Transportation Electrification

Creating synergy with local, regional, and state planning goals

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Scope of Forthcoming Whitepaper

**Purpose:** Explore how utility and transportation planning can align on the local, regional, and statewide levels to promote widespread transportation electrification and its associated benefits

**Information of interest:**

- Major sources of transportation funding
- Criteria used to allocate revenue
- Processes that could consider electrification projects
- How utilities’ electrification programs can better accommodate or complement regional needs

**Basic premise:**

CPUC is not alone in promoting transportation electrification and could work with other agencies to establish a framework for coordinated local regional, and state-level efforts to address barriers and leverage funding.
Methodology

- Identified non-ratepayer transportation funding sources and planning authority processes that could support transportation electrification
- Assessed local and regional agencies’ preferred strategies to reduce transportation emissions
- Reviewed pilot reports and Regional EV Readiness Plans.
- Interviewed transportation experts within local, regional, and state planning agencies

From a transportation planner’s perspective, reducing GHG involves:

1. Promoting fuel efficiency or fuel-switching
2. Reducing overall vehicle miles traveled
3. Capacity and operations management
Ecosystem of Transportation Planning Jurisdictions

MAP-21/U.S. Department of Transportation Funds

CA State Transportation Agency
Taxes, Fees, & Revenues

Regional Plans
Metropolitan Planning Organizations & Regional Transportation Planning Agencies identify projects

Inter-Regional Plans
Caltrans identifies projects i.e. highway & rail expansion

GHG Programs
- High Speed Rail
- Transit & Intercity Rail Capital Program
- Low Carbon Transit Operations Program

City and County General Funds & Tax Revenues

Sustainable Communities Strategies, approved by CARB and CA Transportation Commission

AB 32 Greenhouse Gas Reduction Fund from Cap & Trade Program
Transportation electrification requires local & regional planning partners.

Travel demand is driven by the regional economy, which drives the demand for heavy-duty, light-duty, rail, and off-road vehicles.

Municipal government land-use decisions shape regional travel behavior, so a one-size-fits all solution would not likely meet needs.
More Takeaways

- Utilities could take a more active role in supporting local governments’ applications for federal funds (regarding electrification projects).

- Local and regional governments’ unique funding plans reflect their own preferred greenhouse gas and mobile-source pollutants reduction strategy.

- City governments are critical partners because they shape local and regional transportation needs, and they have zoning, building code, project permitting, and inspection authorities.

- Transportation demand for inter-regional, intra-regional, and intra-city travel reflect specific economic needs, requiring flexibility in electrification strategies, involving diverse partners.
Snapshot – San Joaquin Valley

- Air district encompasses 2 Caltrans districts, 8 counties, and 8 Metropolitan Planning Organizations
- Counties of San Joaquin, Madera, Fresno, Tulare have county-specific transportation/transit programming using county sales tax revenue
- PG&E, SCE, and publicly owned utilities
- Electric transmission constraints in Fresno Local Capacity Area
- Major highway corridors include Interstate-5 and Highways 99
- Significant portion qualifies as Disadvantaged Communities per CalEnviroScreen
- Economic dependency on agriculture results in severe air quality impact from off-road equipment and freight movement, among others.
Snapshot – City of Long Beach

- Air quality concerns have promulgated electrification strategies at the Port of Long Beach

- City government is currently pursuing changes in local ordinance to support installation of electric vehicle charging stations

- Mix of industrial, commercial, and residential areas connected through highways, a seaport, and an airport

- Heterogeneous social economic demographic with both affluent neighborhoods and disadvantaged communities.