

# Opportunities to Invest In Affordable Housing and GHG Reduction Using Cap and Trade Revenues

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**California Housing Partnership**

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# Cap-and-Trade Auction Revenue

- \$200 million projected in 2012-2013
- \$400 million projected in 2013-2014
- Auction revenues are expected to grow over time
  - Free allowances reduced
  - Transportation fuels begin to be regulated
- Cap-and-Trade investments must meet Sinclair Nexus Test; must mitigate GHG emissions

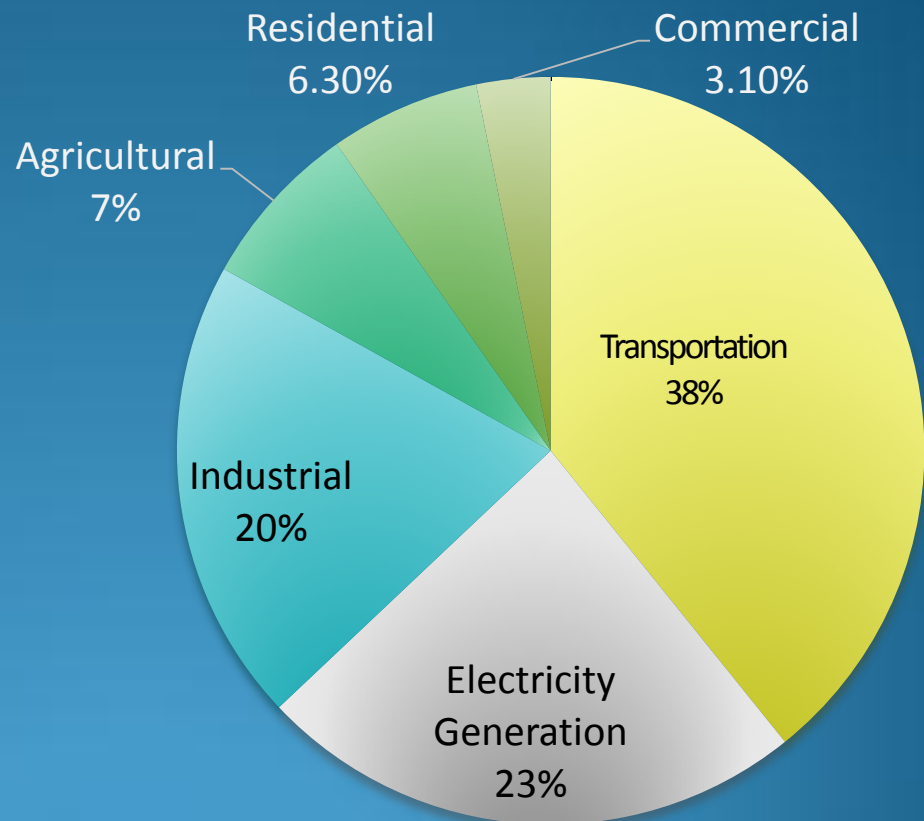
# How does housing fit in?

Two key ways investments in affordable housing can reduce GHGs and meet the Sinclair Nexus Test:

**Location Efficiency**  
**and**  
**Energy Efficiency**

# Greenhouse Gas Inventory

**Because transportation needs are driven in large part by where people want – and can afford – to live, increasing housing affordability affects transportation emissions by reducing vehicle miles traveled (VMT), which in turn reduces GreenHouse Gas emissions.**



Source: ARB Greenhouse Gas Inventory, 2009 Emissions by Economic Sector

# Moving to TOD Lowers Daily VMT and GHG Emissions

Average Daily VMT and GHG Reduction for Movers into TOD			
	Living Far from Transit	Living in TOD	Change living in TOD
Average Daily VMT	33.3 miles	23.5 miles	-9.8 miles
Average Daily CO <sub>2</sub> Emissions*	30.5 lbs.	21.52 lbs.	-8.98 lbs.

VMT reduction averages from survey of TOD movers in Robert Cervero, "Transit Oriented Development's Ridership Bonus: A Product of Self-Selection and Public Policies," \*assumes 0.916 lbs of CO<sub>2</sub> per mile using EPA guidelines

**Affordable TOD is likely to produce larger reductions in VMT and GHG for new TOD residents.**

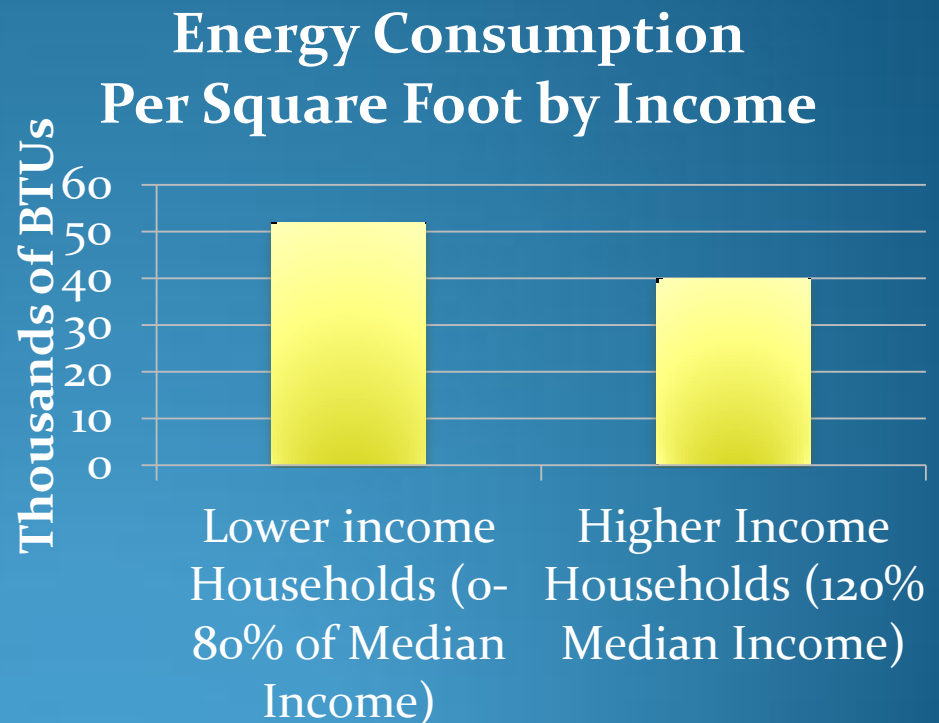
# Low Income Households: Far More Likely to Use Transit and Less Likely to Own a car

- Households with income <\$20,000/year are at least 4 times more likely to use transit than higher income groups
- Households with income <\$20,000/year are at least 5 times more likely not to own a car than higher income groups

Source: Pucher and Renne, “Socioeconomics of Urban Travel: Evidence from the 2001 NHTS”

# GHG Reduction Opportunity: Increasing Energy Efficiency in Affordable Rental Homes

- **Multifamily rental homes use less energy in general, but--**
- **Lower income households use 28% more energy per square foot than higher income households due to older less energy efficient appliances, as well as heating and ventilation systems.**



Source: Income, Energy Efficiency and Emissions: The Critical Relationship, Energy Programs Consortium 2008

# Existing Efficiency Opportunities in Rental Homes Serving Low Income

- **2.4 Million Existing multifamily dwelling units in California**
- **500,000 deed restricted affordable homes provide a pipeline of opportunity to reduce GHGs through Energy Efficiency.**



# Cap-and-Trade Investment Plan

- **\$100 million invested in HCD's TOD program would provide over 1,000 location efficient homes affordable to low income families and seniors, and save 3,000 metric tons of CO2 equivalent.**
- **\$10 million invested in low income multifamily energy efficiency programs would finance approximately 3,000 energy efficient homes, improve energy efficiency by 25% and save 3,800 metric tons of CO2 equivalent.**

Sources: Carbon calculations based on U.S. EPA Clean Energy Calculations and References; energy efficiency gains from EPA Region IX HERCC report.

# Triple Bottom Line

- Investing in new location-efficient Affordable TOD and improved Energy Efficiency in low income multifamily homes provides:
  - GHG Reduction Benefits
  - Improved public health
  - Lower costs to residents and building owners, helping to preserve affordable rents and provide financial relief.

# Contacts

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