



Housing and Climate Change

Housing opportunity is integral to advancing economic well-being, education and public health and managing climate change. This brief highlights the significant and varied ways in which policies that support housing affordability can actively contribute to reducing the negative impacts of climate change.

Residential development occupies the largest share of land use, affecting the regional development footprint and travel patterns.

Development patterns influence greenhouse gas emissions expended in the transportation sector via the proximity and connectivity of jobs and housing. Denser forms of development can *increase* the effectiveness of these relationships, while *reducing* travel time, travel costs, and the ghg emissions responsible for elevating the risks of climate change.

Location efficient affordable housing minimizes vehicle use with 20-40% reduction in VMT.ⁱ

Relaxed development standards and zoning requirements, i.e., smaller footprint and parking requirements, mixed uses, innovative ownership strategies and higher densities typical of affordable housing development strategies, have become increasingly attractive to market-rate developers, as well.

Studies document untapped potential for linking jobs proximate to housing, especially where economic centers diverge from government and finance as major employers. *Of equal importance* are the risks of failing to provide equitable housing options at all price points.

Research reveals increasing land values around a new transit station can trigger unintended consequences; dramatically increased rents (74%) and housing prices (88%) and reduced ridership (40%) compared to surrounding metro areas.ⁱⁱ

When feasible, lower income households will opt to pay the higher cost of housing for access to transit. Land use and housing strategies that encourage owner/renter ratios and equitable sales and rents to mirror the existing or developing employment sector, or “jobs-housing fit,” can preserve or increase the discretionary base of lower income households.

Transit accessibility is important for housing and jobs. Transit hubs record highest levels of ridership within a quarter to half mile radius. Studies reveal public transit ridership drops off dramatically after a distance of four miles from transit stations, particularly for those commuting to and from places of employment, as ridership generally depends on variables including quality, frequency of stops and travel time.

Preservation of existing affordable housing mitigates negative impacts on the economy and natural resources.

As the largest, single sub-sector of the construction industry, the housing sector affords



[Village at Market Creek, San Diego](#)

the greatest potential for maximizing the benefits of green technology. While the construction industry adds approximately two % new stock annually, pre-1980 construction is responsible for approximately 70% of building GHG emissions.ⁱⁱⁱ

Nationally, an estimated 4.5 million older buildings offer potential for renovation or adaptive reuse while capturing energy embodied in existing structures and taking advantage of existing infrastructure. Fewer new resources are required to bring a site back into operation.

Housing that is not built or preserved according to sustainability principles cannot continue to be affordable. According to HUD, where average rents in multifamily housing increased by 7.5% from 2001 to 2009, energy costs for these renters increased by nearly 23%.^{iv}

For lower income households, energy cost relative to income is twice that of other American households.

Energy retrofits ensure long-term economic viability and livability by improving the physical conditions of existing affordable housing stock, bring direct energy savings to those most in need, reduce energy consumption and carbon emissions, and demonstrate visible investment in economically disadvantaged communities.

Lower income households represent a smaller share of drivers contributing to ghg emissions.

Although land use patterns show people tend to follow jobs to reduce commutes, jobs follow people to attract customers and workers.

Lower income households are four times as likely to use transit as higher income groups.^v

Carless households are primarily responsible for lower transportation-related emissions. Owning and maintaining a vehicle consumes 60% of the lower income household budget, prompting a significantly higher share of affordable households to forego car ownership.^{vi}

Higher income households account for just over 2% of ridership.^{vii} Non-work related trips are less likely via public transit, and these “choice riders” tend to bring their personal vehicles with them when they relocate to the urban core. By contrast, lower income households account for nearly one third of all transit riders, and three quarters rely solely on public transportation.

Affordable housing is a synergistic catalyst for economically viable, sustainable development patterns, and energy efficiency.

As evidenced by LEED in Neighborhood Design projects to date, partnering tax incentive programs with other subsidy programs has catalyzed the development of affordable housing with reduced carbon footprints proximate to transit hubs, facilitating lower operations *and* maintenance costs.



Tassafaronga Village, Oakland

Sustainably designed transit-oriented development can stabilize living expenses for lower income households by restraining energy and transportation costs. Preserving and increasing housing choice for those most likely to use public transit will continue to contribute to the reduction of carbon emissions.

Investment in affordable housing integral to long range sustainable land use development reduces risk and uncertainty while increasing the personal net worth and purchasing power of lower income households. Affordable housing continues to be an anchor, economically and environmentally, at the forefront of land use planning.

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ⁱ U.S. Environmental Protection Agency, Smart Growth Program, p. 90, 2013, [Our Built and Natural Environments \[2nd ed.\]](#)

ⁱⁱ Dukakis Center for Urban and Regional Policy, p. 23 & 25, 2010, *Maintaining Diversity in America's Transit-Rich Neighborhoods: Tools for Equitable Neighborhood Change*

ⁱⁱⁱ Deutsche Bank Americas Foundation; Living Cities, p. 18, 2012, [Benefits of Energy Efficiency in Multifamily Affordable Housing](#)

^{iv} Deutsche Bank Americas Foundation; Living Cities, p. 15, 2012, [Benefits of Energy Efficiency in Multifamily Affordable Housing](#)

^v California Housing Partnership Corporation, p. 3, 2013, [Building and Preserving Affordable Housing Near Transit](#)

^{vi} California Housing Partnership Corporation, p. 7, 2013, [Building and Preserving Affordable Housing Near Transit](#)

^{vii} California Housing Partnership Corporation, p. 3, 2013, [Building and Preserving Affordable Housing Near Transit](#)