

Climate Change Politics and Policy Making

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Climate Change Policy Landscape

International

- *Kyoto Protocol*
- *Asia Pacific Partnership for Clean Development*
- *EU Emissions Trading System*
- *Wal-Mart*
- *Pew Business Environmental Leadership Council*
- *Climate Group*

National

- *Climate Change Science Program (US)*
- *Warner-Lieberman Bill (US)*
- *China's National Climate Change Programme (2007)*
- *Chicago Climate Exchange*
- *Evangelical Climate Initiative*
- *US Climate Action Partnership*

Sub-national

- *Fort Collins Climate Action Taskforce*
- *Colorado Climate Action Plan*
- *Regional Greenhouse Gas Initiative*
- *Carbon Rationing Action Groups*
- *Climate Wise*
- *New Belgium's Sustainability Program*

Public

Private

CLIMATE CHANGE POLITICS

“who gets what, when, and how”

What is an acceptable level of risk that society is willing to incur?

What role should science play in decision-making?

How do we manage risks posed by climate change?

Who should bear the economic costs of controlling emissions?

How can we balance climate change risks with other pressing problems?

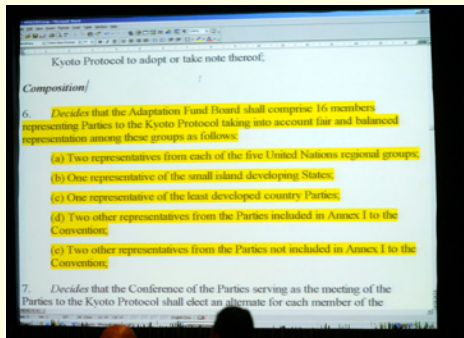
What is a “fair” approach to controlling emissions?

What role should the market play in providing incentives to control emissions?

International Climate Change “Regime”



- United Nations Framework Convention on Climate Change (1992)



- Kyoto Protocol to the UNFCCC (1997/2001)



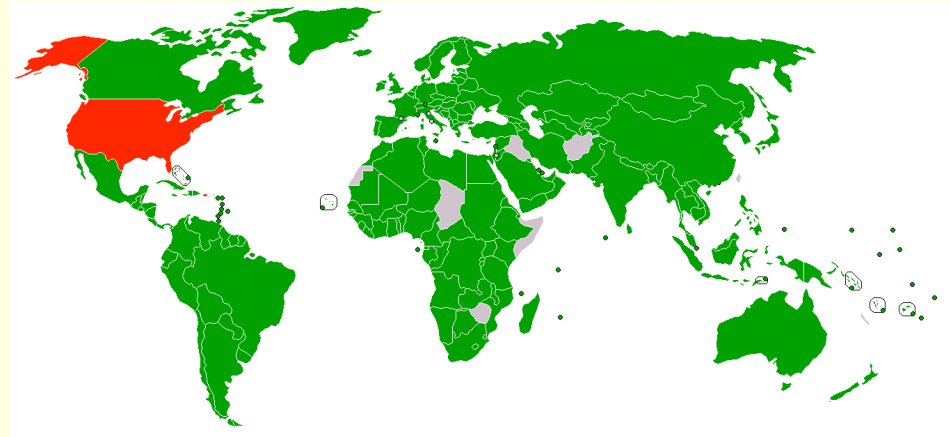
UN Framework Convention on Climate Change

- Objective (Article 2)
stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent **dangerous** anthropogenic interference with the climate system.
- Common but Differentiated Responsibilities (Article 3 paragraph 1)



The Kyoto Protocol

- Industrialized countries shall reduce aggregate GHG emissions 5.2% below 1990 levels by 2008-2012.
- Flexible Mechanisms
 - Emissions trading
 - Clean Development Mechanism (CDM)/ Joint Implementation (JI)



Parties to the Kyoto Protocol, 2009

The Kyoto Protocol

Country	Target (1990** - 2008/2012)
EU-15*, Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein, Lithuania, Monaco, Romania, Slovakia, Slovenia, Switzerland	-8%
US***	-7%
Canada, Hungary, Japan, Poland	-6%
Croatia	-5%
New Zealand, Russian Federation, Ukraine	0
Norway	+1%
Australia	+8%
Iceland	+10%

March 2001: US Withdrawal

As you know, I oppose the Kyoto Protocol because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy.



*Text of a letter to Senators Hagel, Helms, Craig and Roberts
March 13, 2001*

What's Fair?



	Total million MtCO ₂ (2005)
US	5,892
China	5,577
Russia	1,568
Japan	1,248
India	1,222
Germany	829
Canada	559
United Kingdom	539
Italy	477
South Korea	474

Source: World Resources Institute

What's Fair?

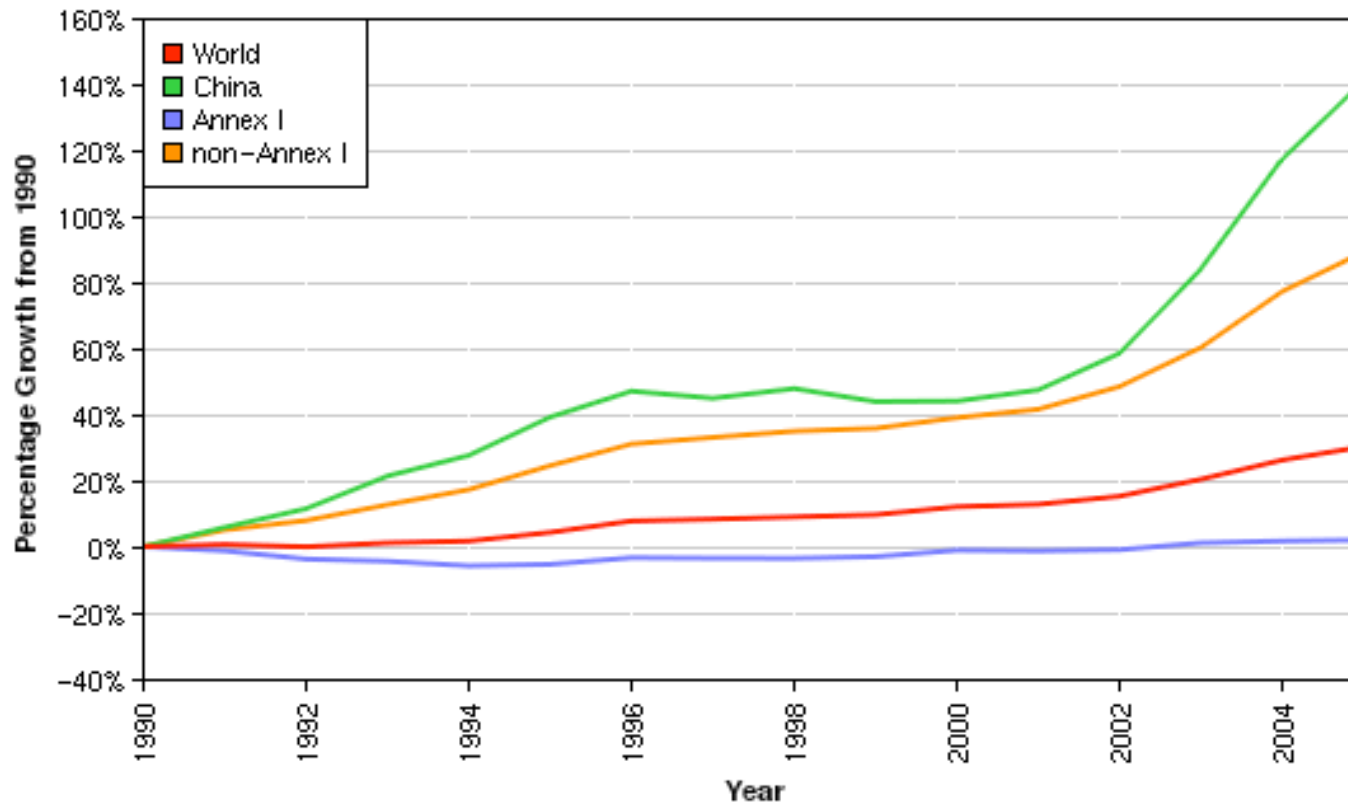


	Total million MtCO ₂ (2005)	Per capita MtCO ₂ (rank)
US	5,892	19.9 (6)
China	5,577	4.3 (70)
Russia	1,568	11.0 (19)
Japan	1,248	9.8 (27)
India	1,222	1.1 (124)
Germany	829	10.0 (25)
Canada	559	17.3 (9)
United Kingdom	539	8.9 (32)
Italy	477	8.1 (39)
South Korea	474	9.8 (26)

Source: World Resources Institute

Emissions Trends

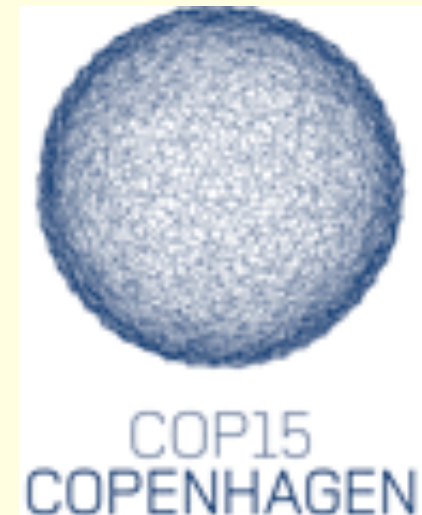
National CO2 Emissions, 1990-2005



Source: World Resources Institute

“Bali Roadmap” to Copenhagen

- Ad hoc working group on long-term cooperative action to address climate change by enhancing implementation of the Convention (AWG-LCA)
 - Mitigation by developing countries
 - Adaptation
- Further commitments for industrialized Parties under the Protocol (AWG-KP)
 - Reference to IPCC AR4
 - 25-40% reductions for Annex I Parties (Box 13.7 WGIII)



US Climate Policy: The Bush (and Clinton) Years

- Federal (In)Action
 - Climate Change Technology Program
 - Climate Change Science Program
 - Voluntary measures
- Debate over the science of climate change

Risk Management

“SOUND SCIENCE”

- *“Our actions should be measured as we learn more from science and build on it.” (George W. Bush, 2001; <http://www.climatevision.gov/statements.html>)*
- **More conclusive evidence necessary before regulatory action.**

PRECAUTIONARY APPROACH

- *“[U]se should be made of the precautionary principle where the possibility of harmful effects on health or the environment has been identified and preliminary scientific evaluation proves inconclusive for assessing the level of risk.”*
(EU Ministers, 2000; http://ec.europa.eu/dgs/health_consumer/library/pub/pub07_en.pdf)
- **Preponderance of evidence sufficient for regulatory action.**

US Climate Policy: Obama



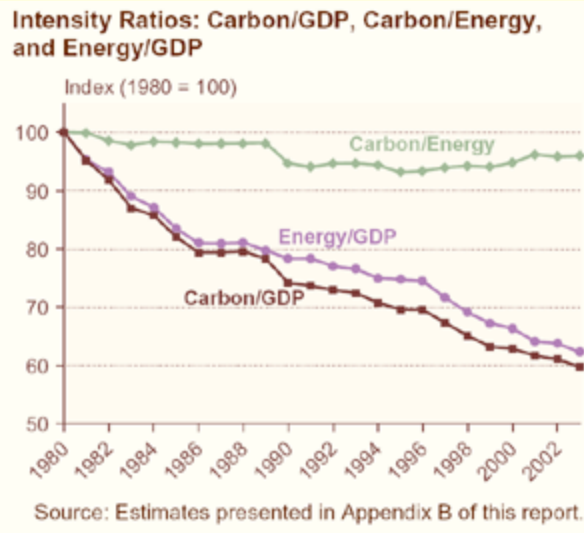
“Few challenges facing America and the world are more urgent than combating climate change. The **science is beyond dispute** and the facts are clear.”

“Denial is no longer an acceptable response”

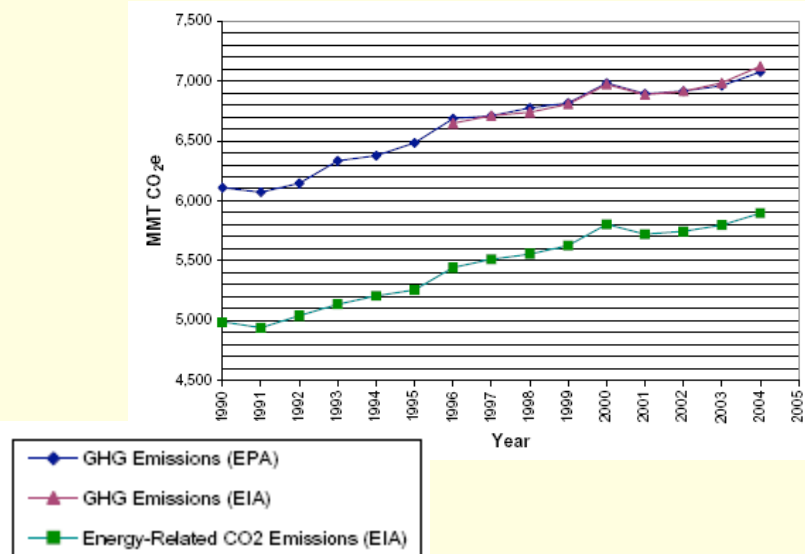
*Governors' Global Climate Summit
18 November 2008*

Economics and the Environment

2002: Reduce GHG *intensity* of economy 18 percent (compared to 2002) by 2012



Source: Energy Information Administration http://www.eia.doe.gov/oiaf/1605/gg04rpt/intensityfigure_1.html



Source: Pew Center on Climate Change <http://www.pewclimate.org/docUploads/USEmissions2004%5FFeb06%2Epdf>

US Climate Policy: Obama

- “Climate change and our dependence on foreign oil if left unaddressed will continue to weaken our economy and threaten our national security.”
 - Return emissions to 1990 levels by 2020; 80% below 1990 levels by 2050
 - Re-engage in international negotiations
 - “Cap and Trade” as a central policy instrument

Musical Chairs: A Helpful Analogy

Courtesy of Holmes Hummel

Each chair represents the “right to pollute”:

one metric ton of carbon dioxide (1 mtCO₂)

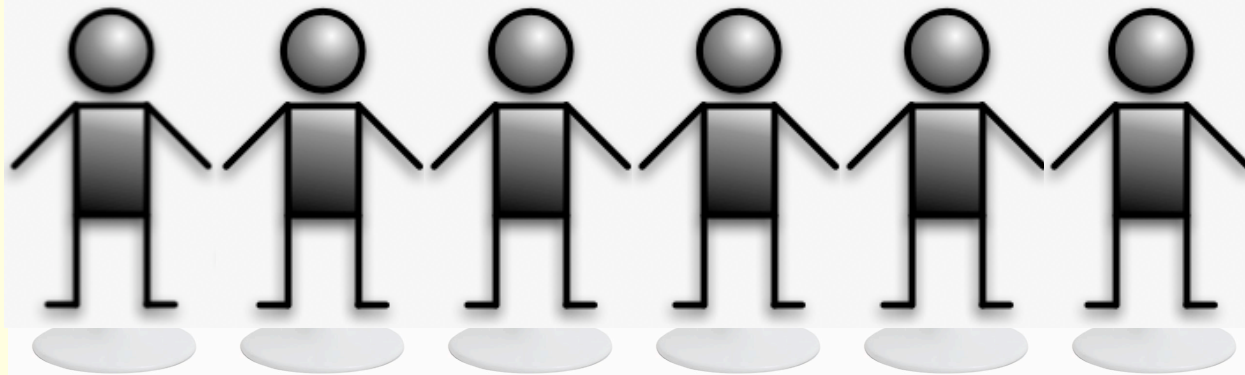
or an equivalent amount of any other greenhouse gas





Musical chairs

At the start of the game, everyone has a seat – because there are no limits on carbon emissions.





Musical chairs

After the first year, a cap is imposed by limiting the amount of permits and making **players compete for the permits available**.

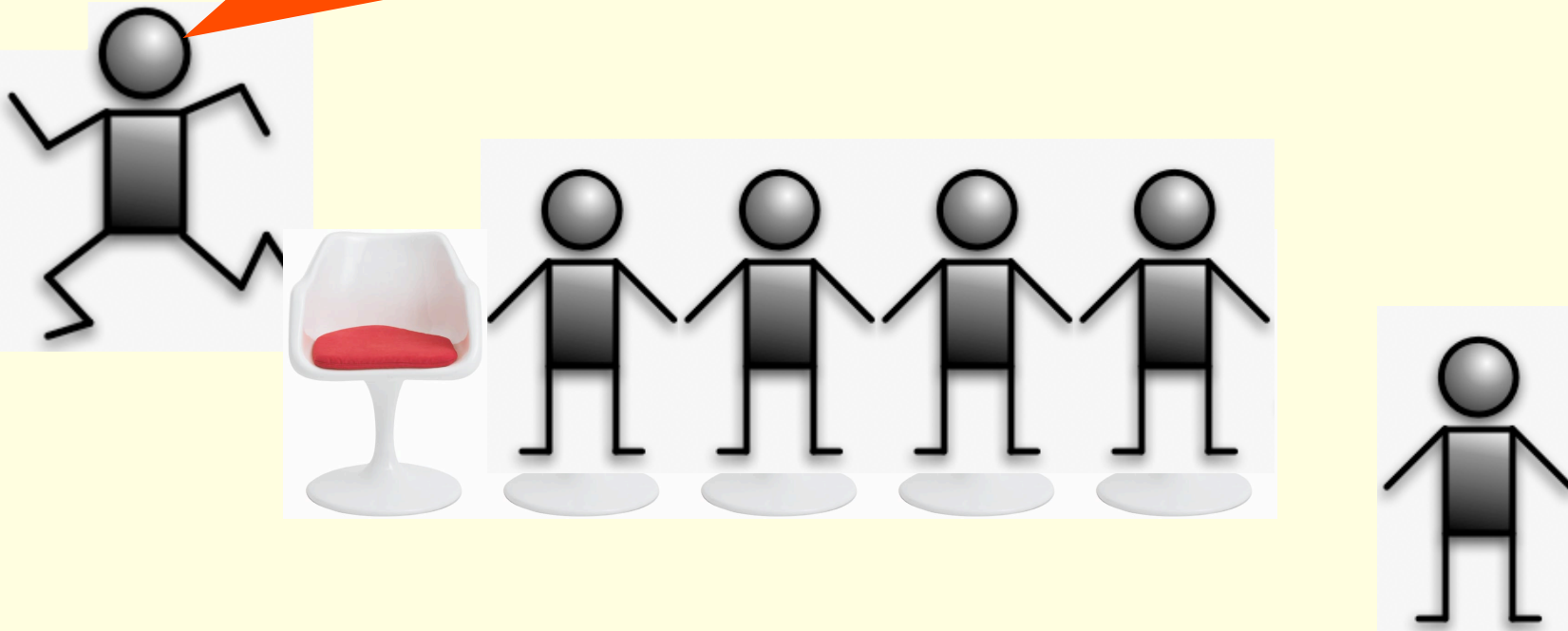
In our analogy, one player doesn't have a chair...



Would anyone be willing to trade their chair for \$30?



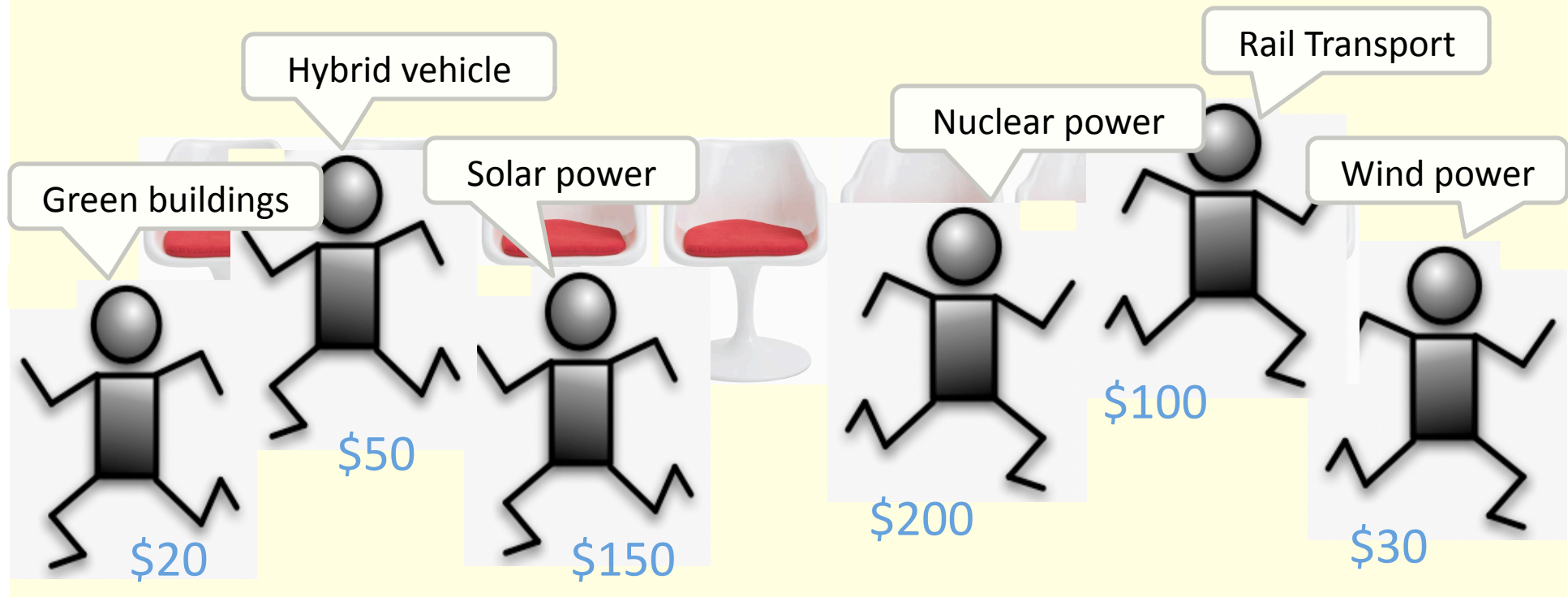
Sure! For that price, I can finance an efficiency upgrade, eliminating my need for a pollution permit.





Achieving Reduction Targets

In a market, players leave when they find better options as costs rise.
Cap-and-trade lets players choose at what price they leave the game – and how they want to make that change.



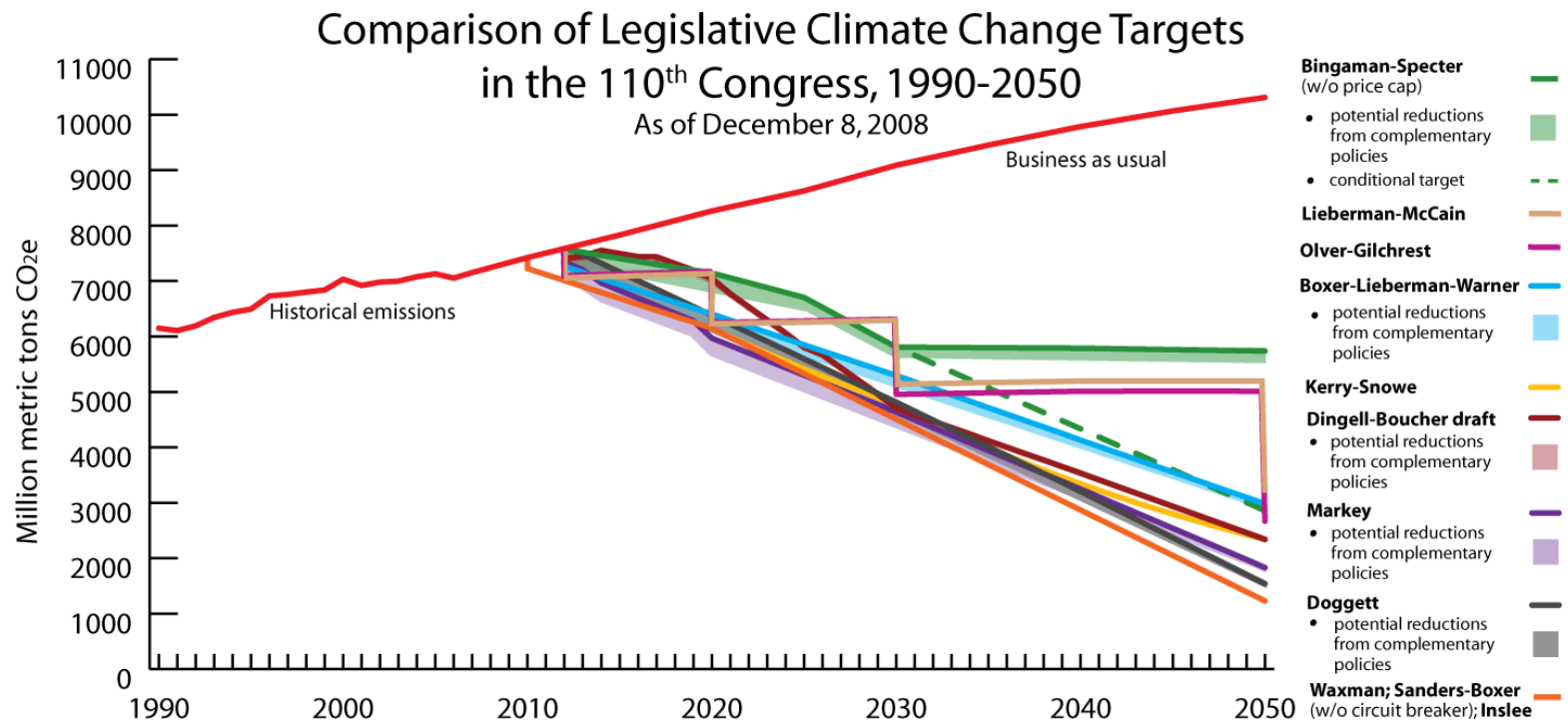
Cap and Trade

- European Union Emissions Trading Scheme
- Chicago Climate Exchange
- New South Wales (Australia) Greenhouse Gas Abatement Scheme
- Regional Greenhouse Gas Initiative
- Japanese Voluntary Emissions Trading Scheme

2006	Cap & Trade	Total Carbon Market
Mt traded	1 billion	1.6 billion <i>4.2 billion (2008)</i>
Value	€18.4 billion	€22.5 billion <i>€63 billion (2008)</i>

Source: Point Carbon 2007

Cap and Trade Proposals



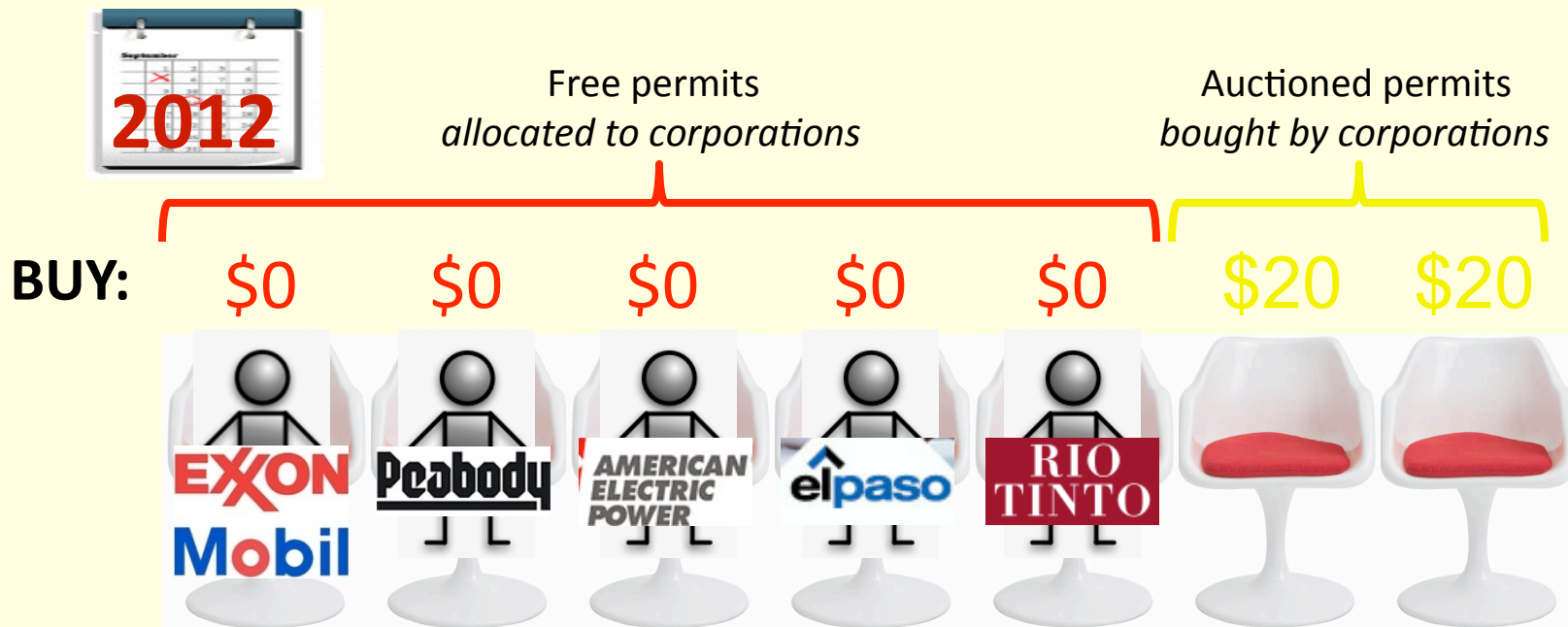
WORLD RESOURCES INSTITUTE

For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>. WRI does not endorse any of these bills. This analysis is intended to fairly and accurately compare explicit carbon caps in Congressional climate proposals and uses underlying data that may differ from other analyses. Price caps, circuit breakers and other cost-containment mechanisms contained in some bills may allow emissions to deviate from the pathways depicted in this analysis.

Auctioning Permits vs Allocating for Free

By contrast, the Lieberman-Warner bill for U.S. climate policy proposes giving away *more than half* the permits.*

Those companies start out each round “sitting down” at no cost.

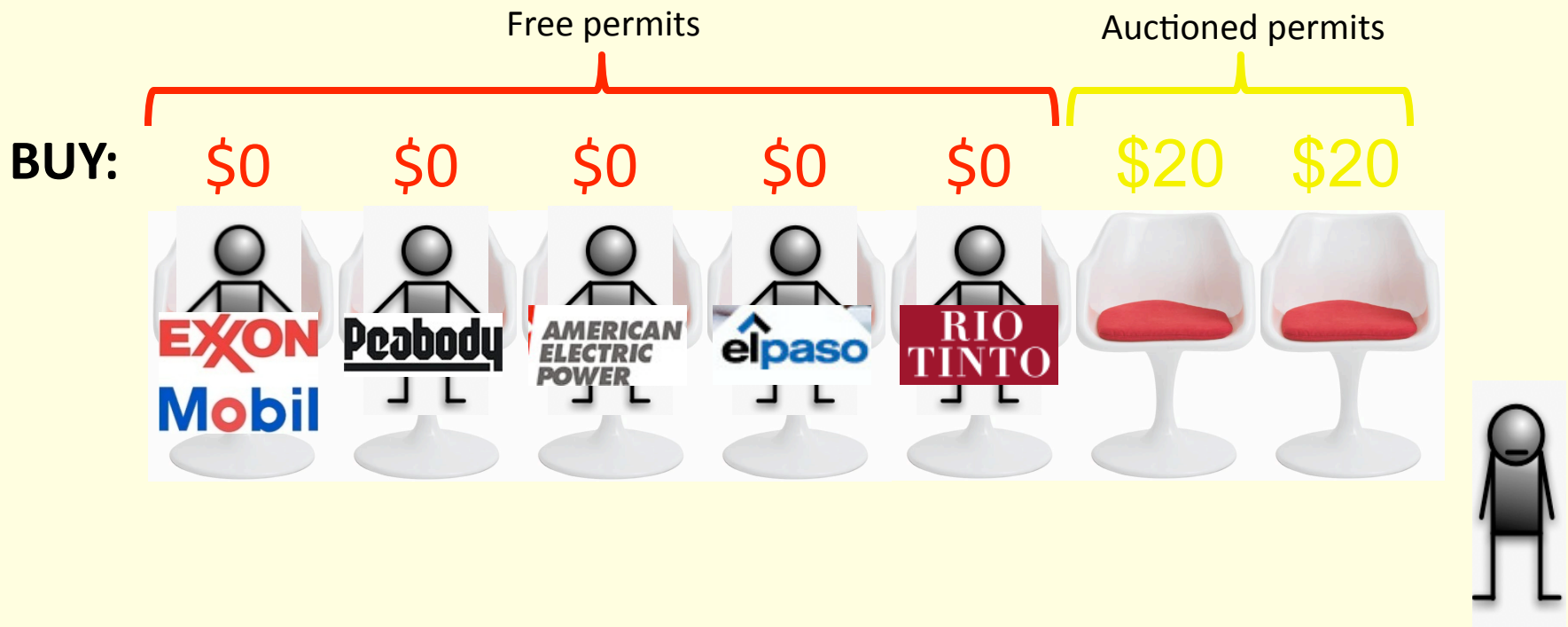


* Though portion would change over time, 1/4 are still free in 2050.

Auctioning Permits vs Allocating for Free

Why is this a cause for concern?

1. **Unfair competition:** New players entering the market with innovative ideas have difficulty competing against pre-existing polluters who get free permits as a subsidy to diminish their political opposition.



Auctioning Permits vs Allocating for Free

Why is this a cause for concern?

2. **Unearned windfall profits:** In a carbon market, firms that buy permits in an auction will try to pass costs to customers, and others receiving a permit for free can sell their permits at that same price.

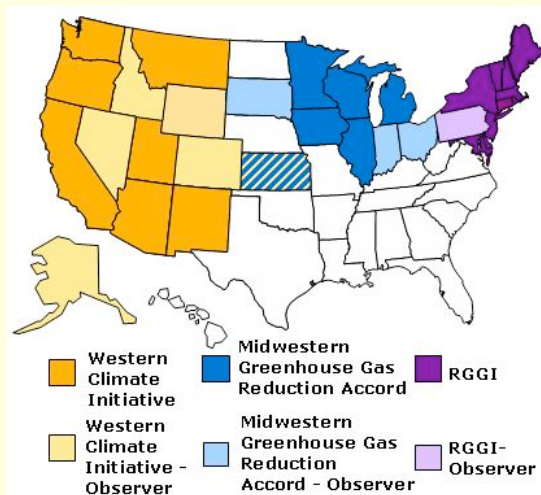


Spending

With hundreds of billions of dollars being raised, expectations are high about who could benefit from climate policy – and how:

- **Tax credits and Incentives** – support for efficiency and zero carbon energy sources
- **Research & Development** – on the scale of a New Apollo Project or a Manhattan Project for zero carbon energy sources
- **Low-income Households** – committing at least 15% of all revenues to neutralizing impact of higher prices on fossil fuels and other goods
- **Adaptation** – helping vulnerable communities (1) avoid harm from climate change, and (2) recover from climate damages
- **Green Collar Jobs** – encouraging job development in the clean energy industry

State v. Federal Action



Pre-emption?

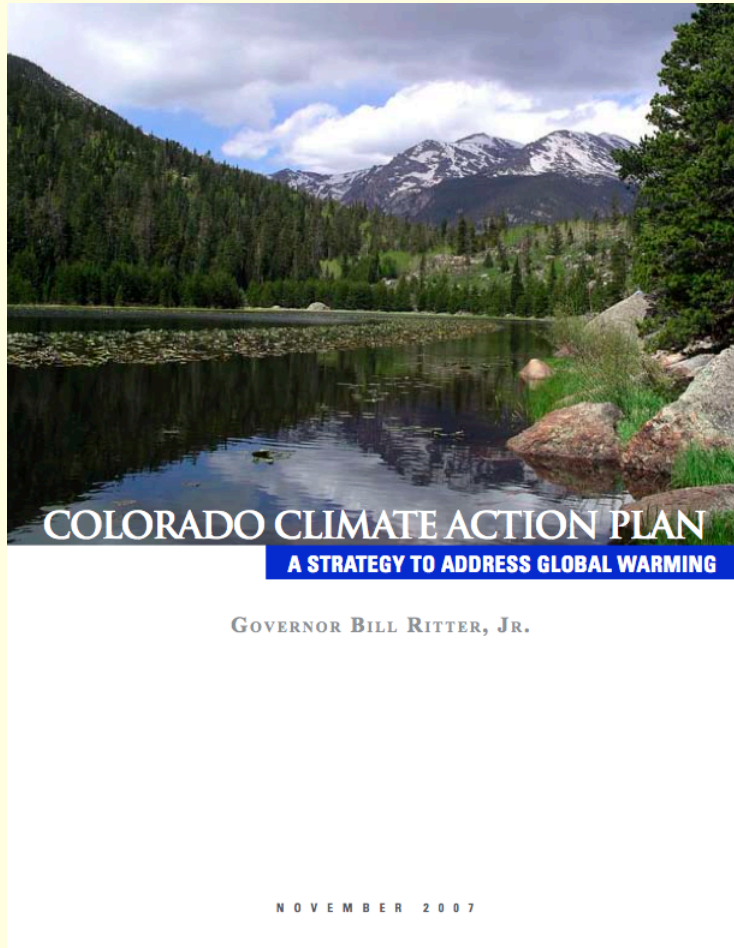


www.john-daly.com

Source: *Pew Center on Global Climate Change*

“Although we support the WCI’s efforts to develop a regional cap-and-trade regime, **we believe that fundamental greenhouse gas strategies such as this should be implemented on a national scale** so that all emitters can do their part. A unified national trading market would have consistent rules, be more comprehensive, have fewer administrative burdens and could be integrated into an international program.” (Colorado Climate Action Plan 2007).

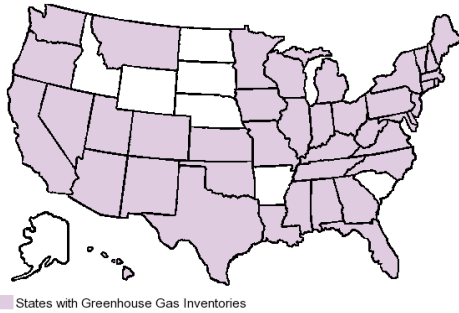
Colorado Climate Action



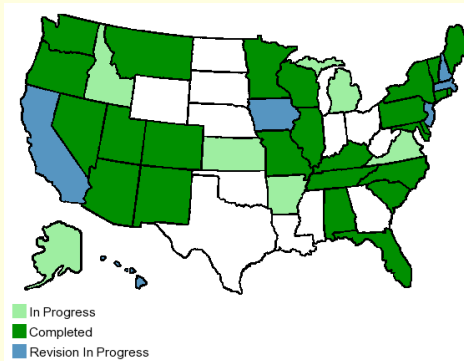
- Reduce emissions 20% below 2005 levels by 2020; 80% by 2050
- Focus on “The New Energy Economy”
- Call for adaptation planning

State Climate Policy

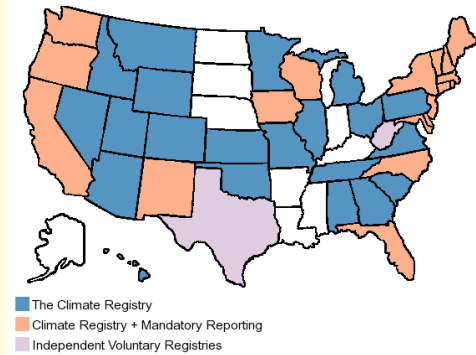
Emissions Inventories



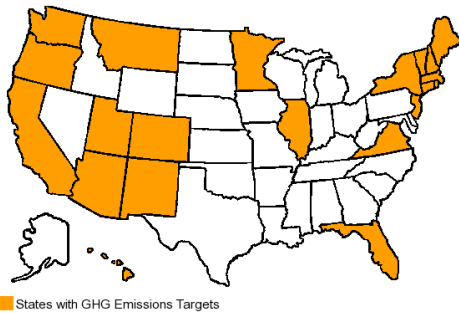
Climate Action Plans



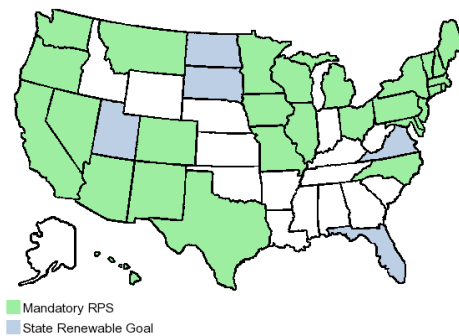
Reporting



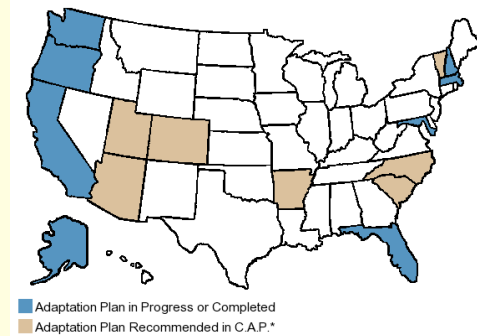
GHG Emissions Targets



Renewable Portfolio Standards



Adaptation Plans

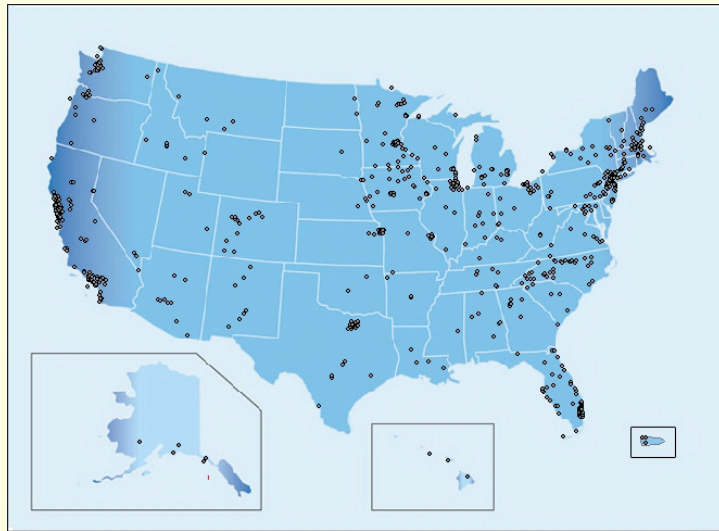


Colorado Carbon Fund

- Voluntary carbon offset program for “unavoidable” emissions
- Support for energy efficiency and renewable energy projects in Colorado
- Additional, verifiable, and permanent



Municipal Climate Action



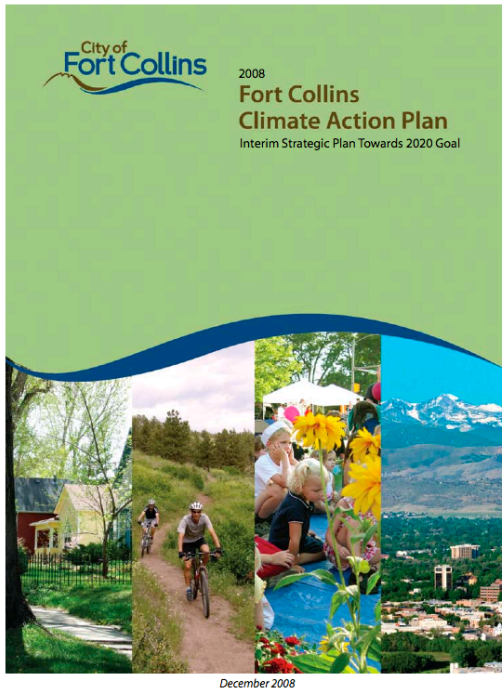
US Mayors' Climate Protection Agreement (935 mayors; 4/7/09)

ICLEI Cities for Climate Protection

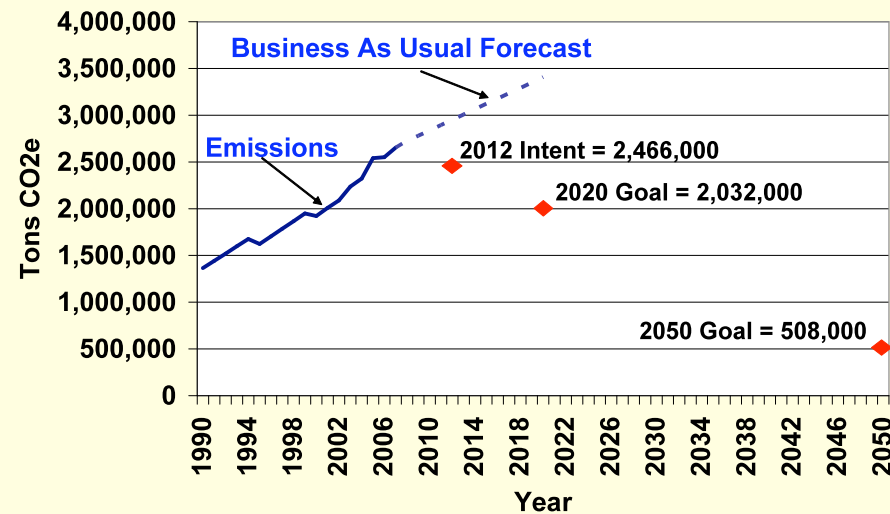


Fort Collins Climate Policy

Reduce community-wide emissions
20% below 2005 levels by 2020;
80% by 2050



Fort Collins Greenhouse Gas Goals



Fort Collins Climate Policy

In choosing to embrace climate protection, Fort Collins has adopted the "No Regrets" approach already adopted by localities and corporations around the world. This approach that entails making economically sound choices to curb greenhouse gas emissions, while providing multiple benefits to the community and support for existing community goals.

(From 2008 Climate Action Plan)

- Proposed New Measures (high 2012 benefits)
 - Expand Climate Wise
 - Ban cardboard from waste stream
 - Government organizations set and meet GHG goals
 - Energy efficiency programs
 - Community climate challenge

