

Why Emissions Trading?

Just a shell game?



Climate Change Central

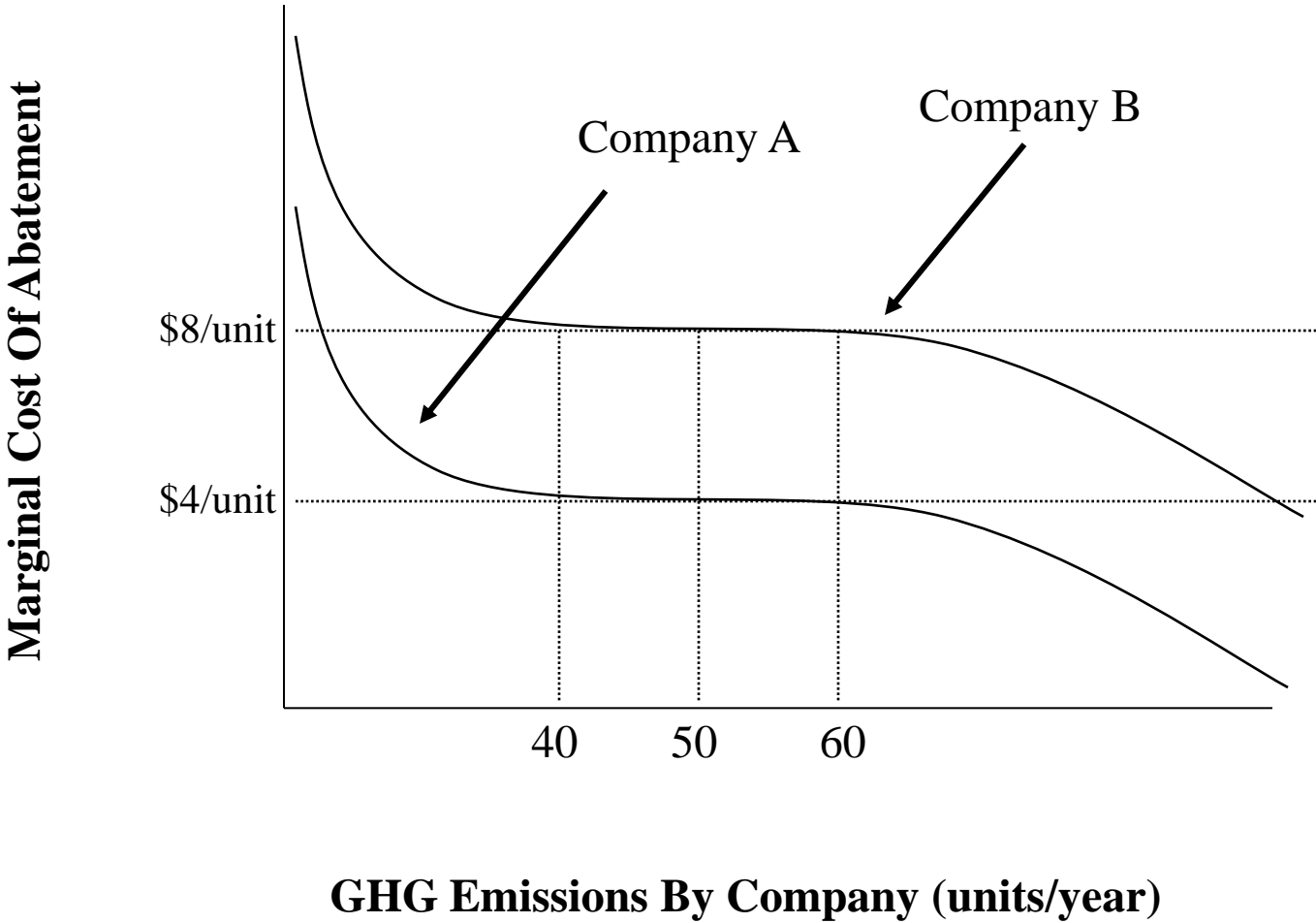
Albertans taking action

Why?

- Emissions trading is a part of many climate change systems.
- one tool in the toolbox for seriously addressing climate change.
- used to address other environmental issues – such as acid rain (US Acid rain program is an arguably successful cap and trade system for NO_x and SO₂ emissions).
- Typically, emissions trading results in reductions at a lower cost, by providing the opportunity for innovation and technology development.

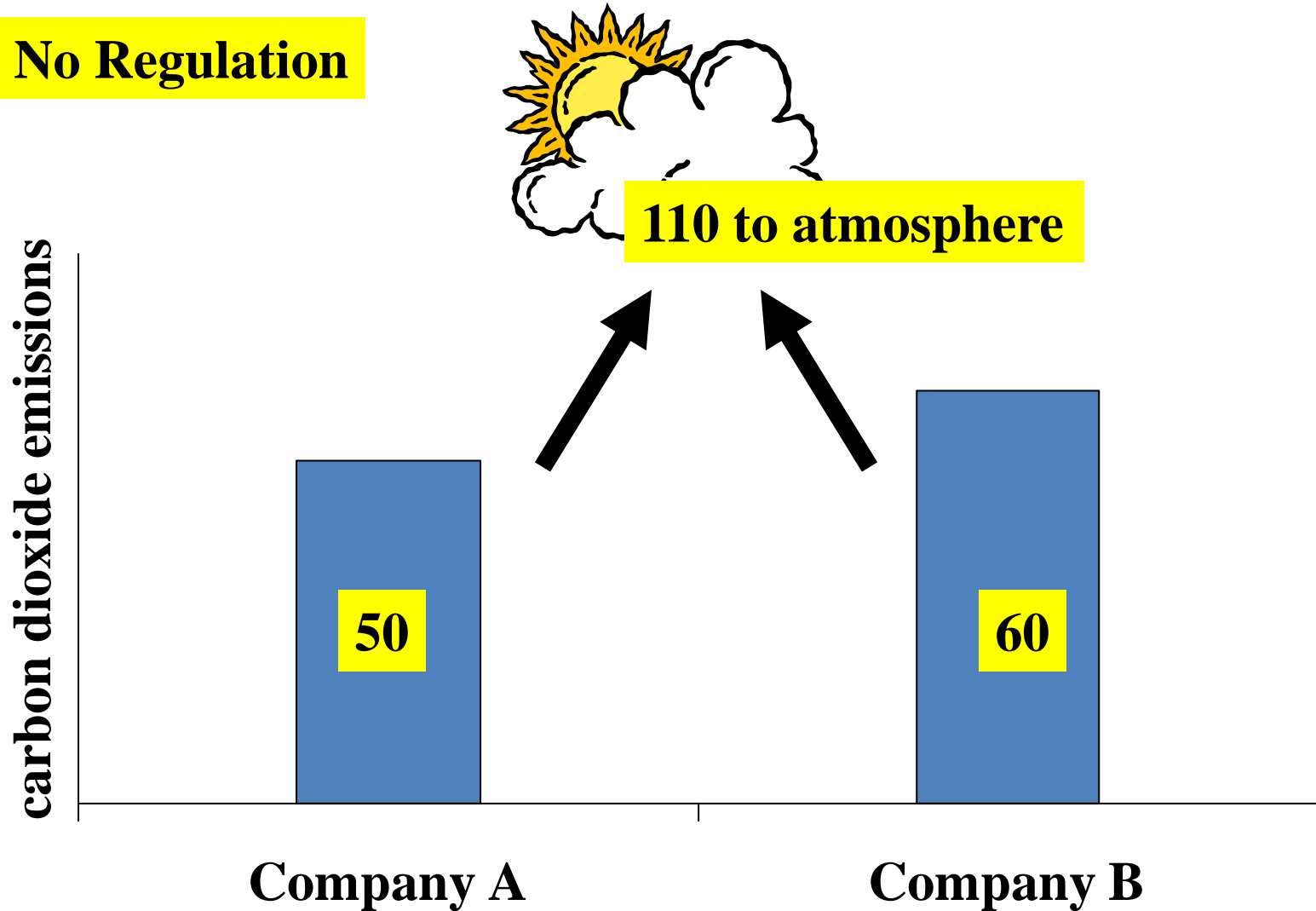


Marginal Costs of Emissions Abatement

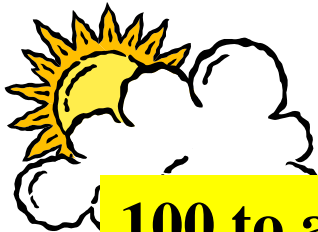


Emissions Trading: Simplest Form

No Regulation



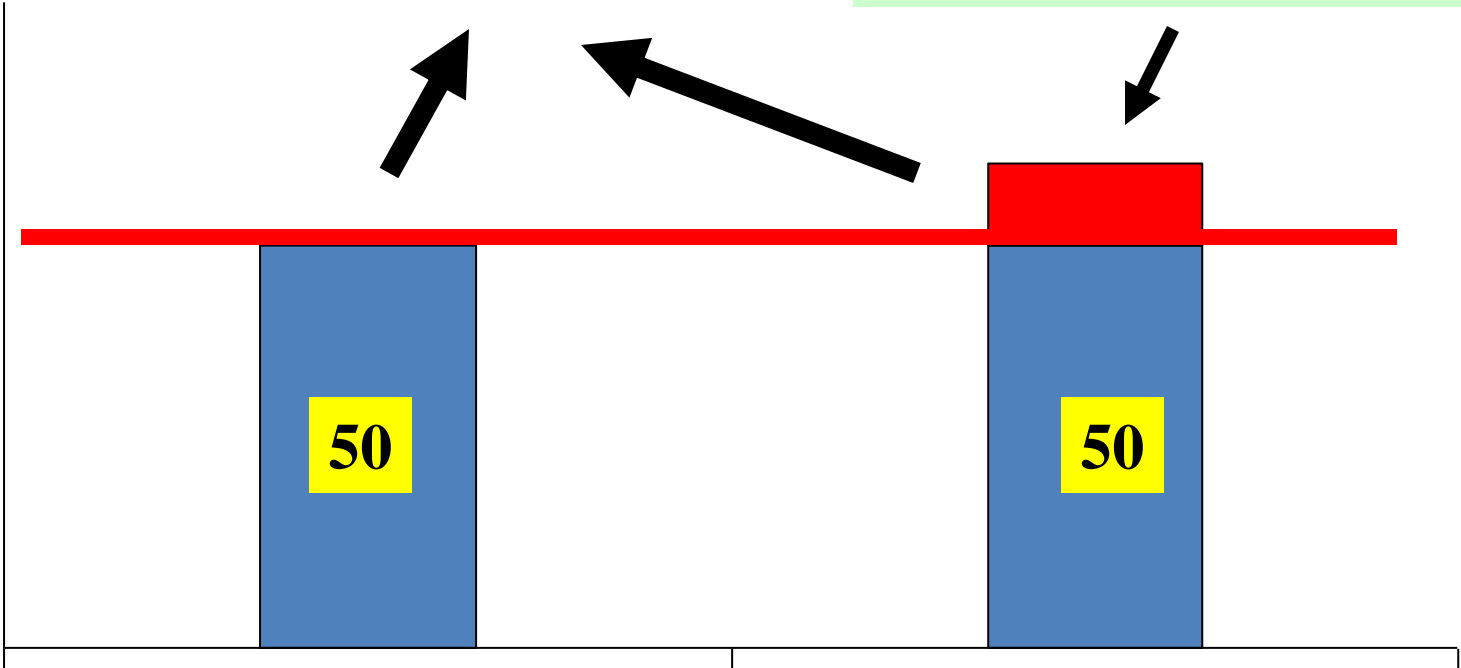
100 cap set: each company emits 50



100 to atmosphere

Company B's reduction cost is 8\$ per unit for total of \$80

carbon dioxide emissions



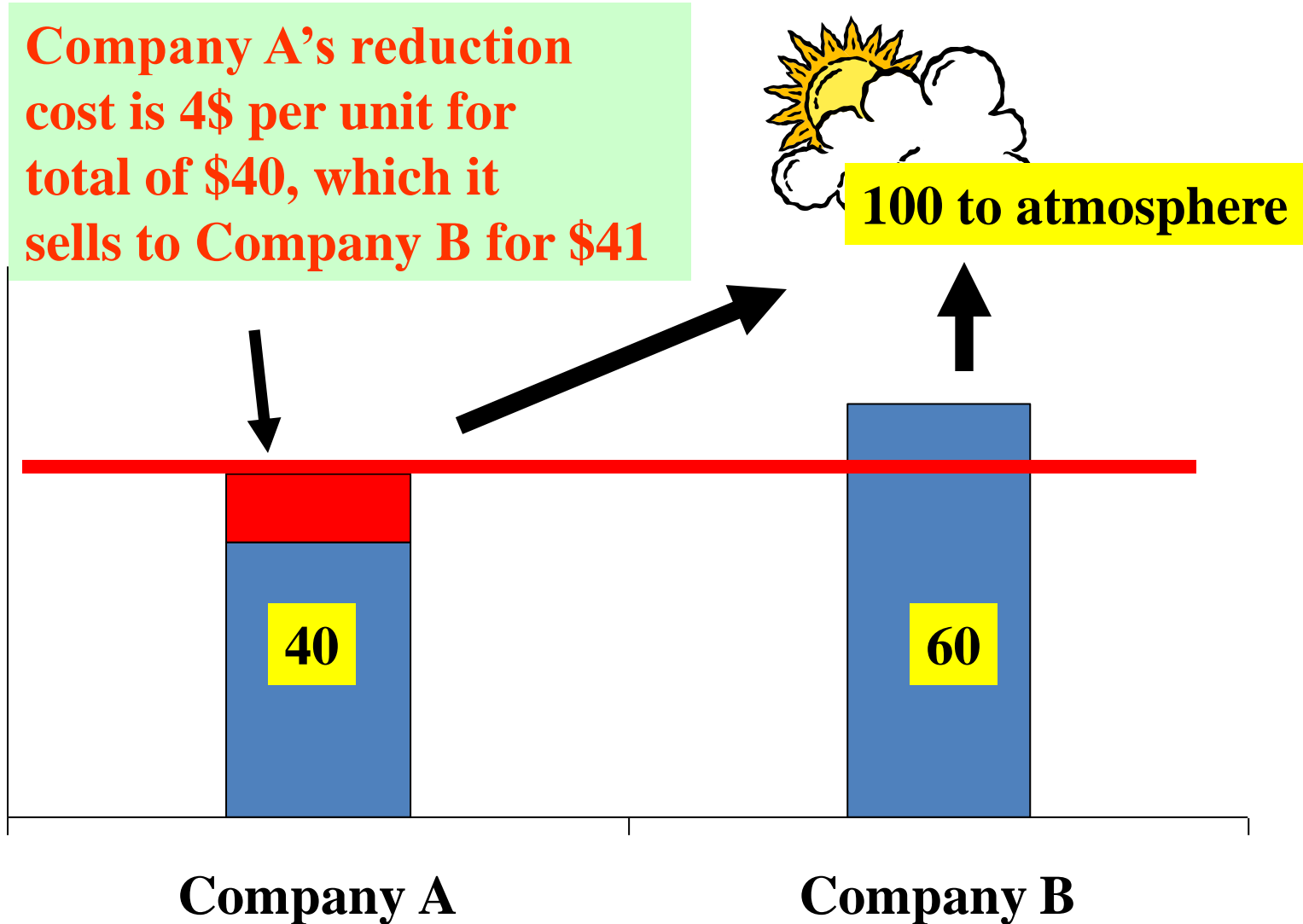
Company A

Company B

100 cap set: each company emits 50 but allow trade

Company A's reduction cost is 4\$ per unit for total of \$40, which it sells to Company B for \$41

carbon dioxide emissions



What are the Challenges of Creating an Emissions Trading Market?

- **Creating a Demand** – Targets need to be binding
 - Set targets/signal decreasing targets in future?
- **Creating Supply**
 - Setting the Rules – the playing field/commodity need to be defined(offsets, allowances, both?)
 - Stimulate opportunities for the balance of industrial sectors/stakeholders
- **Setting up the Infrastructure** – This Takes Time
 - Infrastructure needed to operate
 - Deal with measurement, verification, title, registration, additionality, growth, certification, creditworthiness, remedies, permanence, taxes, etc!



The World of Offsets...



Climate Change Central

Albertans taking action



Alberta Emissions Offset Registry



REGISTRY INFORMATION

44 Projects Registered

6,707,257 tCO₂e Reductions/Removals

Offsets are an integral compliance option for regulated entities under the Specified Gas Emitters Regulation in Alberta. Voluntary projects that include new technologies and/or practice changes generating greenhouse gas emission reductions or removals may be eligible to generate offsets. The Alberta Offset System has rigorous rules and criteria to ensure eligible project types generate real, measurable, and quantifiable emission reductions. Registration of eligible Alberta-based projects is a vital component to using offsets to meet compliance requirements.

On this site you can browse, register, transfer and retire offsets from eligible Alberta-based projects, and search registry participants. There is no cost to create an account, or to browse projects.

[SIGN IN OR CREATE A NEW ACCOUNT](#)

What the heck is an offset?

- A “carbon offset” is an emission reduction credit from another organization’s project that results in less carbon dioxide or other greenhouse gases in the atmosphere than would otherwise occur.
- Carbon offsets are typically measured in tons of CO₂-equivalents (or 'CO₂e')
- Offsets are typically bought and sold through a number of brokers, online retailers, and trading platforms.



Concerns about Offsets

- Will work too well
 - If too many, will divert effort away from the capped sectors, reduce investment in Technology
- Won't work
 - Too costly or complicated – or too discounted to bring in participation
- Not real reductions



The Ride Behind Us

1996 – Climate Change Program (↓20% 1990 by 2005)

1997 – Kyoto signed (↓6%1990 by '08-12)
– 12% above 1990 BAU emissions

1998 – 16 Experts/Issues Tables; NCCP

1999 – DOE/ENV – Baseline Protection

2000 – Climate Change Plan 2000

2001 - Domestic Emissions Trading WG

2002 - Kyoto Ratified

- Sector Agreement discussions with Large Final Emitters
- Trade Dept, CDM/JI Tours with Industry

2003 - \$1B Climate Change Plan

- Principles for Domestic Emissions Trading Program Set

2004 – One Tonne Challenge

- Expecting Fall Regulations

2005 –\$10B to meet Kyoto Targets by '08-'12;

- 22% above1990 BAU emissions
- Regulations/Offset System and supporting legislation drafted

2006 – Change in Government

- Policy uncertainty – at its Zenith
- 10 to 12 mos regroup

2007 - Clean Air Act (Bill C-30) omnibus bill attempted; No to Kyoto

2007 – GHG Regulatory Framework

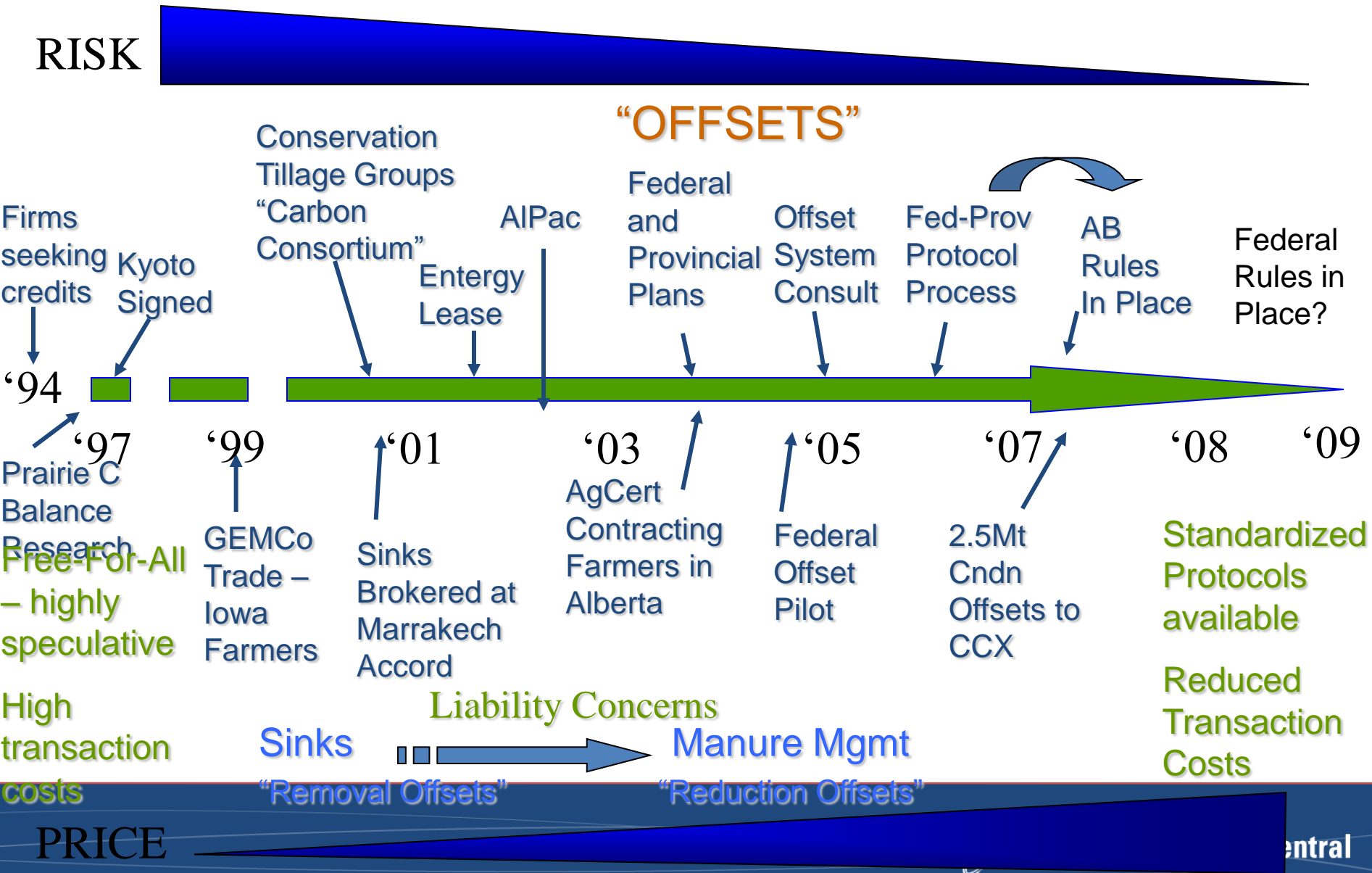
- Minimal consultation

2008 – Turning the Corner Plan

- ↓ 20% 2006 levels by 2020
- ↓ 60-70% 2006 levels by 2050

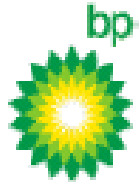


Offsets Just as Bumpy...

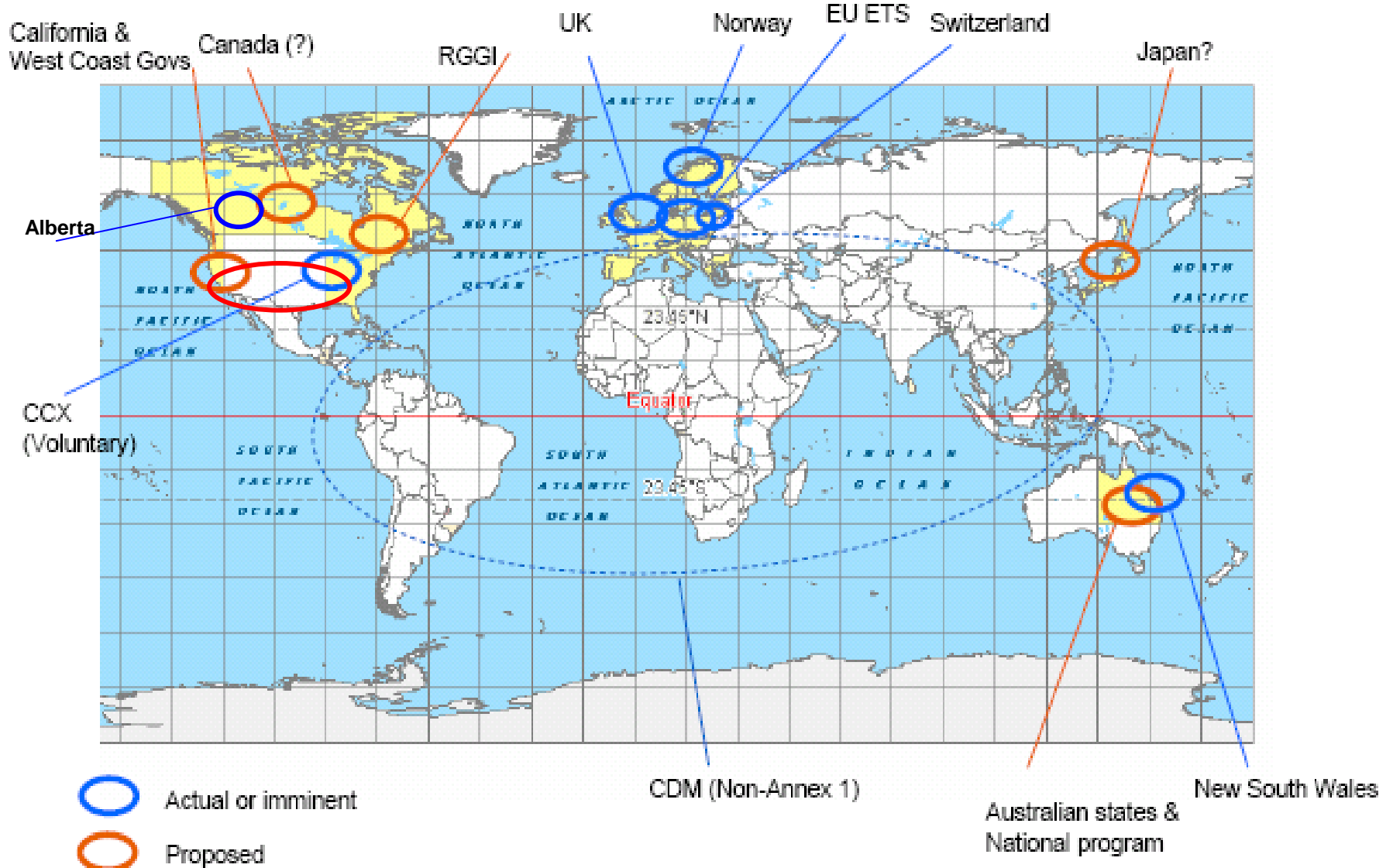


Forest Carbon Management: Where Have we Been?

- 1997 – Kyoto Signed by Canada
- 1999 – National Climate Change Process
 - Issues Tables; Sinks and Forestry
 - Industry – Government tables
- 2002 – National Forestry Sinks Co.
 - F-P-T process; consultation with industry
- 2000 - 2004 - Pollution Probe Work
 - Pilot Workshop - technically good , terminology has changed
 - Don't lose it
- 2006 - close to the rules being implemented federally
- July 2007 – Alberta launches it's Regulatory Framework
- Spring 2008 – FCM protocol submitted to Alberta's Protocol Review Process
- August 2008 – Federal Fast Track Process in the Guide to Protocol Developers – FCM protocol on the Fast Track List (California)



The Evolving Global Carbon Market



Voluntary & Compliance Differences

| Characteristic | Voluntary-Based | Compliance-Based |
|-------------------------|---|---|
| Demand | <p>Set by <u>interested trading firms</u> for a variety of reasons:</p> <ul style="list-style-type: none"> • Corporate Social Responsibility • Public relations • Learning about markets • Carbon Neutral objectives | <p>Set by <u>Government regulations</u> through compliance targets.</p> |
| Price | <p>Relatively <u>lower</u> due to voluntary demand, thin markets and confidence of the market.</p> | <p>Relatively <u>higher</u>; demand is mandatory; High Standards/confidence in Credits.</p> |
| Rules for Credit Supply | <p>Decided by <u>trading firms</u>; science review/scrutiny may be limited.</p> | <p>Overseen by <u>government</u> to fit compliance criteria for regulations; strong, consensus science base to ensure integrity of the system Additionality needs to be met.</p> |
| Transaction costs | <p>Tend to be <u>lower</u>; emphasis on learning.</p> | <p><u>Higher</u>; can be minimized by supply standards and government policy.</p> |
| Aggregation | <p>Still needed to minimize risk and reduce transaction costs.</p> | <p>Still needed to minimize risk and reduce transaction costs.</p> |
| Verification | <p><u>May</u> be 3rd party.</p> | <p><u>Essential</u> to have 3rd party audits.</p> |
| Practice Change | <p><u>May</u> or may not be required.</p> | <p><u>Essential</u> to have baseline and practice change to satisfy additional criteria.</p> |
| System Integrity | <p>Emphasis on learning; getting started; <u>more flexible</u> in rules.</p> | <p>Emphasis on compliance; considers international rules/targets.</p> |
| Liability | <p>Addressed through <u>bilateral contracts</u>.</p> | <p><u>Rules</u> in place; government policies will dictate how reversible carbon (soil and forestry sinks) need to be managed.</p> |