



VERMONT ENERGY
INVESTMENT CORPORATION

VEIC Transportation Efficiency

Upper Valley TMA| September 17, 2012

Karen Glitman | VEIC

VEIC

Dedicated to reducing the:

- economic
- environmental costs

of energy consumption through cost-effective energy efficiency and renewable technologies.



Transportation efficiency :

Doing the same or more with less energy

- **What we drive – switch to more efficient vehicles, including hybrid, electric, and CNG**
- **How we drive – practice eco-driving**
- **Why we drive – ensure options to single occupancy vehicles (SOV) exist**

VEIC Transportation Efficiency



Go Vermont is a resource for commuters who want to reduce the cost and environmental impact of driving. The program features a free carpool/vanpool matching service, ridesharing tips, and other practical information on getting around by biking, walking, bus, train and ferry.



At **Go! Chittenden County**, our job is to solve your specific transportation needs. From taking the bus to car-sharing, from walking and biking to carpooling, there have never been more options for getting around. We're your one-stop shop for information and advice about our region's transportation resources.



Way to Go - Weeklong commuter challenge will be expanded to a year round effort.



Drive Electric VT is program that aims to accelerate the electric vehicle industry by fostering ecosystems in which the technology can most succeed. We are partnering with Rocky Mountain Institute, the Vermont Agency of Natural Resources, Agency of Transportation, and the Vermont Department of Public Service to facilitate the adoption of electric vehicles across Vermont.

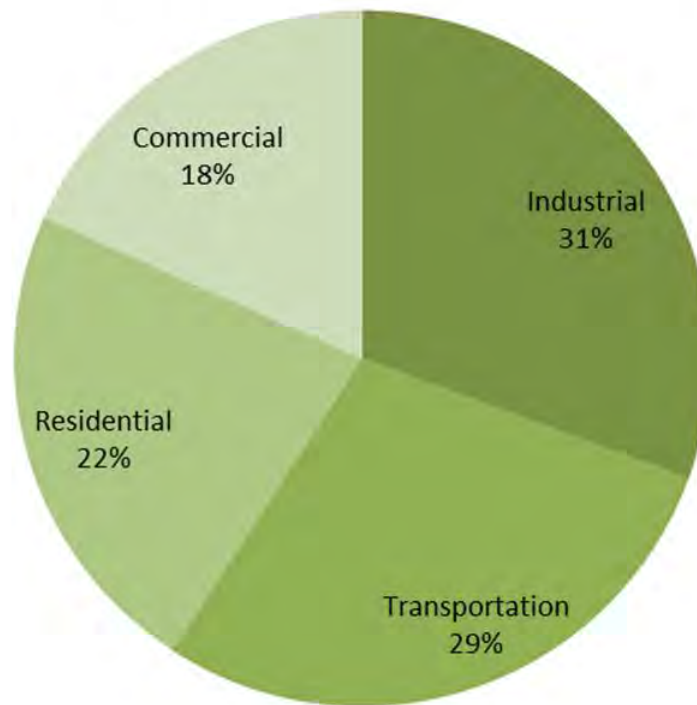


VEIC Transportation Efficiency

- Section 39 report - an analysis of *“options for user fees and fee collection mechanisms for motor vehicles that use energy sources not currently taxed so as to contribute to the transportation fund.”* This report is to be delivered at the November meeting of the Joint Fiscal Committee and Joint Transportation Oversight Committee.

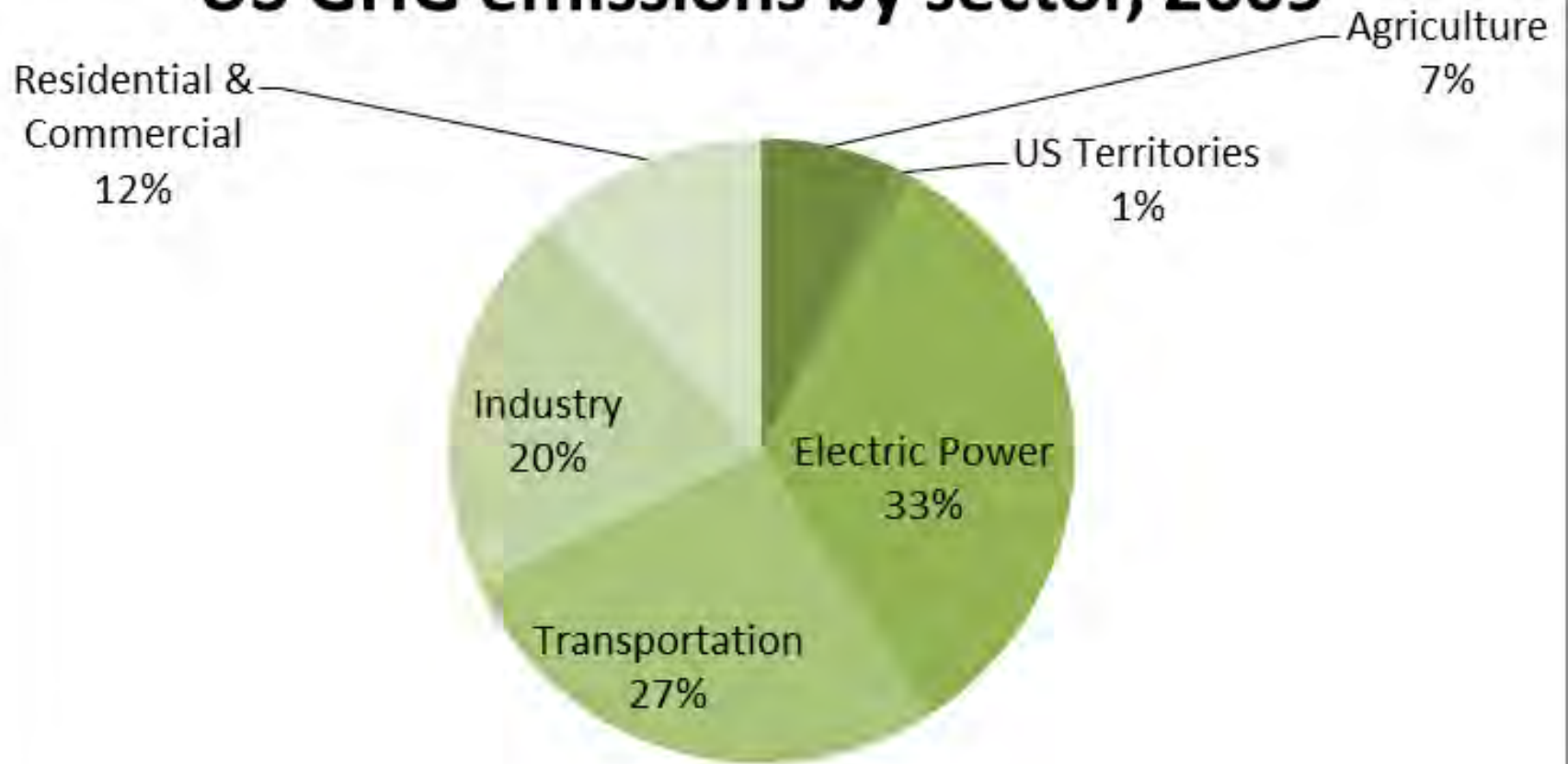
Why is transportation so critical to energy and climate policy?

US Energy Consumption by Sector





US GHG emissions by sector, 2009



Vermont Comprehensive Energy Plan



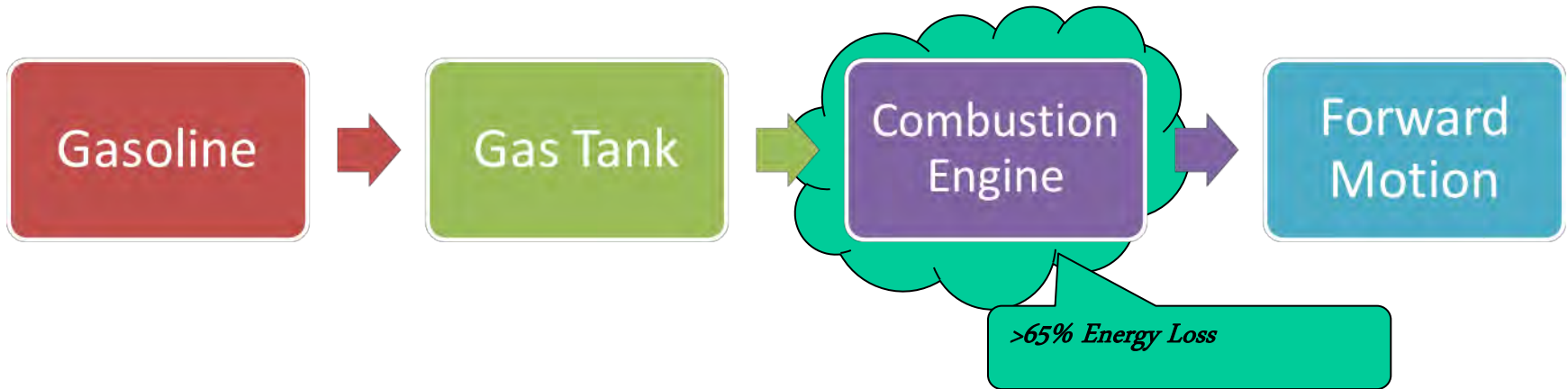
“If we are to achieve our goals, we must create transportation systems and support communities that allow Vermonters to embrace other means of transportation —rideshare, transit, walking, biking— while creating an infrastructure and public policies that support alternative fuels and emerging, more efficient, and renewably fueled vehicle technologies such as hybrid and electric-powered options.”

(December 2011)

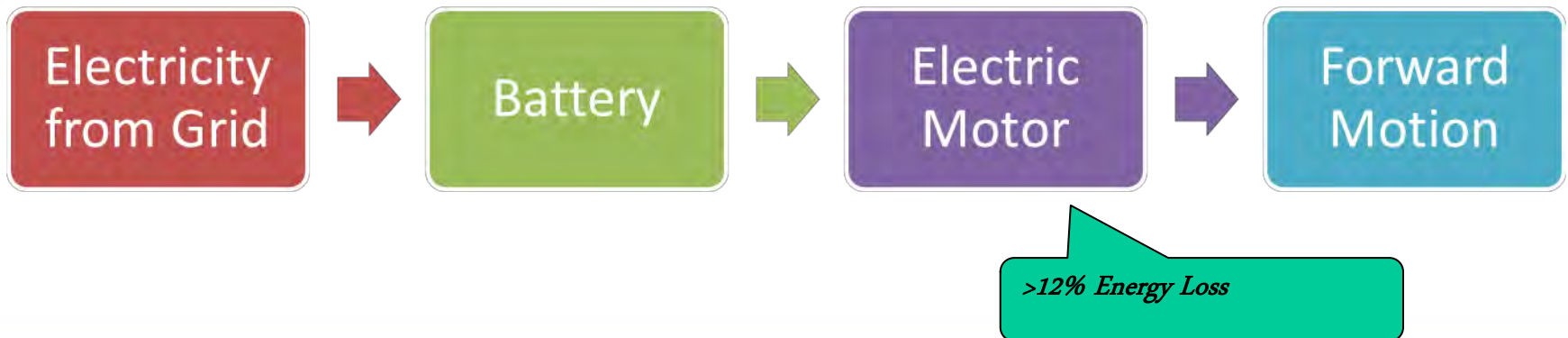


Vehicle Efficiency

Internal Combustion Vehicle Efficiency

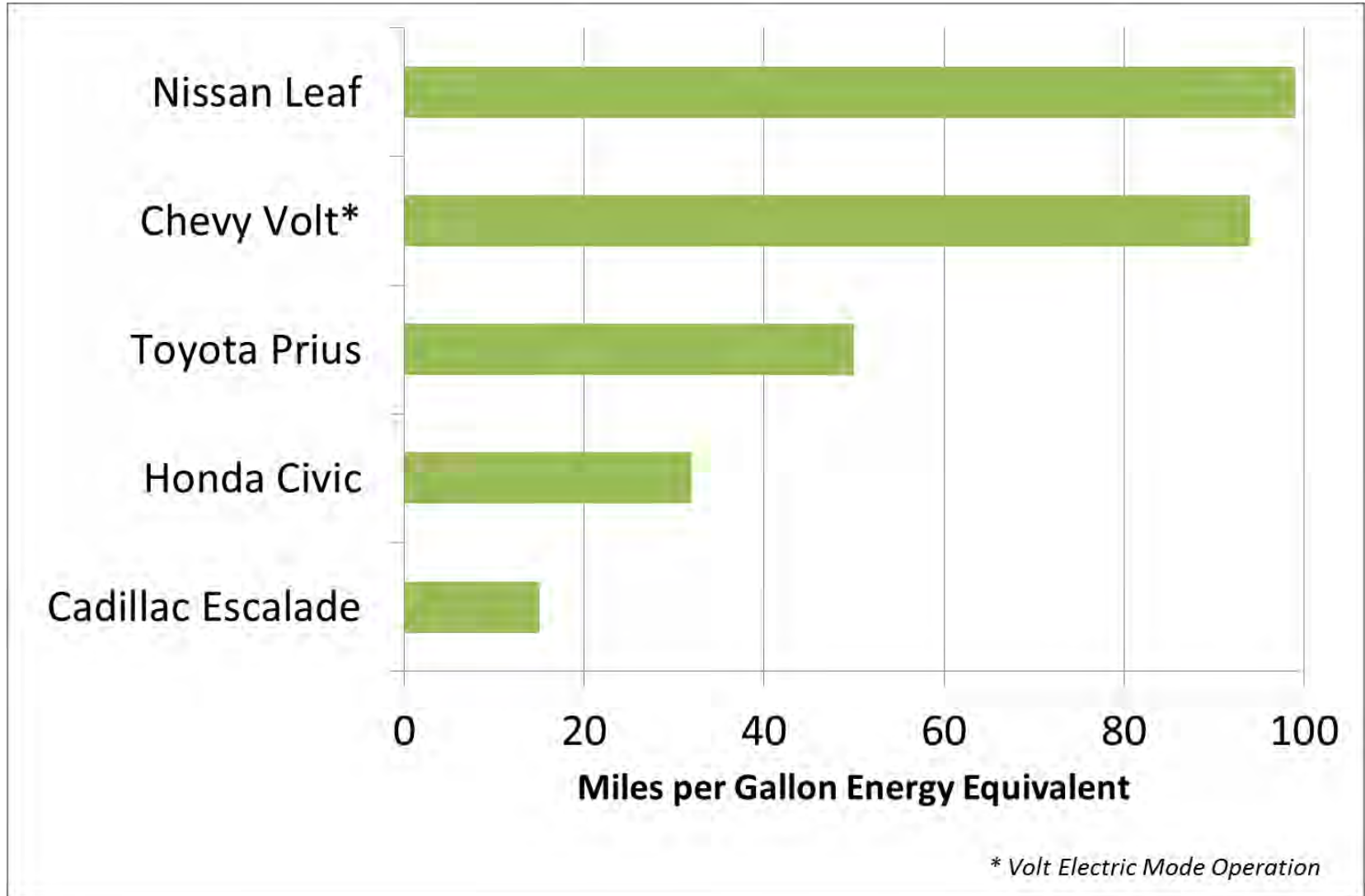


Electric Vehicle Efficiency

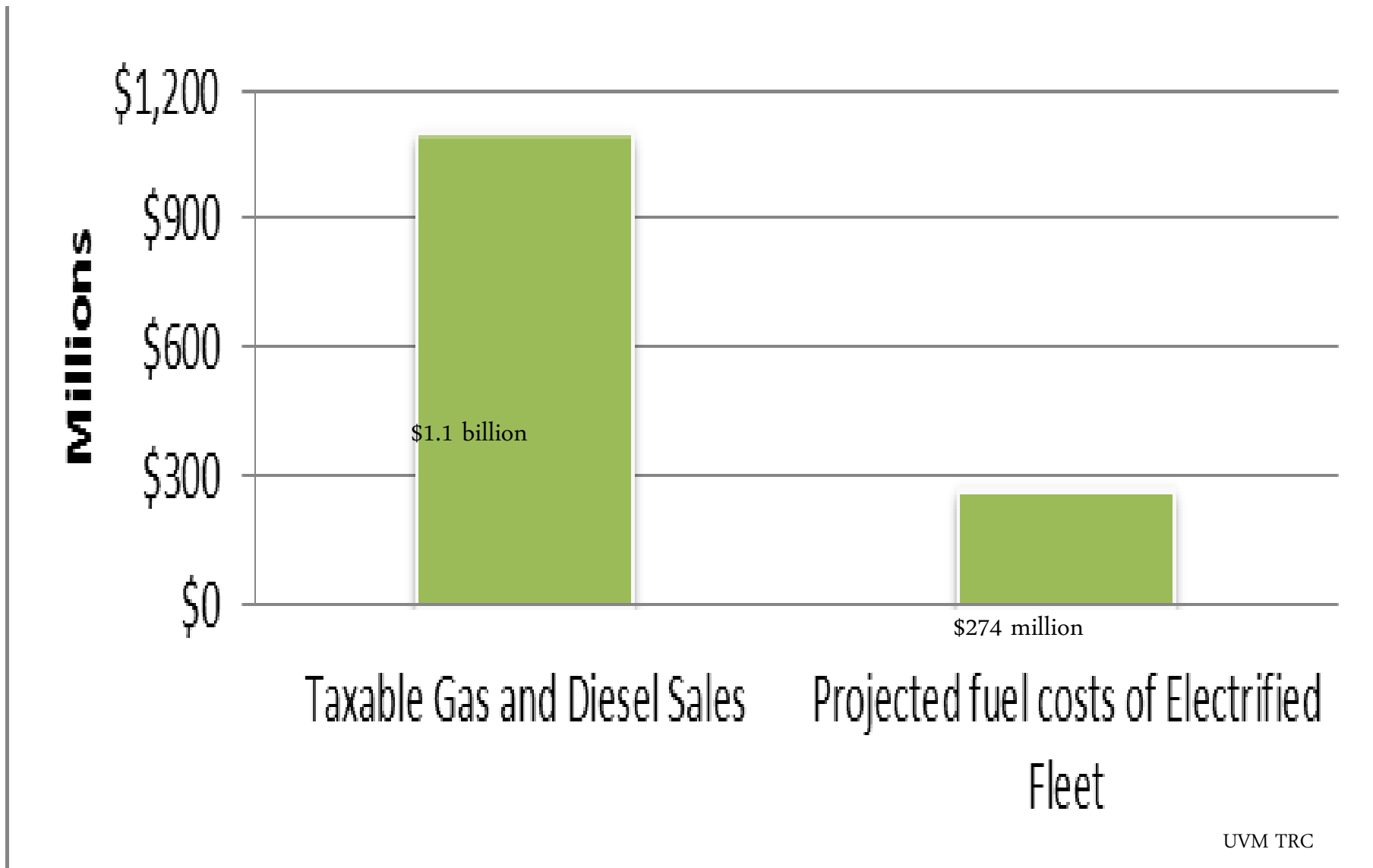




Vehicle Efficiency Comparison



Petroleum expenditures and projected energy costs of electrified fleet 2010 \$/
kWh (December)



Charging levels

Level 1 Charging



Level 1 Charging - Standard House Outlet

Level 2 charging



Inductive charging



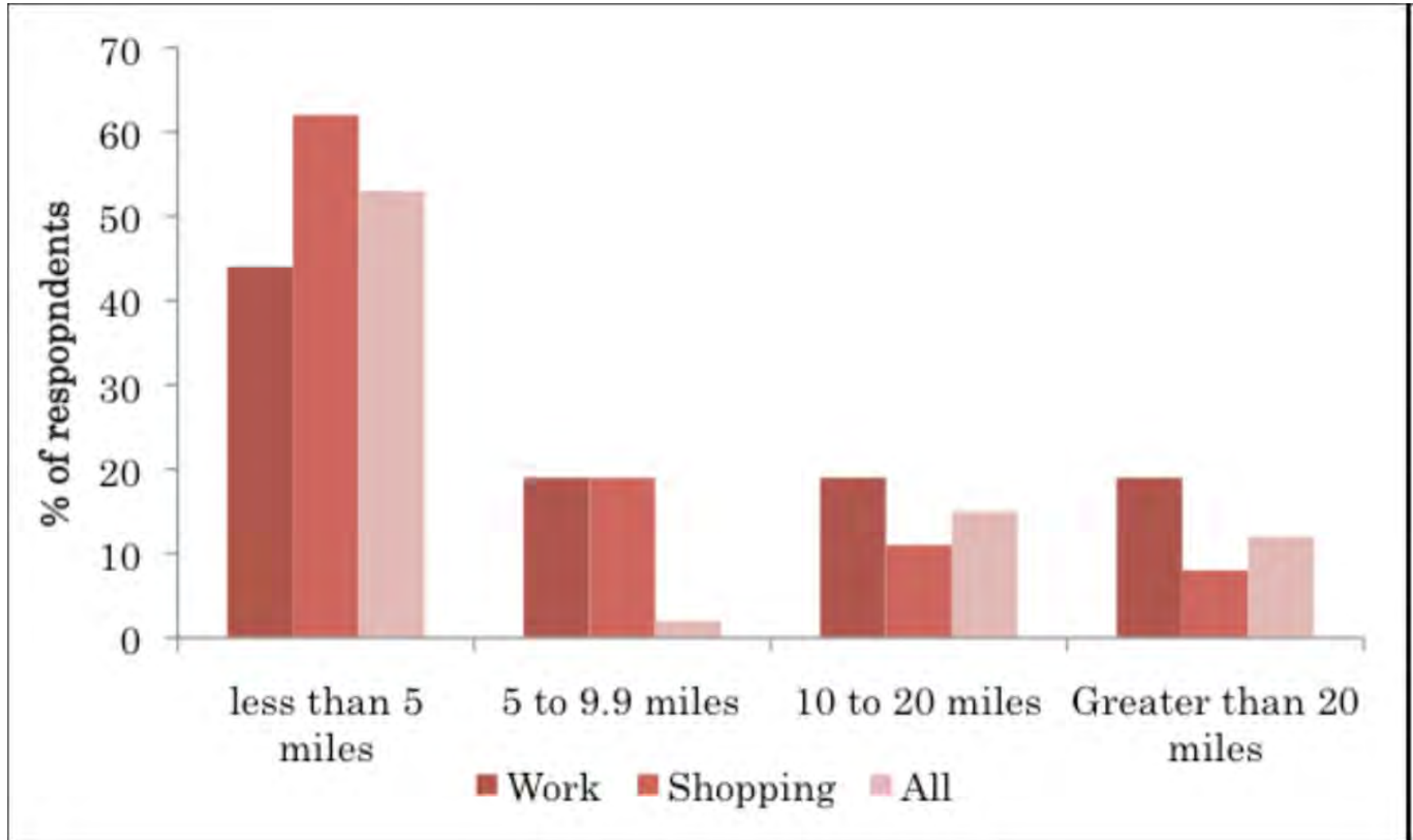
DC Fast Charging



Blink DC Fast Charge Station
photo by ECOtality

**More than 1.5
million charge
stations by 2017**
—Pike Research

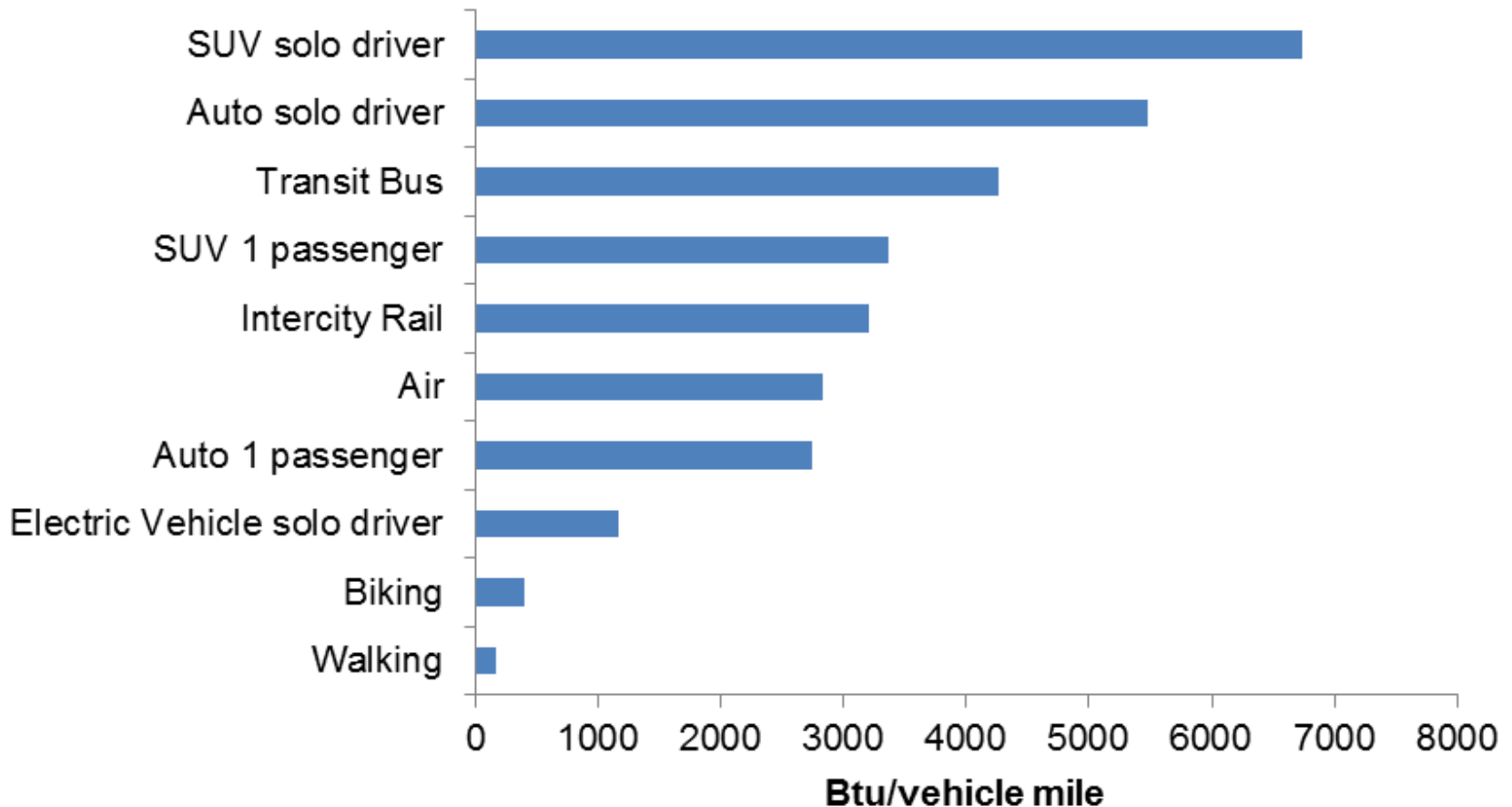
Vermonters' trip length - 2009



Vehicle to grid

By 2020, an Advanced Electric Vehicle fleet of 50,000 in Vermont could represent a power resource of 300 MW, with the ability to store 1,000 MWh of energy.

Energy use per passenger-mile by transport mode and occupancy





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My Nissan LEAF*



The details

- Live in Jericho – work in Burlington, 34 mile roundtrip commute
- Using a Level 1 charger (dedicated, GFI plug, outside)
- 2012 Nissan LEAF SV (lower trim model – no back-up camera, solar panel, level 3 charge port or fog lights)
- \$1000 down
- 39 months lease
- \$294/month
- Waiting for Rate 17
- Solar panels on roof – net metered.

Car Wings statistics

- 918 miles - Distance Traveled
- 4.3 Average Energy Economy miles/kWh
- 212.4 Electricity Consumption kWh
- 29.8 Travel Time hrs
- 593 CO₂ Tailpipe Emission Reduction* lbs
- 34 gallons of gasoline not purchased
- Over \$100 saved in energy cost

How can you support more EVs

- Join the DEV stakeholder group
- Encourage work place charging for employees
- Support sustainability benefits to assist employee purchases,
- Sponsoring or attending EV demo days,
- Including EVs in future planning for facilities and operations.



<http://driveelectricvt.wordpress.com/>