Towards a North American Carbon Market

Transportation Sector

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Voluntary or mandatory Emissions Trading Systems are barely incorporating the transportation sector. There are only 2 transport CDM projects (<0.1%).

Mexico doesn’t have any experience in cap-and-trade systems.

Courtesy of SEaT (Shipping Emissions Abatement and Trading)
WHAT TO TRADE?

GHG Offsets coming from:

✓ More stringent **fuel economy** (CAFE) and GHG standards

✓ Fuel switching programs (CNG, Biofuels, clean electricity, carbon free hydrogen, etc.)

✓ METRO, BRT or any public transport projects

✓ Fleet replacement and scrapping programs

✓ Modal shift (Trucks by Railroad)
We need a more comprehensive concept of the Lifetime Carbon Burden of motor vehicles:

\[ \text{LCB} = (\text{RE}) \text{ VMT} \times (\text{CF}) \text{ FE}^{-1} \times C_{\text{conc}} \]

- \( \text{VMT} \): Vehicle Miles Traveled
- \( \text{FE} \): Fuel Economy (mpg) = \( \text{FE}_1 + \text{FE}_2 \)
- \( C_{\text{conc}} \): Fuel Carbon content (mtC/gallon)
- \( \text{RE} \): Rebound Effect \pm 1-2\%
- \( \text{CF} \): Correction Factor \approx 15\% in the US

HOW TO TRADE IT?

**UPSTREAM**
- LCA approach
- Fine of 90 Usdlls/ton CO₂e
- CAFE

**CAP & TRADE**
- 20~50 Usdlls/ton CO₂e
- INTRA sectoral

**DOWNSTREAM**
- LCA approach
- CDM type PROJECTS
- <20 Usdlls/ton CO₂e
- Transmilenio

**INTRA sectoral**
- TAXES & FEEBATES
- 100*~375** Usdlls/ton CO₂e

*California Feebate proposal
**Guzzler Tax
In the Cap and Trade system that the US Congress is analyzing (Waxman-Markey bill), there are some opportunities to build a regional North American market or integrated markets:

- **Clean Transportation.** Promotion of electric vehicles
- **Transportation Efficiency.** CAFE-GHG standards and promotion of public transport
- **International offsets credits**, based in multilateral agreements (NAFTA)
- **Pending and problematic issues with EPA:**
  - Project types and sizes
  - Additionality
  - Measuring performance
  - **Carbon leakage** *(chocolate vehicles)*
AUTOMOBILE Carbon leakage

AUTOMOBILE LIFE CYCLE

$FE_1$

140,000 miles

$FE_2$

$\approx 50,000$ miles
¡GRACIAS!
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