



# *Efficiency of CO<sub>2</sub> Emission Reduction Mechanisms*

World Forum on Energy Regulation IV  
Athens, Greece  
October 18 - 21, 2009

John W. Gulliver, Partner  
Pierce Atwood LLP

# Carbon Offsets and Emission Trading

---



- Creation of Law and Economics
- History of emissions trading dates back over a century
  - Alfred Marshall, U.K.
  - Henry George, U.S.
- Insight: Need to assign property rights to environment in order to protect it

# Carbon Offsets – Legal Initiatives

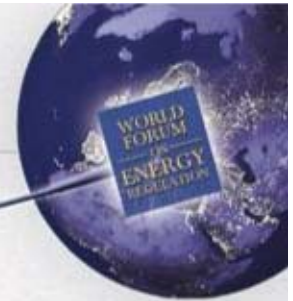
---



- Kyoto Protocol/Copenhagen Successor
- EU – ETS European Trading System
- U.S. RGGI – Regional Greenhouse Gas Initiative
- All are legal/regulatory initiatives that create both the obligation and the right

# Carbon Tax vs. Offset Trading

---

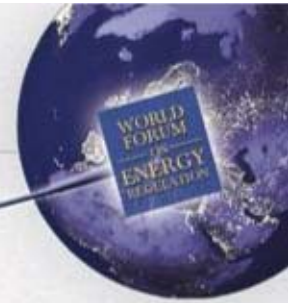


- Taxation as tool? Serious debate on carbon tax vs. tradeable offsets
  - William Nordhaus – Yale
  - Steven Schneider – Stanford
  - Stern Report – U.K.
  - Martin Wolf – Financial Times



# American Clean Energy and Security Act of 2009

---



- Passed by the U.S. House, 219-212 last June
- Backed by Obama Administration
- Broad based cap and trade scheme
- Gradual implementation over time
- Will the U.S. Senate act?

# Current State of Carbon Markets

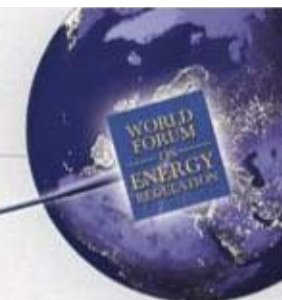


Table 1: Carbon Market at a Glance, Volumes & Values in 2007-08

	2007		2008	
	Volume (MtCO <sub>2</sub> e)	Value (MUS\$)	Volume (MtCO <sub>2</sub> e)	Value (MUS\$)
<b>Project-based Transactions</b>				
Primary CDM	552	7,433	389	6,519
JI	41	499	20	294
Voluntary market	43	263	54	397
Sub total	636	8,195	463	7,210
<b>Secondary CDM</b>				
Sub total	240	5,451	1,072	26,277
<b>Allowances Markets</b>				
EU ETS	2,060	49,065	3,093	91,910
New South Wales	25	224	31	183
Chicago Climate Exchange	23	72	69	309
RGGI	na	na	65	246
AAUs	na	na	18	211
Sub total	2,108	49,361	3,276	92,859
<b>TOTAL</b>	<b>2,984</b>	<b>63,007</b>	<b>4,811</b>	<b>126,345</b>

Source: World Bank,  
State and Trends of  
the Carbon Market,  
May 2009

# Volatility in European Market

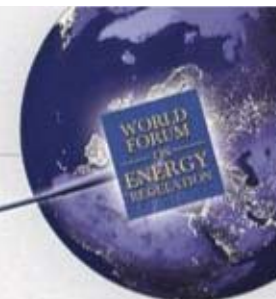
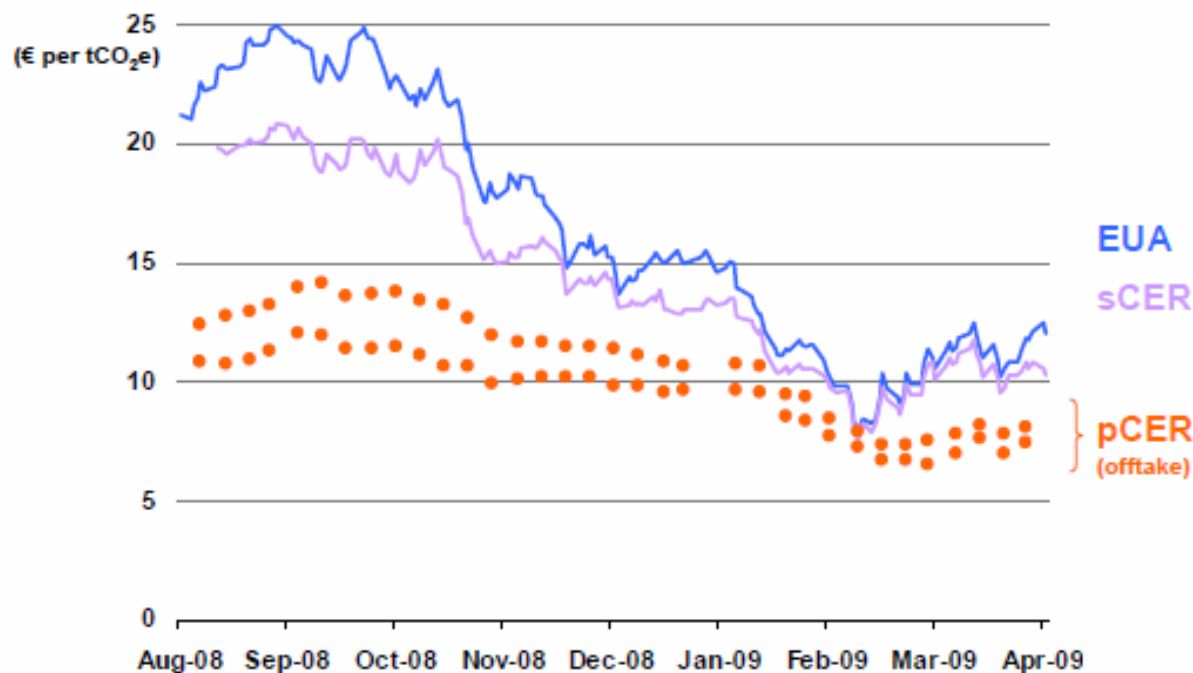


Figure 1: Carbon Prices Respond to the Recession



Source: Spot EUA and sCER (closing price): Bluenext; primary CER (average price for categories b and c): IDEA Carbon.

Source: World Bank, State and Trends of the Carbon Market, May 2009

# Observations

---



- Debate over need to address climate change through legal, regulatory and market-based tools continues
- Legal/regulatory framework essential:  
Key to creating clear, predictable, consistent, stable conditions



# Today's Session

---



- Superb panel of experts
- Reflecting different regional or national, and philosophical perspectives
- Will provide a thought provoking glimpse of the future



# ***Thank You***

**John W. Gulliver, Partner  
Pierce Atwood LLP  
One Monument Square  
Portland, Maine USA 04101  
Tel: +1-207-791-1296  
Fax: +1-207-791-1350  
Mobile: +1-207-415-3400  
Email: [jgulliver@pierceatwood.com](mailto:jgulliver@pierceatwood.com)**