

Industrial Assessment Centers Student Meeting



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Pew Center on Global Climate Change**

**Washington, DC
February 4, 2010**

- Background on Pew Center
- U.S. Climate Policy State-of-Play
- Business Community Support for Climate Policy
- Pew Center Corporate Energy Efficiency Project

- Established in 1998 as an independent, non-partisan climate organization
- Three-fold structure – a “do” tank:
 - Research – 100+ reports over 10 years
 - Actively advise on policy – state, federal, international
 - Business Environmental Leadership Council (BELC)
 - 46 companies
 - \$2 trillion in revenues
 - Nearly 4 million employees

Introduction to BELC



Progress made in 2009:

- Climate change a top priority of President Obama and Congressional leadership
- House passage of bill with GHG cap-and-trade
- Major GHG regulatory actions
- Major businesses (e.g., USCAP) advocating for GHG cap-and-trade
- Climate legislation passes out of key Senate committee
- “Tri-partisan” Senate effort emerges to craft broad climate-energy legislation

Key challenges:

- Much of U.S. public does not recognize urgency of climate action (e.g., “Climate-gate”, cold winter, etc.)
- Climate change, and cap-and-trade in particular, have become tied up in partisan politics
- The economy
- Obama & Congressional attention on health care & wars

Three objectives climate-energy policy must meet:

- To power continued economic growth
- To reduce US vulnerability to energy-related security threats
- To reduce risk of climate change & other environmental threats

Global warming provisions of House-passed Waxman-Markey bill:

- Covers 85% of US GHG emissions through cap-and-trade
- 17% below 2005 levels by 2020; 83% below by 2050
- 85% of allowances allocated for free
- 2 billion tons domestic & int'l offsets; discounted by 20%
- Strategic reserve of 2.5 billion allowances available if allowance prices rise above trigger price
- U.S. state GHG cap-and-trade programs on hold for 5 years
- Includes additional renewable energy and energy efficiency provisions

Senate situation:

- 60 out of 100 votes required for Senate passage
- 59 Democrats in Senate, 20+ from states with strong manufacturing, fossil energy sectors
- 9 current Republicans have supported mandatory climate action in previous years
- Several committees have jurisdiction over climate & energy regulation
- Bingaman committee passed energy bill June 2009
- Boxer committee passed cap-and-trade bill Nov 2009

Kerry (Democrat) - Graham (Republican) – Lieberman (Independent) objectives:

- Energy supply
- Energy security
- Climate change

Kerry-Graham-Lieberman proposal:

- GHG cap-and-trade
- Support for increased nuclear power
- Increased access to domestic oil & gas supplies
- Trade measures
- GHG allowance “price collar”

Final action requires strong Obama Administration engagement in legislative process:

- State of the Union message
- Explaining energy-climate issue to U.S. public
- Engaging Democratic and Republican moderates
- Releasing principles for energy-climate bill
- Involving cabinet in legislative process

"I am grateful to the House for passing a [comprehensive energy and climate] bill last year. This year, I am eager to help advance the bipartisan effort in the Senate. I know there have been questions about whether we can afford such changes in a tough economy; and I know that there are those who disagree with the overwhelming scientific evidence on climate change. But even if you doubt the evidence, providing incentives for energy efficiency and clean energy are the right thing to do for our future - because the nation that leads the clean energy economy will be the nation that leads the global economy. And America must be that nation."

-- President Obama, 2010 State of the Union Address

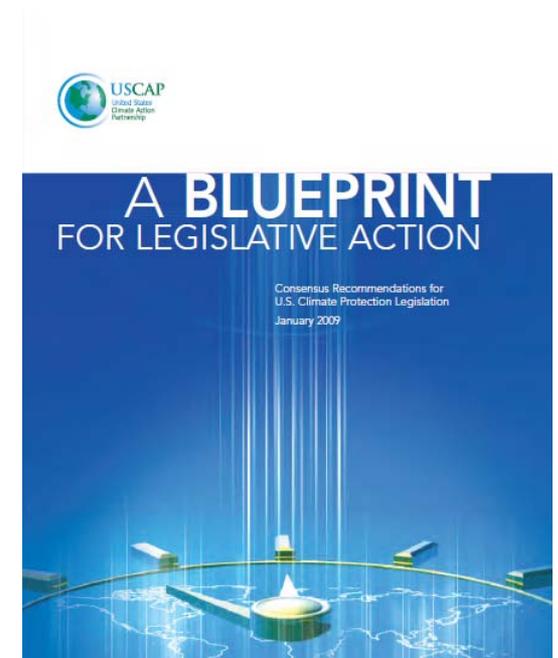
- EPA moves forward with regulating CO₂ under the Clean Air Act
 - Already moving in that direction
 - Lack of flexibility in the act leads to less cost-effective regulation and/or prolonged litigation
 - Less policy stability
- State and regional programs continue to move forward
 - Varying standards and requirements throughout the country increase costs and complexity for businesses



**Congressional solution remains best outcome
for the environment and the economy**

The U.S. Climate Action Partnership

- CEO-level partnership
- “Call for Action” released January 2007
- “Blueprint for Legislative Action” issued January 2009
- Proposed targets & timetables
 - 97%-102% of 2005 levels by 2012
 - 80%-86% of 2005 levels by 2020
 - 58% of 2005 levels by 2030
 - 20% of 2005 levels by 2050





USCAP

United States
Climate Action
Partnership

"We are committed to a pathway that will slow, stop and reverse the growth of U.S. emissions while expanding the U.S. economy."



WORLD
RESOURCES
INSTITUTE

Business Support for Climate Policy



- Coalition of 88 organizations calling for national energy and climate legislation
- Signatories included businesses, NGOs, national security experts, labor unions, veterans, and faith-based groups
- Ad ran in Wall Street Journal and Politico

A QUESTION OF AMERICAN LEADERSHIP

How will America take back control of its energy future while enhancing our national security?
When will the U.S. economy regain its competitive edge instead of letting other countries corner the emerging global clean energy market?
How can we get the U.S. back on track by creating American jobs in the new low-carbon economy?
How can we protect our natural resources and future generations from climate change?
These are the questions we're asking our policy makers as America faces a once-in-a-century opportunity to lower greenhouse gas emissions and become the world's leader in a burgeoning clean energy economy.

We are a broad and diverse group of leading businesses, environmental organizations, national security experts, veterans' organizations, labor unions and faith-based groups.

We believe it's time for Democrats and Republicans to unite behind bi-partisan, national energy and climate legislation that increases our security and limits emissions, as it preserves and creates jobs.

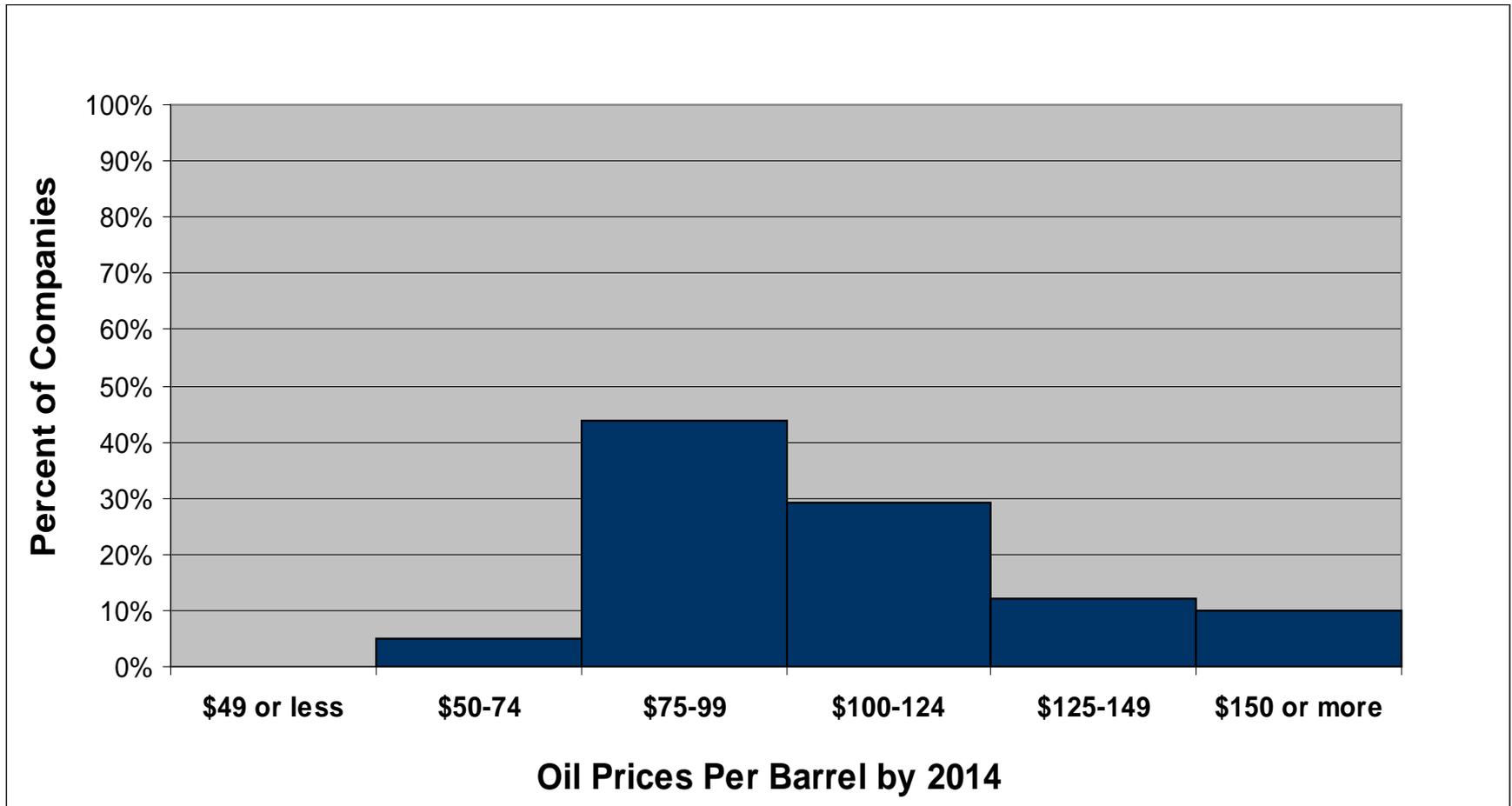
It's a question of American leadership.

A message from the above organizations.

- Exploring best practices in corporate energy efficiency strategies
 - Project funded by 3-year, \$1.4 million grant from Toyota
- Focus is on management approaches to improving efficiency throughout a company, including:
 - Internal operations
 - Supply chains
 - Products & services
- Research process will culminate in published report
 - Major conference set for April 6 with yearlong communications/outreach campaign to follow.

Energy Price Expectations by 2014

(Using World Oil Prices as a Proxy)



U.S. Climate Legislation Expectations

Number of
Companies

Percent

Within Two Years

27

57.4%

**After Two Years, but Before
Four Years**

20

42.6%

Total

47

100.0%

- UTC: Highly decentralized company, but all business units focused on efficiency
- IBM: Parlayed internal expertise in efficient data centers into a customer offering
- Dow Chemical: Uses about the same amount of energy annually as Australia
- Toyota: One of the most efficient car companies in the world
- PepsiCo: Leading edge of companies focused on supply chain energy efficiency
- Best Buy: Focus is on marketing energy efficiency solutions to customers

The 7-Habits of Highly Efficient Companies



1. Efficiency is a core strategy
2. Leadership and organizational support is real and sustained
3. Company has SMART energy efficiency goals
4. Strategy relies on a robust tracking and measurement system
5. Organization puts substantial resources into energy efficiency
6. Energy efficiency strategy shows results
7. Company effectively communicates results

Habit 3: Company has SMART energy efficiency goals



- PepsiCo: Big Hairy Audacious Goals—purposefully set as stretch targets
 - Targeting 20% electricity; 25% fuel; 20% water savings by 2015 against a 2006 baseline
- UTC: Moved to absolute GHG reduction goal after years of energy efficiency improvements
 - 2010 target to reduce CO₂ 12% below 2006 baseline
- Dow Chemical: Re-upped on efficiency targets after exceeding previous goal
 - New target: 25% efficiency improvement by 2015 off a 2006 baseline

Habit 4: Strategy relies on robust tracking and measurement system

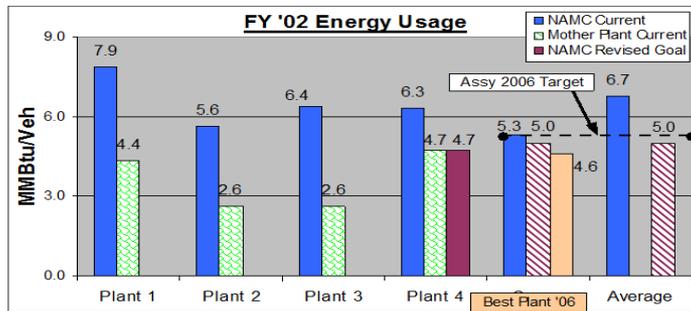


2008 Toyota Energy Action Plan

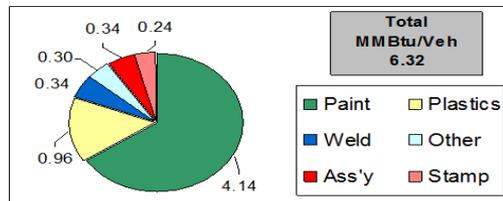
Purpose :

Become the North American Leader (#1) in energy usage per vehicle among all North American Automobile Manufacturing Facilities.

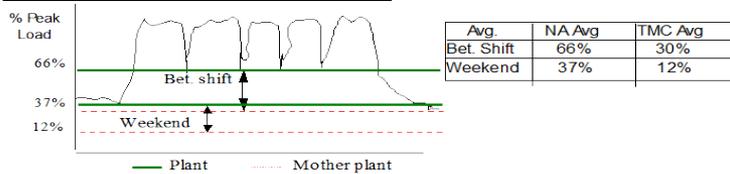
Current Situation



Energy Usage



Non-Production Time Energy Usage



Key Activities:

- 1) Focus on paint shop energy reductions
- 2) Optimize Non-production energy

Energy Metering :

All shop metering is operational and meets TMC's requirements.

Develop plan and implementation costs for measuring all utilities ED, Primer, T/C Booths, and all Ovens by the end of November 2002.

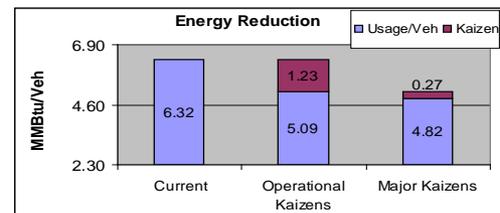
Kaizen Scenarios:

Operational Kaizens	Dept.	Energy Savings (MMBtus/Veh)	Savings (\$)/Veh	Implement. \$/Veh	Impl. Costs (\$)
A. Reduce NAMC electrical loads to TMC BS and WE stds; Tahara BS=30 WE=12, TMMI Current BS=66 WE = 37	All	0.56	\$ 3.63	\$ 0.29	\$ 50,000
B. Reduce painting booth air flow IAW NFPA 91. 10% reduction from existing 1,266,250 cfm.	T/R	0.18	\$ 1.19	\$ 0.12	\$ 20,000
C. Eliminate air flow in portions of paint booths that work is not being performed in. Reduce booth area 3% average.	T/R	0.14	\$ 0.93	\$ 0.29	\$ 50,000
D. Reduce air volume at lunch and between shifts to 50% of 1,033,000 cfm. Total of 4.7 hours day. (Gas Savings)	T/R	0.05	\$ 0.36	\$ 0.12	\$ 20,000
E. Database Kaizens not yet implemented	All	0.29	\$ 1.88	\$ 3.17	\$ 550,000
Sub-Total		1.23	7.99	3.97	690,000

- Investigate and Plan Operational kaizens by 3rd Qtr FY04

- Evaluate Major kaizen budget in 4th Qtr of FY04

Major Kaizens					
1. Steam Generation through Incinerator Waste Heat Recovery: 6 klb/hour 60 psi steam	T	0.22	\$ 1.42	\$ 5.76	\$ 1,000,000
2. EnergySaver panels: 2,000 HIDs, 24 x 365 and 100T baseload cooling 8 months year	ALL	0.03	\$ 0.17	\$ 6.33	\$ 1,100,000
2. Add De-Superheater: Recover heat from ACU for pre-heating boiler water make-up water.	F/C	0.02	\$ 0.14	\$ 0.58	\$ 100,000
Sub-Total		0.27	1.73	12.66	\$ 2,200,000
Project Payback =	1.71	Total	1.50	9.72	\$ 16.63



Yearly Energy Targets

Plant	FY 01	FY 02 (Base Year)	FY 03	FY 04	FY 05	FY 06	Total
Current Plan			3%	3%	3%	3%	12%
Additional Plan			0%	3%	5%	5%	13%
New Annual Reduction Targets			3%	6%	8%	8%	25%
Actual Target (MMBtu/Veh)	8.12	6.32	6.130	5.750	5.245	4.739	1.58

1.58 - Total Reduction required to achieve target (FY02 - FY06)

Habit 5: Organization puts substantial resources into efficiency



- PepsiCo: 2% of company's capital budget goes to a Sustainable Investment Fund
 - Creates dedicated source of funding for environmental projects
- UTC: Set a goal of investing \$100 million in energy conservation projects by 2010
 - So far \$96 million worth of projects have been funded.
- IBM, and others, consider co-benefits to energy efficiency investments
 - Co-benefits include increased productivity, improved worker morale, and broader innovation value

Habit 6: Energy efficiency strategy shows results



- Dow: Estimates its energy efficiency strategy has led to \$8.6 billion in cost savings and 86 million tons of avoided CO₂ emissions
- PepsiCo: Saved \$100 million and prevented the release of 170,000 tons of CO₂ from 2006-2008
- DuPont: Estimates its efficiency initiatives saved the company approximately \$2 billion between 1990 and 2000
- Best Buy: Estimates that sales of ENERGY STAR products in 2008 saved consumers about \$90 million in electricity savings

Corporate Efficiency Web Portal



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Business Environmental Leadership Council
Learn more about the 45 companies that lead the way in addressing climate change. [1](#) [2](#) [3](#) [4](#)

The Corporate Energy Efficiency Project was launched by the Pew Center on Global Climate Change with generous funding from Toyota.
The project is a multi-year research and communications effort to identify and highlight the most effective methods used by companies to reduce their energy consumption and lower their related greenhouse gas emissions. [Read More >](#)

WHAT'S NEW

From Shop Floor to Top Floor: Best Business Practices in Energy Efficiency
The Pew Center on Global Climate Change invites you to join us on April 6-7, 2010 in Chicago for a major

INSIDE ENERGY EFFICIENCY

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ENERGY EFFICIENCY RESOURCES BY TOPIC

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BROWSE BELC MEMBERS

Conference and Report Launch



Are you looking for ways to **reduce** your company's **energy** consumption, **lower** greenhouse gas **emissions** and **save** money?

The Pew Center on Global Climate Change presents:

**From Shop Floor to Top Floor:
Best Business Practices in
Energy Efficiency Conference
and Report Launch**

April 6-7, 2010 • Chicago, IL

A conference on corporate energy efficiency and release of in-depth research report. Learn from business community peers about the most effective management approaches to reduce energy use across four categories: internal operations; supply chains; products and services; and cross-cutting issues.

Don't miss this opportunity to learn from the experts.
Register now at:
www.pewclimate.org/energy-efficiency/conference

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Two weeks of harsh rhetoric and pitched procedural battles

- Basic terms of Copenhagen Accord brokered directly by President Obama & key developing country leaders on final day
- Nearly another full day of tense negotiations to allow leaders' deal to be formalized over bitter objections of a few governments
- Parties adopted parallel decisions that "take note" of political accord & open way for governments to individually sign on
- In separate decisions, parties agreed to continue negotiating toward a fuller agreement in late 2010 in Mexico City
- Uncertainty on formal standing of Copenhagen Accord under U.N. climate process & about nature of any future agreement

Key Elements of Copenhagen Accord

- Aspirational goal of limiting global temperature increase to 2 degrees Celsius
- Process for countries to submit their mitigation pledges by January 31, 2010
- Terms for reporting and verification of country actions
- Commitment by developed countries for \$30 billion in “new & additional” resources in 2010-2012 to help developing countries reduce emissions, preserve forests, & adapt to climate change
- Goal of mobilizing \$100 billion a year in public & private finance by 2020 to address developing country needs