

Electric Vehicles Project

Luofei Yan

Background

- ▶ The cost of transportation is the second highest household expense in low income families
- ▶ Historic legacy---redlining
- ▶ Environmental justice people are concentrated in less desirable areas, such as close to highways
- ▶ Therefore, initiation of electric vehicle program would benefit the environmental justice group

Learning from California

- ▶ Car Sharing Program

- ▶ Blue LA

- ▶ 100% electric car sharing

- ▶ Partnering with LA DOT to deliver 100 electric vehicles and 200 charging points by 2018

- ▶ Our Community CarShare in Sacramento

- ▶ Residents have access to electric cars by the hour

Learning from California

- ▶ Incentives
 - ▶ Community Housing Development Corporation (CHDC)
 - ▶ Up to \$5,000 buy down
 - ▶ Special financing up to \$15,000
 - ▶ Interest rate up to 8%
 - ▶ Enhanced Fleet Modernization Program (EFMP)
 - ▶ Retire Only : \$1,500 to low income motorists
 - ▶ Retire and Replace: up to \$4,500 to low income motorists

Learning from Pennsylvania

▶ Alternative Fuels Incentive Grant Program

- ▶ Provides rebates to consumers for the purchase of plug-in hybrid, plug-in electric, natural gas, propane and hydrogen fuel cell vehicles
- ▶ Rebate amount
 - ▶ Electric and electric hybrids:
 - ▶ **\$1,750 rebate** for a Plug-In Hybrid Electric Vehicle (PHEV) or Battery Electric Vehicle (EV) (battery system capacity must be equal/greater than 20 kWh).
 - ▶ **\$1,000 rebate** for a PHEV or EV (battery system capacity must be between 10 kWh and 20 kWh).
 - ▶ **\$750 rebate** for a PHEV or EV (battery system capacity less than 10 kWh).
 - ▶ Natural Gas and Propane:
 - ▶ **\$1,000 rebate** for a Natural Gas (CNG) fueled vehicle
 - ▶ **\$1,000 rebate** for a Propane (LPG) fueled vehicles
 - ▶ Hydrogen:
 - ▶ **\$1,000 rebate** for a Hydrogen and/or Fuel Cell vehicles

Commonwealth of Massachusetts

- ▶ Massachusetts Offers Rebates for Electric Vehicles (MOR-EV) 2016
 - ▶ Open to all residents
 - ▶ Aims to provide air pollution emission reductions for MA by increasing the use of electric vehicles
 - ▶ Funded through Regional Greenhouse Gas Initiative auction proceeds, administered by Center for Sustainable Energy in San Diego (CHEAPR)
 - ▶ Up to \$2,500 rebates for purchase or lease of plug-in hybrid light-duty vehicles

CHEAPR (Connecticut Hydrogen Electric Automobile Purchase Rebate) Results (CSE)

- ▶ \$1.4 million in rebates, 602 rebates have been given out
- ▶ 1,380 metric tons of CO2 reduction
- ▶ 85 dealerships

California Clean Vehicle Rebate Project Results (CSE)

- ▶ 200,000 rebates, totaling \$440 million
- ▶ 340+ events and workshops
- ▶ In San Francisco, 4,600 test drives

Commonwealth of Massachusetts

- ▶ Pilot Massachusetts Low Income Rebate Program (Fall 2017)
 - ▶ Aims at gathering data to help design future programs
 - ▶ DOER is seeking Low Income Home Energy Assistance Program (LIHEAP) recipients who would be eligible for \$5,000 rebates

Commonwealth of Massachusetts

Rebate amount

| Vehicle Types | Definition | Energy Source | Rebate Amount* |
|----------------------|--|--------------------------|-----------------------|
| BEV | Battery Electric Vehicle | Electricity | \$1,000 - \$2,500 |
| FCEV | Fuel Cell Electric Vehicle | Hydrogen fuel cell | \$1,000 - \$2,500 |
| PHEV+ | Plug-in Hybrid Electric Vehicle with battery capacity \geq 10kWh | Electricity and gasoline | \$1,000 - \$2,500 |
| PHEV | Plug-in Hybrid Electric Vehicle with battery capacity $<$ 10kWh | Electricity and gasoline | \$1,000 - \$2,500 |
| ZEM | Zero-Emission Motorcycle | Electricity | \$750 |

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, layered effect.

Special Thanks
to
Linda Benevides and Professor Reibstein

Sources

- ▶ Brugge Doug
http://www.scholarsstrategynetwork.org/sites/default/files/ssn_basic_facts_brugge_on_particulate_air_pollution.pdf. Retrieved on December 5, 2017.
- ▶ Manaugh K, Badami MG, El-Geneidy AM. Integrating social equity into urban transportation planning: a critical evaluation of equity objectives and measures in transportation plans in North America. Transport Policy, 2015.
- ▶ Sandler R, Pezullo PC. Environmental Justice and Environmentalism: The Social Justice Challenge to the Environmental Movement. Published in 2007.
- ▶ For more information from CA and PA programs:<https://www.arb.ca.gov/msprog/aqip/solicitations.htm>