Electrifying Transportation

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California’s ambitious goals

- **5 million ZEVs** in CA by 2030
  - About 14,000 EVs needed in Ventura (~100,000 countywide)

- **250,000** vehicle charging stations
  - About 500 chargers in Ventura (~3,000 countywide)

- **$134 million** to fund EV charging infrastructure

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![Energy usage distribution chart](chart.png)

- 41% Transportation
- 23% Industrial
- 8% Agriculture
- 7% Residential
- 5% Commercial
- <1% Not Specified
- 6% Electricity IMPORTS
- 10% Electricity IN STATE

**429.4 MMTCO₂e**

2016 TOTAL CA EMISSIONS
Passenger vehicles = ~70% of transportation emissions in CA
Types of EVs

- **Pure Battery Electric Vehicles**: Powered exclusively by battery. Newer models typically have 150+ miles of range.

- **Plug-in Hybrid Electric Vehicles**: Have an internal combustion engine and an electric powered engine. Typically 30-50 miles on battery and a full gas tank.

- **Hybrid Electric Vehicles**: Non-plug in hybrids capture energy through braking system for greater fuel efficiency.

- **Fuel Cell Electric Vehicles**: Use hydrogen to produce electricity that powers the car. Not very common.
- Clean air/climate resiliency
- Comparable costs after incentives
- Electricity is far less expensive than gas ($1.20/gallon!)
- Maintenance cost savings
- 8-10 year or 100,000 mile battery guarantee
- Longer ranges and more infrastructure
- Will only get cleaner
More than 40 new models available!

Options include

- Full sized sedans
- SUVs
- Minivans
- Pick-up trucks coming soon!

View all options at: PlugInCars.com
### Cost comparison examples

<table>
<thead>
<tr>
<th></th>
<th>2008 Mazda CX-9</th>
<th>2019 Toyota Corolla</th>
<th>2019 Nissan Leaf</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Miles per gallon</strong></td>
<td>15 city/ 21 highway (mpg)</td>
<td>28 city/ 35 highway (mpg)</td>
<td>124 city/ 99 highway (mpg)</td>
</tr>
<tr>
<td><strong>Monthly costs</strong></td>
<td>$211</td>
<td>$118</td>
<td>$53</td>
</tr>
<tr>
<td>($3.20/gallon &amp;</td>
<td>($3.20/gallon &amp; $0.13/kWh;</td>
<td>($3.20/gallon &amp; $0.13/kWh;</td>
<td>($3.20/gallon &amp; $0.13/kWh;</td>
</tr>
<tr>
<td>1,2500 miles/month</td>
<td>1,2500 miles/month average)</td>
<td>1,2500 miles/month average)</td>
<td>1,2500 miles/month average)</td>
</tr>
<tr>
<td><strong>Monthly savings on</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>fuel</td>
<td>$158 (Mazda) OR $65 (Toyota)</td>
<td>$158 (Mazda) OR $65 (Toyota)</td>
<td>$1,892 (Mazda) OR $780 (Toyota)</td>
</tr>
<tr>
<td><strong>Yearly savings on</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>fuel</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Upfront Cost</strong></td>
<td>$6,000-8,000 (used)</td>
<td>$18,000-$24,000 (new)</td>
<td>-$29,000-$36,000 (new - before incentives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-$29,000-$36,000 (new - before incentives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-As low as $20,000 after incentives</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-$5,000-$10,000 for 2014-16 models</td>
</tr>
</tbody>
</table>

Visit [www.fueleconomy.gov](http://www.fueleconomy.gov) for more information.
# Combining different rebates in CA

<table>
<thead>
<tr>
<th>Rebate program</th>
<th>Standard rebate</th>
<th>Rebate for low or moderate income</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State Rebate*</td>
<td>Up to $2,500 (new - purchase or lease)</td>
<td>Up to $5,000 (new or used purchase)</td>
</tr>
<tr>
<td>SCE Clean Fuel Rewards</td>
<td>$1,000 (new or used)</td>
<td>$1,000 (new or used)</td>
</tr>
<tr>
<td>Vehicle retirement</td>
<td>$1,000</td>
<td>$1,500</td>
</tr>
<tr>
<td><strong>Total rebate amount possible</strong></td>
<td><strong>$4,500</strong></td>
<td><strong>$7,500</strong></td>
</tr>
</tbody>
</table>

*All rebates listed can be “stacked” except for the two state programs: CVRP and CVAP
Up to $7,500 in Tax Credit from the IRS available for some EVs*
Charging 101

Types of chargers:

• **Level 1**: 3-5 miles per hour of charge (standard 120v outlet)

• **Level 2**: 10-50 miles per hour of charge (240v, most common)

• **Level 3 (DCFC)**: 90-170 miles per 30 minute charge (public charging)

Free Volta charging at the Collection
Where can I charge?

At home: Level 1 or 2. Depends on your options and needs

Work: Level 1 or 2

School: Moorpark College, Ventura College, CSUCI

Public destinations: Level 2 or Fast Chargers. See PlugShare for (almost) all public options.

You can find more options at: www.plugshare.com or electricdrive805.org

Green = Level 1 or 2, Orange = Level 3
Do you currently own or lease a plug-in electric vehicle?

1,073 responses

- Yes, I currently own or lease a plug-in electric vehicle: 84.2%
- No, I do not own or lease a plug-in electric vehicle: 15.8%
If you had the ability to do most of your vehicle charging at work for the same cost as you charge at home, would you choose to do so?

170 responses

- Yes: 84.7%
- No: 11.8%
- I don't know and need more information
Would you consider purchasing or leasing a plug-in electric vehicle if you are in the market for a new or used automobile?

903 responses

- Yes, I would consider purchasing a plug-in electric vehicle: 60%
- No, I would not consider purchasing a plug-in electric vehicle: 40%
True or false?

- EVs are slower than ICE cars
- EVs are way more expensive than other cars
- EVs are unsafe and randomly catch fire
- Emissions associated with EVs are worse than gasoline
Lessons Learned

● Leasing and ridesharing vs personal EV ownership
● Access to charging and misconceptions are the biggest barriers
● If you build it, they will come
Would you consider an EV? Why or why not?
Do you have any questions or comments about EVs?