

The Electric Vehicle Evolution

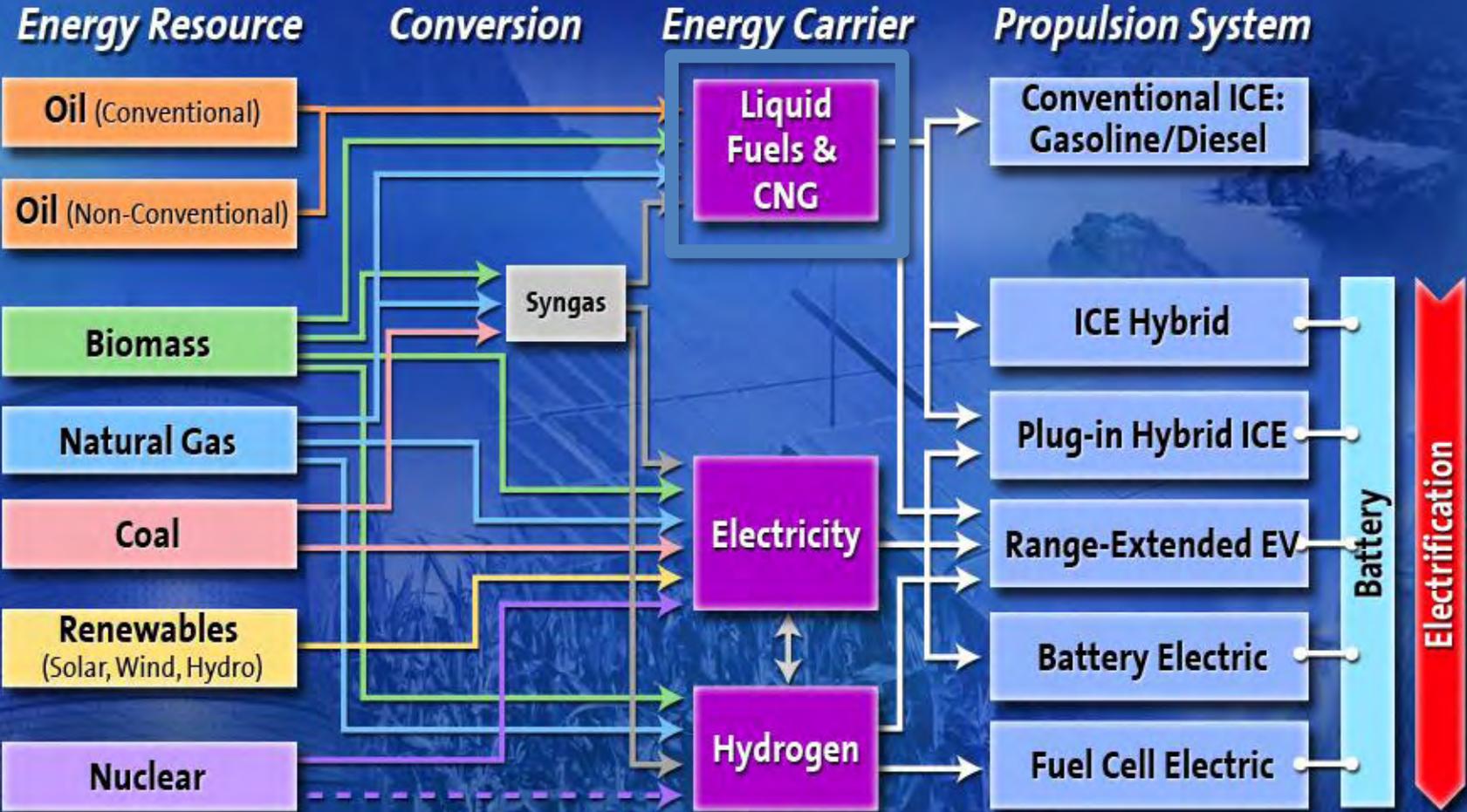


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ENERGY OPTIONS



CHEVROLET VOLT



CHARGING AND INFRASTRUCTURE



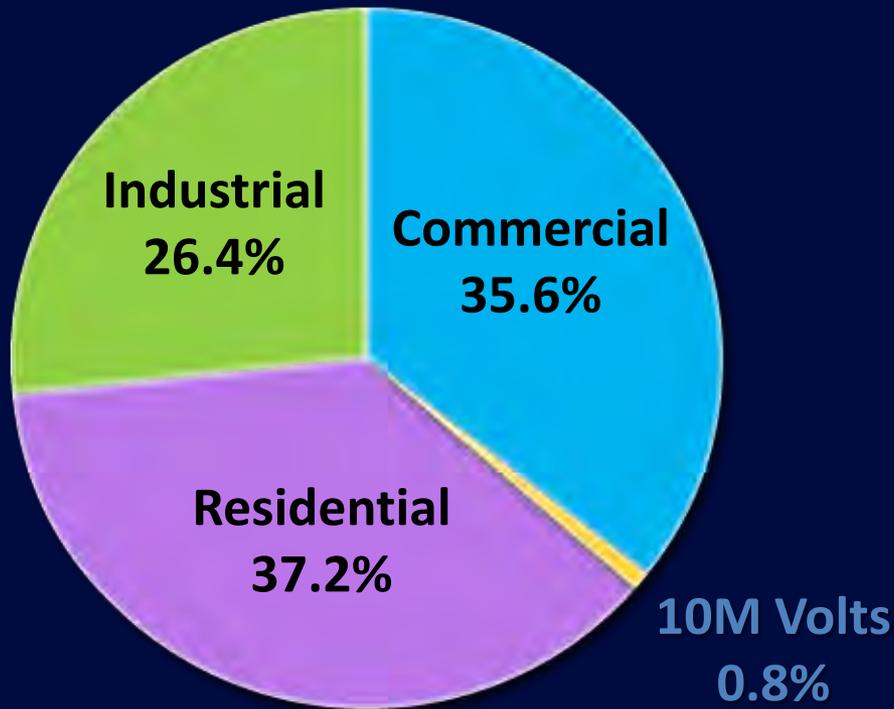
120V Cordset



240V Charge Station

- 120V (1.2 kW) charging – household outlet
- 240V (3.3 kW) charging – one-time investment
- Charger and control logic on board the vehicle

IMPACT ON THE GRID

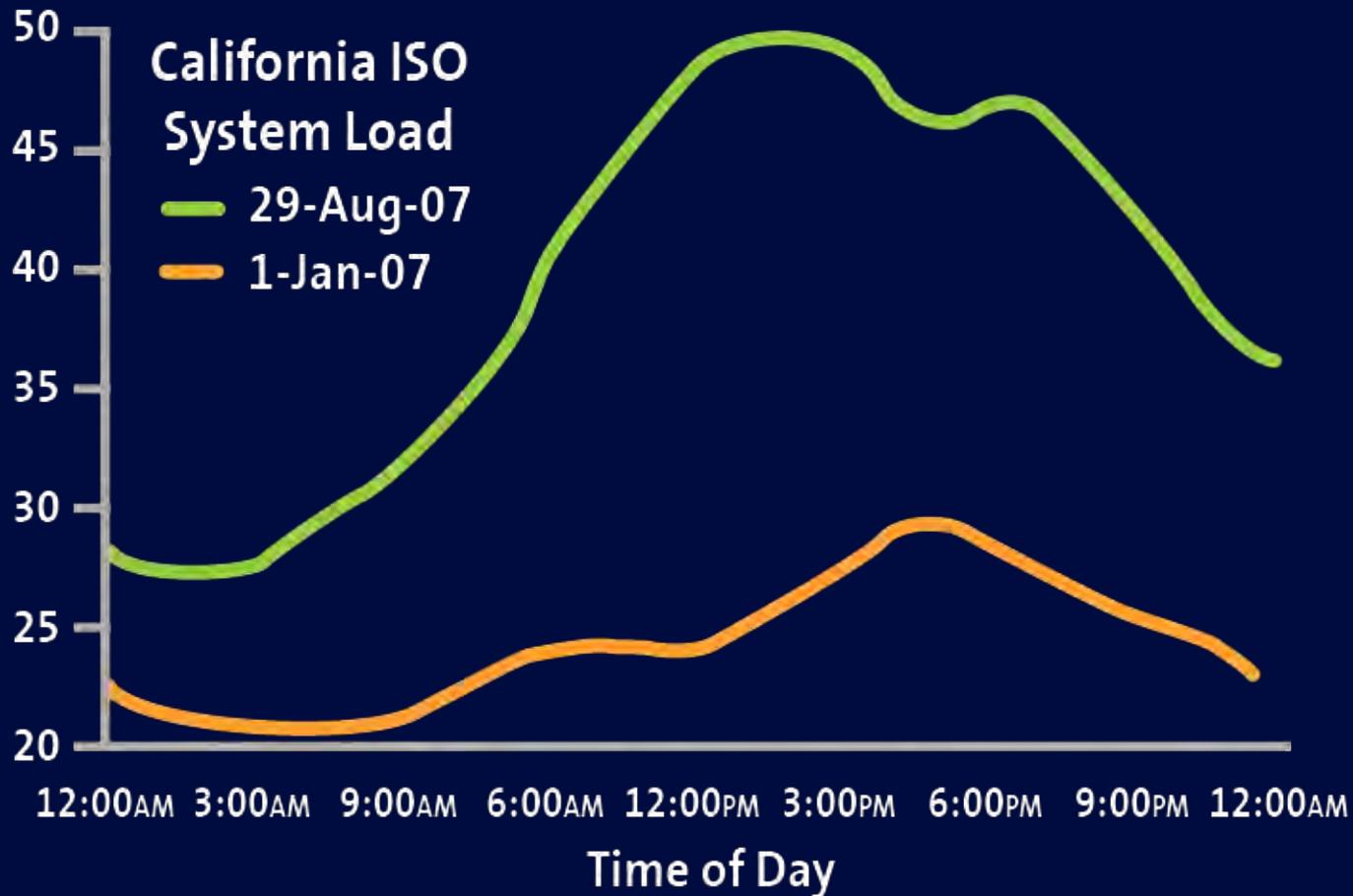


Electricity: An important energy source with significant capacity to support transportation

10 million Volts would add a load that is less than 1% of the current total grid load

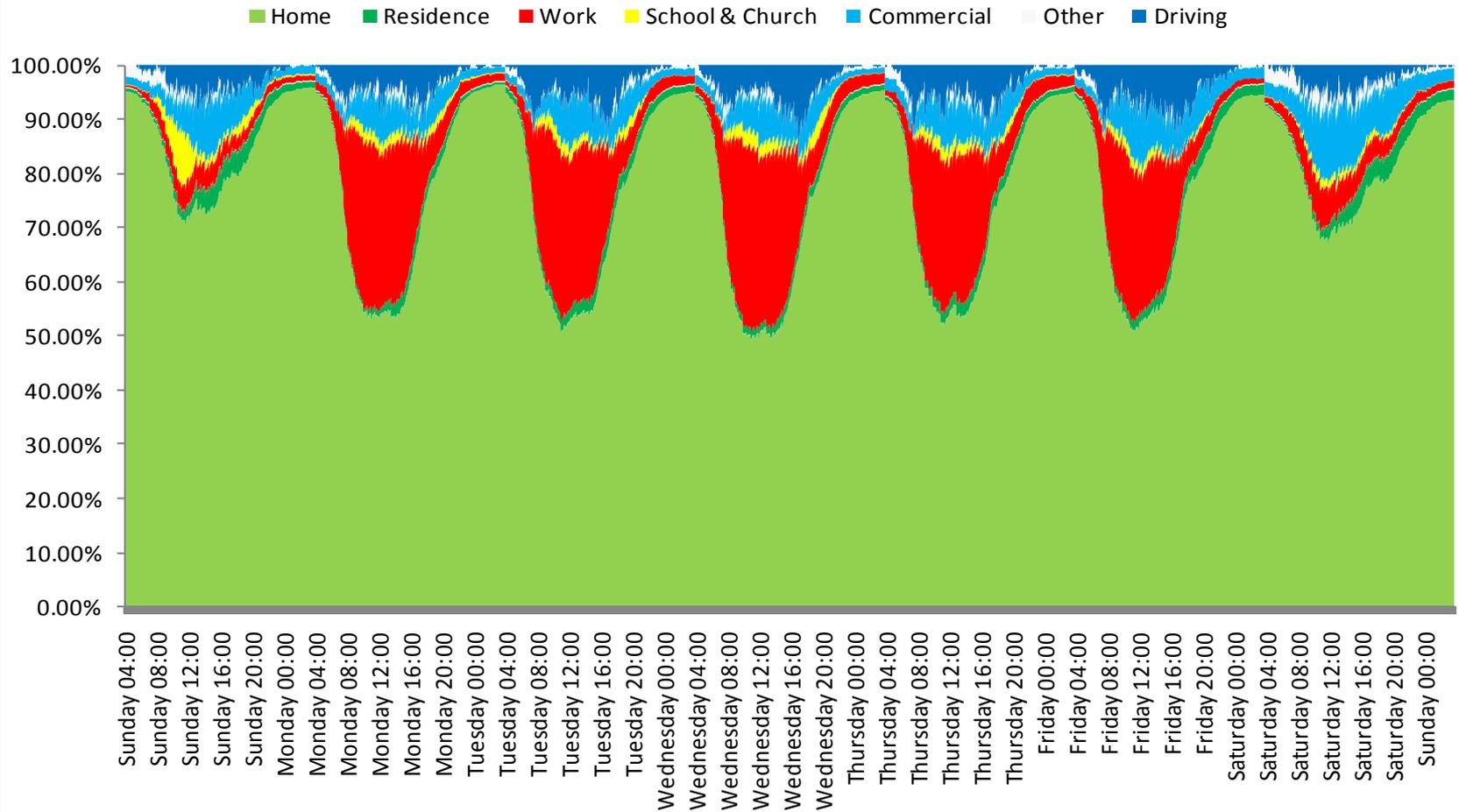
ELECTRIC GRID DESIGNED FOR PEAK DEMAND

VOLT LEVERAGES OFF-PEAK FOR CHARGING



WHERE ARE THE CARS?

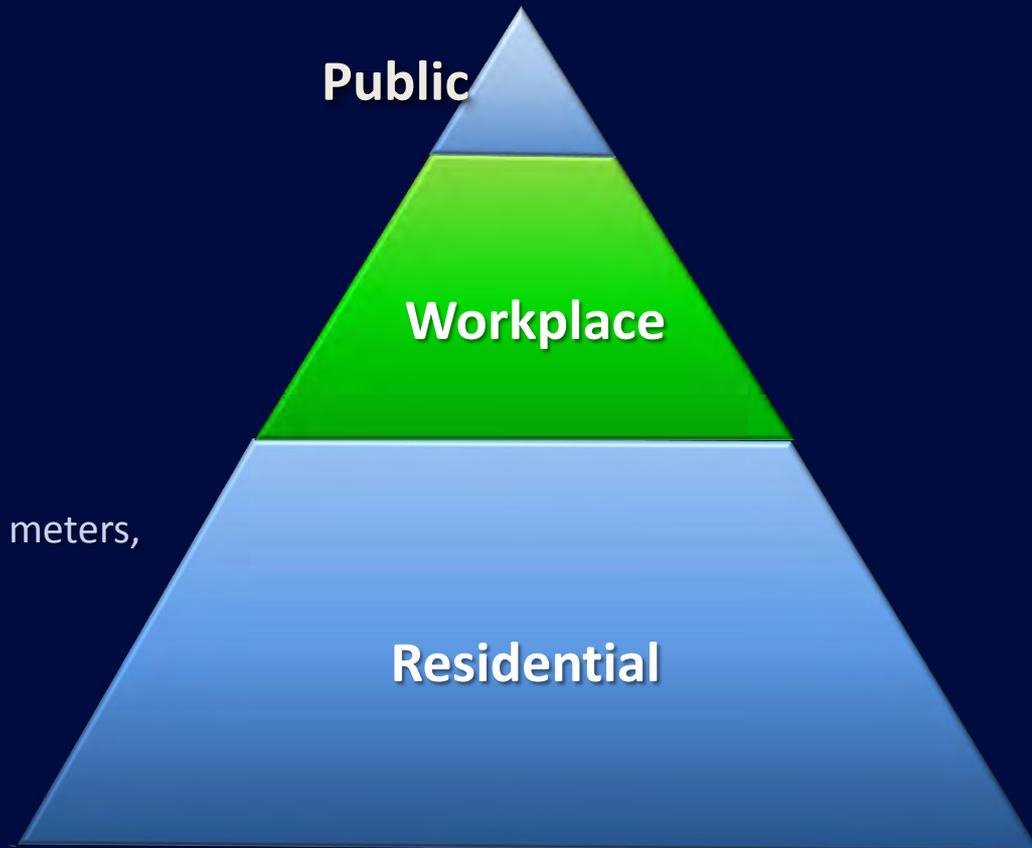
Fleet Distribution during week



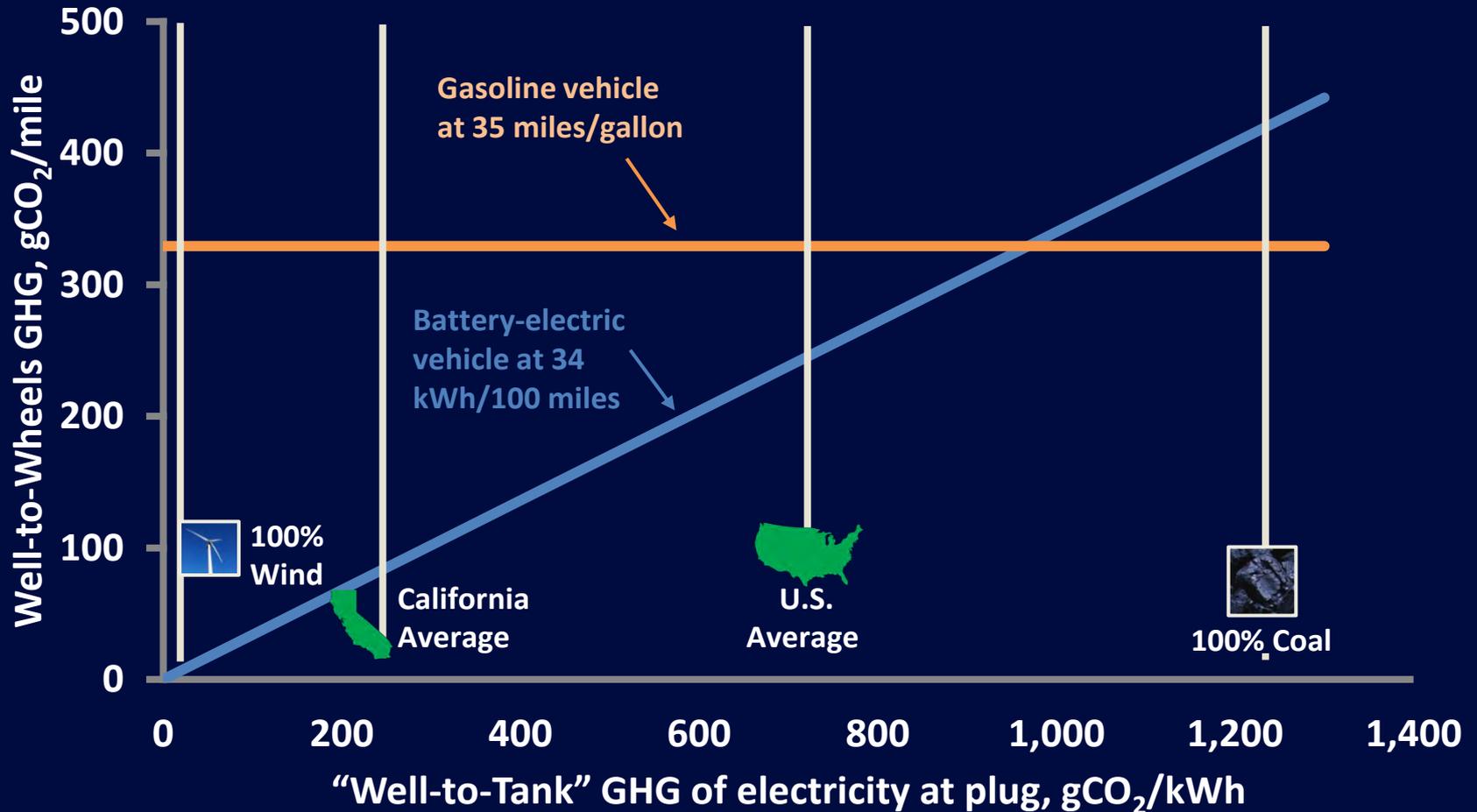
Source: 2001 National Household Travel Survey; GM Data Analysis (Tate/Savagian)– SAE paper 2009-01-1311

CHARGING INFRASTRUCTURE

- Public charging
 - High visibility
 - Commercial/Retail
 - Public education and outreach
- Workplace
 - Corporate, municipal parking lots
- Residential (majority)
 - Satisfying consumer-driven home installation process
 - Permits, electricians, inspections, meters, rates



GREENHOUSE GAS (GHG) BENEFITS OF BATTERY-ELECTRIC DEPEND ON ENERGY SOURCE USED BY GRID



PLUG-IN READY COMMUNITIES

Required Stakeholders

- Dedicated project leader
- State, city, county
- Clean Cities Orgs/AQMD
- DOT
- Utilities (municipal and regional)
- Regulators/public utility commissions
- Permitting and code officials
- Local employers
- Local universities



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HOME CHARGING INSTALLATION – MANAGING ENORMOUS OPTIONS AND VARIABILITY

Volt Customers



Home
Install
Service
Provider

Charging Hardware



GM
Voltec



Incentive Programs

Fed Tax Credit
(30% up to \$1,000)

DOE Programs



Time-of-Use Rates and Meters

- SCE
- PG&E
- SDG&E

Permitting and Inspectors

40,000
Jurisdictions!!
(JHAs)

PROJECT DRIVEWAY



PRODUCTION-INTENT
FUEL CELL SYSTEM



8,000
EVERYDAY DRIVERS

3,200,000
KILOMETERS
LOGGED

