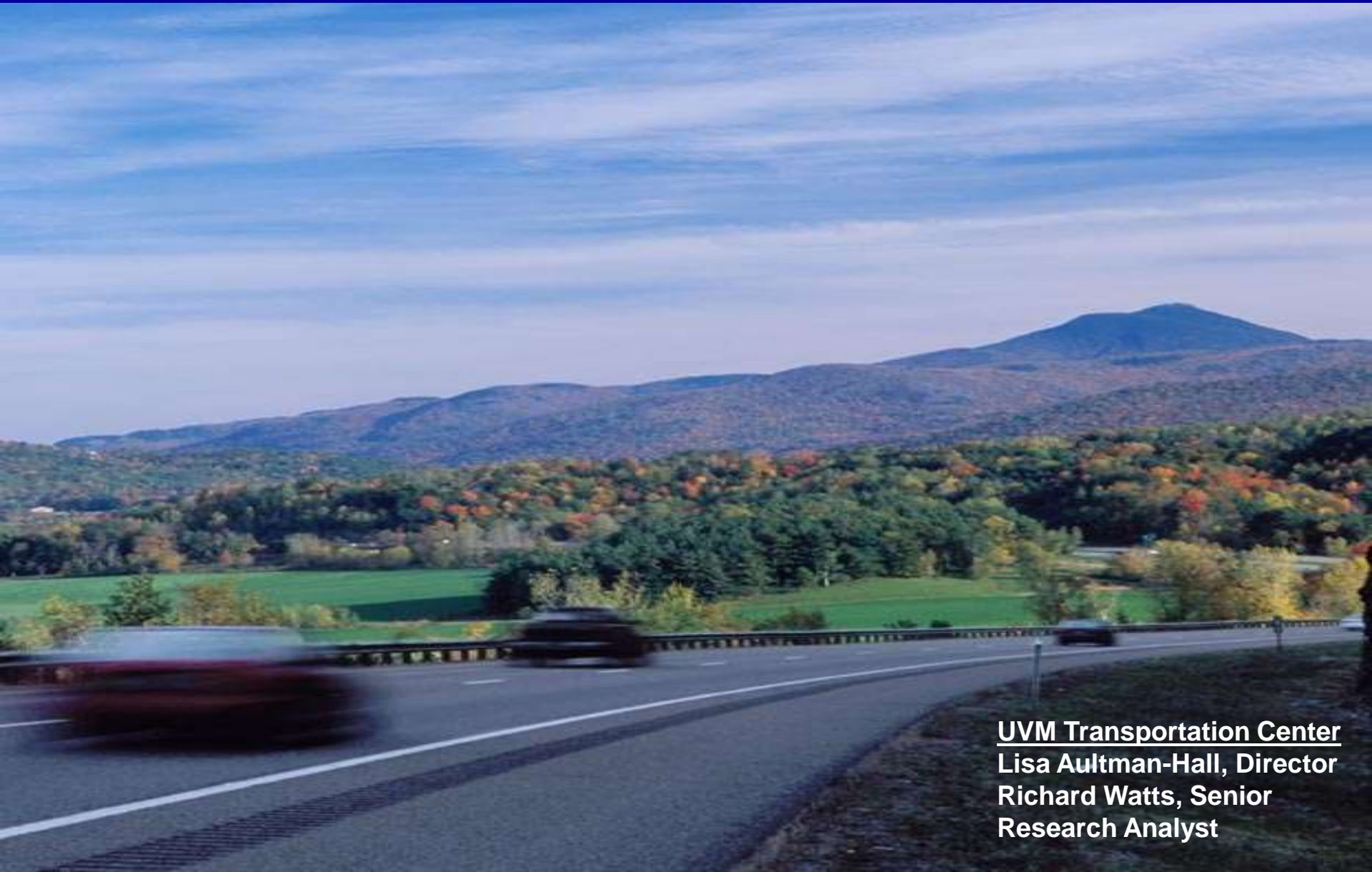


# Clean Cities Roundtable

March 28, 2007



UVM Transportation Center  
Lisa Aultman-Hall, Director  
Richard Watts, Senior  
Research Analyst

# Agenda

9-11 a.m. South Building, UVM

1. Welcome and Introductions
2. Walter Poleman, GreenHouse Director
3. Overview of the Clean Cities Program
4. Kelly Launder, Department of Public Service: Clean Cities and the Department of Energy
5. UTC Clean Cities Activities
6. Overview of the University Transportation Center
7. Discussion of Clean Cities work-plan for '07-'08



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# Vermont Clean Cities History

- Vermont Designated 2001 (first state)
- Snelling Center review (2005 & 2006)
- UTC designated host January 2007
- Some thank you's



# DOE Clean Cities Activities

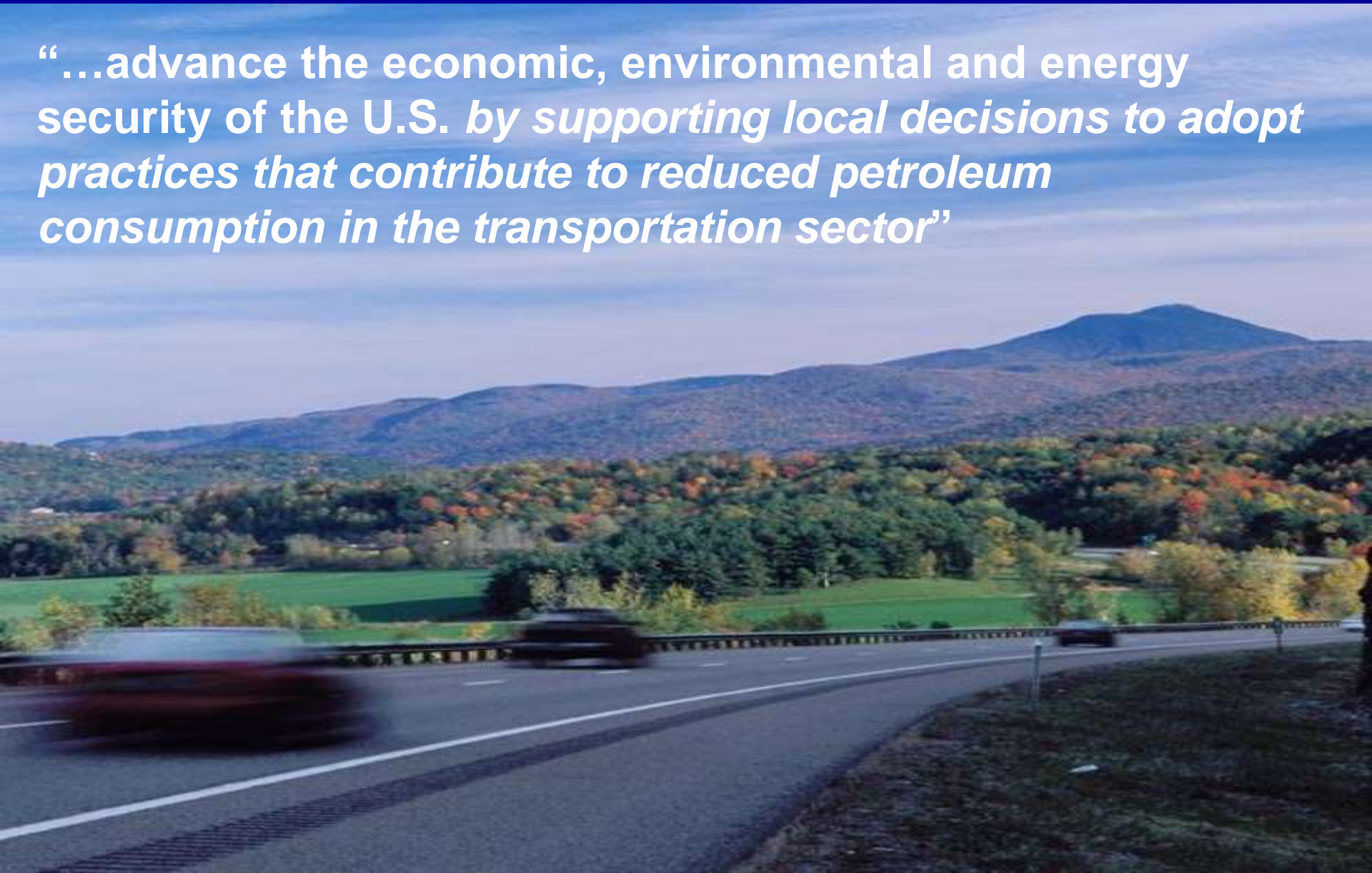
Clean Cities national program lists five areas:

- Alternative Fuels and Vehicles
- Fuel Blends
- Anti-Idling
- Hybrid Electric Vehicles
- Fuel Economy

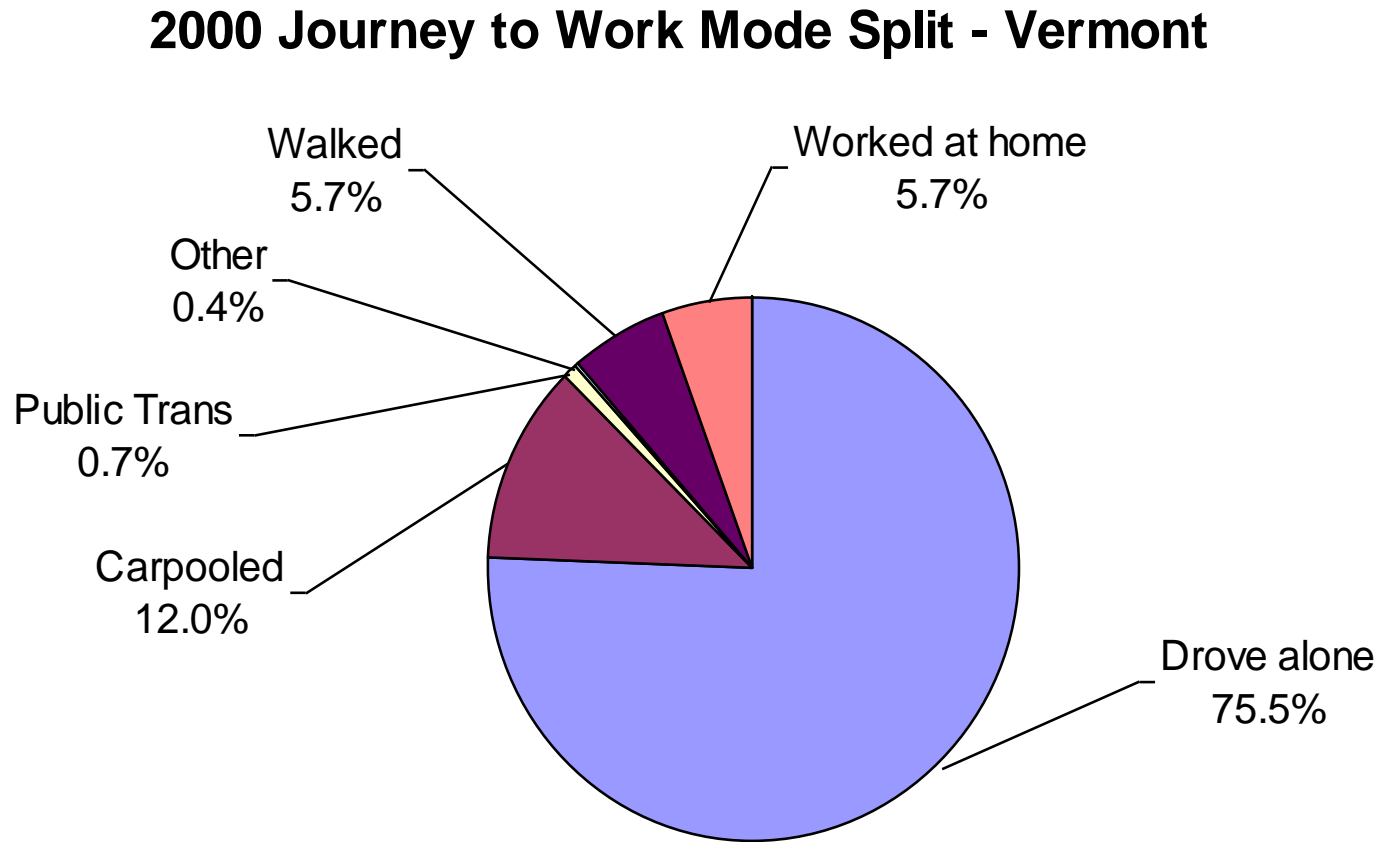


# Clean Cities Mission

**“...advance the economic, environmental and energy security of the U.S. *by supporting local decisions to adopt practices that contribute to reduced petroleum consumption in the transportation sector*”**



# Automobile Dominance

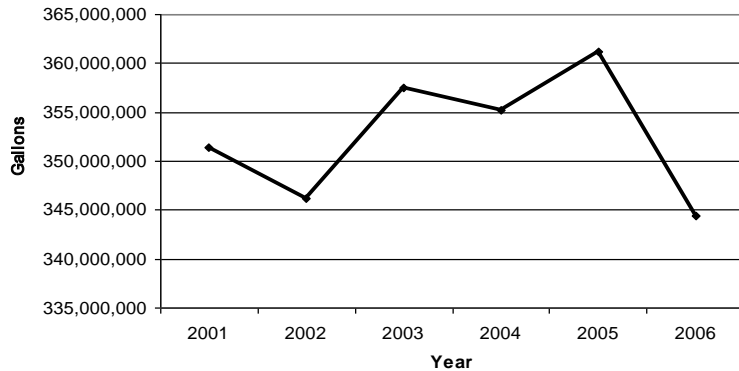


Slide courtesy of Resource Systems Group (RSG)



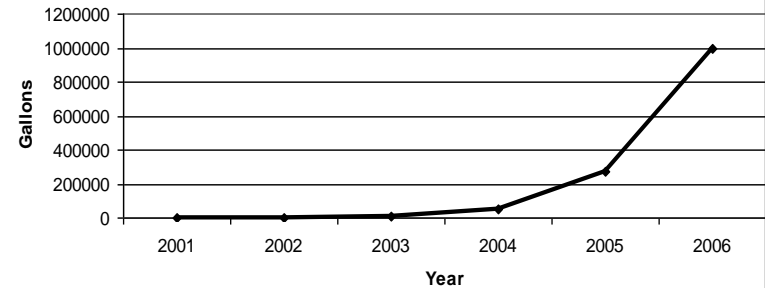
# Vermont Fuel Sales for Transportation

Gallons of Gasoline Sold Annually (2001-2006)



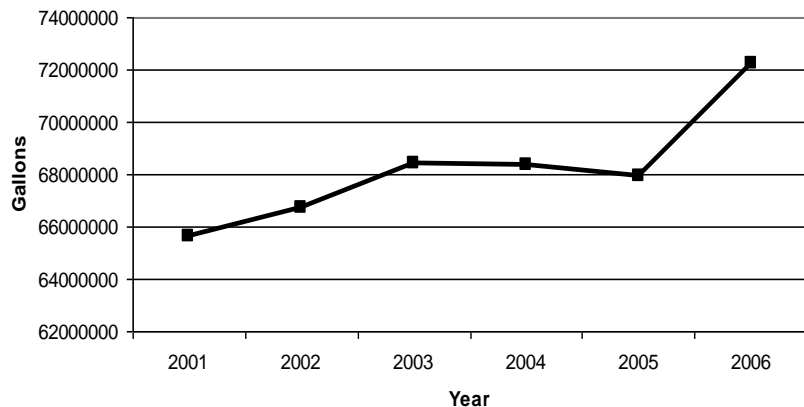
Source: VT Joint Fiscal Office

Gallons of Biodiesel Sold Annually (2001-2006)



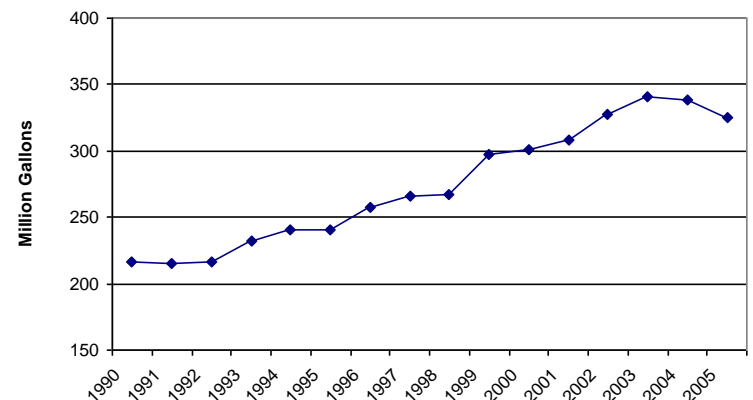
Source: VBA

Gallons of Diesel Sold Annually (2001-2006)



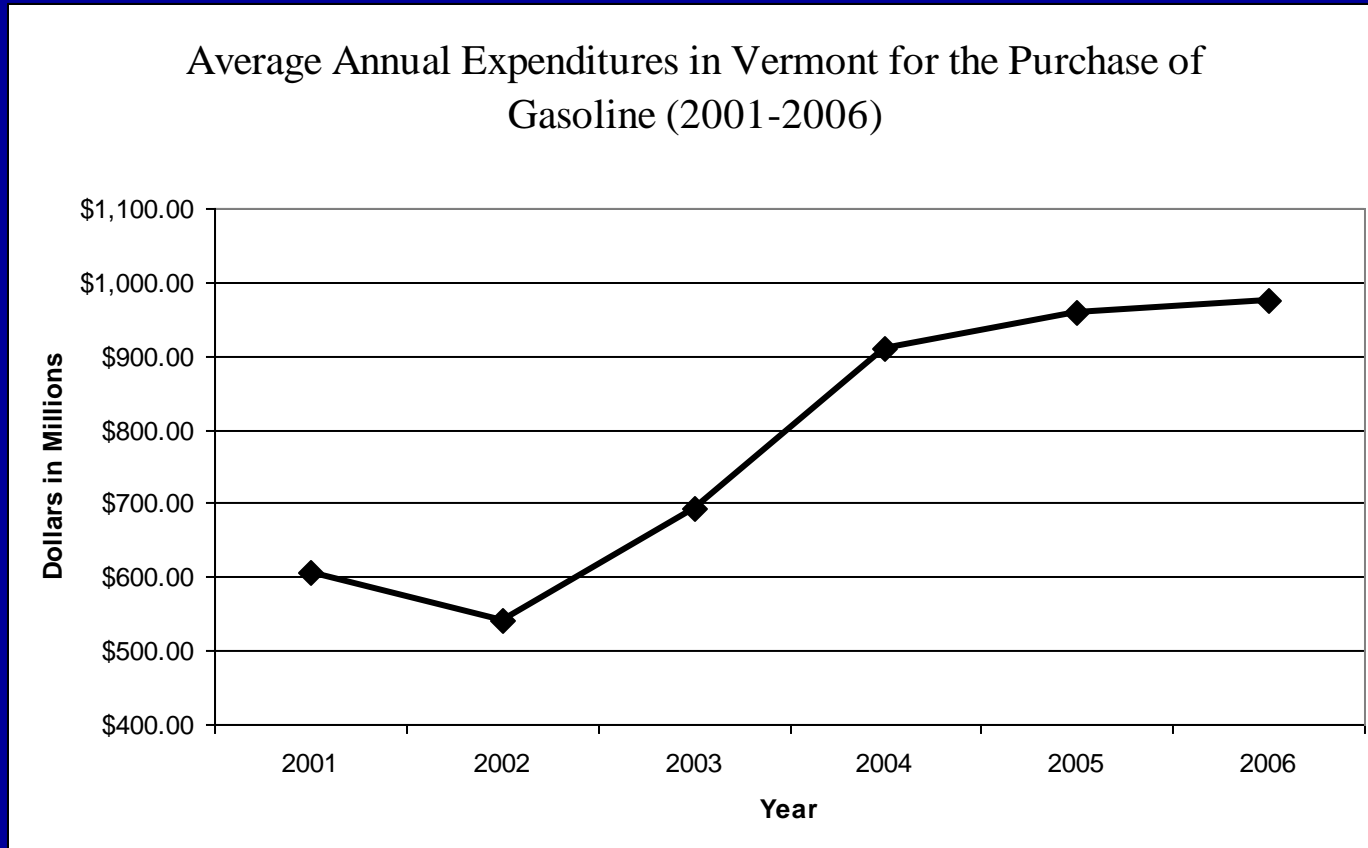
Source: VT Joint Fiscal Office

VT Total gasoline all sales 1990-2005



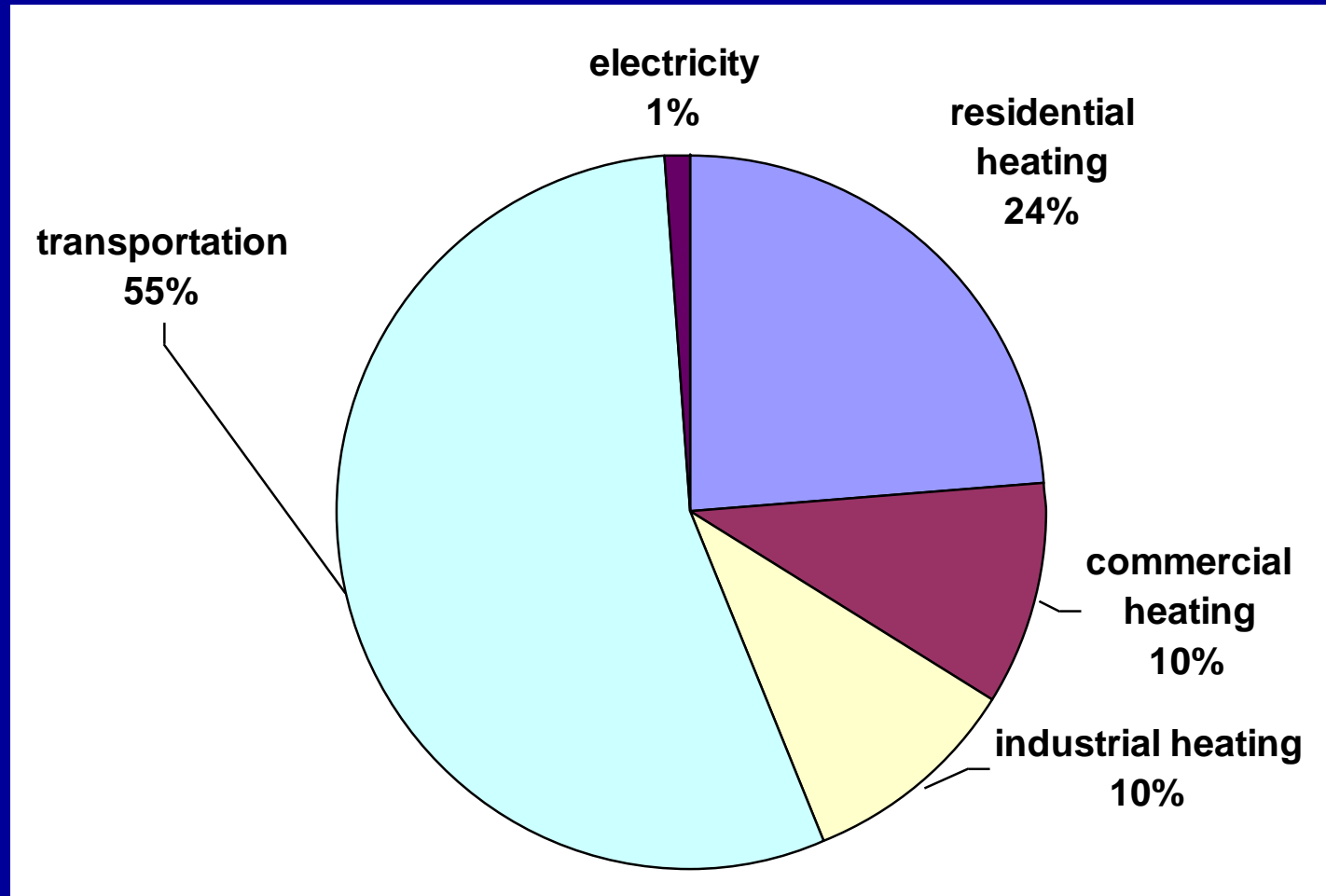
Source: DOE - EIA

# Vermont Transportation Fuel Spending



Source: Derived by Clean Cities team from last slide and gasoline retail price

# Vehicle Contributions to GHG Emissions



# Vehicle Contributions to GHG Emissions

## U.S. Transportation Sector

28 Percent GHG

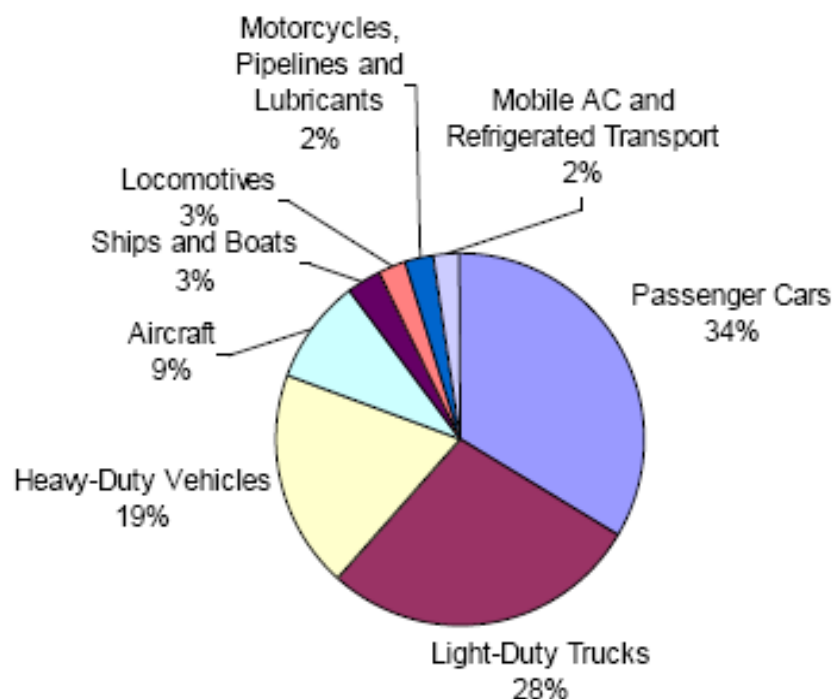
62 percent light duty vehicles

Sharpest increase 1990-2003

62 percent increase trucks

23 percent light duty vehicles

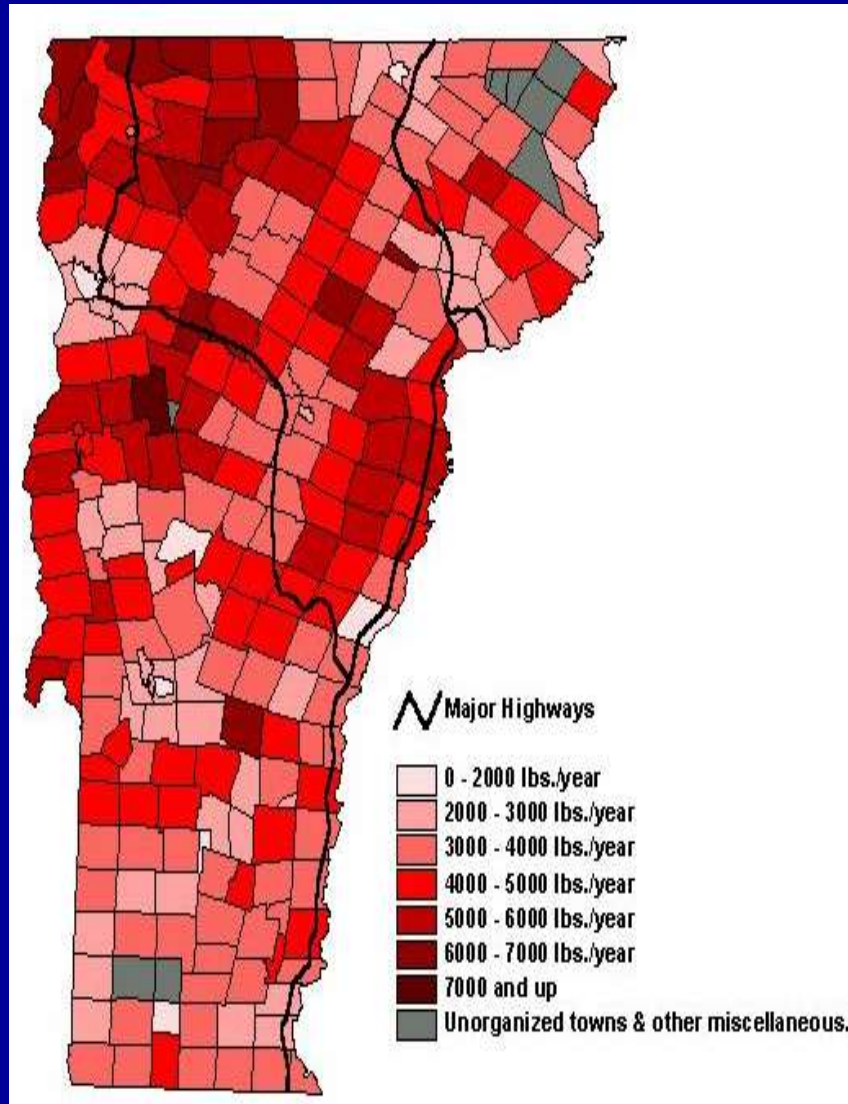
FIGURE 2 U.S. Transportation GHG Emissions by Source, 2004



Source: U.S. Environmental Protection Agency, 2006. *Inventory of U.S. Greenhouse Washington, DC.*



# Vermont Towns with Highest Automobile GHG Emissions



Source: VPIRG

# Vehicle Registrations in Vermont



Heritage Toyota '06 Prius

Fuel	DMV 31-Dec-05	DMV 31-Dec-06	DMV Inc 05-06	%Incr 05-06
Hybrids	1510	2358	848	56%
Electric	118	110	-8	-7%
Propane	127	110	-17	-13%
Diesel	27504	29161	1657	6%
Gas	543,009	542126	-883	0%
Total	572268	573865	1597	

# Vermont HEV 2006 Registrations

- Hybrids: 2 % of 2006 Vermont vehicles leased or purchased
- 53 % Toyota Prius



Ford Escape	41
Honda Accord	13
Honda Civic	114
Honda Insight	13
Lexus	18
Mercury Mariner	6
Saturn	1
Toyota Camry	69
Toyota Prius	525
Toyota Highlander	185
<b>Total</b>	<b>985</b>

Source: R.L. Polk Consulting

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# UTC Clean Cities Activities

- E-newsletter
- Web page
- Grant Proposal Coordination
- Yearly Roundtable
- Represent VT regionally and nationally
- Database of VT AFV
- Yearly “special task”



# eNewsletter

- News clearinghouse
- Sections:
  - CC Announcements
  - Petro-stats
  - News & Info
    - Fuels
    - Alternative Modes
    - No idling
  - On the Horizon
    - Policy Watch
    - Funding Opportunities
  - Events

## Clean Cities Vermont eNewsletter 3.14.2007

*Your clearinghouse for news, programs, and funding related to reducing the consumption of petroleum for transportation in Vermont.*

Clean Cities is a national program, coordinated by local coalitions in states and large cities, committed to advancing “the economic, environmental and energy security of the U.S.” through cutting back on **“petroleum consumption in the transportation sector”**. [More at the [Clean Cities](#) website].

### Weekly Petro-Stats

	Gas at the pump, VT [compiled from <a href="#">fuelgaugereport.com</a> ]	Crude oil futures [compiled from <a href="#">nymex.com</a> ]
This week (Mar 7-13)	\$ 2.550/gallon	\$ 60.070/barrel
Last week (Feb 28-Mar 6)	\$ 2.444/gallon	\$ 60.605/barrel

### NEWS & INFO BY SECTOR

- **Announcement: Clean Cities Vermont Stakeholders Meeting**
- **Fuels**
  - PHEV Benefits
  - Hydrogen and Biofuels Research Grant for UVM
  - Biodiesel On-Farm Production in Shaftsbury
  - Biodiesel and Basketball
- **Alternative Modes**

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# UVM TRANSPORTATION CENTER

*Research, Education and Innovation for Vermont and Beyond*



*Sustainable Systems* & ADVANCED TECHNOLOGIES  
for Northern Communities

- Founded in Fall 2006
- Funded through SAFETEA LU Transportation Law
- One of 10 National Transportation Centers
- Theme: Sustainable Systems and Advanced Technologies for Northern Communities
- Multi-disciplinary research
- Diverse partners: Academic and research institutions, Vermont state agencies, community, public and private partners, US DOT, other transportation centers

# University/USDOT invests in a center...

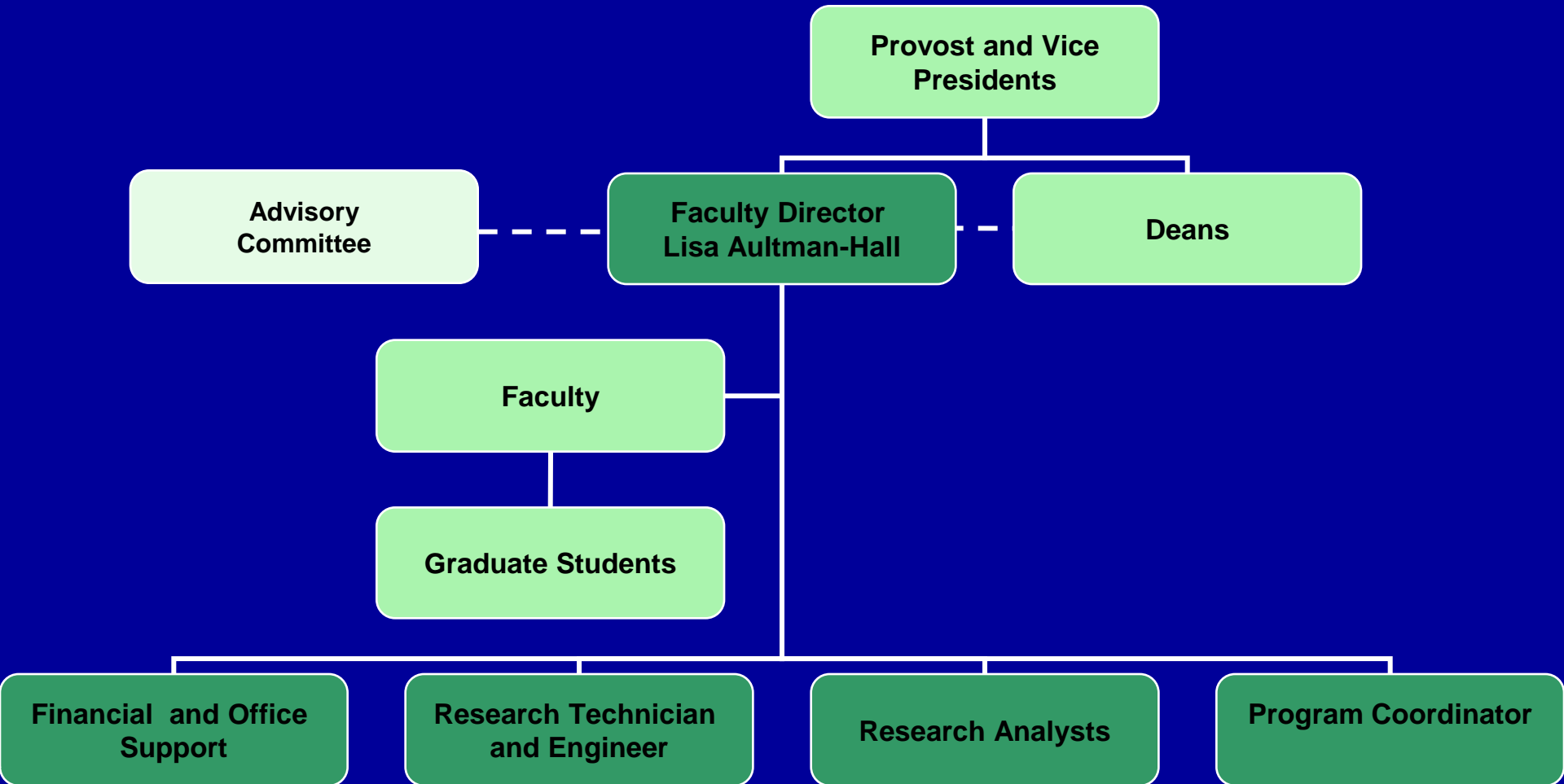
- Distribution of funding is not core goal
- Goals
  - Grow research capacity and education programs
  - Academic synergy collaboration – visible hub
  - Seminars, large proposal development, facilitate interaction
  - *Transportation Research Capacity* = computer systems and programs, staff, support, equipment, labs, expertise, unique data = support faculty research

# UTC Planned Programs

- Signature Research Projects (3 years, up to \$2M)
- Small Faculty Research Grants (1 year, \$20-50k)
- Graduate Certificate Program
- Graduate Fellowships
- Workforce Development
- Seminars, Conferences, Workshops



# UVM UTC Organizational Chart

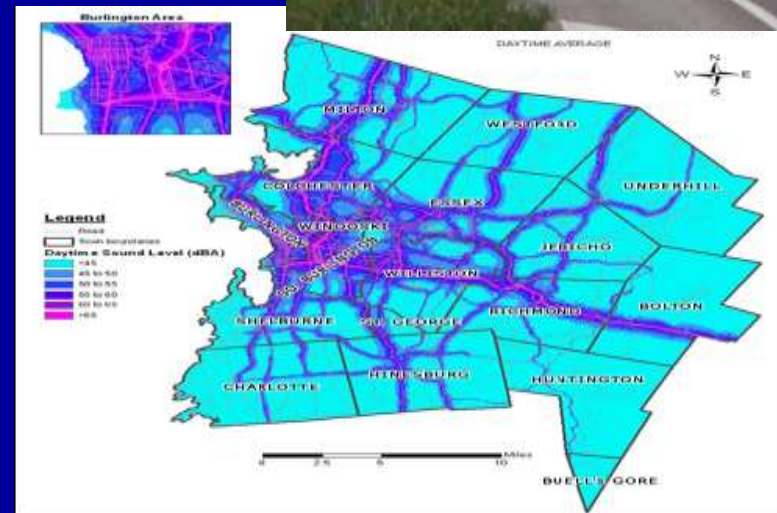




# Signature Project 1: Modeling Transportation and Development Patterns

## Modeling Transportation and Development Patterns

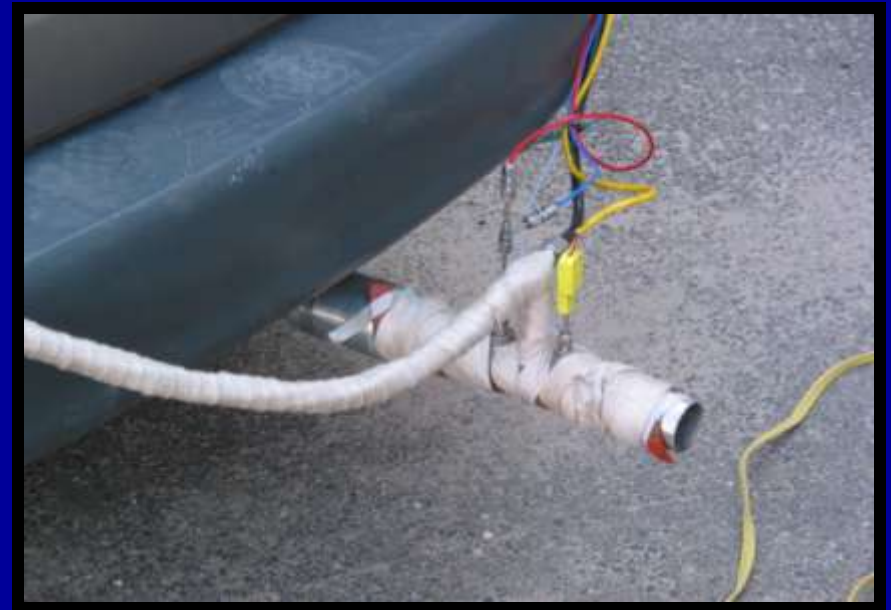
- What will the transportation system and landscape look like in 20 years? What is the environmental impact of different fleets of vehicles?
- Compare micro and macro land-use and transportation system models.
- Develop improved policy-relevant metrics that can be estimated based on transportation model outputs (carbon footprints, local freight access, road salt impact, storm water, network robustness).



# Signature Project 2: Emissions and Performance of Alternative Vehicles in Northern Climates

## Emissions and Performance of Alternative Vehicles in Northern Climates

- Monitor the performance and emissions of personal vehicles and transit buses powered by alternative fuels. The project will include real-time sensor development for data collection.
- Evaluate the issues affecting market penetration for personal vehicles that use alternative energy.



# Signature Project 3: Sustainable Transportation for Tourism

## Sustainable Transportation for Tourism:

- Marketing sustainable tourism
- Travel patterns of tourists
- Energy costs and climate change issues related to tourism



# Signature Project 4: Non-motorized Transportation, Livability and Isolation in Northern Communities

- Document climate impacts on bicycle and pedestrian travel patterns
- Measure liveability/isolation as a function of built environment
- Focus on rural towns and senior citizens



# Why does Clean Cities fit at UVM UTC?

- Theme overlap
- Leverage UTC and University resources
- Outreach / education missions
- Both want to focus on communities but network nationally
- Interdisciplinary goals





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