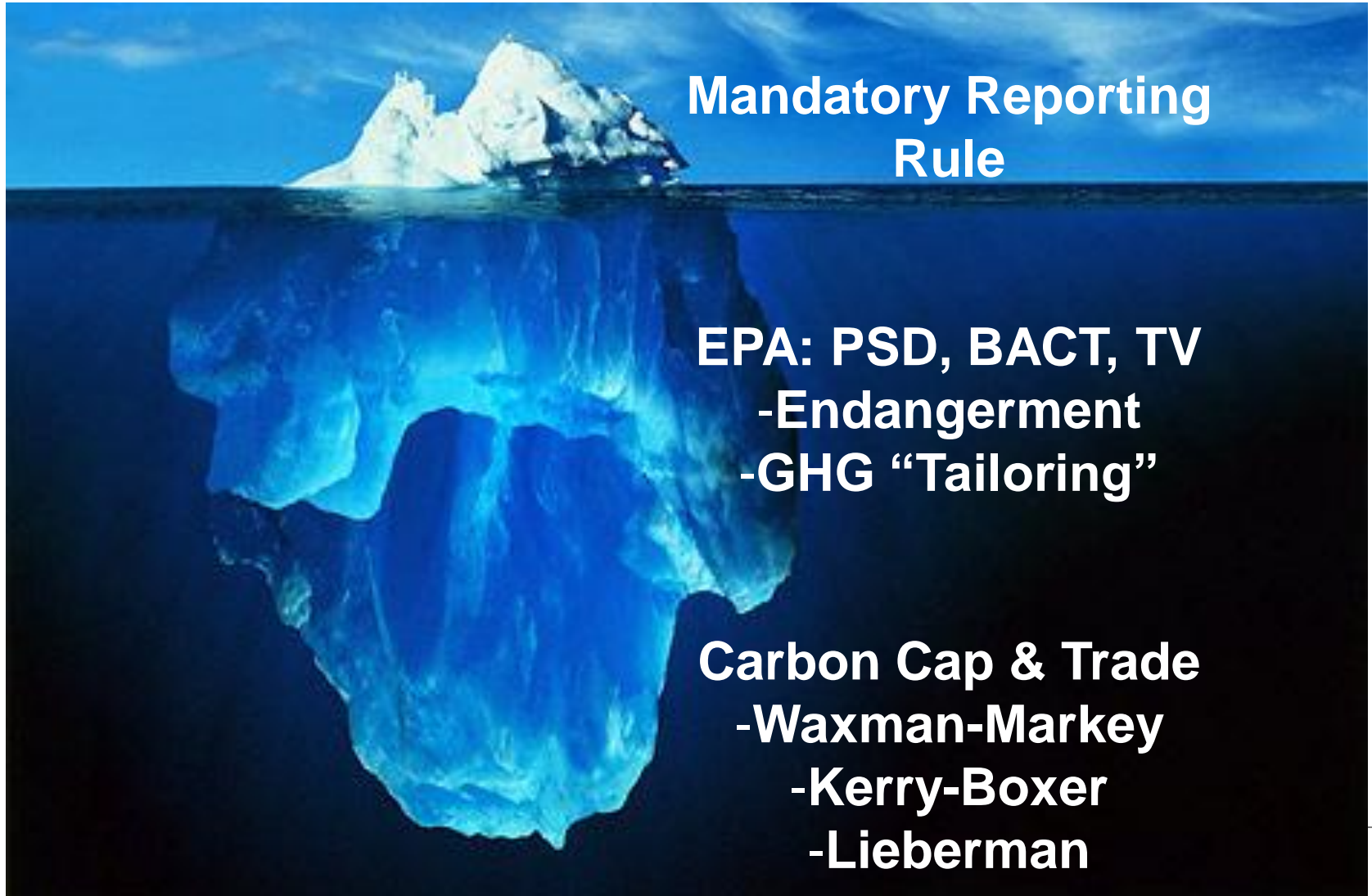
What Do You Consider a Scary Movie or Book?

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- Government Out of Control ??????
- Western Development Out of Control ??????
- Giant Monsters ??????
- Shipwrecks ??????

US GHG MRR (Reporting) is “Tip of Iceberg”

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Seriously.....MRR.....What is It ?

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- EPA Greenhouse Gas (GHG) Mandatory Reporting Rule (MRR)
 - ▣ A new regulation “authorized” by the Clean Air Act
 - ▣ Heard of it?
- Who does it affect?
 - ▣ Refiners
 - ▣ Chemical Plants
 - ▣ Upstream E&P
 - ▣ Any facility > 25,000 MT/yr

MRR.....What??? (part 2)

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- Why is it important to your clients?
 - ▣ Cost of compliance, impact on Industry as a whole
 - ▣ Effect on future capital projects
 - ▣ And because of “What’s Next” i.e. Things it will lead to.....

Why Did EPA Do It?

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- To Gather Information “To Shape Future Climate Change Policy”

- Translation: “To Prepare for Cap & Trade”
 - This is the first shoe to drop. The MRR Preamble clearly states to wait for the other shoe.

- Part of Multi-Pronged Effort to Regulate GHGs
 - MRR
 - Permitting & BACT
 - CAFÉ Standards
 - Cap&Trade

Science Meets Politics

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Our Administration and EPA have determined that the science is settled. The political reality is that the decision has been made.

- ▣ Preamble to the MRR
- ▣ Endangerment Finding
- ▣ Mood of Congress and Administration

Foregone Conclusion

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“The right answer to a non-problem is to have the courage to do nothing.” – *Lord Christopher Monckton*

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“Oh Well” – *Matt Harrison*

MRR.....Background

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- Final GHG Mandatory Reporting Rule (MRR)
 - Sept 22, 2009 (Fed Register 10/09)
 - Fines, penalties
 - Designated representatives
 - Verification

- New Subparts Issued in 2010



EPA GHG MRR Subparts

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- A – General Provisions
- C – Stationary Fuel Combustion
- D, E, F, G, H, K, N, O , P, Q, R, S, U, V, X, Y, Z,
- AA, BB, CC, EE, GG, HH, JJ, LL, MM, NN, OO, PP
- More in 2010! Subpart W, RR

MRR: Costs to Comply

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- EPA/OMB Estimated <\$30,000 per refinery
- Industry has spent **Many Times** this much already
 - Cost to Reply/Comment
 - Planning: Consultants/Internal Personnel
 - Tracking
 - QA/QC & Recordkeeping
 - Reporting



FAQ from Facility Managers

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- Statement: I have combustion sources

- Q: Do I have to report?

- Q: If so, what do I have to do?

- Q: How do I resolve discrepancies?

FAQ: Do I have to report?

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- Determine applicability of other sections (beyond our scope this morning)
 - ▣ If certain sections are applicable, you may have to report Subpart C no matter the level of stationary source emissions

- Determine if you have stationary combustion sources $\geq 25,000$ MT/yr actual CO₂e
 - ▣ See EPA's screening tool on website
 - ▣ Use existing company GHG inventory, prudently

- Applicability exemptions:
 - ▣ Aggregate <30 MMBtu/hr for facility....do not report
 - ▣ R&D activities excluded from reporting

Overview of MRR Compliance Steps

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- Applicability Analysis & Gap Assessment
 - Training/Education
- Compliance Planning/Implementation
- Inventory Production (Calculation Tools)
- Annual Reporting
- Verification and Audit

Other GHG Issues for Companies

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Voluntary GHG Inventories:

- ▣ May need 2+ sets of GHG emission books in US, if corporate reporting is still needed for prior year comparison or internal use or annual report
- ▣ Need to determine interaction of US MRR protocol with GHG protocol for international assets

Must Report Impacts of GW To SEC

Why Does the SEC Care About Climate Change and GHGs?

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- Growing demand for transparency
- Climate change may pose material risks
- Material risks must be disclosed to investors
- Climate change topics SEC suggests companies evaluate for materiality
 - Impact of Legislation and Regulation
 - International Accords
 - Indirect Consequences of Regulation or Business Trends
 - Physical Impacts of Climate Change

What is “material” anyway?

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SEC Definition

- Information is material if there is substantial likelihood that a reasonable investor would view it as important in deciding whether to buy or sell a security.

Materiality = Probability x Magnitude

- Qualitative and Quantitative Interpretations
- Example rules of thumb
 - 5-10% of net income
 - 1% of total revenues or equity

What's Next?

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?????



???

State and Regional Programs Continue

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- CA (reporting and Cap&trade)
- NM (reporting and Cap&trade)
- RGGI
- WCI
- CDP

The FUTURE: US Federal Regulatory Compliance

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- Mandatory Reporting Rule for GHG (final 2009)
 - ▣ Mandatory Reporting Rule Additions (proposed Subparts out now)
 - ▣ New Interpretations Regularly

- GHG Permitting
 - ▣ Endangerment Finding (also allowed Mobile Source Standards)
 - ▣ Tailoring Rule
 - ▣ BACT

- Future Cap & Trade / Tax & Cap
 - ▣ (Waxman Markey/HR2454 & Boxer/Kerry, Lieberman 2010, Etc.)

What's Next under Federal Actions

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- ▣ More costs, more costs, more costs
- ▣ Under the MRR
 - More Subsections, more interpretations
 - Audits, fines
- ▣ Under Permitting
 - More Permits: Fees, Costs
 - BACT
- ▣ Under Cap&Trade
 - Control Requirements and/or Offsets
 - Taxation
 - Possible Imported Refined Products/ Possible Loss of Industry

GHG Tailoring Rules....Path to Permitting

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- Allows EPA to Regulate GHG's under the CAA Provisions at Reasonable Thresholds (i.e. shoe-horn into the CAA)
 - **Sets thresholds** for GHG emissions that define when permits under the NSR (New Source Review) PSD (Prevention of Significant Deterioration) and title V Operating Permit programs are required for new and existing industrial facilities.
 - **Schedule** that will initially focus CAA permitting programs on the largest sources with the most CAA permitting experience. Then expands

GHG Permitting Phase-In

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- **Step 1. (January 2, 2011 –June 30, 2011)**
 - Only sources **currently subject to the PSD permitting program** (i.e., those that are newly-constructed or modified in a way that significantly increases emissions of a pollutant other than GHGs) would be subject to permitting requirements for their GHG emissions under PSD.
 - For these projects, only GHG increases of 75,000 tpy or more of total GHG, on a CO₂e basis, would need to determine the Best Available Control Technology (BACT) for their GHG emissions.
 - Similarly for the operating permit program, only sources currently subject to the program (i.e., newly constructed or existing major sources for a pollutant other than GHGs) would be subject to title V requirements for GHG.
 - During this time, no sources would be subject to Clean Air Act permitting requirements due solely to GHG emissions.

Permitting Phase-In

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- **Step 2. (July 1, 2011 to June 30, 2013)**
 - Step 2 will build on Step 1. In this phase, PSD permitting requirements cover new construction projects that emit GHG emissions of at least 100,000 tpy even if not over the permitting thresholds for any other pollutant.
 - Mods at existing facilities: GHG emissions $\geq 75,000$ tpy subject to permitting requirements, even if no effect on any other pollutant.
 - Facilities that emit at least 100,000 tpy CO₂e will be subject to title V permitting requirements.
 - 550 sources will need Title V permits for the first time (solid waste landfills, industrial manufacturers)
 - 900 additional PSD permitting actions each year triggered by increases in GHG emissions

Permitting Phase-In

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- **Additional Step 3 Outlined in this Rule EPA commits to undertake another rulemaking, to begin in 2011 and conclude no later than July 1, 2012.**
 - Step three, if established, will not require permitting for sources with greenhouse gas emissions below 50,000 tpy.
 - EPA will not require permits for smaller sources in step three or through any other action until at least April 30, 2016.

Permitting Phase-In

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- **Other Steps Outlined in this Rule**
 - By the end of April 2015, EPA will complete a study on remaining GHG permitting burdens
- **Implementation**
 - Step 1 January 2, 2011.
 - EPA also plans to develop supporting guidance and other information to assist permitting authorities as they begin to address permitting actions for GHG emissions for the first time.
 - EPA will be actively working with states on technical information and data needs related to identifying BACT requirements for PSD permits. The guidance would first cover source categories that typically emit GHGs at levels exceeding the thresholds established through this rulemaking.
- On May 7, 2010, EPA and the Department of Transportation's National Highway Safety Administration issued the first national rule limiting GHG emissions from cars and light trucks. **The requirements of the GHG light duty vehicle rule take effect on January 2, 2011**, the earliest date that 2012 vehicles meeting the standards can be sold in the United States. **On this date, CAA permitting program requirements will apply to stationary sources of these pollutants.**

GHG BACT

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- In Development by EPA
- Combustion Controls
 - No way to control chemical combustion reaction
 - Hopefully, eliminates consideration of “non-fossil fuel alternatives”
 - Efficiency is a likely control... *feasible & proven*
 - *Might be an equipment specification or an operating procedure*
- Post-Combustion Controls
 - Carbon Capture and Storage (CCS) *not commercially available, but in DOE testing for power plants*
 - Not much else
- Other Controls for Non-Combustion Possible

GHG BACT

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- EPA air office chief Regina McCarthy is promising a “reasoned process” to develop guidance for states on best available control technology (BACT) requirements for greenhouse gases by the end of 2010.
- “BACT is generally applied to the design of a facility and that is where we are right now.”
- McCarthy suggested there are numerous ideas on the table from the agency’s Clean Air Act Advisory Committee

Cap & Trade

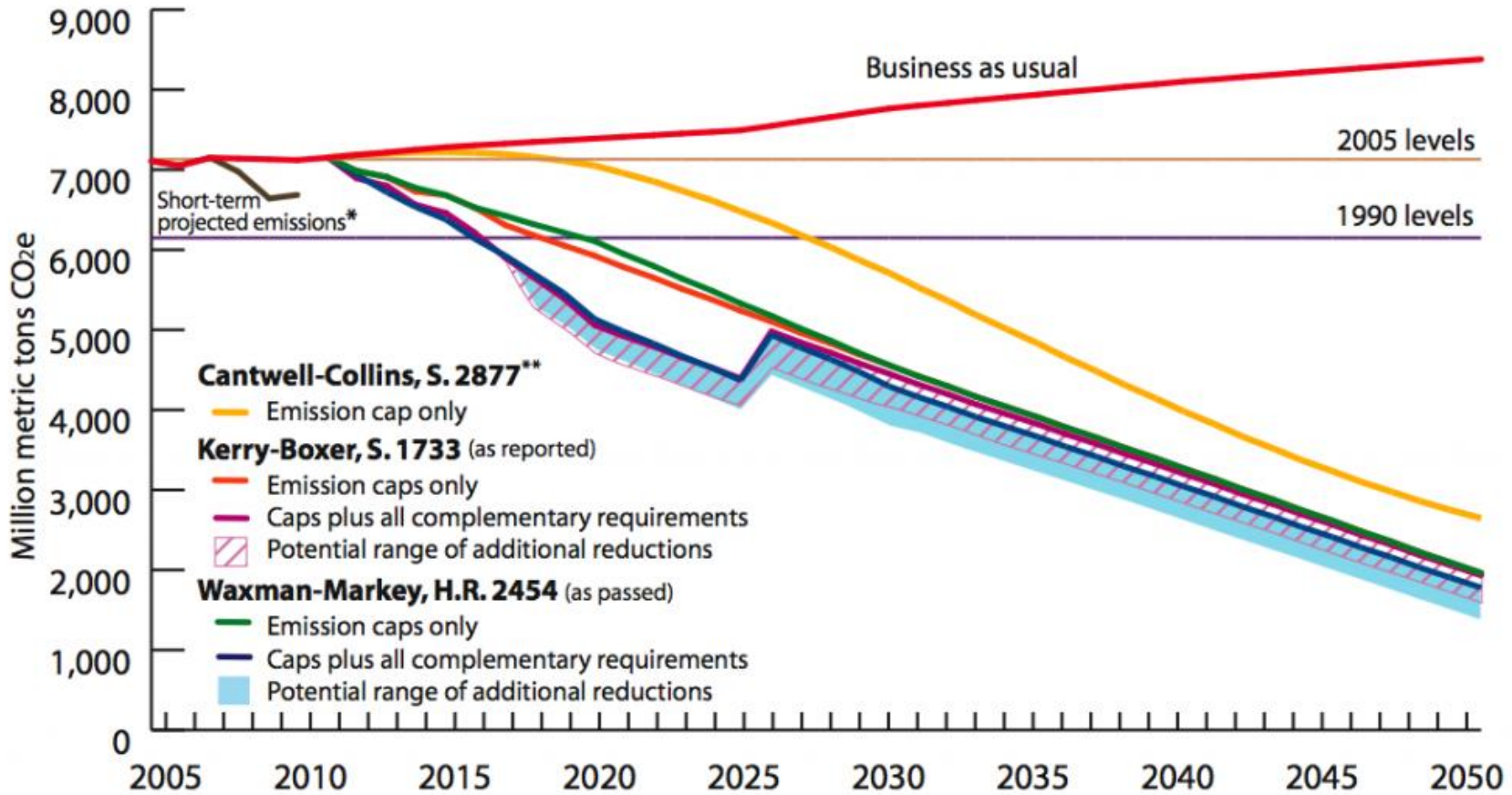
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- Already Exists in Europe
- Many Versions proposed in the last 2 Congresses
- Now that Health Care is Passed, it is on the list of possibilities
- Offsets, Auctions, Allowances, Caps
- Caps emissions, so may force some control technologies beyond BACT

- Watch the news! Including the opposition.

Net Emission Reductions Under Cap-and-Trade Proposals in the 111th Congress, 2005-2050

December 17, 2009



For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>.

**"Business as usual" emission projections are from EPA's reference case for its analysis of the Waxman-Markey bill. "Short-term projected emissions" represent EIA's most recent estimates of emissions for 2008-2010.

** Cantwell-Collins sets economy-wide reduction targets beginning with a 20 percent reduction from 2005 levels by 2020. However, additional action by Congress would be required before these targets could be met. Reduction estimates do not include emissions above the cap that could occur due to the safety-valve.

Future Implications of All Actions

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- Allow for longer permitting of “major” projects (to address GHG)
- Anticipate business impacts of a new Cap and Trade program (e.g. increased future cost of energy, which is a stated goal!)
- Energy efficiency opportunities will have increasing value/usefulness
- Companies may find it easier to do business elsewhere

Opposition Example: Murkowski Proposal

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- 6/10 in Senate, Murkowski resolution to **block the Environmental Protection Agency (EPA)** from regulating man-made emissions of carbon dioxide.
 - Confrontation regarding EPA's decision to initiate regulations CO2 emissions as a threat to human health
 - Out of line with precepts of the Clean Air Act (written for criteria pollutants, not GHG)
 - Undermines the power of Congress to make the decision of regulating carbon under the CAA.

- **Defeated Thursday 6/10 47-53** in a procedural vote. Obama has threatened to veto anyway

- **Why is it important?**
 - “proxy fight” sheds light on future cap-and-trade legislation which Majority Leader Reid has put on the short list of things to do before the end of the summer.

- **Good news**
 - had 41 sponsors, including three Democrats.
 - may have drawn enough votes to damage Democratic hopes of a passing a bigger pollution-reduction plan this year (6 Senate Democrats joined the Republican effort)

Thank You for Your Attention!

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