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Alternative Fuels or Fools: Right Choices for the Transport Sector?

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EMBARQ

- A catalyst for socially, financially, and environmentally sound solutions to the problems of urban mobility





EMBARQ

- Established as a unique center within World Resources Institute in 2002, *EMBARQ* is now the hub of a network of centers for sustainable transport in developing countries.
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 - US AID
 - Asian Development Bank
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 - Blue Moon Fund
 - US Environmental Protection Agency
 - Japan International Transport Institute (JITI)





Troubling Trends in Global Energy And Carbon for Transport

- **The US Is Still the Big Kid on the Block**
 - Largest oil user, big GHG Emitter absolute, per capita or per GDP
 - US on-road fuel economy stagnant since early 1990s
 - Little extra, concrete change at the margin under Bush
- **Global Nature of the Problem**
 - Oil and CO₂ are global and fungible – Savings are good anywhere
 - Motor vehicles are global
 - US lifestyles emulated”
- **Look before you Dig, Plant, or Plug in**
 - Oil from other hydrocarbons (including shale)
 - Designer (factory) bio fuels
 - Electric drive (fuel cells, PHEV)

No Clean, Low CO₂ Substitutes for \$90 Oil in Quantity (>5 mn bbl/day) Except More Efficient Energy Use





What Can Alternative Fuels Do? How Can They Do It Efficiently and Cleanly?

- **Lower oil imports and improve fuel security**
 - First value “1 less barrel of oil imported” and tax oil
 - Lower vehicle use, higher efficiency also improves security
 - Mandated or subsidized alternative-fuels cut off other options
- **Reduce GHG emissions**
 - US corn ethanol has little savings, high cost
 - Other “solutions” have varying degrees of closet carbon
 - No CO2 relief is reliable without a carbon tax
- **Improve urban air quality**
 - Alcohol blends, biodiesel can help, but why subsidize?
 - Electric storage drive – ZEV means EEV (Elsewhere Emissions Vehicles)
 - Lower vehicle use also improves air quality

*Fixing Fuel/Emissions Doesn't Solve Transport Problems
Fixing Transport Helps Solve Fuel/Emissions Problems*





Discussion Points for Today

How Much, How Soon, How Messy?

- **Transparency on Environment**
 - Rules of engagement and calculation
 - Full fuel cycle analysis?
 - Correct pricing of energy, land, water inputs?
- **Externality Pricing Framework Necessary**
 - Tax bads, don't earmark favorites like the US does
 - Pricing in most developing economies twisted
 - US subsidy approach (ethanol @ > \$1/gallon) a fiasco
- **Larger Issues**
 - Nothing works if 20 mpg vehicles @ 13 000 mi/year are the target
 - Conversely, better transport eases many problems, not just fuels
 - Quantity mandates rather than economic signals invite mischief





Good Luck, Panelists

Lee Schipper

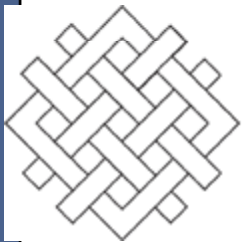
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