

County of Sonoma California

DOCKET

09-ALT-1

DATE

RECD OCT 15 2009

General Services Department

Fleet Operations Division

David Worthington

Assistant Fleet Manager



Over 482,000 Residents
1,580 Square Miles in Size
2,557 Miles of Roads
61.90 % of Land Use is for Agriculture



Fleet Composition

- 1500 Vehicles and Equipment in Total
- 950 Automobiles and Light Duty Trucks
- 550 Medium and Heavy Duty Trucks , Off-Road Heavy Equipment, Tractors, Forklifts, Trailers, etc.
- 10 Million Miles Driven Last Year
- 14.5 Average MPG Last Year

- Hybrid Vehicle Program Results 2002 to April 2009
 - 3,221,903 Miles Driven
 - 50,,084 Gallons of Gasoline Saved
 - 546 Tons of GHG Reduced

- 2008-2009 Fiscal Year
 - 1,055,041 Miles Driven
 - 16,652 Gallons of Gasoline Saved
 - 181.5 Tons of GHG Reduced

HEV & EV Fleet Composition

- 201 Hybrid Electric Vehicles (HEV's) in Total
 - 62 Toyota Prius Hybrids
 - 55 Honda Civic Hybrids
 - 52 Toyota Camry Hybrids
 - 18 Ford Escape Hybrids
 - 14 Chevrolet Malibu Hybrids
- 6 Toyota Prius Plug-In Hybrid Conversion (PHEV)
- 2 More Toyota Prius Models Scheduled for PHEV Conversion
- 7 GEM Neighborhood Electric Vehicles (NEV's)
- 1 ZAP Truck NEV

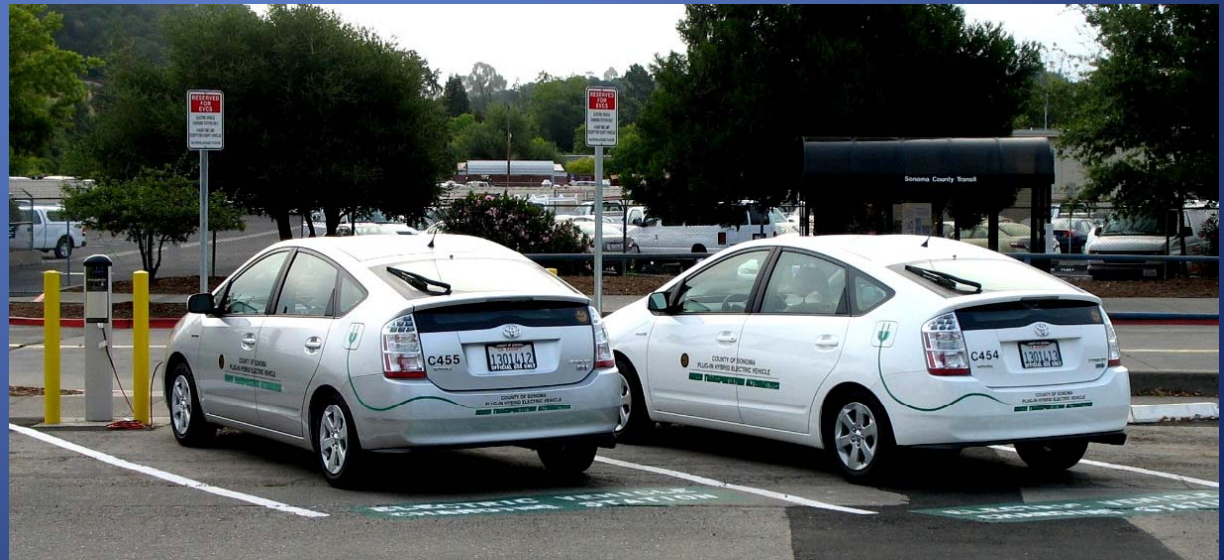
Proposed Fleet Additions in 2010 and 2011 Based on Potential Grant Funding

- 25 Toyota Prius PHEV's
- 50 + EV Automobiles with a 100 mile range
- 5 + HEV and PHEV Medium Duty Truck



Current EV Infrastructure

- 5 Level I Charging Stations in Operation
 - 4 Located on County Property in Santa Rosa
 - 1 Located at Northern Sonoma County APCD in Healdsburg
 - 4 Accessible to General Public
 - 4 Wire Ready for Level II Add-On Conversion
- 2 Level I Charging Stations Awaiting Landlord Permission to Install



Planned EV Infrastructure

We have requested funding of \$150,000 through the Department of Energy Block Grants. If funding is made available it will be used for the following:

- 5 Level I and II Charging Stations Located in Fleet Operations Motor Pool Parking Lot at County Center Campus
- 6 Level I and II Charging Stations Accessible by the General Public Located in Highly Visible Locations Around the County Center Campus
- 2 Level I and II Charging Stations Accessible by the General Public Located at Sutter Medical Center and Hospital
- 2 Level I and II Charging Stations Accessible by the General Public Located in Industrial Parks near the Charles M. Schulz Sonoma County Airport
- 16 of the 22 Charging Stations will be Accessible to the General Public

Additional EV Infrastructure Necessary to Support EV Rollout in 2011 and Beyond

- Current PHEV and EV Plan will require a minimum of 80 Level I and II Combination Charging Stations by the end of 2010
- Regionally, a minimum of an additional 90 to 100 Level I and II Combination Charging Stations will be necessary to fulfill the needs of the Sonoma County Local Government EV partnership which includes the County, the Sonoma County Water Agency, and all nine cities located in Sonoma County.
- A Majority of these Charging Stations would be Accessible to the General Public.

EV Infrastructure Capital Costs

- Average Cost of Installation is Estimated at \$10,000 per unit.
- Average Cost of a Level I and II Combination Charging Station is Estimated between \$3,000 and \$4,000 per unit.
- Level III Installation Costs are Estimated at more than \$25,000 per unit.
- The Cost of Installation is Reduced if Multiple Stations are Installed at the same Location.
- These Cost Estimates are Based on Sonoma County Owning the Property where the Charging Stations would be installed.
- The Regional Cost Estimate for the Installation of 180 Level I and II Combination Charging Stations Located on County and City Owned Property would be approximately \$2,500,000

EV Infrastructure Support Needed for a Successful Roll-Out

- Immediate Standard SAE Agreed Upon Level II and III Connectors
- Immediate Funding Made Available to Begin Infrastructure Installation Now. The First Wave of EV's and Production PHEV's will be Available in Less than a Year and a Half.
- Funding for the Conversion of HEV's to PHEV's.
- Funding for the Differential Cost Between EV's , PHEV's, and Current Market HEV's.
- Standardized Local and Regional Permit Process for the Infrastructure Installation.
- Regulatory Changes that allow Users to be Charged for the Exact Amount of Electricity Consumed During the Charging Process.
- The Ability for Users to Charge at Different Manufactured Charging Stations and Only be Billed Through One Vendor. (I.E. Cell Phone Roaming Charges)
- Funding for Training Programs to Educate the Current Technician Workforce in EV, and PHEV Technologies.

The Future of EV's in Sonoma County

- 200 + Charging Station Network in 2010 throughout Sonoma County
- Goal of 1,000 EV's County Wide





Thank You

www.sonoma-county.org