

Prospects for US Carbon Markets

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Current Challenges in the Emission Permit Markets
London, 2 November 2010



Climate policy
Prospects for US ~~Carbon Markets~~

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Agenda

1. How did we get here?
2. What happens now?
3. What are the prospects for a US carbon market?

1. How did we get here?

ENVIRONMENTAL DEFENSE FUND



June 26, 2009

111TH CONGRESS
1ST SESSION

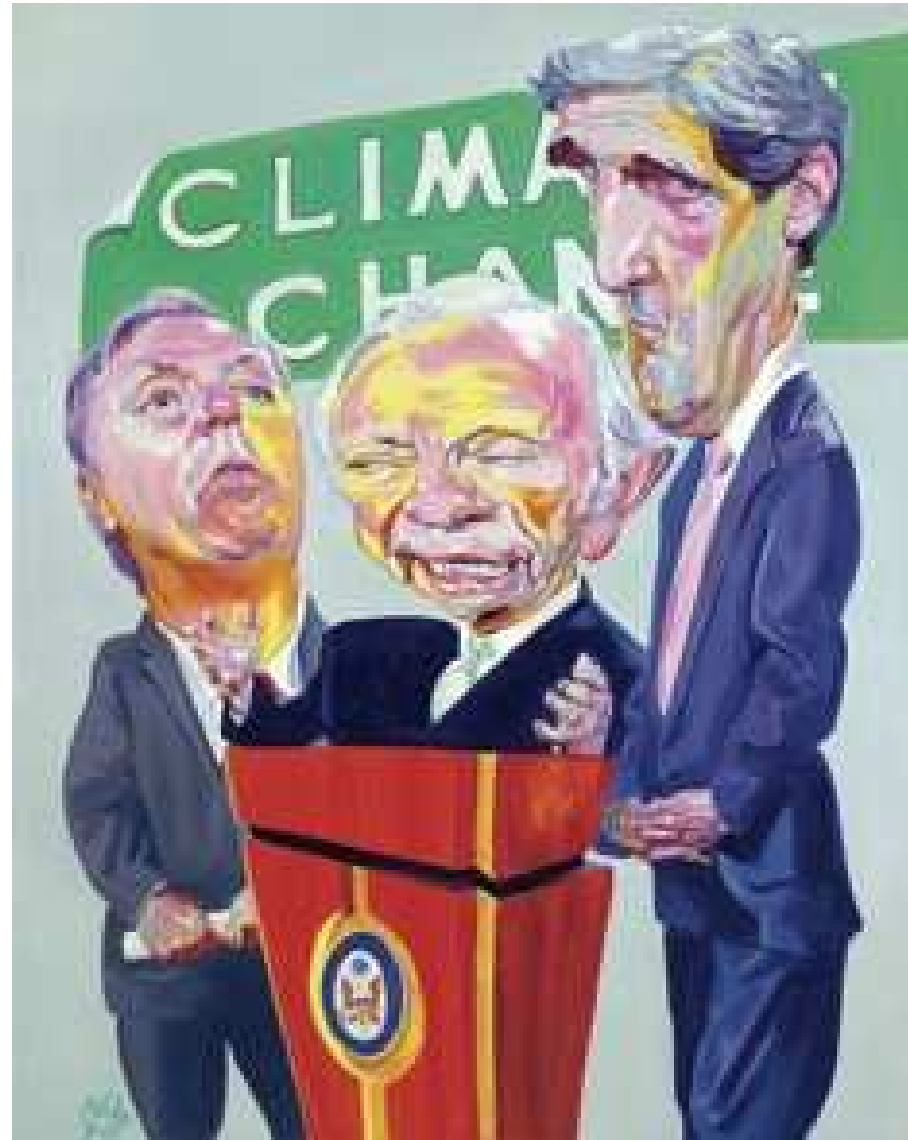
H. R. 2454

AN ACT

To create clean energy jobs, achieve energy independence, reduce global warming pollution and transition to a clean energy economy.

- 1 Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,
- 2

- Kerry-(Graham)-Lieberman
“American Power Act”
- Similar to Waxman-Markey
- Stalled in the Senate after failure to get bipartisan support



2. What happens now?

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At federal level, focus shifts to EPA

- GHG reporting rule

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- Mobile sources



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- PSD/BACT



At federal level, focus shifts to EPA

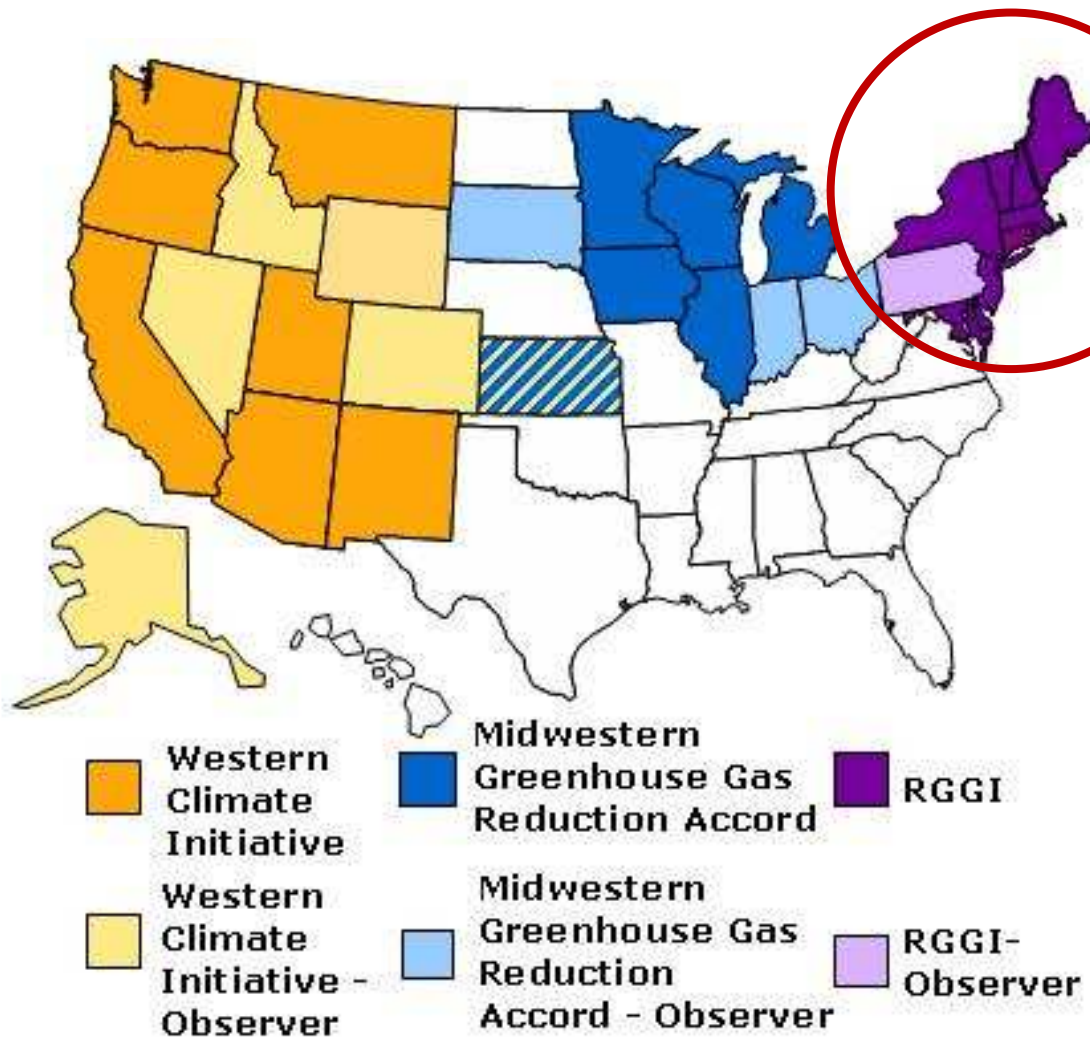
- GHG reporting rule
- Mobile sources
- Tailoring rule
- PSD/BACT
- Source-specific performance standards (NSPS)



Regulatory focus on coal-fired power plants

- GHG regulations
- SO₂, NO_x, Hg
- Other environmental regs (coal ash, water)

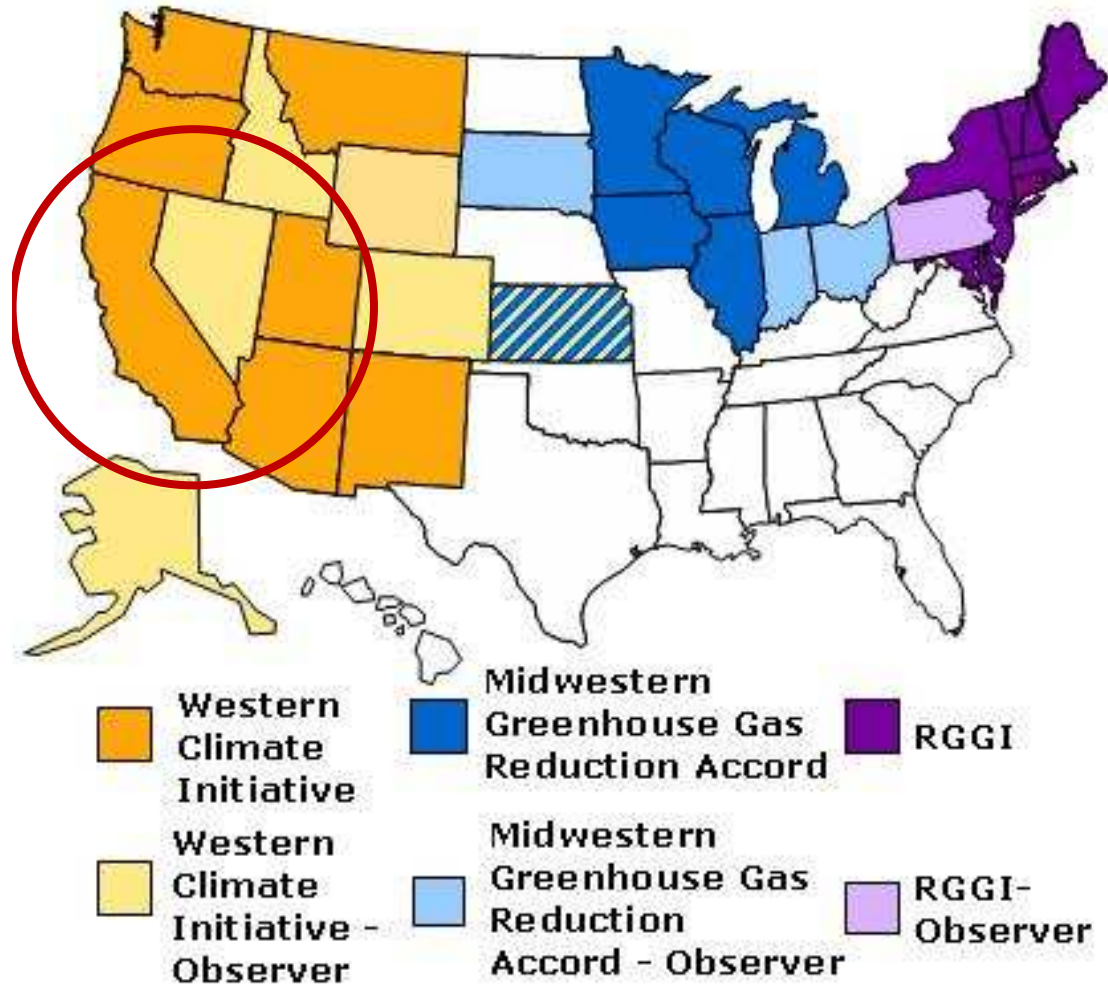
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Regional efforts

- Regional Greenhouse Gas Initiative (NE states)

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Regional efforts

- Regional Greenhouse Gas Initiative (NE states)
- AB32 (California)

3. What are the prospects for a US carbon market?

Is cap and trade dead?

Is cap and trade dead?

Depends on what you mean by
“cap and trade” ...

Is cap and trade dead?

Depends on what you mean by
“cap and trade”...

and by “dead.”

Why (still) cap and trade?

1. U.S. politics

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4. Self-adjustment

Why (still) cap and trade?

1. U.S. politics
2. Proven success
3. International harmonization
4. Self-adjustment
5. Virtues of a quantity limit: thresholds and tipping points

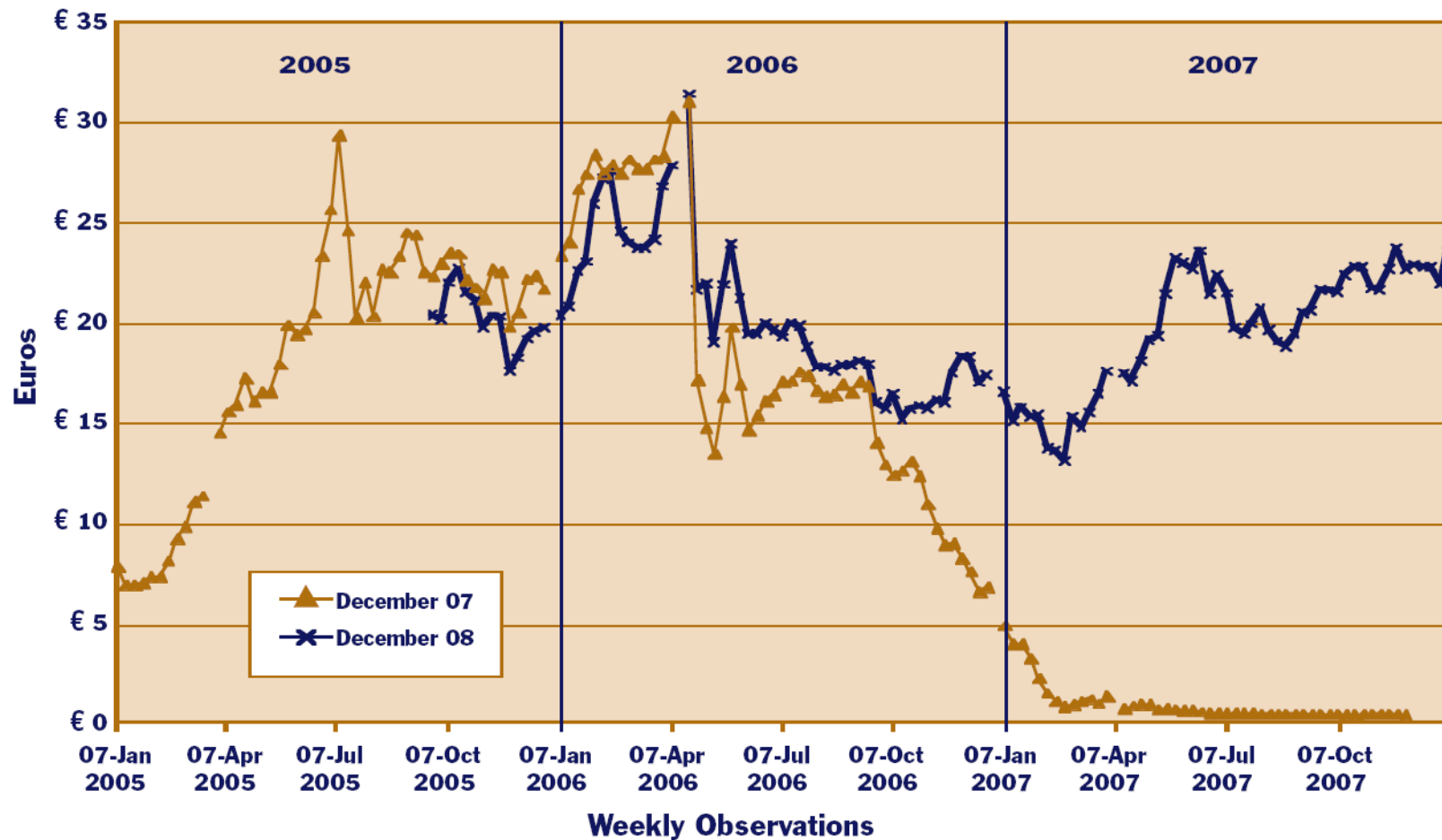
Two common objections to cap and trade

1. “The price will be too volatile”
 - How volatile are prices actually?
 - How much does short-term volatility matter?
2. “The price won’t be high enough”
 - The goal is reducing emissions – not deploying certain technologies. If price is too low, tighten the cap!
 - The current EU experience demonstrates the procyclicality of emission prices — which is a good thing.
 - Key question: Why do we want price to do double duty?

In both cases, the key is a **credible long-term policy** – once again raising the issue of **regulatory risk**.

Importance of banking (1/2)

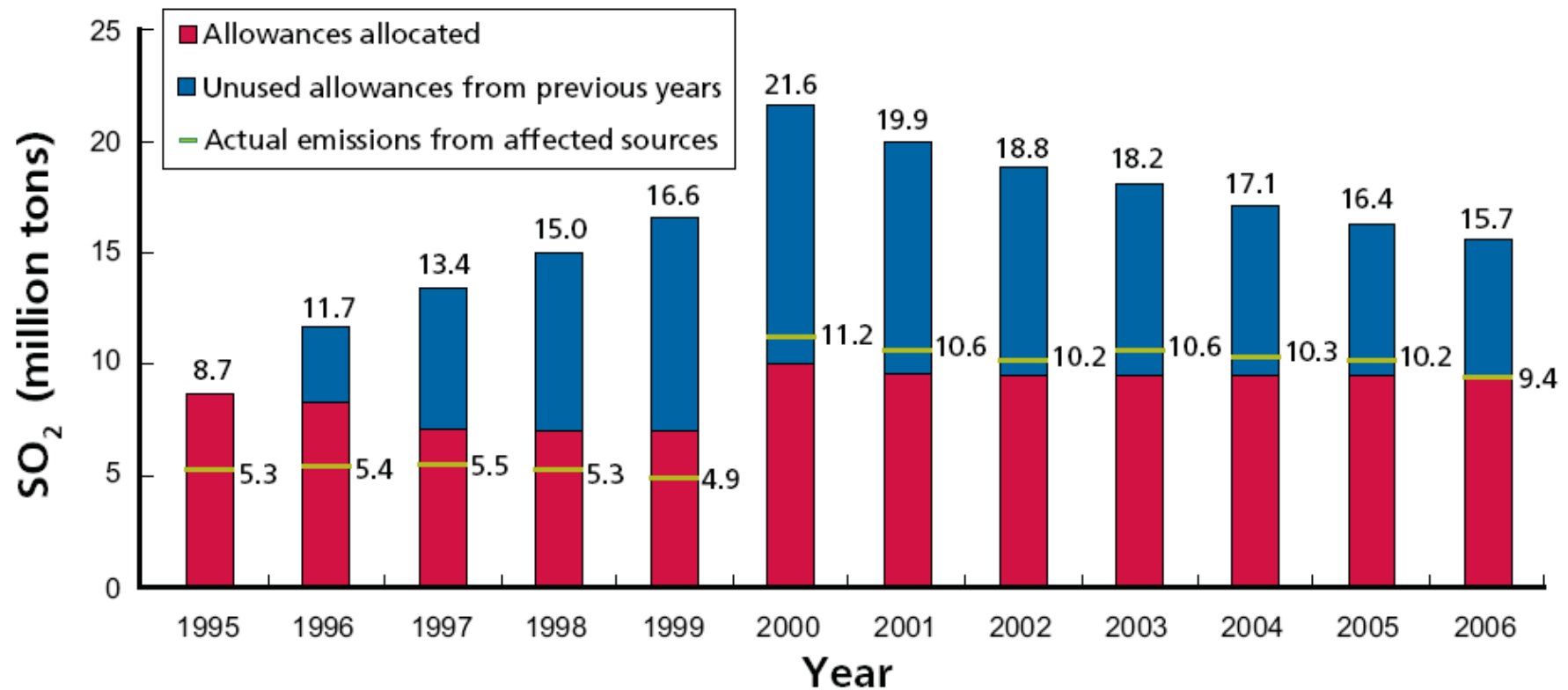
Evolution of EUA Prices 2005-2007



Source: Ellerman and Joskow 2008

Importance of banking (2/2)

U.S. SO₂ trading program, 1995-2006



Source: EPA, 2007

Major policy design issues (1/6)

Targets and timetables

Scope and point of reg.

Offsets

Int'l competitiveness

Cost containment

Allocation

HR2454:

2012: 3% below 2005

2020: 17% below

2050: 83% below

Notes:

- 2005 emissions were 17% above 1990.
- 2009 emissions were 9.6% below 2005.

Major policy design issues (2/6)

Targets and timetables

Scope and point of reg.

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Scope should be **as broad as possible** to capture largest gains from trade.

- Key political question:
Coverage of transportation sector

“Point of regulation” –
upstream vs. downstream.

Major policy design issues (3/6)

Targets and timetables

Scope and point of reg.

Offsets

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Allocation

Offsets effectively **expand the scope** of the market and make more aggressive targets feasible.

But **strong scientific review** will be crucial.

Not all offsets are created equal:

- Domestic offsets
- Tropical forest carbon (REDD)
- International
 - CDM (project-based)
 - Sectoral crediting

Major policy design issues (4/6)

Targets and timetables

Scope and point of reg.

Offsets

Int'l competitiveness

Cost containment

Allocation

A legitimate environmental and economic issue despite trade concerns.

Avoid carbon leakage from trade-exposed manufacturing sectors.

Solutions:

- Output-based allocation
- Border adjustments

However, largest source of leakage is **indirect**.

Major policy design issues (5/6)

Targets and timetables

A price collar, sure – but will it be “hard” or “soft”?

Scope and point of reg.

Classic tension between greater certainty about cost and greater certainty about outcomes.

Offsets

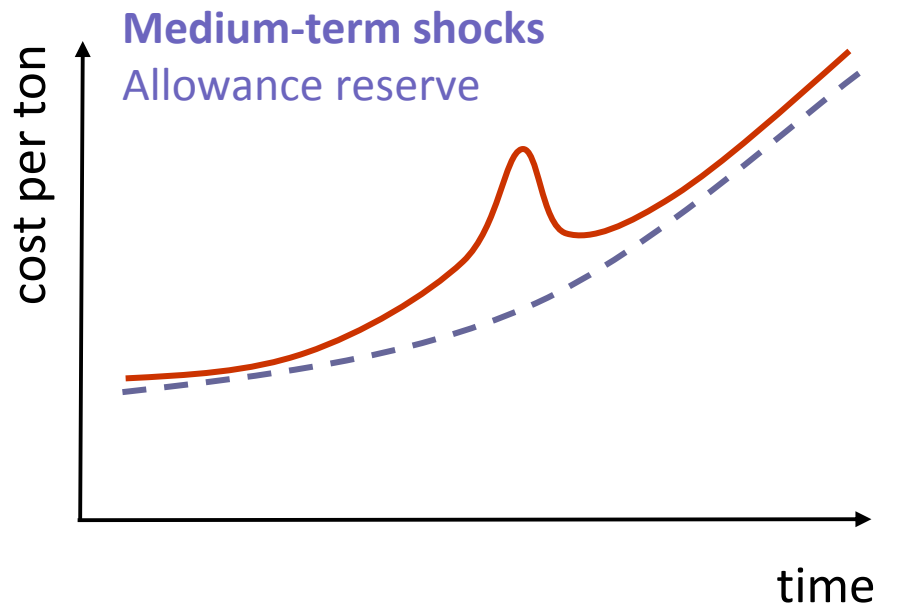
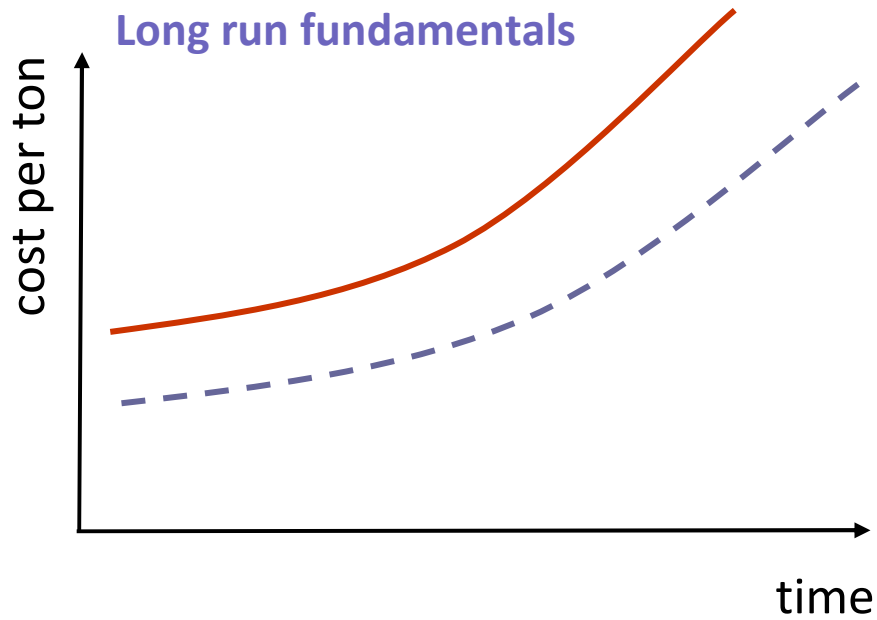
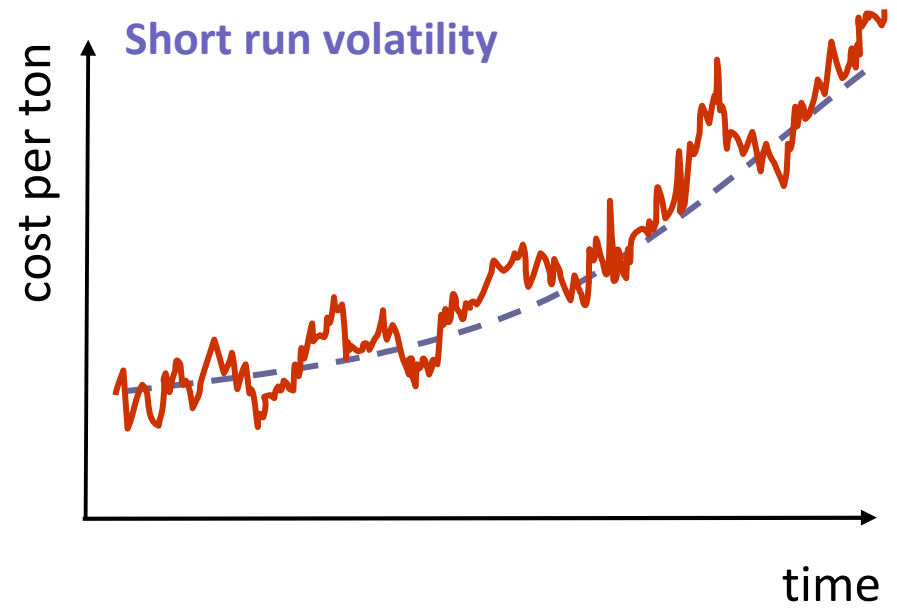
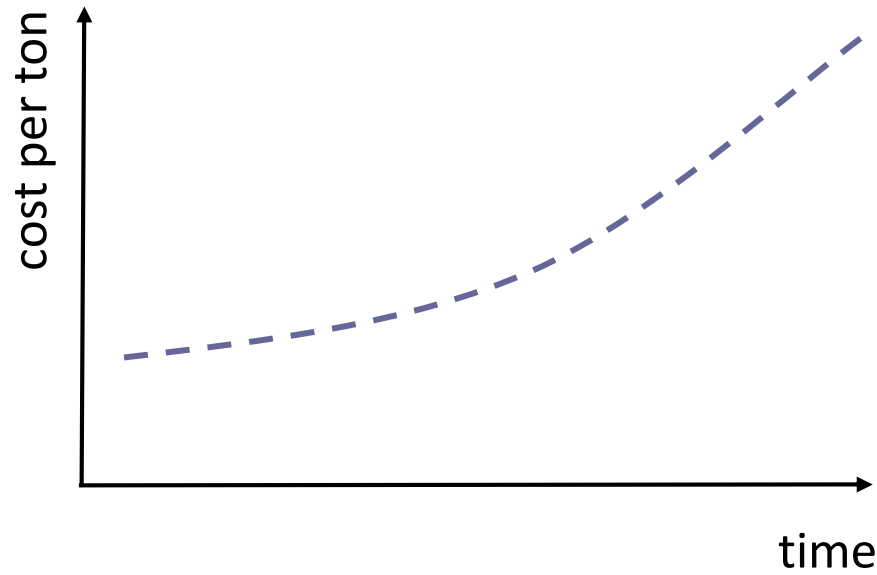
Int'l competitiveness

Cost containment

Prevailing solution is a hybrid “allowance reserve” approach.

Allocation

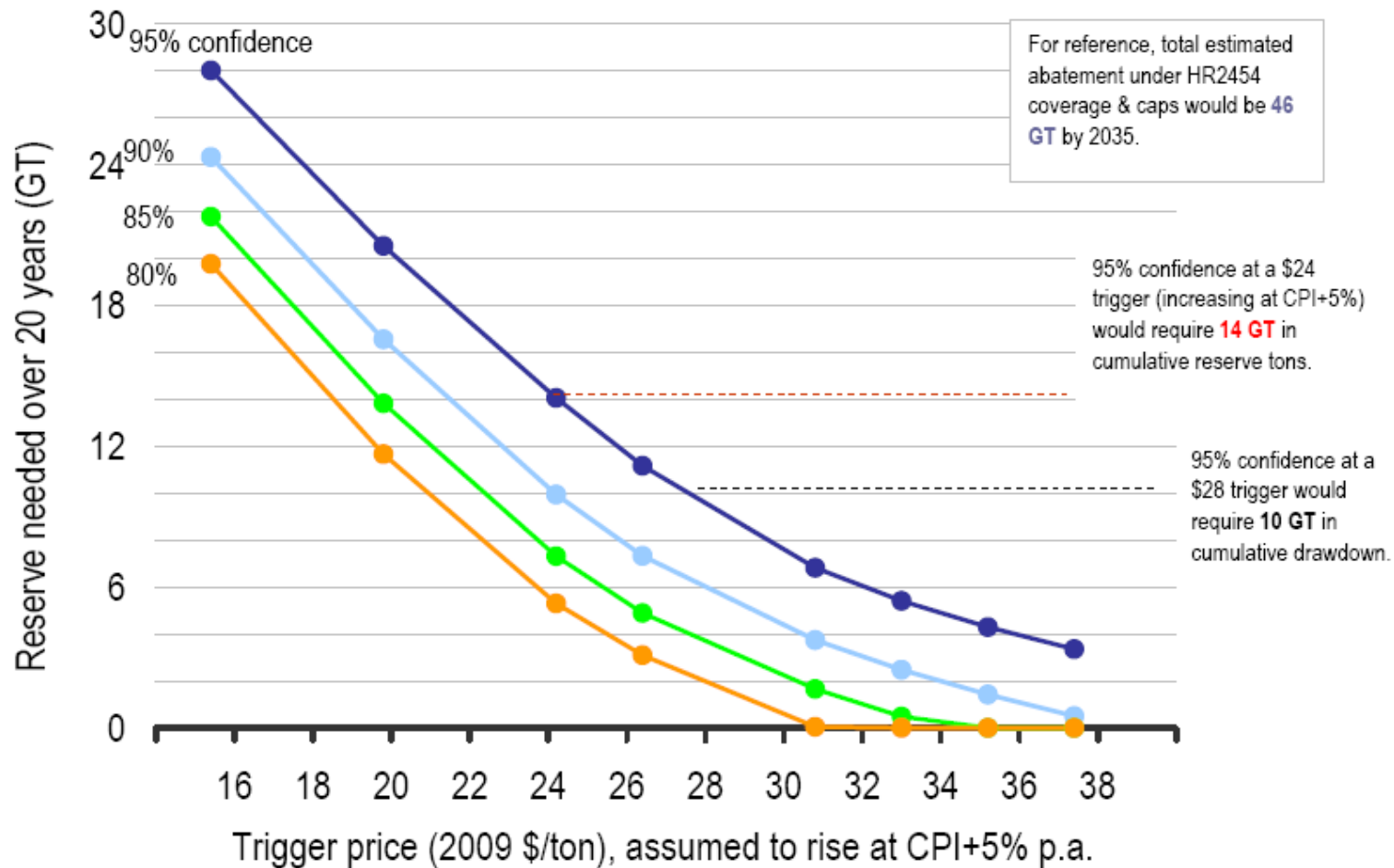
ENVIRONMENTAL DEFENSE FUND SHORT, MEDIUM, LONG RUN



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Reserve vs. trigger price

Cumulative reserve needed as a function of trigger price, 2015-2034



Major policy design issues (6/6)

Targets and timetables

Scope and point of reg.

Offsets

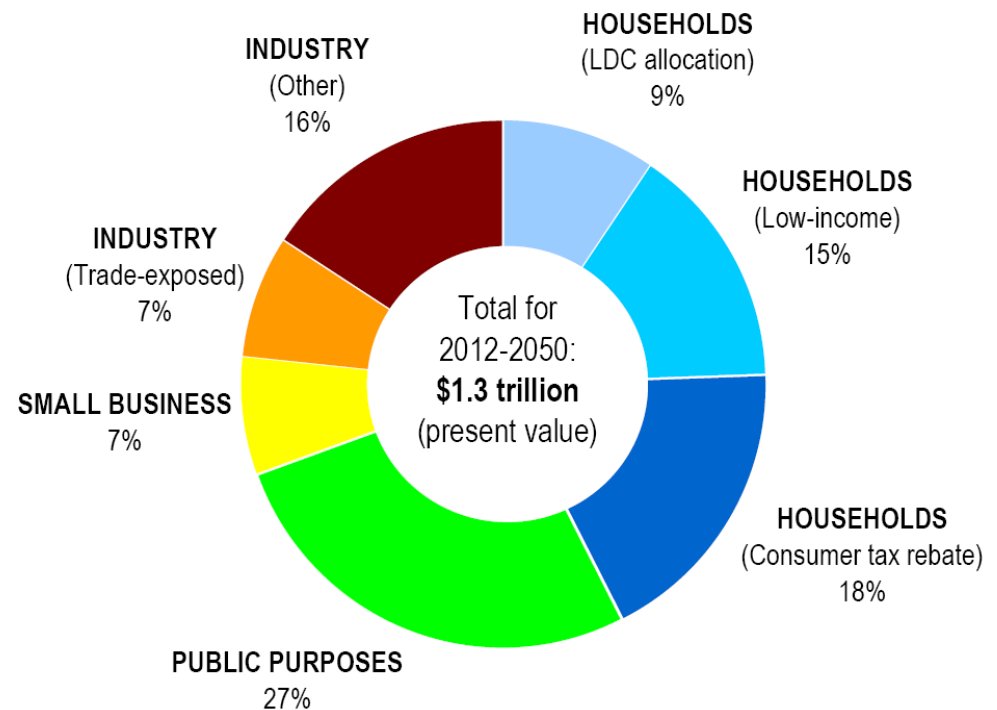
Int'l competitiveness

Cost containment

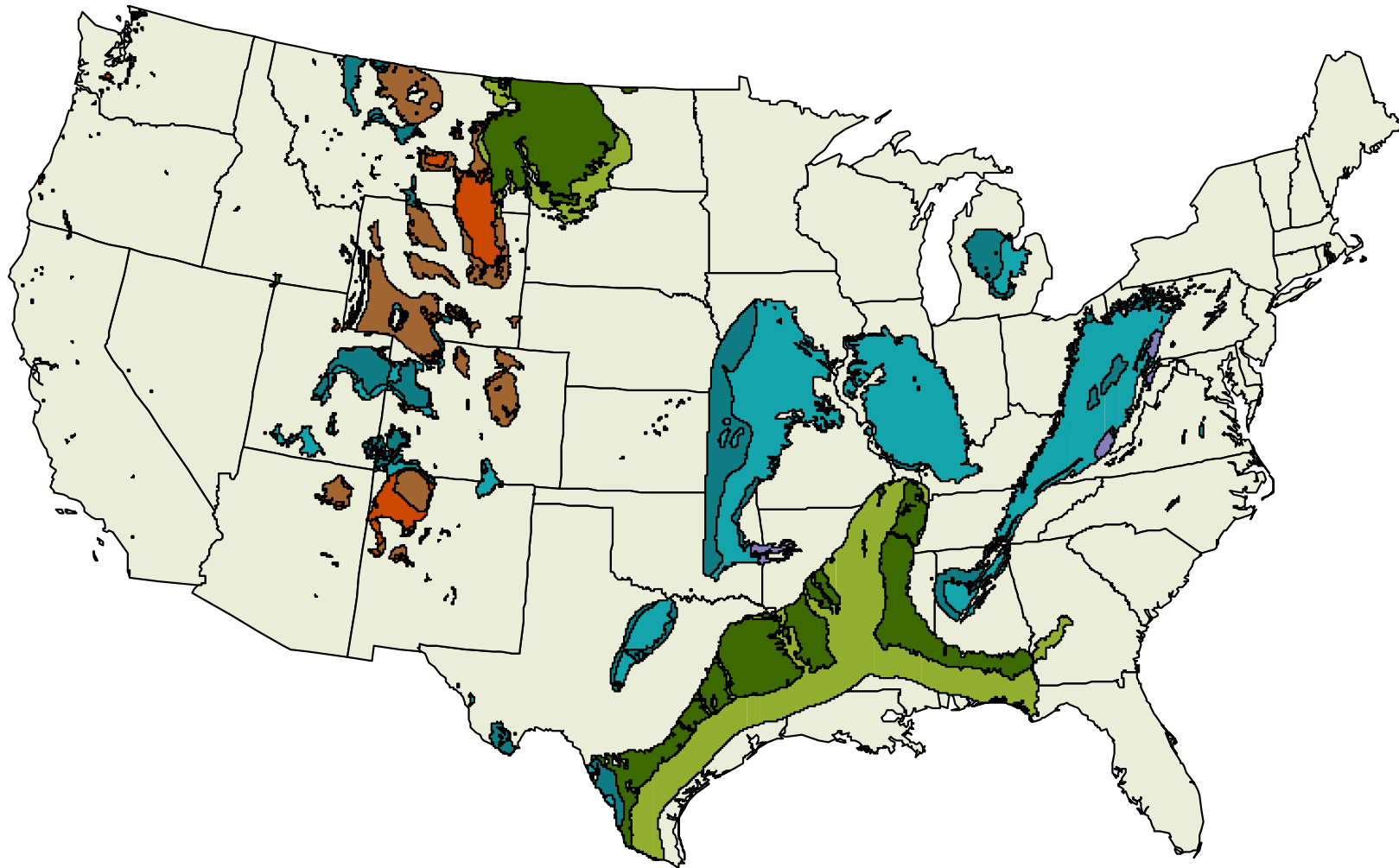
Allocation

What matters is **how allowance value is distributed**, not auction vs. free allocation.

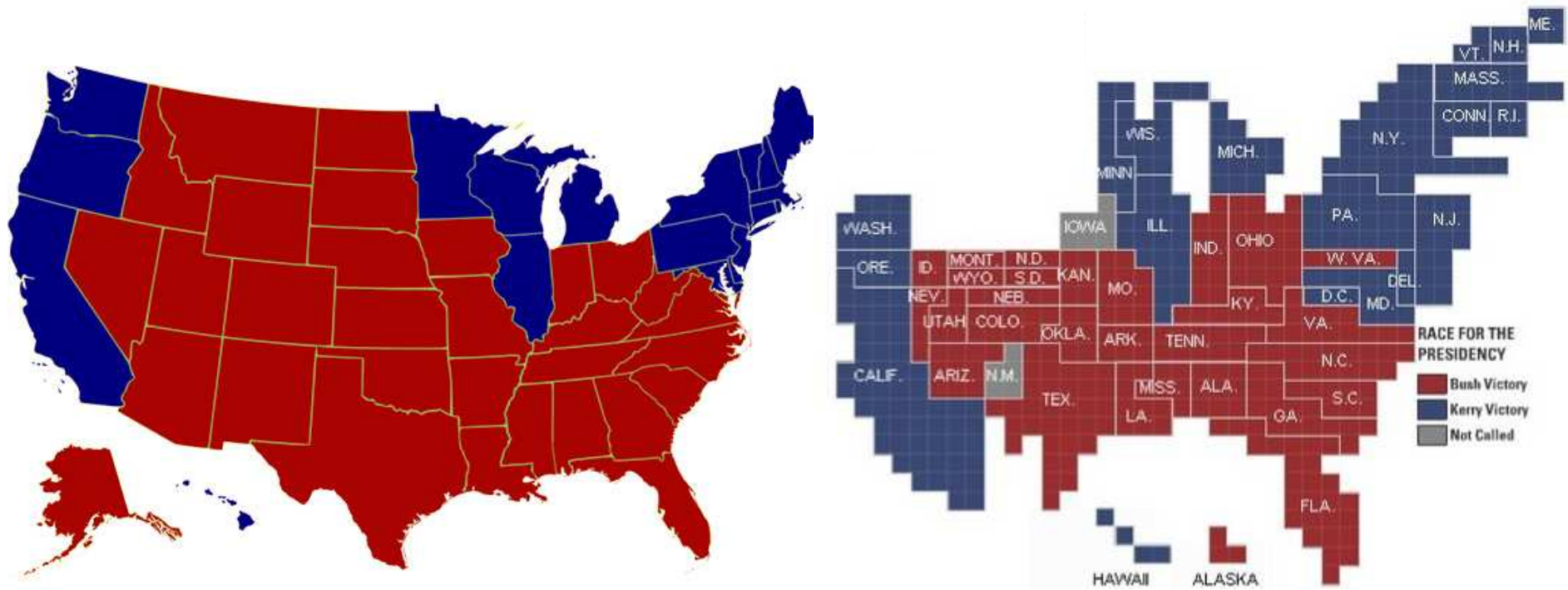
Chart shows HR2454 allocation



Mapping the political reality (1/2)



Mapping the political reality (2/2)



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