



# Perspectives on Transportation, Land Use, and Climate Change

***Changing Land Use to Mitigate Climate Change:  
A Trans-Atlantic Collaboration***  
**Dubrovnik, Croatia**

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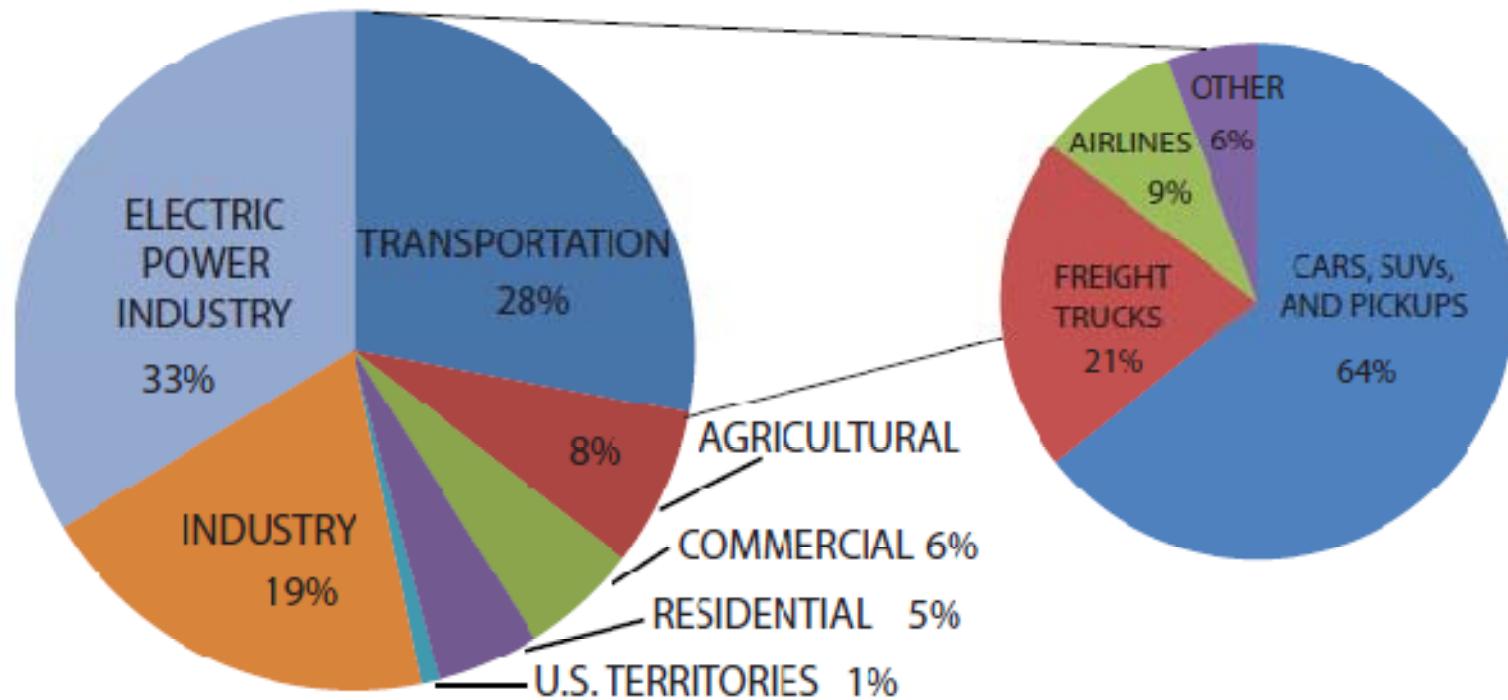


## Context

- Transportation accounts for 28% of U.S. GHGs.
- Significant action on State and local level.
- States and local governments incorporating climate change considerations into transportation plans.
- U.S. Climate Action Partnership between large corporations and environmental groups moved debate forward.
- U.S. EPA issued “endangerment finding” in response to U.S. Supreme Court ruling. Provides impetus to climate change legislation.
- Global economic recession.



## Transportation Accounts for 28% of U.S. Greenhouse Gas Emissions



Source:  
U.S. Environmental Protection Agency, *Inventory of Greenhouse Gas Emissions and Sinks: 1990-2006*, April 2008.



## Economic Recovery Legislation

- American Recovery and Reinvestment Act (ARRA) passed February 2009
- Primary goal to put economy on path to recovery and create jobs
- Additional goals:
  - Invest in infrastructure
  - Orient economy to meet new energy and environmental challenges
- Additional \$8.4 billion for transit almost doubled FTA budget
- Created new \$100 million FTA program to reduce energy consumption from transit
- \$1.5 billion multi-modal discretionary program
- High Speed Rail, \$8 billion

# VISION for HIGH-SPEED RAIL in AMERICA





# Surface Transportation Legislation

*"The reauthorization of DOT's surface transportation programs... will provide additional opportunities for considering ways to improve our energy and environmental policies. An important element of the reauthorization should focus on livable communities. This means fostering pedestrian and bike-friendly communities, providing more transportation choices, and offering better access to jobs and housing."*

**Secretary of Transportation Ray LaHood, Testimony to the U.S. House of Representatives Committee on Energy and Commerce, April 22, 2009**



## Climate Change Legislation

- President Obama has stated a goal to implement a cap and trade system to reduce U.S. GHGs by 80 percent by 2050
- U.S. House of Representatives released draft legislation
- Impact on transportation: 20 cent increase in price of gas
- Complementary measures under discussion
- Allocation of allowance / auction revenue to be determined
- Use of auction revenues for transportation?
  - Lieberman-Warner would have given a percent to transit



## U.S. DOT Climate Change Activities

- Climate Change Center
  - Gulf Coast Study, Sea Level Rise Study
  - Report to Congress on Transportation's Impact on Climate Change and Solutions
- FTA activities
  - transit helps reduce greenhouse gas emissions
  - technical assistance in TOD and planning, environmental management systems
  - research on alternative fuel and fuel efficient transit vehicles
  - grant incentives
  - Fuel Cell Bus program
  - policy oriented research





# Map of FTA Grant Recipients





## FTA Programs Enable Transit Oriented Development (TOD)

- Transit facilitates compact land use, which further reduces emissions as it
  - Reduces driving trip distances
  - Supports walking/biking
- Combining transit and supportive land use policies offers synergies that increase each strategy's impact.





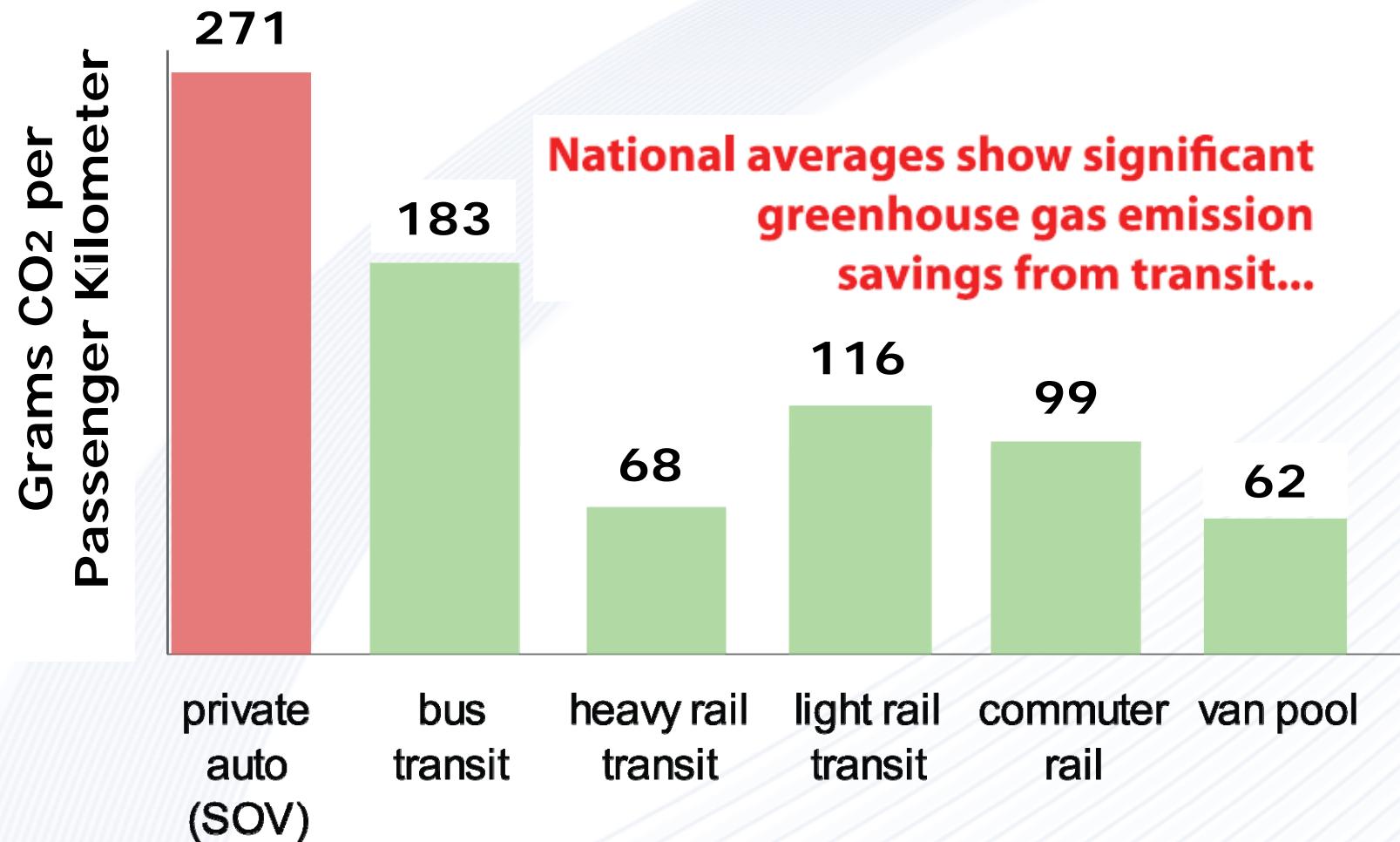
## National Fuel Cell Bus Program

- \$49 million over 2006-2009
- Balanced portfolio of projects selected to best advance fuel cell bus commercialization
- Development and Demo Projects (8 projects, \$43M)
  - Up to 12 new buses will begin rollout in 2009
  - Spectrum of cost and risk
  - Multiple drive technologies/configurations
  - Supporting infrastructure
- Component Technology (2 projects, \$300K)
- Analysis, Outreach, Coordination (4 projects, \$1.25M)





## CO<sub>2</sub> Emissions per Passenger Kilometer



Data Sources: Federal Transit Administration 2007 National Transit Database,  
U.S. Department of Energy, U.S. Environmental Protection Agency



## Take Away Points

- Unique opportunities under three U.S. Federal legislative packages
  - [Economic Recovery](#): more funding for transit & high speed rail
  - [Surface Transportation](#): emphasis on livable communities
  - [Climate Change](#): Economy-wide cap on carbon emissions and potentially complementary transportation measures.
- U.S. DOT recognizes seriousness of problem and ready to take action.



## Parting Thoughts



*"The President has already announced a series of aggressive actions to lower greenhouse gas emissions... The Department of Transportation has been and will continue to be a full partner in all of these efforts, as well as legislative efforts. This is essential because transportation sources are a significant contributor of greenhouse gas emissions in the U.S. and must be part of the solution."*

**Secretary of Transportation Ray LaHood, Testimony to the U.S. House of Representatives Committee on Energy and Commerce, April 22, 2009**