

HOW DO PEVS BENEFIT CALIFORNIA?

Plug-in Electric Vehicles (PEVs) benefit all Californians by bringing cleaner air, energy security, fuel cost savings, and economic growth while leveraging the state's leadership in technology and innovation.

KEY MESSAGES

PEV Benefits Include:

- Improving air quality and lowering greenhouse gas (GHG) emissions, resulting in better health and productivity.
- Creating new clean energy jobs.
- Enhancing energy security and national security by lowering dependence on foreign oil imports.
- Providing fuel cost savings that can help stimulate the local economy.
- Leveraging California's culture of leadership in technology and innovation.

BETTER AIR QUALITY FROM PEVS MATTERS

- Transportation emissions are the primary source of carcinogenic particulate matter, air toxins and smog in California.
- The transportation sector is the greatest source of GHG emissions in California. Greenhouse gases cause climate change, and with thousands of miles of coastline, California is particularly vulnerable to climate change impacts.
- Low-income and minority communities are disproportionately affected by transportation emissions and therefore stand to benefit the most from cleaner air.

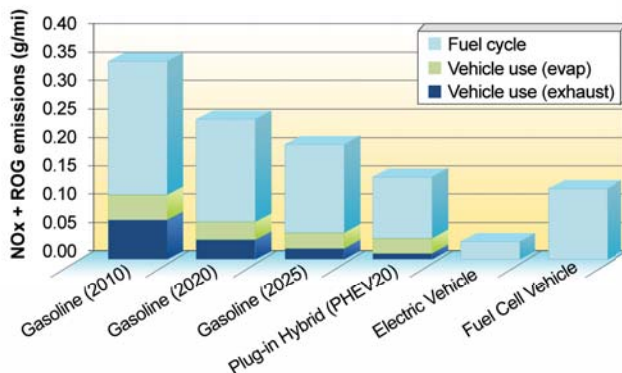
American Lung Association -- State of the Air 2011 Most Polluted Cities in America

Ozone (CA Cities: 8 of the Top 10)	Short-Term Particle Pollution (CA Cities: 6 of the Top 10)
#1 Los Angeles	#1 Bakersfield
#2 Bakersfield	#2 Fresno
#3 Visalia	#4 Los Angeles
#4 Fresno	#7 Visalia
#5 Sacramento	#9 Hanford (tie)
#6 Hanford	#9 Sacramento (tie)
#7 San Diego	
#9 Merced	

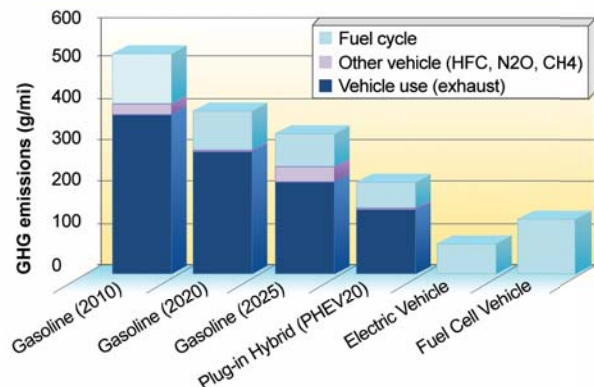
Source: California PEV Collaborative (CG1-1), American Lung Association in California, The Road to Cleaner Air, 2011.

PEVS DRAMATICALLY LOWER SMOG AND GREENHOUSE GAS EMISSIONS

SMOG FORMING EMISSIONS WELL TO WHEEL COMPARISON*



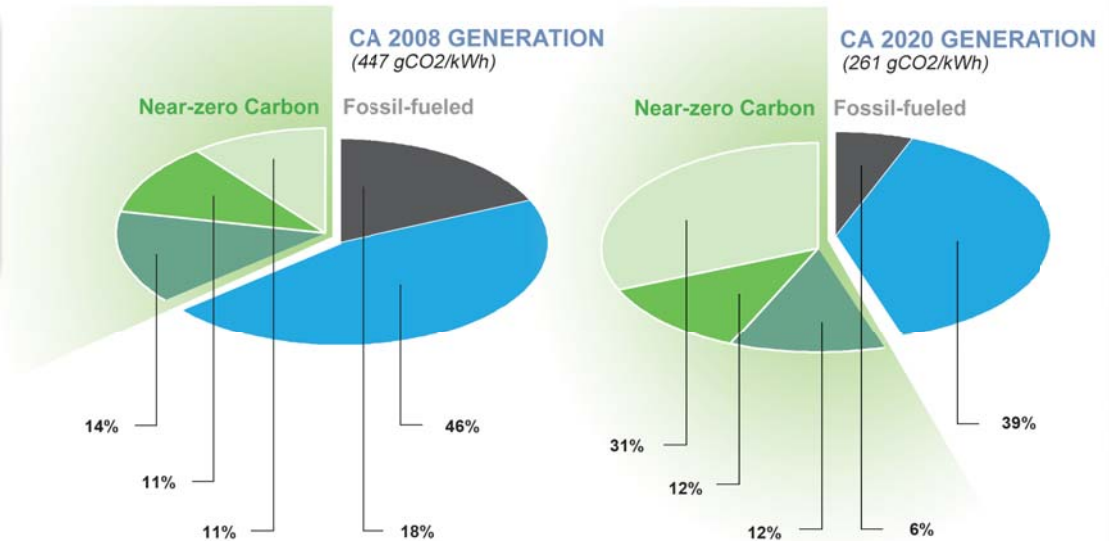
GREENHOUSE GAS EMISSIONS WELL TO WHEEL COMPARISON*



Source: California PEV Collaborative (CG1-2), California Air Resources Board, Advanced Clean Cars Summary, 2012. *Smog forming emissions include reactive organic gases (ROG) and oxides of nitrogen (NOx). GHG emissions include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) as well as HFC134a (a refrigerant used in some vehicle air conditioning systems). The Well to Wheel comparisons take into consideration emissions from production, distribution, and refining of fuels and the generation of electricity.

PEVs in California will offer continual improvements in air quality and greenhouse gas (GHG) emissions, as California's electricity grid becomes cleaner.

In 2008, California's electricity grid already had 35% lower carbon emissions than the United States grid. By 2020, California's electricity grid is expected to have 40% lower carbon emissions than in 2008.



Source: California PEV Collaborative (CG1-3). Taking Charge, California PEV Collaborative, 2011.

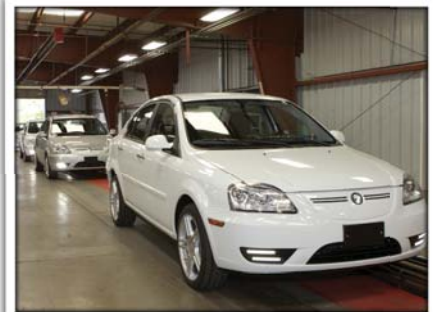
JOBS, ENERGY AND NATIONAL SECURITY, AND ECONOMIC GROWTH

New job creation and economic growth are propelled by California's leading role in the PEV and charging infrastructure industries.

- PEV job-related growth in California outpaces overall job creation, both over a 15 year period and, significantly, during the 2010 – 2011 economic downturn.
- In 2010 and in the first half of 2011, California attracted over 60% of total global venture capital investment in electric vehicle related sectors (\$1.3 billion).
- California is a global patent leader in electric vehicle technology.
- California PEV companies have re-started automotive manufacturing in the state. Manufacturing jobs account for over 50% of the jobs in the PEV sector, growing 130% between 2004 – 2010.



Tesla – Manufacturing plant, Fremont, California



CODA – Assembly line, Benicia, California

PEVs offer California greater energy and national security, while fostering California's transition to a clean energy economy.

- Because California's electricity is generated mostly in-state, from a wide variety of sources, PEVs provide Californians with "personal energy independence", by reducing their reliance on volatile world oil markets.
- Millions of transportation fuel dollars will go toward electricity generated mostly in-state rather than gasoline from foreign oil.

PEVs provide fuel savings to consumers, stimulating local economic growth.

- PEVs are more efficient and have lower relative fueling costs making them cheaper to operate than gasoline powered cars today.
- PEV fleets and drivers spend less on fuel, leaving businesses and families with additional income to spend on local goods and services. This reinvestment spurs economic growth in all sectors of the local economy.

CALIFORNIA LEADERSHIP IS ACCELERATING PEV MARKET SUCCESS



Chevrolet Volt

PEVs benefit from California's culture of leadership in technology and innovation.

- California has the most PEVs in the country.
- California's policies are leading the way in the global effort to produce the cleanest cars.
- California is ensuring that cities and towns throughout the state have charging infrastructure ready to support PEVs. The state is sponsoring over \$125 million in public, workplace, and DC fast charge infrastructure investments over the next few years.



Nissan LEAF™, PEV Parade, Santa Monica California 2011

CALIFORNIA CHARGES AHEAD

In 2012, Governor Jerry Brown strengthened the State's commitment to zero emission vehicles (ZEV) and infrastructure in order to protect the environment, stimulate economic growth and improve air quality. With an Executive Order, he established aggressive PEV vehicle and infrastructure targets that call for 1.5 million ZEVs and easy access to infrastructure for all Californians by 2025.














Source: California PEV Collaborative (CG1-4).

California PEV leadership is propelled by a wide range of entrepreneurs, Fortune 500 companies, high-tech start-ups, contractors, municipal safety officials, and a host of others who see opportunity in the clean energy economy. The California Plug-In Electric Vehicle (PEV) Collaborative, a multi-stakeholder public-private partnership, is working together to ensure a strong and enduring transition to a plug-in electric vehicle market in California. The Collaborative embodies all key California PEV stakeholders including elected and appointed officials, automakers, utilities, infrastructure providers, environmental organizations, research institutions and others.



Source: California PEV Collaborative (CG1-5).

RESOURCES

-  American Lung Association in California, The Road to Cleaner Air: Public Health and Global Warming Benefits of Advanced Clean Car Standards, 2011
www.lungusa.org/california
-  California Energy Commission
www.energy.ca.gov/drive/index.html
-  California PEV Collaborative, Taking Charge, 2010
www.PEVCollaborative.org
-  California PEV Resource Center – Advanced Clean Car Summary
www.DriveClean.ca.gov/PEV www.arb.ca.gov/msprog/clean_cars/acc%20summary-final.pdf
-  Consumer Reports, "LEAF and Volt Cheaper to Run than Gasoline Cars," December 2011
news.consumerreports.org/ca
-  Edison Electric Institute – Frequently Asked Questions About Electric Companies and Plug-in Electric Vehicles
www.eei.org
-  Electric Drive Transportation Association (EDTA)
www.GoElectricDrive.com
-  EPRI / NRDC – Environmental Assessment of Plug-in Hybrid Electric Vehicles, 2007
my.epri.com/portal/server.pt?space=CommunityPage&cached=true&parentname=ObjMgr&parentid=2&control=SetCommunity&communityID=404&RaiseDocID=00000000001015326&RaiseDocType=Abstract_id
-  Next 10 - For studies and data on PEV job-related growth and economic development:
www.next10.org
-  Press Release: Office of Governor Edmund G. Brown, Jr. March 23, 2012. "Governor Brown Announces \$120 Million Settlement to Fund Electric Car Charging Stations Across California; Issues Executive Order to Help Bring 1.5 Million Zero-Emission Vehicles Onto California's Roads"
www.gov.ca.gov
-  Press Release: California Air Resources Board re Advanced Clean Cars Program January 2012. For more information on Advanced Clean Cars, see: www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm