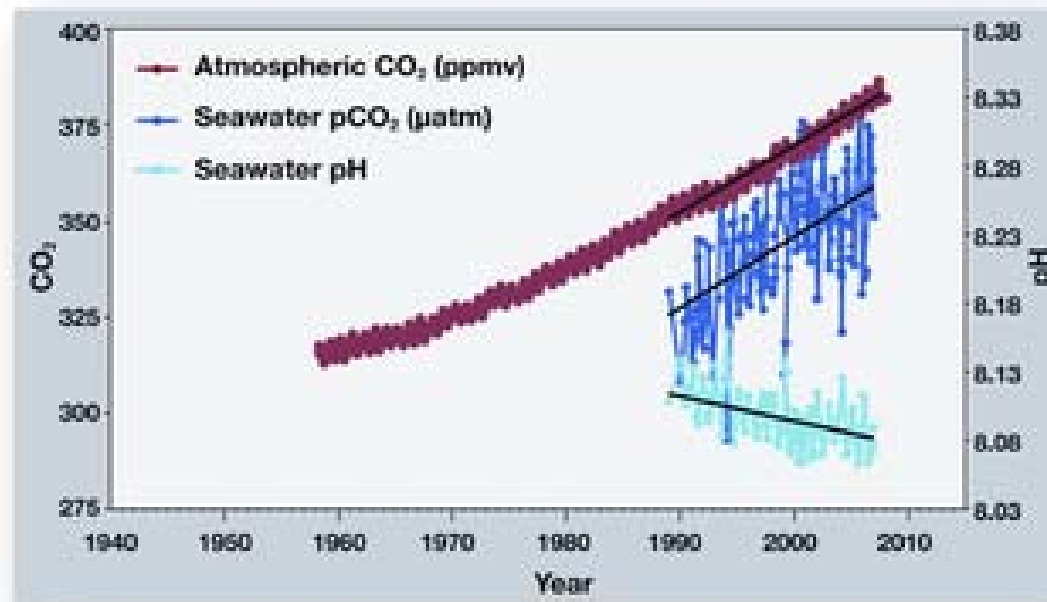




Why Wait for A Corporate Solution to Ocean Acidification

Home Owners Have an Economically
Viable Option That Reduces
Household Carbon Release by 50%

Is Ocean Acidification a Problem ?



This graph shows the correlation between rising levels of carbon dioxide (CO₂) in the atmosphere at Mauna Loa with rising CO₂ levels in the nearby ocean at Station Aloha. As more CO₂ accumulates in the ocean, the pH of the ocean decreases. (Modified after R.A. Feely, Bulletin of the American Meteorological Society, July 2008)

<http://www.pmel.noaa.gov/co2/story/Ocean+Acidification>

Reducing Household Carbon Footprint by Half



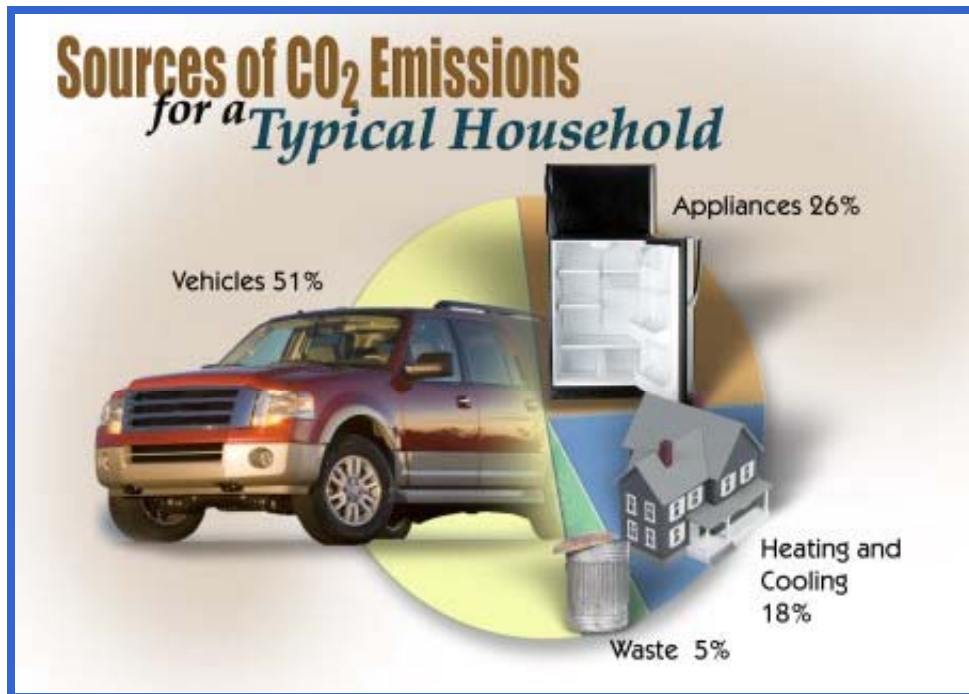
Energy retrofits reduce demand for household energy, but a 50% reduction is generally not possible from this investment.



A different fuel for household transportation can achieve this

- Reduce household carbon footprint by 50%

Half of Household Carbon Emissions are due to Transportation



<http://www.fueleconomy.gov/feg/climate.shtml>

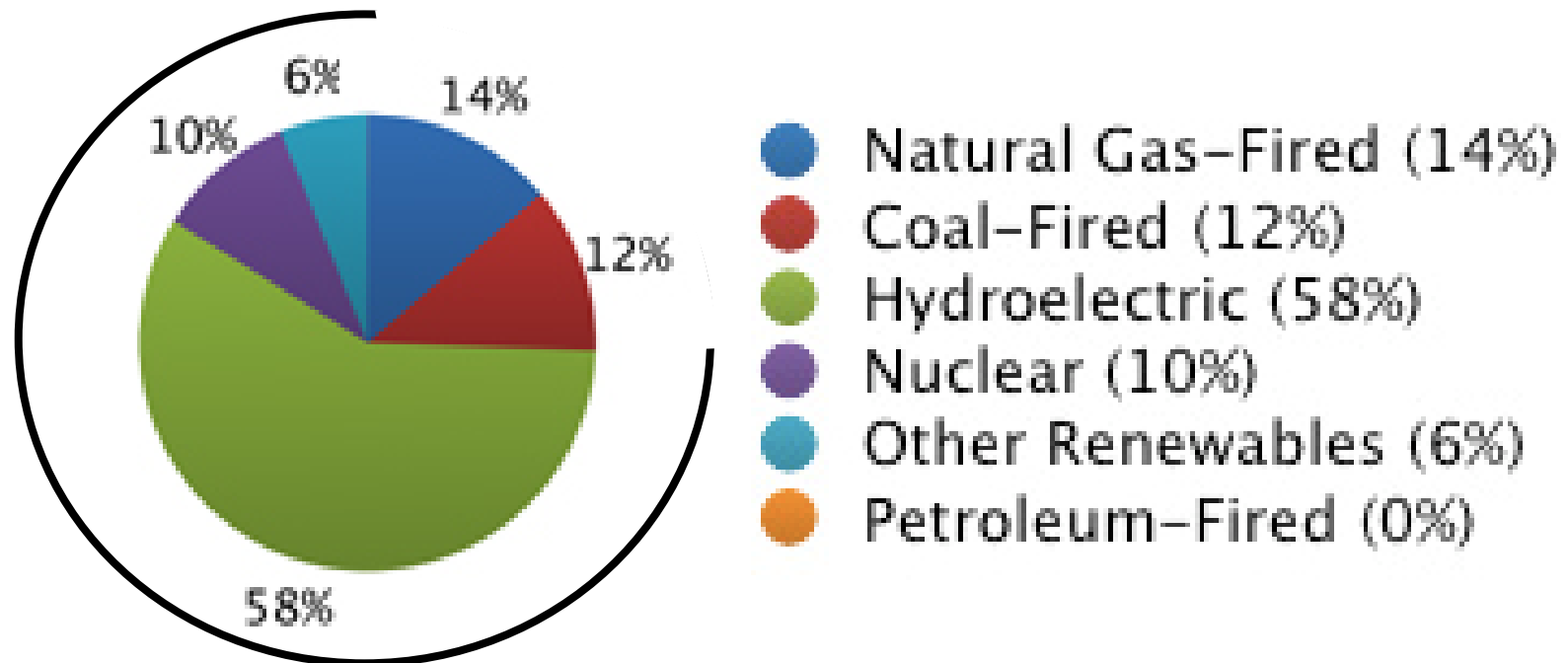
If household transportation is accomplished by Electric Vehicle, up to 50% of household CO₂ emissions are eliminated.

- National average is 2 cars per household
- WA utilities use little electricity from coal plants.

Clean Energy in Washington State



Washington's Electricity 2010



74% Non-carbon Energy

Ref: Institute for 21st Century Energy

http://www.energyxxi.org/pages/Energy_Tour_Washington_State.aspx

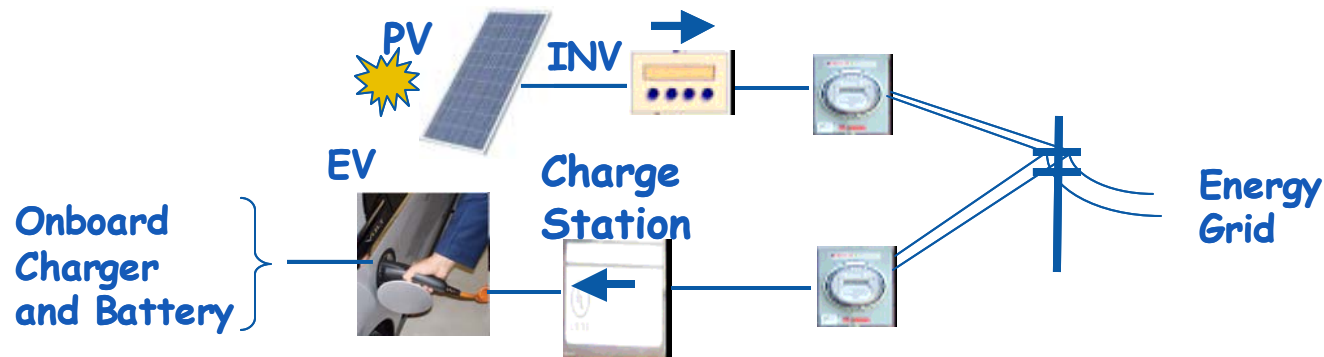
Homeowner rooftop PV is a local Climate Solution



With PV connected to the energy grid, energy is sent to the grid during the day and used to charge the EV at night.

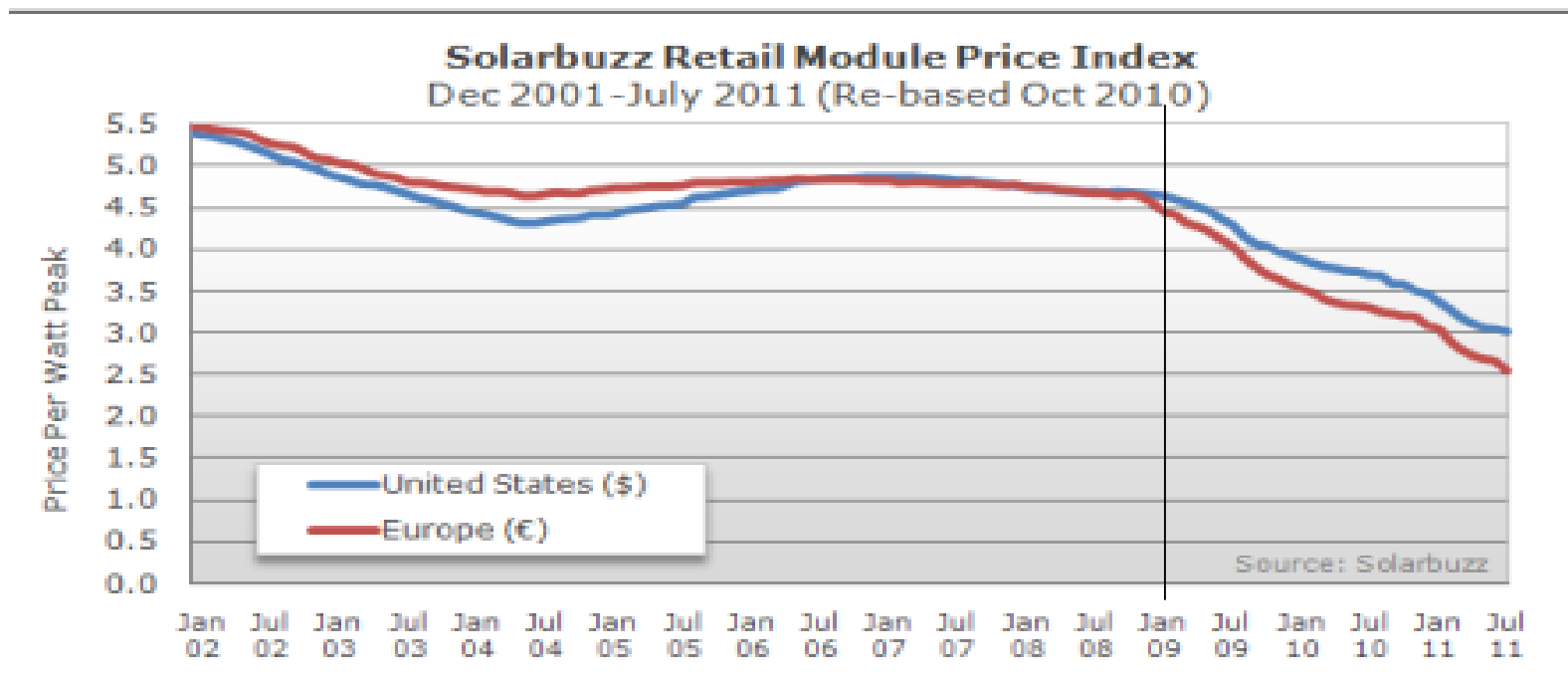
Panel to Vehicle (P2V)

Business, Home, Apartment, Parking Lot



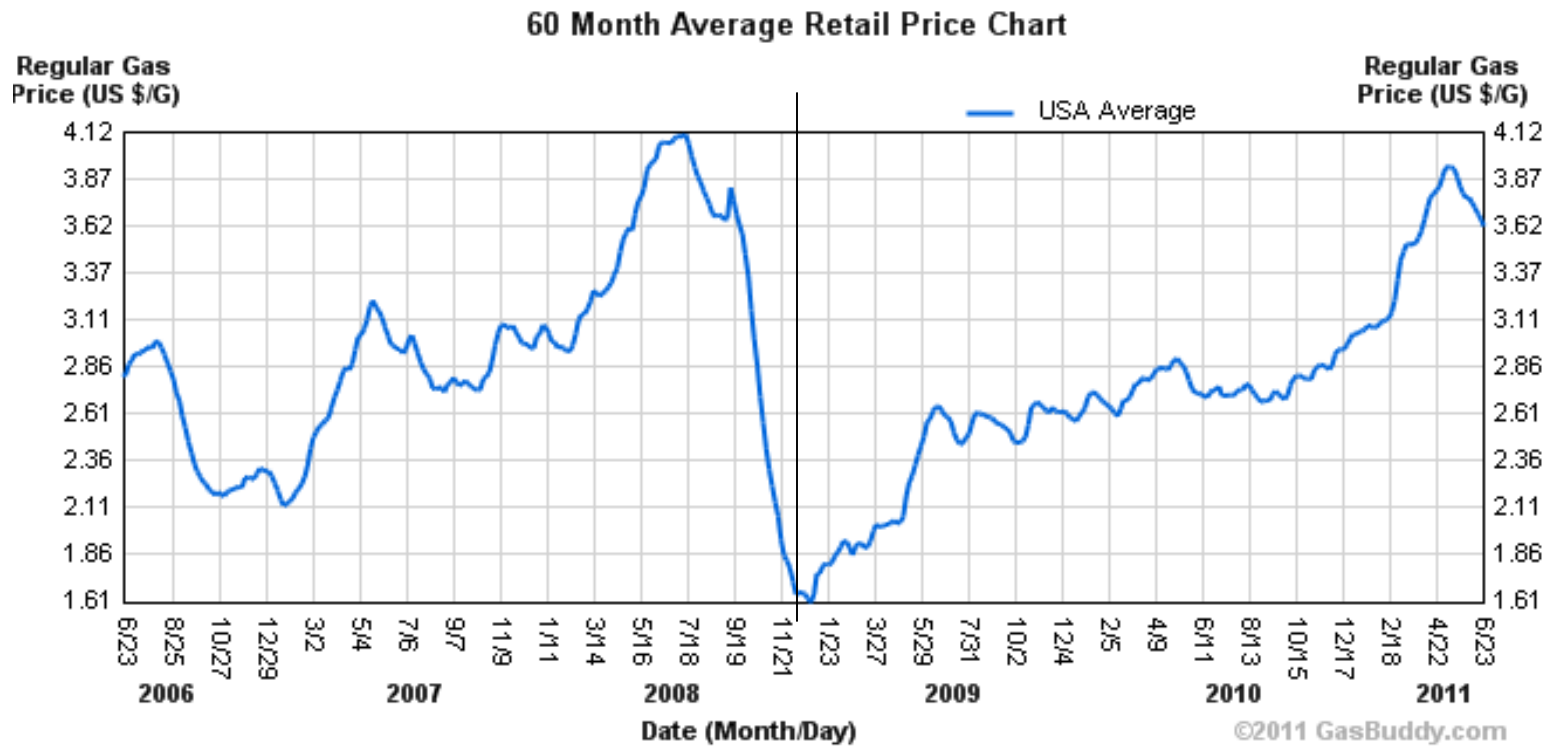
- 100% Clean energy
- No fuel cost
- Charge anytime from grid
- Isolated from utility rates
- Standard Charge Station
- Energy Feed-In Tariff pays off home PV installation costs
- **No transportation CO2 footprint**
- Petro fuel cost savings pay off home PV installation costs

PV Cost History



<http://solarbuzz.com/facts-and-figures/retail-price-environment/module-prices>

Gasoline Price History

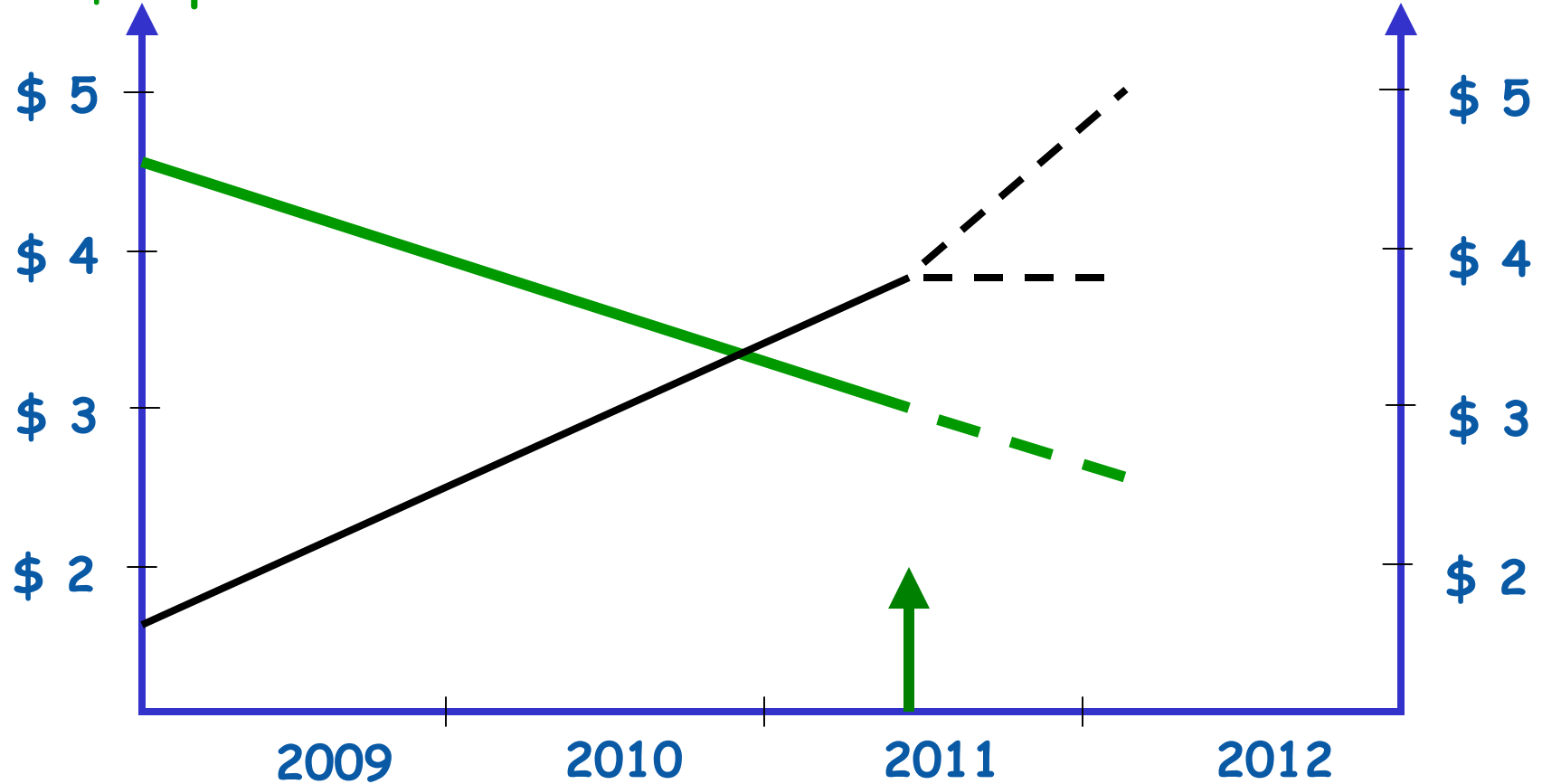


http://gasbuddy.com/gb_retail_price_chart.aspx

Cost Curve Intersection

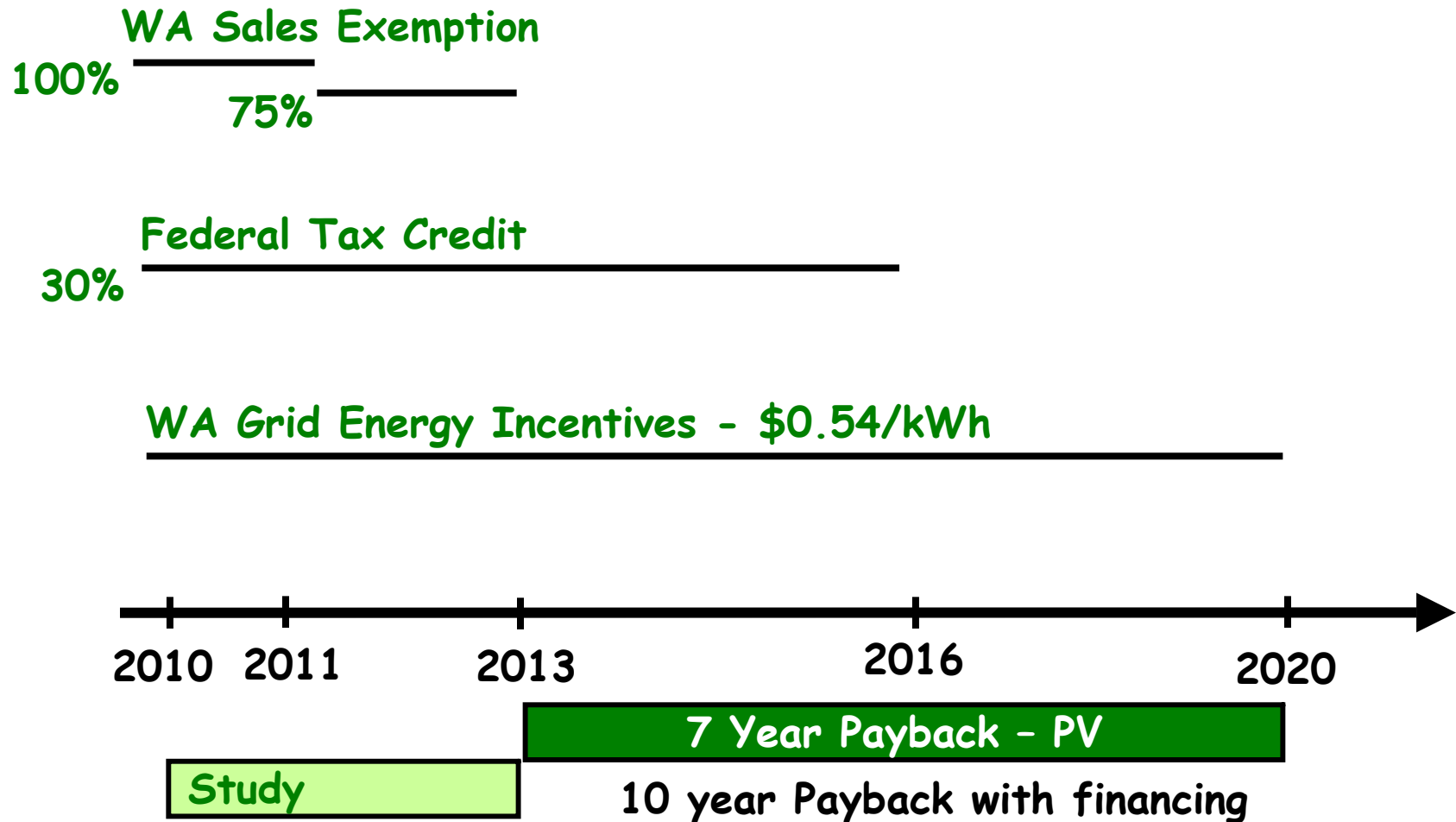


PV Module Cost
\$/Wp



NOTE Add PV installation cost of \$2/W

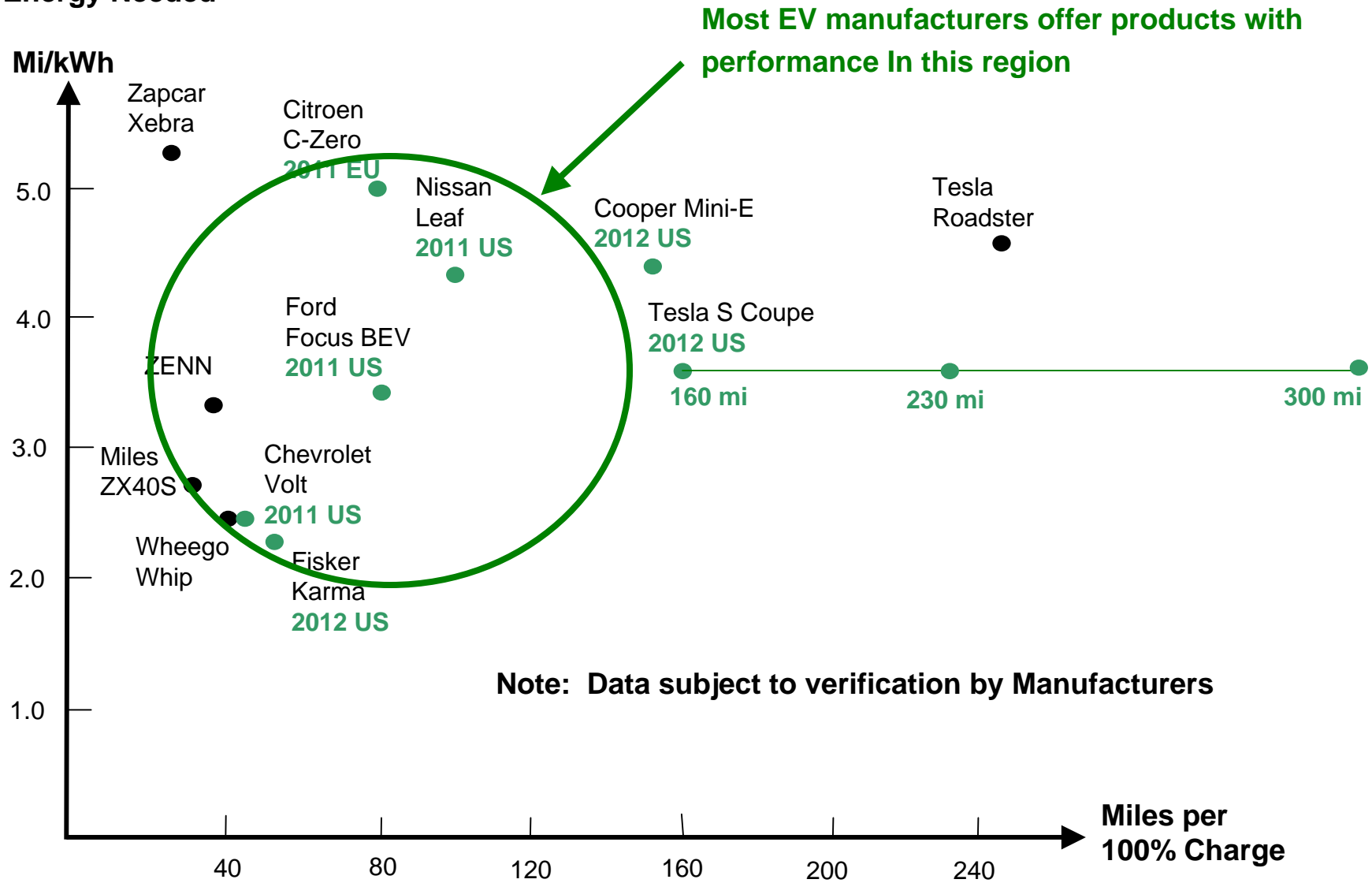
PV Incentives Don't Last Forever



About Electric Vehicles



EV Energy Needed



State Energy Mandate - Long Term



Washington I-937 (2006)

Compliance required regardless of utility need.

Amount of Renewables based on annual retail load:

- 3% by 2012
- 9% by 2015
- 15% by 2020

Utilities must acquire:

- Renewable Energy Credits (REC), and/or
- **Eligible Renewable Resources (MWh)**

Eligible Renewable Resources
• Wind
• Solar
• Geothermal
• Incremental Hydro
• Biomass
• Landfill Gas
• Ocean (wave, tidal)
• Bio Diesel



Notes

Households Consume 30% of Total US Energy



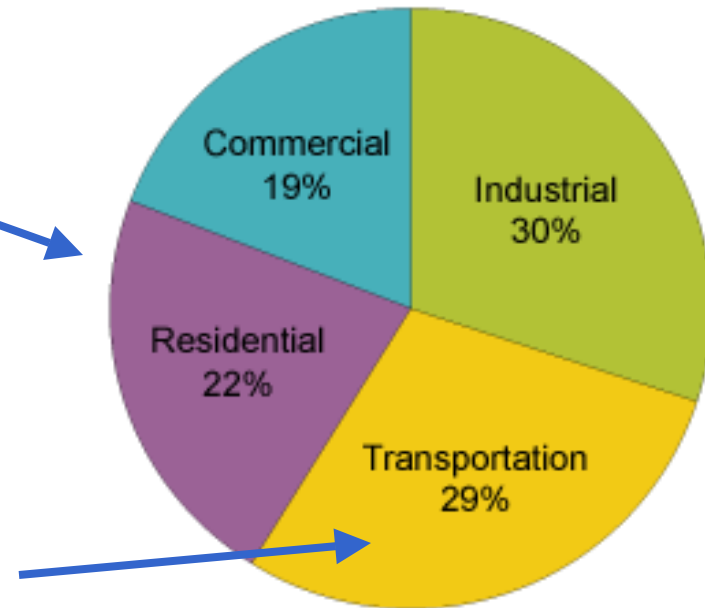
Residential energy consumption is 22% of US energy produced.

http://www.eia.gov/energyexplained/index.cfm?page=us_energy_use

The share of US energy used for Household transportation (cars + light trucks) is 29% of the Transportation segment (29% of 29%), or 8%

http://www.eia.gov/energyexplained/index.cfm?page=us_energy_transportation

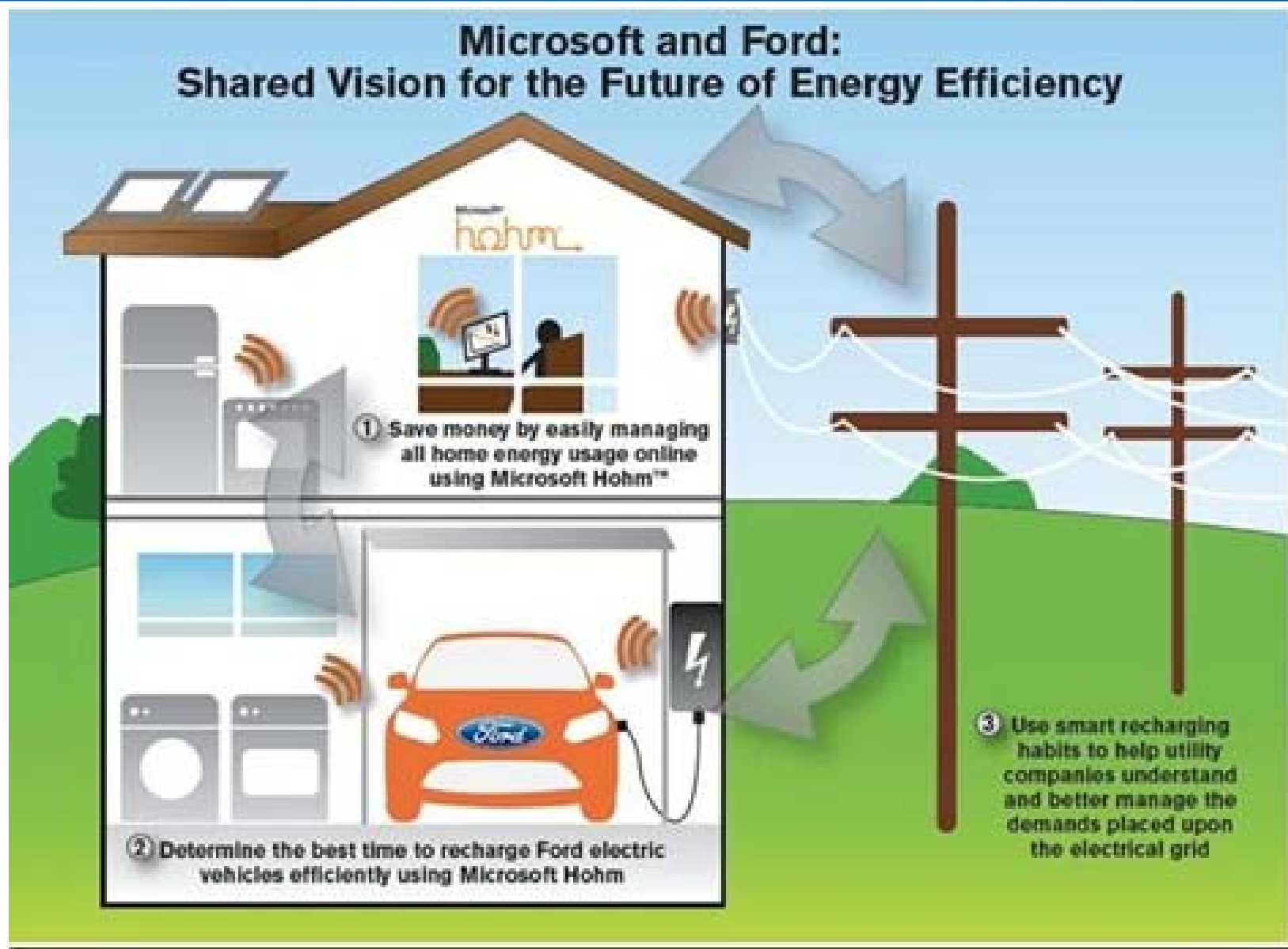
Share of Energy Consumed by Major Sectors of the Economy, 2009



Source: U.S. Energy Information Administration, *Annual Energy Review 2009*.

Including home and car the total Household energy consumption is 22% + 8% = 30%

Hohm Living Space over Garage





Mission:

Advocate for efficient distributed energy generation as well as early adoption of clean energy transportation for homes and businesses. Help transform the solar industry by providing accurate prediction of cost trends and performance.

better-energy-LLC.com

August 1, 2011

SEARCH "Renewable Gas Tank" - Solar WA