



Public Transportation and GHGs: *APTA Guidance and Tools*

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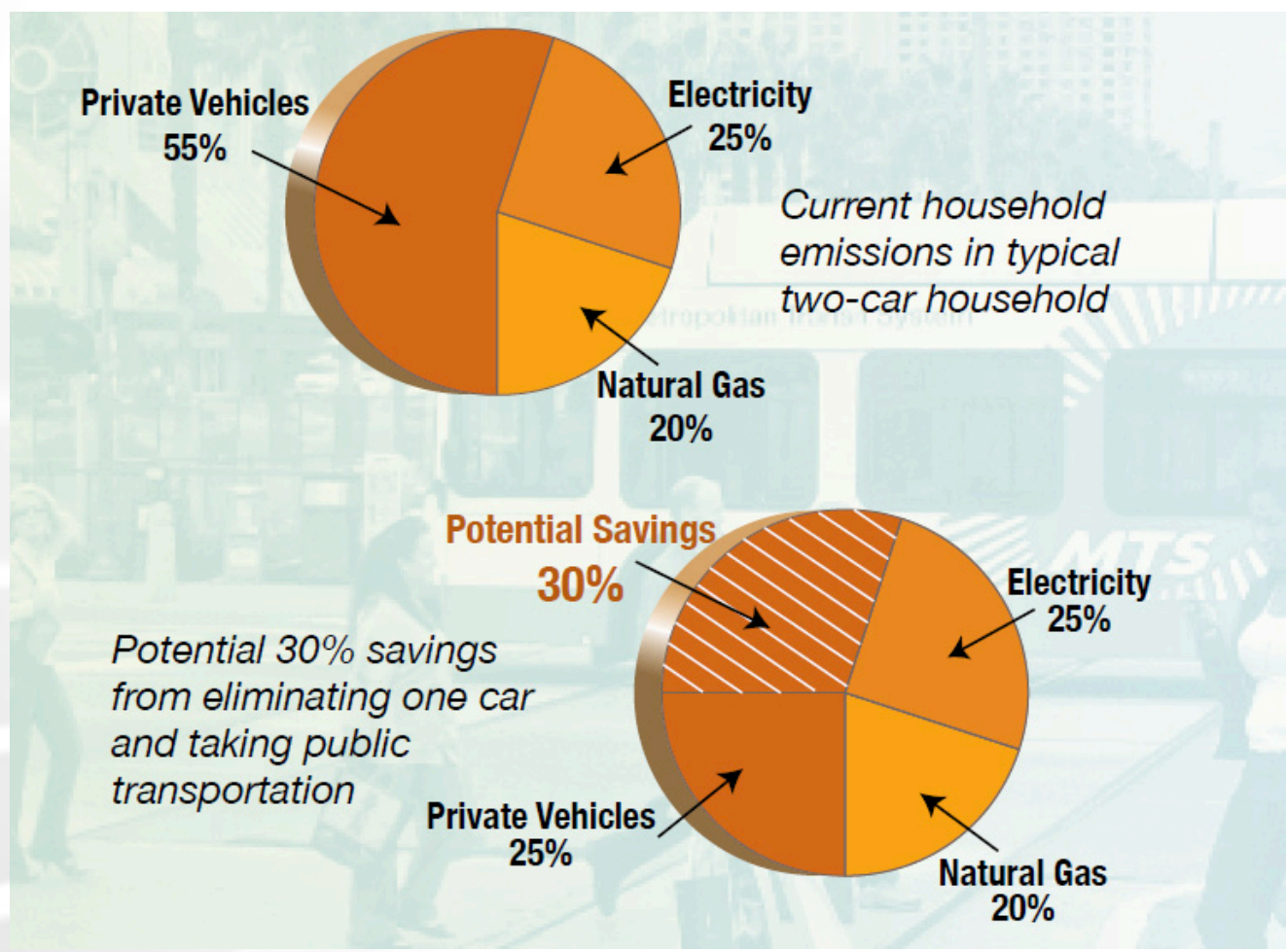
New Partners for Smart Growth

San Diego, CA

February 2, 2012



Private vehicles are the largest contributor to a household's carbon footprint



Source: "Public Transportation's Contribution to U.S. Greenhouse Gas Reduction," Science Applications International Corporation, September 2007.

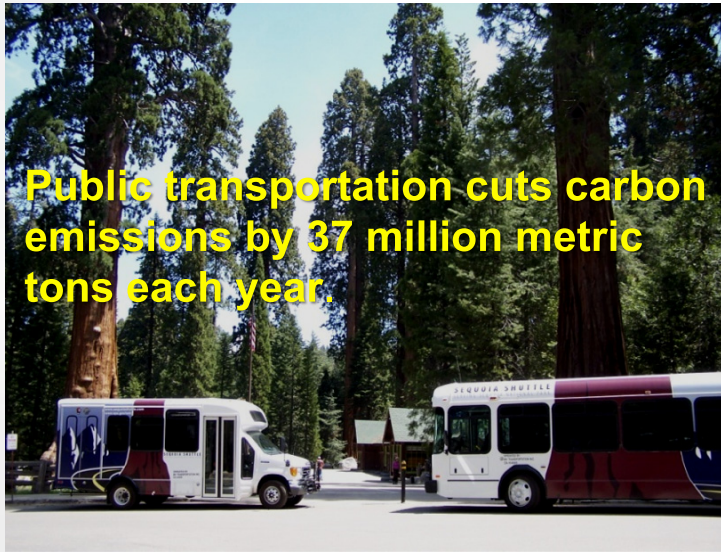


Value of Public Transportation as a Climate Change Strategy

- Potential for immediate action
- Supports efficient land use patterns & general reduction in travel demand by individual cars
- Reduces congestion and improves fuel economy
- Preserves mobility in a climate of rising fuel prices



A Smaller Carbon Footprint



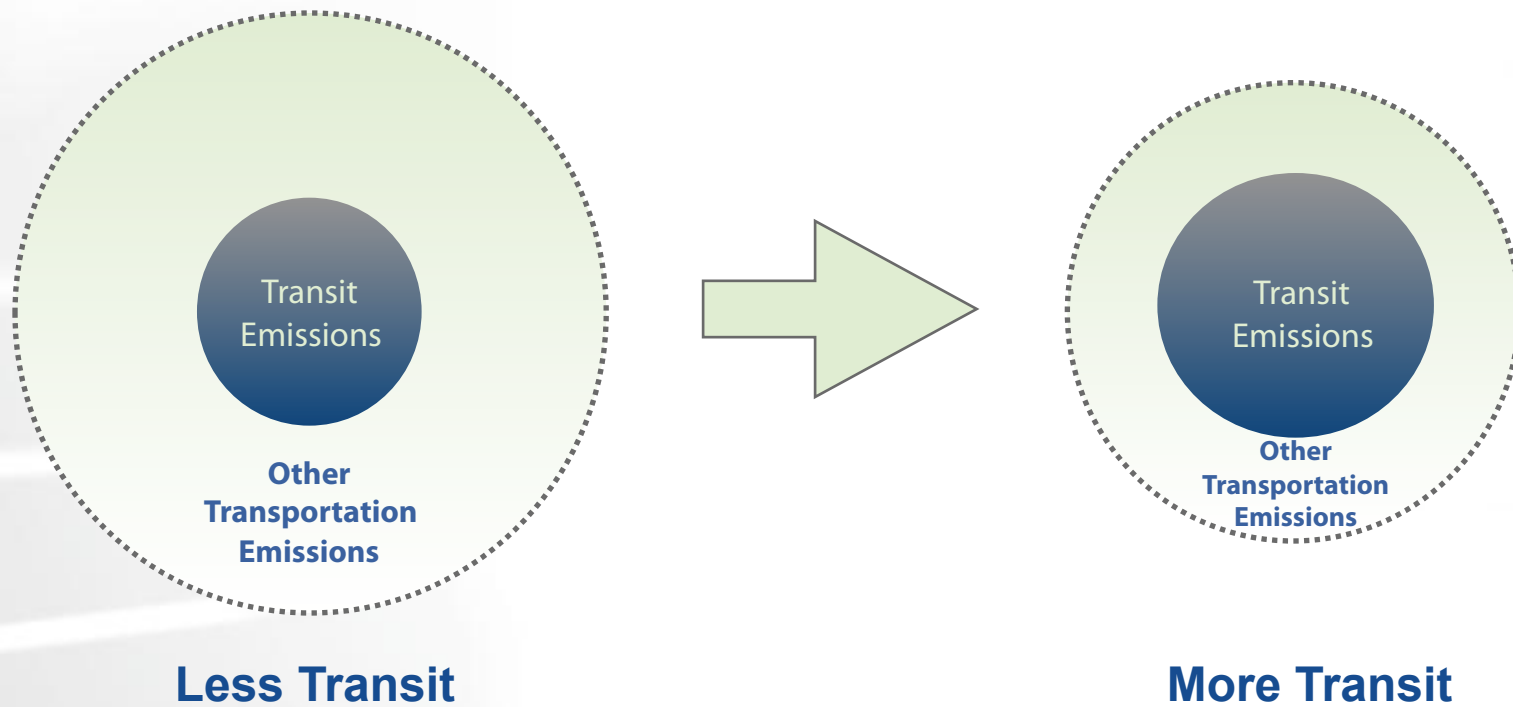
Equal to New York; Washington, DC; Atlanta; Denver; and Los Angeles households *combined* stopping use of electricity.



Transit's GHG Paradox



Regional Transportation GHG Emissions




Public Transportation is reducing its own carbon footprint



Guidance and Tools for Measuring and Managing Transit's GHG Emissions



 **APTA STANDARDS DEVELOPMENT PROGRAM**
RECOMMENDED PRACTICE
American Public Transportation Association
1666 K Street NW
Washington, DC 20006

APTA SUDS-CC-RP-001-09
Approved August 14, 2009
Climate Change Standards
Working Group, SUDS Policy and
Planning Committee


Quantifying Greenhouse Gas Emissions from Transit

Abstract: This Recommended Practice provides guidance to transit agencies for quantifying their greenhouse gas emissions, including both emissions generated by transit and the potential reduction of emissions through efficiency and displacement by laying out a standard methodology for transit agencies to report their greenhouse gas emissions in a transparent, consistent and cost-effective manner.

Keywords: carbon footprinting, climate change, greenhouse gas emission inventory/reporting, mode shift, congestion reduction, land use multiplier

Scope and purpose: This Recommended Practice provides guidance to transit agencies for quantifying their greenhouse gas emissions, including both emissions generated by transit and the potential reduction of emissions through efficiency and displacement. It lays out a standard methodology for transit agencies to report their greenhouse gas emissions in a transparent, consistent and cost-effective manner. It ensures that agencies can provide an accurate public record of their emissions; may help them comply with future state and federal legal requirements; and may help them gain credit for their "early actions" to reduce emissions.

This Recommended Practice represents a common viewpoint of those parties concerned with its provisions, namely, transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. The application of any standards, practices or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a rail transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or practices, as implemented by individual rail transit agencies, may be either more or less restrictive than those given in this document.

 **APTA STANDARDS DEVELOPMENT PROGRAM**
RECOMMENDED PRACTICE
American Public Transportation Association
1666 K Street, NW, Washington, DC, 20006-1215

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Approved March 24, 2011
APTA Climate Change Standards
Working Group

Guidelines for Climate Action Planning

Abstract: This Recommended Practice presents reasons why agencies should undertake climate action planning, lays out a framework for approaching such planning, and discusses considerations to keep in mind as an agency goes through the planning process.

Keywords: climate action plan (CAP), emissions, greenhouse gases (GHGs), sustainability

Summary: Climate action planning presents transit agencies with the opportunity to engage with jurisdictional partners to demonstrate and ensure consideration of the strong potential of transit to provide substantial reductions of GHGs at a local, regional and global scale. Transit has a unique role in climate action planning, as it provides more carbon-efficient transportation than personal automobiles. Additionally, transit facilitates greater use of non-motorized modes such as walking and bicycling and creates large "co-benefits," such as lower-energy homes and neighborhoods. Modeling of these combined benefits has shown that transit can reduce regional GHG emissions equal to many times those it emits. Transit, thus, emerges as a key GHG reduction tool and needs to increase rather than decrease its carbon footprint as long it does so due to system expansion and increased ridership, rather than due to reduced efficiency. Since they have focused on automobile-based strategies such as low-carbon fuels and battery and engine technologies while disregarding the direct and indirect emission reductions attributable to transit, statewide and regional CAP approaches to the transportation sector to date have undervalued the ability of transit to reduce regional GHG emissions. This guidance document is designed to help transit agencies reverse this trend.

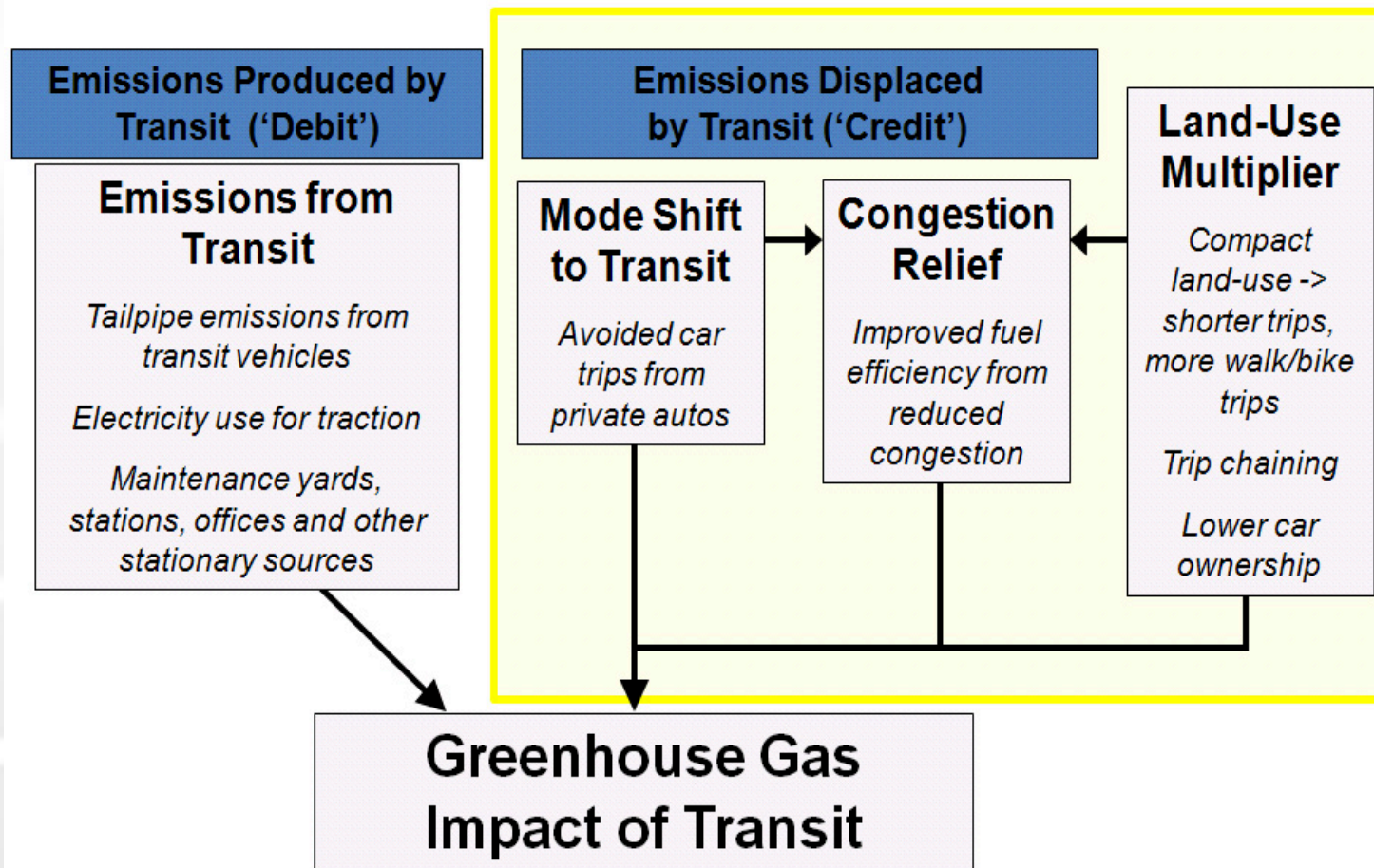
Scope and purpose: This Recommended Practice is one of a series of Sustainability and Urban Design Standards documents designed to support APTA members as they work to advance their sustainability practices. The purpose of this document is to provide guidance on the methods and factors that should be considered in climate action planning.

This Recommended Practice represents a common viewpoint of those parties concerned with its provisions, namely, transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. The application of any standards, practices or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a rail transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or practices, as implemented by individual rail transit agencies, may be either more or less restrictive than those given in this document.

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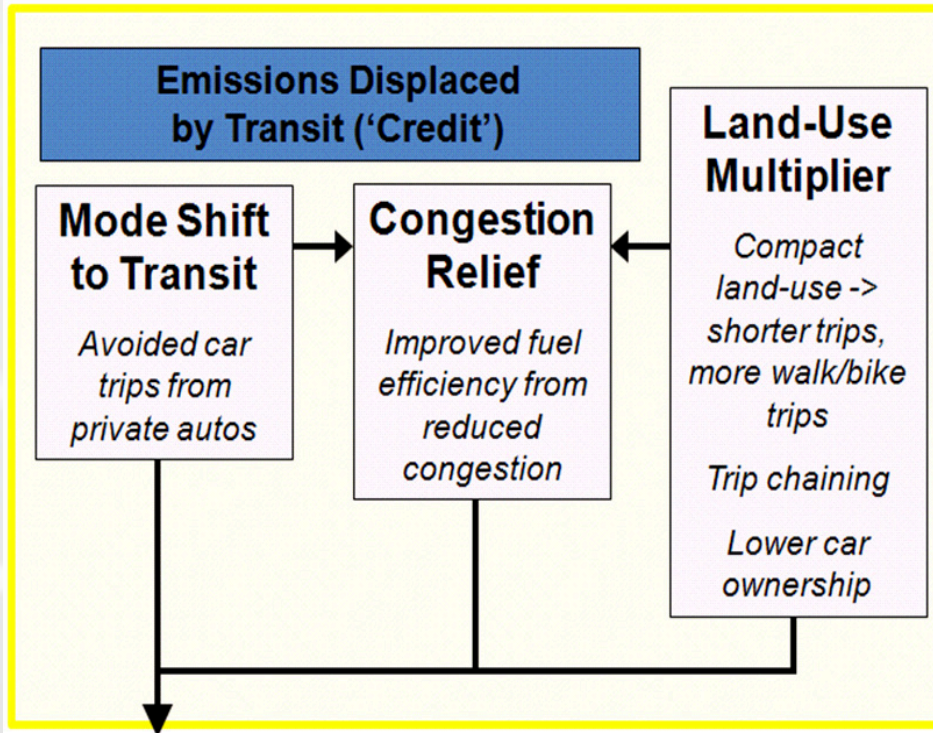
- www.apta.com/sustainability

APTA Recommended Practice Quantifying Net GHG Emissions from Transit





Quantifying Transit's GHG "Credit" The Land-Use Multiplier



- Transit enables compact development patterns resulting in shorter and fewer motor vehicle trips

- Facilitates bicycle and pedestrian travel
- Trip chaining
- Related impacts of reduced car ownership

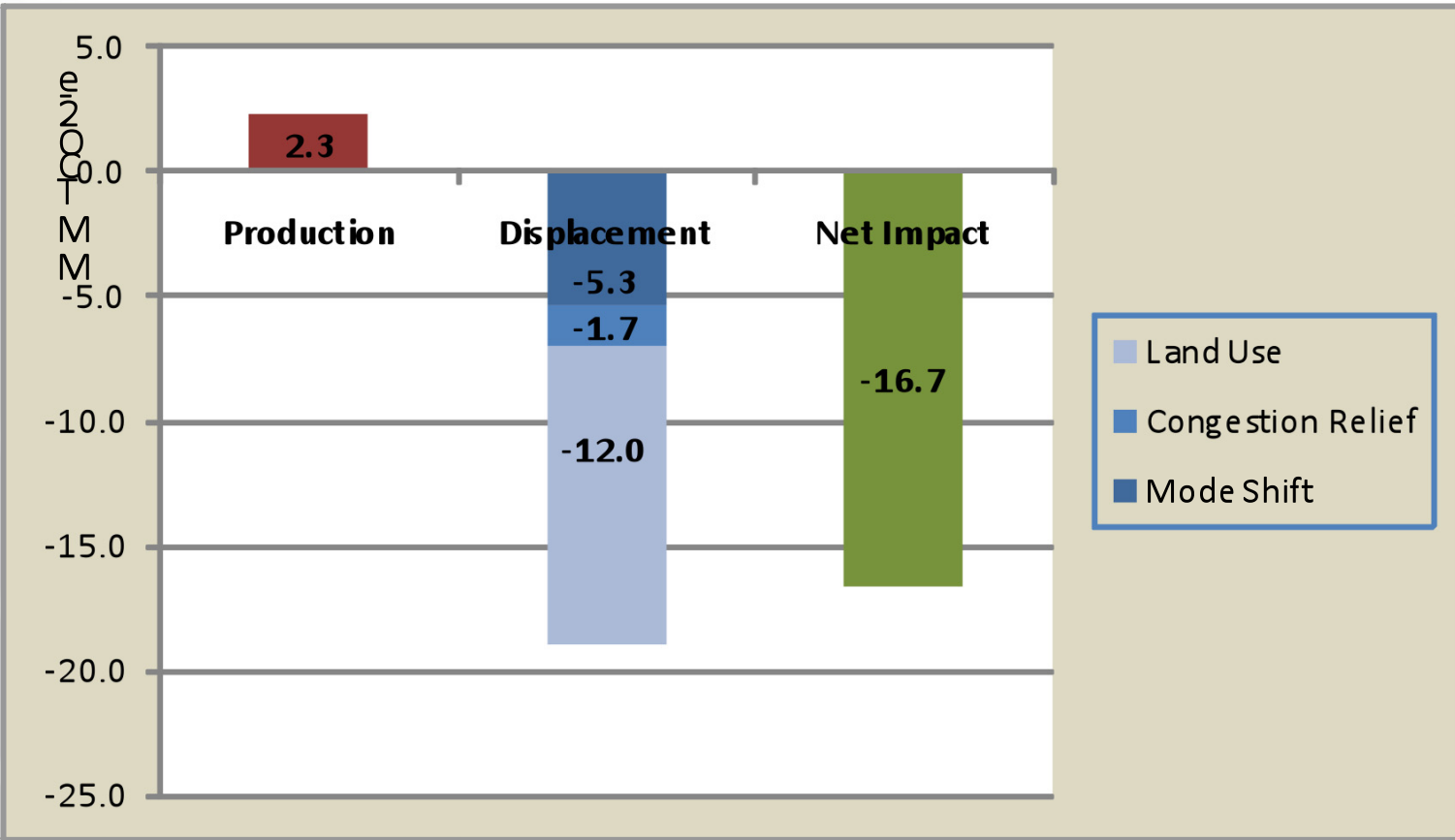
Quantifying Transit's GHG "Credit" The Land-Use Multiplier

- **APTA *Recommended Practice*** offers guidance on two approaches:
 1. Use of a default national multiplier
 2. Locally-specific analysis
- **More examples and data points** create better understanding
- **TCRP Project H-46** will result in refinement of analysis and tools





Example: New York MTA Net Carbon Impact



Industry Participation



- Barbara Thomson, First Environment
- Betsy Delaney, First Environment
- Brian Laverty, PB
- Craig Bilderback, Veolia Transportation
- Cris Liban, Los Angeles MTA
- Cynthia Hoyle, Champaign-Urbana MTD
- Dan Locke, Utah Transit Authority
- Dave Gillespie, New Jersey Transit
- David Erne, Booz Allen Hamilton
- Ed Buchanan, Utah Transit Authority
- Eric Hesse, TriMet
- Erik Johanson, SEPTA
- Gary Prince, King County Metro
- Joan LeLacheur, WMATA
- Joe Speaks, Booz Allen Hamilton
- Justin Antos, AECOM Transportation
- Karl Peet, Chicago Transit Authority
- Liz Zelasko, FTA
- Mark Minor, Regional Transportation Authority (Chicago)
- Marty Meller, San Francisco MTA
- Monica Hale, SAIC
- Projjal Dutta, New York MTA
- Tim Papandreou, San Francisco MTA
- Tina Hodges, FTA
- Trish Webb, TransLink
- Val Menotti, BART