CALIFORNIA STATEWIDE PRELIMINARY SCENARIO RESULTS

BUSINESS AS USUAL: Growth pattern based on past trends. A significant portion of growth takes place at the edges of urban areas, with a fair amount of larger-lot single family development.

COMPACT GROWTH: Focuses a majority of growth in and around existing cities and towns and aligns with the housing demand profile presented in recent studies of California regions (details on following page).

2050 SCENARIO RESULTS

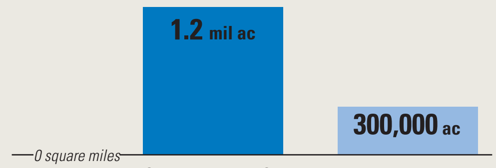
Scenarios analyzed using Calthorpe Associates' RapidFire Model (See reverse for assumptions.)

BUSINESS AS USUAL | **COMPACT GROWTH**

LAND CONSUMPTION

Trend development patterns will expand the state's urban footprint by 2050, consuming an additional 1.2 million acres of farmland, open space, and recreation areas. The Compact Growth scenario ***saves 860,000 acres*** of this resource.

Saves over 12 times the land area of the City of Fresno.

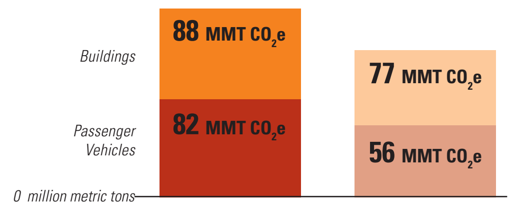


Cumulative Land Consumption to 2050

GREENHOUSE GAS EMISSIONS

More compact development patterns, along with more efficient cars and buildings, cleaner fuels, and a cleaner energy portfolio are all essential in reducing GHG emissions. The Compact Growth scenario prevents the release of ***37 million metric tons*** of carbon dioxide equivalent in 2050, or 22% less than a Business as Usual future.

GHG reduction equivalent to taking 18 million cars off California roads for a year.

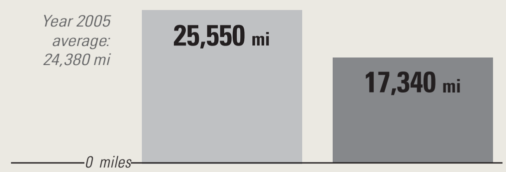


Annual Greenhouse Gas Emissions in 2050

VEHICLE MILES TRAVELED (VMT)

Automobile emissions account for about 40% of carbon emissions in California. The Compact Growth scenario, with more walkable, transit-oriented development, reduces passenger vehicle VMT by over ***2.9 trillion miles*** to 2050.

VMT reduction equivalent to taking ALL cars off California's roads for almost 10 years.



Annual VMT per Household in 2050

INFRASTRUCTURE COSTS

Infrastructure costs rise in line with land consumption, as dispersed development calls for longer extensions of sewers, water pipes, local roadways, and utility lines. Through 2050, the Compact Growth scenario ***saves more than $31 billion*** in infrastructure capital and operations and maintenance costs, about $6,300 per new housing unit.

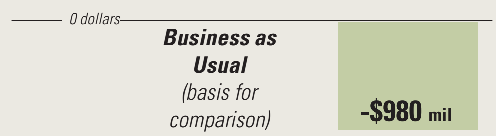
Saves $6,300 per new housing unit, or over $785 million per year.

Cumulative New Infrastructure Costs to 2050

PUBLIC HEALTH

Auto-related air pollution results in a spectrum of respiratory and cardiovascular health issues, leading to hospital visits, work loss days, and premature mortality. Health incidences, and their related costs, are reduced along with VMT. The Compact Growth scenario avoids ***75,000 health incidences and $980 million in health costs*** in 2035.

Less pollution avoids $980 million in health costs.



Annual Health Costs in 2035

HOUSEHOLD COSTS

More centrally located homes and more compact building types can dramatically reduce household driving and utility costs. Households in the Compact Growth scenario spend ***$6,500 less per year*** on auto-related costs and utility bills.

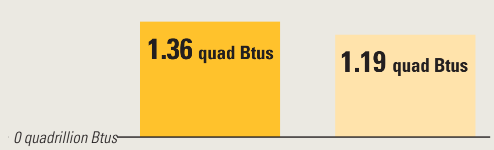
Saves $6,500 per household on annual auto costs and utility bills.

Annual Costs per Household in 2050

BUILDING ENERGY USE

Due to its greater proportion of more compact building types, the Compact Growth scenario ***cuts annual energy use in our homes and businesses by 12%***. This leads to lower household utility bills, greater energy security, and lower carbon emissions.

Saves enough energy annually to power over 2 million homes.



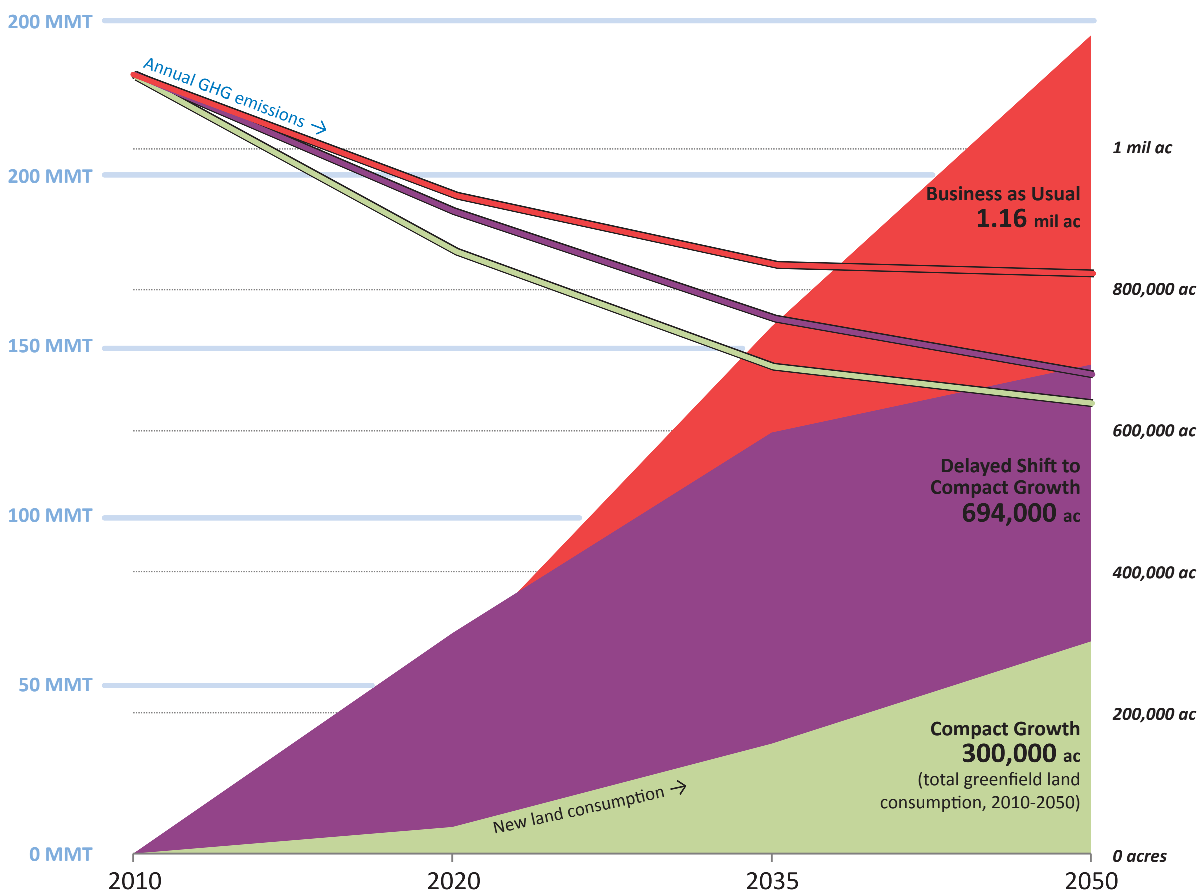
Annual Building Energy Use in 2050

Rev. 03-07-2013

LAND CONSUMPTION and GHG EMISSIONS TO 2050

GHG emissions from passenger vehicle transportation and building energy use vary significantly according to land use choices, as well as the timing of the shift to more compact development types. This chart shows growth in greenfield land consumption over time (represented by the lines) and GHG emissions from passenger vehicle transportation and building energy use over time (represented by the wedges) for three scenarios. More dispersed land uses result in higher greenfield land consumption and higher emissions. Timing plays an important role in emissions reductions, as demonstrated by the performance of the Delayed Shift scenario, which by 2050 achieves a similar development profile to the Compact Growth scenario but on a delayed timeframe.

GHG emissions for all scenarios decline over time due to policy-based assumptions about improvements in vehicle and fuel technology and building energy efficiency. The same assumptions are applied to all scenarios, so variations between scenarios are attributable to differences in land use. The impact of land use on GHG emissions is substantial, with the Compact Growth scenario preventing the release of ***37 million metric tons*** *of carbon dioxide equivalent annually in 2050, or 22% less than a Business as Usual future.*



Scenarios cover the State of California, with a projected population increase to 50 million people by 2050.

Housing demand profile of Compact Growth scenario based on:

- Nelson, Arthur C., 2011. *The New California Dream: How Demographic and Economic Trends May Shape the Housing Market*. Urban Land Institute. Available at www.uli.org/report/the-new-california-dream/
- Nelson, Arthur C., 2013. *A Home for Everyone: San Joaquin Valley Housing Preferences and Opportunities to 2050*. Council of Infill Builders. Available at councilofinfillbuilders.org/resources/valley-housing.html.

STATEWIDE SCENARIO ASSUMPTIONS:

Preliminary scenario results are calculated using policy-based assumptions for automobile and fuel technology, building energy and water efficiency, and energy generation and emissions. The assumptions used for these scenarios were developed in coordination with relevant state agencies to reflect the direction of adopted policy into the future. Assumptions for the year 2050 are as follows:

Transportation

- On-road passenger fleet average fuel economy: 37.2 mpg by 2050. (This reflects a passenger vehicle fleet mix (including sales rates and vehicle efficiency) that meets the Governor's Executive Order for 1.5 million ZEVs on the road by 2025. On-road new vehicle fleet average performance aligns with the EPA standard of 54.5 mpg by 2025, with the assumption that real-world fuel economy is typically a certain percentage lower.)
- Fuel emissions: 17.7 lbs per gallon.
- Fuel cost: $15 per gallon. (2012$)
- Auto ownership and maintenance: $0.40 per mile. (2012$)

Buildings and Energy Generation

- Energy and water efficiency of new buildings: 35% reduction from baseline usage rates for residential buildings, 60% reduction for commercial buildings.
- Energy and water use efficiency of existing buildings: 0.5% reduction, year-upon-year.
- Electricity emissions: 0.61 lbs CO_2e per kWh.
- Natural gas emissions: 11.7 lbs CO_2e per therm.
- Residential electricity cost: $0.35 per kWh. (2012$)
- Residential natural gas cost: $3.74 per therm. (2012$)
- Water cost: $1,634 per acre-foot. (2012$)

Public Health Impacts

- Estimated based on tons of criteria pollutants emitted, which in turn are estimated based on per-mile emission rates from the California Air Resources Board Emissions Factors (EMFAC 2011) model. Health incidence and valuation assumptions developed by TIAX, LLC for the American Lung Association (Oct 2011).

Fiscal Impacts

- Infrastructure costs are one-time costs that include the construction of streets, parks, water, and wastewater infrastructure. Operations and maintenance costs are ongoing costs that are incurred annually to maintain that infrastructure. Costs vary by dwelling unit type, and are based on data collected from a number of representative cities/areas in California.

All cost metrics are expressed in 2012 dollars.