



The 27th INTERNATIONAL  
ELECTRIC VEHICLE  
SYMPOSIUM & EXHIBITION.

Barcelona, Spain  
17th-20th November 2013

# GETTING THE SAN FRANCISCO BAY AREA READY FOR ELECTRIC VEHICLES

Jack P. Broadbent, Executive Officer  
Bay Area Air Quality Management District

Organized by



Hosted by



In collaboration with



Supported by



- **Introducing BAAQMD**
- **Why Electric Vehicles (EV)?**
- **Setting Policy - Promoting EV adoption**
- **Grants - Jumpstarting the EV market**
- **Planning - Getting ready for mass deployment**
- **Coordination – Keeping in step**
- **Results & Recommendations**

Organized by



Hosted by



In collaboration with



Supported by



## Who is the Bay Area Air Quality Management District (BAAQMD)?

- Established in 1955, oldest air agency in California, USA
- 7 million population
- 9 Counties
- 5,340 square miles
- Mission: To protect and improve public health, air quality, and the global climate



Organized by



Hosted by



In collaboration with



Supported by



## Why Electric Vehicles?

- 5 million on-road vehicles
- Region has intermittent poor air quality
- On-road vehicles a major contributor to poor air quality/greenhouse gases
- Population, Goods Movement, vehicle ownership expected to grow through 2020
- Zero tailpipe emissions vehicles are the key to clean air



Organized by



Hosted by



In collaboration with



Supported by



- 1990s - BAAQMD supported the unsuccessful EV deployment in North America
- 2010 - Auto manufacturers signal reintroduction of EV in California
  - Reintroduction a direct result of robust State and local policy framework
  - BAAQMD – adopts Mobile Source Measure (MSM) A-2 - Zero Emission Vehicles (ZEV) and Plug-in Hybrids (MSM A-2) as part of 2010 clean air plan.
  - This policy requires BAAQMD to commit incentives funding, establish partnerships with private, local, state and federal agencies to promote the purchase of EV and to expand charging infrastructure

Organized by



Hosted by



In collaboration with



Supported by





# Jumpstarting the Market

**In order to achieve policy goals, a multiyear investment plan was required to:**

1. Invest in EVSE infrastructure to allay public fears such as range anxiety
2. Provide subsidies to bridge the gap between early EV adopters and mass-market adoption.

- **\$6.5 million Initial program for public and residential level II (240 V) EVSE:**
  - 200 publicly available Level II EVSE installed by 2012
  - 1,500 residential Level II EVSE installed by 2012 (vehicle purchase required)
  - Funding leveraged federal, state, local and private monies often at ratios of 4 to 1 and higher
- **BAAQMD has committed a further \$6.25 million in 2013 to invest in:**
  - DC fast-charge EVSE, workplace, and multi-family unit dwelling EVSE
  - 3,000 additional BEV in Bay Area by the end of 2014

Organized by



Hosted by



In collaboration with



Supported by



# Getting Ready for Mass Deployment

- Several EV and EVSE deployment efforts commenced in the Bay Area at the same time in 2011/12
- Issues – many of the 109 city and County governments in the San Francisco regions needed help preparing new zoning, planning, inspection, permitting and land use guidance for EV and EVSE
- BAAQMD and partners secured a \$1 million planning grant to get the state of California “PEV ready”
- Plan provided for the development of:
  - Best practices guidelines on building codes, permitting and inspection, zoning, parking, and local ordinances for cities and counties
  - Overview of all regional deployment efforts
  - A siting analysis for future EVSE based on vehicle adoption
  - Recommendations on stakeholder training and education and consumer outreach
  - Recommendations on minimization of impacts to utilities
  - Recommendations on policy actions, incentives and coordination

Organized by



Hosted by



In collaboration with



Supported by



- **Plan identifies all of the deployment efforts in the Bay Area**
- **BAAQMD and partners establish a regional coordinating council:**
  - EV industry (auto manufacturers and EVSE providers),
  - local and regional governments,
  - Nongovernmental Organizations
  - Utilities.
- **BAAQMD also coordinates with state wide organization – California Plug-in Electric Vehicle Collaborative**
- **BAAQMD acts a nexus between state of California policy and local policies**

Organized by



Hosted by



In collaboration with



Supported by



### **Results:**

- 10,000+ EV vehicles in the San Francisco Bay Area – highest per capita adoption rate in United States
- 1,200 publicly installed level II (240 V) EVSE
- EVSE siting guide and EV best practices document are currently available to city and County governments
- EV deployment is now a cornerstone of strategy to reduce greenhouse gases in the Bay Area by 15% per capita by the year 2030.

### **Lessons learned:**

- Plans must have clear, measurable and actionable items with near and long-term goals that can be implemented by local governments
- Coordination and partnership between private and public sector, regional and local governments, community and nongovernmental organizations is essential to supporting EV deployment
- Incentive funding and nonmonetary incentives are key to transforming EV purchasers from early adopters to mass-market consumers
- Strategic location and deployment of EVSE creates public confidence in the technology
- Local governments should invest in training, readiness and planning to further mass adoption of EV
- Education and outreach are key elements to ensuring the public interest and understanding of EV

Organized by



Hosted by



In collaboration with



Supported by



# evs|27

## QUESTIONS

Organized by



Hosted by

**AVERE**

**WEA**



In collaboration with

**EVAP**

**EDTA**



Supported by