
(Cap and Trade)
A bill designed to reduce the amount of carbon dioxide and other greenhouse gases in the atmosphere, in a cost-effective manner

- Proposed by Rep Henry Waxman (D-CA), and Rep Ed Markey (D-MA)

Before businesses in a covered sector can emit a greenhouse gas, they need to have the ration coupons (allowances) for each ton emitted
85% of allowances have been promised to big companies
  › The percent allocated to industry declines in future years

15% of allowances will be auctioned
  › Amount auctioned will also decline

Reduce greenhouse gases from 2005 levels:
  › 2020 = 20%
  › 2030 = 42%
  › 2050 = 83%
The Congressional Budget Office has projected that the allowance price (price to emit carbon dioxide) will be $28 per ton of CO2 in 2020.

5.056 billion tons of CO2 equivalent in the cap in 2020

Which implies a gross cost of $141 billion
Advantages

- Permits would raise up to $300 billion per year by 2020
  
  › Proposed offset to consumers for higher utility bills and related expenses
  
  › Proposals for $15 billion/year in spending and tax incentives to develop alternative energy
  
  › Rewards companies who invest in reduction methods and penalizes those who do not

- Replaces Clean Air Act which is more complicated and costlier
Disadvantages

- This policy involves the United States only! Current global regulations are not as aggressive or long-term.
  - Kyoto Protocol opened for signing in 1997 and currently 188 countries have signed the agreement representing 63.7% of the total emissions
  - China and India have signed but no agreement on reduction since they are considered developing nations. United States signed but did not ratify.
- 2050 predictions by the Model for the Assessment of Greenhouse-gas Induced Climate Change (MAGICC)
  - Mid-range emissions prediction would result in 0.112°C “savings” and high range emissions prediction would result in 0.195°C “savings”
Waxman-Markey Climate Bill

Projected Global Average Temperature Change

- A1FI - IPCC
- A1FI - Waxman-Markey
- A1B - IPCC
- A1B - Waxman-Markey

Source: http://masterresource.org/?p=2355
Disadvantages continued...

- Since 2000, China’s emissions increase is 50% greater than the rest of the world total increase. India will continue to impact as industrialization grows.
- Creates competitive disadvantage for the U.S. in manufacturing and trade
- Lost income to U.S. citizens through higher taxes and higher energy costs
- “Carbon leakage”: companies relocate to countries that do not have similar, strict emissions policies
Impact on Producers

- Farm profits would decline by 28% by 2012
- Increased cost of equipment
- Higher costs associated with:
  - Diesel fuel, fertilizers, chemicals
Impact on Producers continued...

- No other food exporting nation has announced plans to impose similar energy-price boosting, global warming measures on their own ag sector.

- Farmers become suppliers and must earn credits for the carbon they sequester from the atmosphere.
  - Which, in turn, are sold to gas emitting companies for the offset. This is a 5-year commitment.
Economics of Cap & Trade

Quantity Constraint prohibits production above

Quantity

Price

Supply

Demand

\( P_{ED} \)

\( P_{M} \)

\( P_{ES} \)

\( Q_{E} \)

\( Q_{M} \)
Cap & Trade Uncertainty

Quantity Constraint prohibits production above $Q^E$

Price

$PED2$

$PED1$

$PED$

Demand $^1$

Demand $^2$

Supply

Quantity $Q^E$
Carbon Tax vs. Cap & Trade
Recommendation:

- Do not implement this piece of legislation

- Instead, perhaps consider a tax on carbon emissions from the burning of gas, coal, and other fuels might be a more economically efficient manner in which to regulate pollutants
Questions?