



Providing Transportation Choices to Reduce Greenhouse Gas Emissions

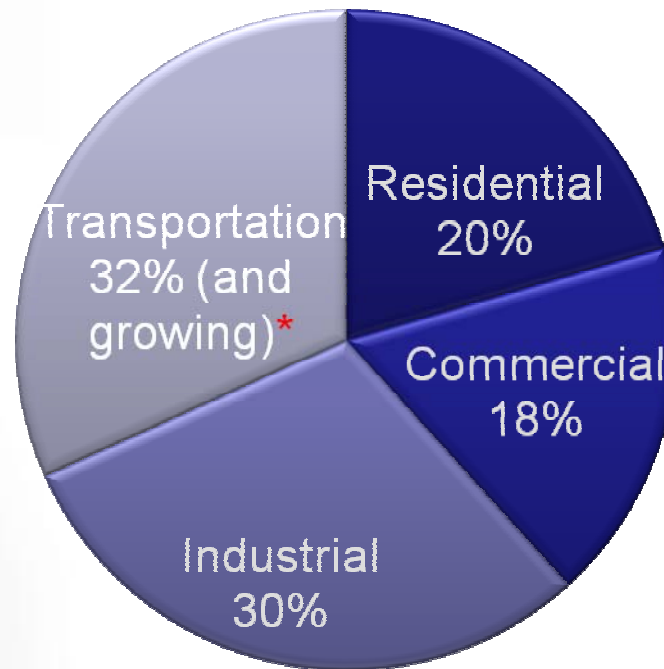
Petra Mollet

American Public Transportation Association

Why Transportation is a Big Part of the Problem



End Use CO2 Emissions in the US

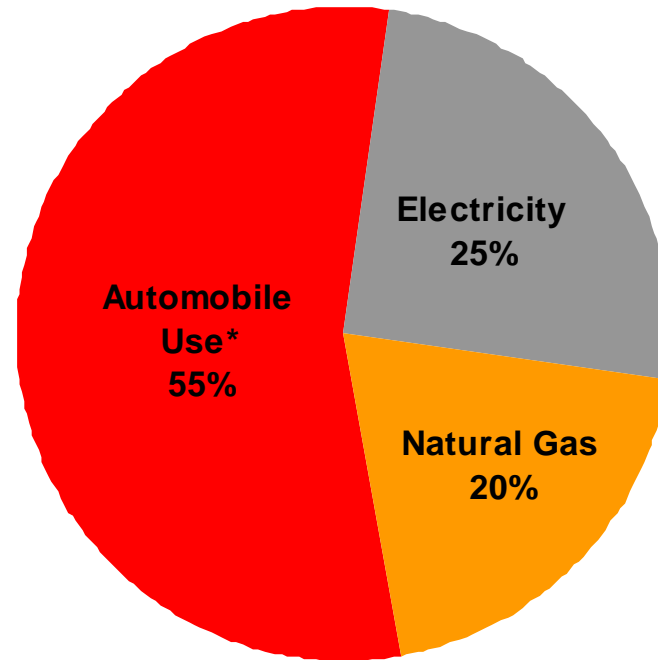


*** 85% from surface transportation**

The Private Vehicle is the Largest Contributor to a Household's Carbon Footprint



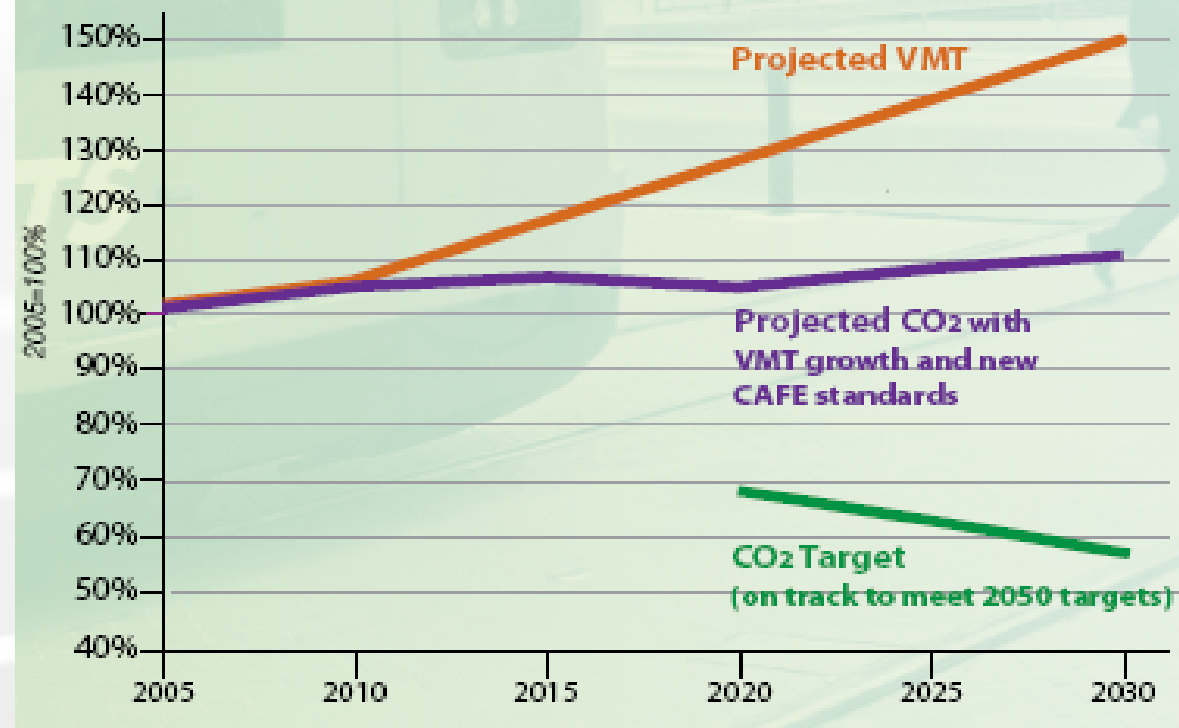
Household Carbon Emissions





The Challenge of VMT Growth

CO₂ Reduction Targets Cannot Be Met with Recently Enacted CAFE Standards



*Projected emissions from cars and light trucks assuming newly adopted nationwide vehicle and fuel standards and current projected VMT growth. Source: Growing Cooler Report **

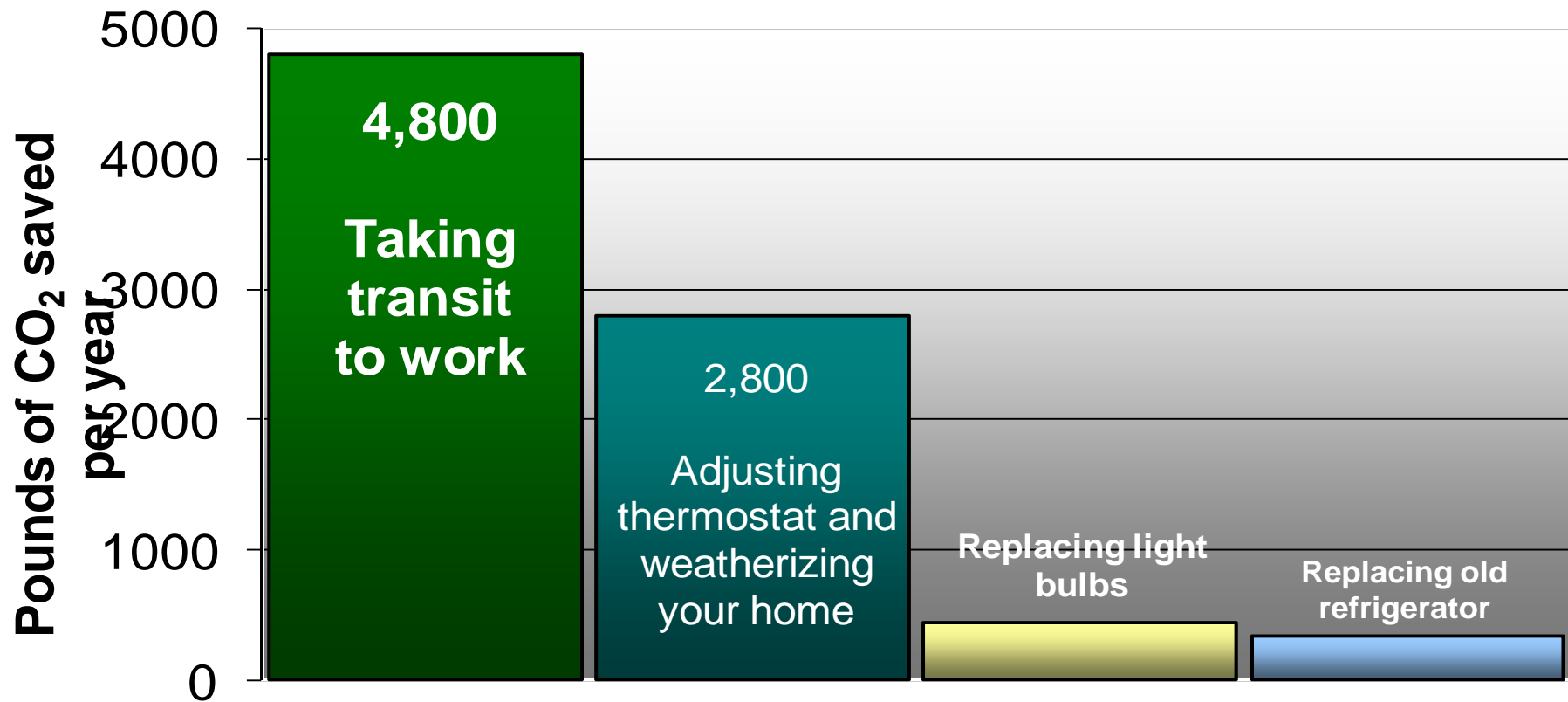


Public Transportation is a Net Carbon Reducer*

▪ CO ₂ avoided from reduced vehicle travel	+16.2 M Tonnes/year
▪ Additional CO ₂ savings from reduced congestion	+3.0 M Tonnes/year
▪ CO ₂ produced from public transportation	-12.3 M Tonnes/year
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▪ Total CO₂ savings from public transportation	+6.9 M Tonnes/year

* SAIC, September 2007

The Effect of Household Action*

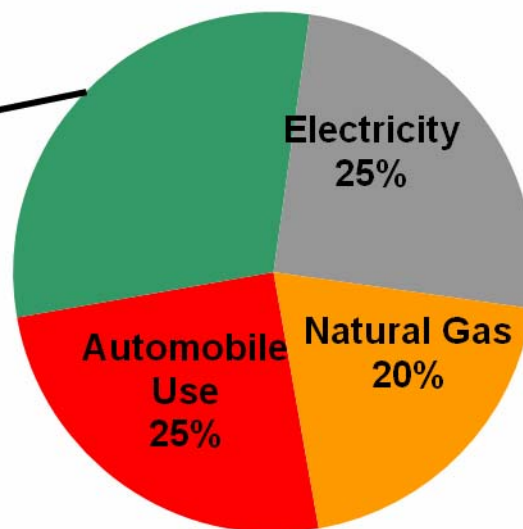


* SAIC, September 2007

Household Carbon Emissions Reduction



30% Potential Savings by Switching One Car to Public Transportation and Other Modes



The “Leverage Effect” of Public Transportation



Supporting more efficient land use patterns

- Reducing the growth in Vehicle Miles Travelled (VMT)
- Easing congestion

Total Effect of Public Transportation in One Year*



- **102.2 billion** less VMT
- **4.2 billion** less gallons of fuel consumed
- **37 million** metric tonnes less CO₂ emissions

* ICF, February 2008



The Impact of Development Patterns and Rail Transit



higher density, concentration of development and rail transit = smaller per capita carbon footprints (1)

Average carbon emissions/year from cars (2) :

- Richmond resident : **1.335 tons**
- Virginia Beach resident : **1.004 tons**
- Washington metro resident : **0.984 tons**

(1) Shrinking the Carbon Footprint of Metropolitan America, Brookings, May 2008

(2) 2005 figures



What Actions Can Be Taken by Policy - Makers?

- Avoid public transportation fare increases or service cuts due to increased operational costs
- Protect existing public transportation assets and service
- Expand public transportation service coverage and frequency
- Recognize transit's net benefit in carbon programs
- Promote energy efficient transportation technologies

Making Transportation Investments More Effective



- Land-use policies + investment go hand in hand
- Accessibility to transit : park & ride, bike paths and sidewalks
- Carrots and sticks



**the higher the occupancy,
the less GHG emissions per passenger**

Create a virtuous GHG reduction cycle



Cooler Growth



Cooler Transport

