



# Transportation Electrification (SB 350)

## Utility Integration of Electric Transit Vehicles

**Noel Crisostomo**  
**Amy Mesrobian**

*Energy Division*

*California Public Utilities Commission*

**Electric Utility Workgroup**  
**Air Resources Board**  
**April 8, 2016**





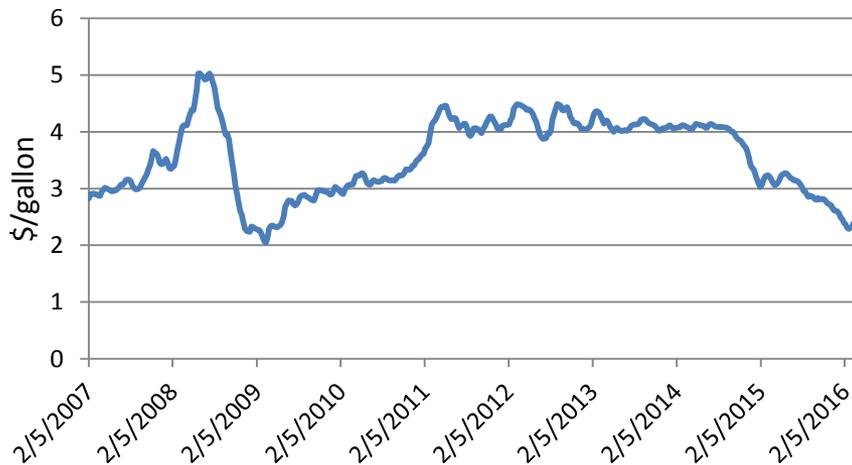
# Agenda

- CPUC role
- CPUC policies relevant to Transit Agencies
- Senate Bill 350 overview
- Next steps & upcoming events in Alternative Fuel Vehicles Rulemaking (R.) 13-11-007

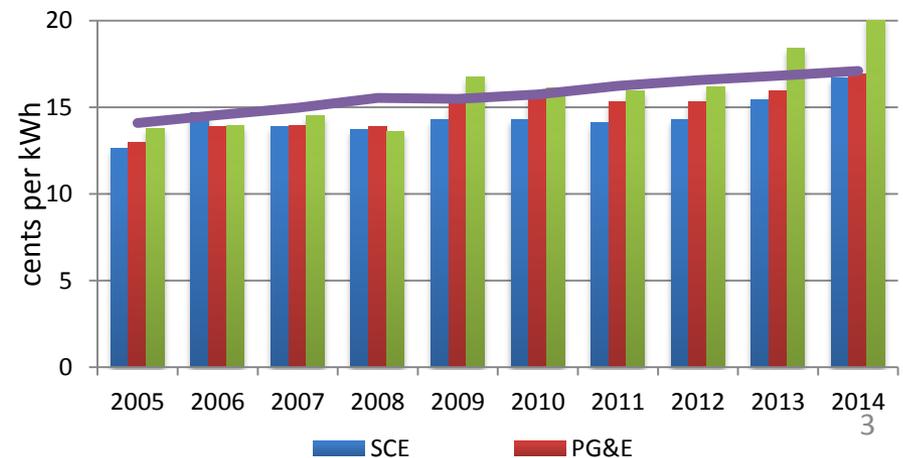
# CPUC Role

- Regulate electric and natural gas utilities
- Ensure reasonable rates through a public process
  - Determine a utility's revenue requirement in General Rate Cases (every 3 years)
  - Based on revenue requirement, set rates to reflect cost of service
  - Adjust rates annually to account for approved transmission, procurement, and program costs
- Consider innovative rate designs to meet policy goals

**Historical California Diesel Prices**  
California No. 2 Ultra Low Sulfur



**System Average Electricity Rates**  
Large Investor-Owned Utilities





# CPUC Role

- Coordinate with other state agencies to achieve state transportation electrification goals
- Develop policies that:
  - Coordinate the utility buildout of infrastructure to charge electric vehicles
  - Establish fair and economic rates
  - Utilize Vehicle-Grid Integration technologies to use transportation energy as a system resource that utilizes renewable energy
- Understand transit agencies' experiences with and barriers to electrification to inform future policy development



# Policies Relevant to Transit Agencies

- CPUC authorized [PG&E](#) and [SCE](#) to allow government entities with zero emissions buses to be eligible for small general electric service tariff on a 3-year temporary basis
  - Tariffs are time of use rates with no demand charges
  - San Joaquin Regional Transit District (PG&E) and Foothill Transit (SCE) have participated



# SB 350: Statutory Requirements

Doubling of Electric & Natural Gas **Energy Efficiency** Savings

Increases **Renewable Energy** requirements from 33% by 2020 to 50% by 2030

Widespread **Transportation Electrification**

- Requires resource optimization and an **Integrated Resource Planning (IRP)** process
- Expresses intent for **regional expansion of the CAISO**
- Consider **disadvantaged communities** in CPUC decision-making process



# SB 350: Transportation Electrification

- *Transportation Electrification* is necessary to reduce economy-wide GHGs and air pollutants, defined as:
  - Use of electricity in vehicles, vessels, trains, boats, & other equipment
  - Charging and propulsion infrastructure investments
- Efforts will target charging infrastructure availability, underserved communities, new technologies for customers, and vehicle grid-integration
- Requires triennial review of data on electric transportation adoption rates and consultation with ARB and CEC.



# SB 350: Guidance for TE Applications

- CPUC's ([draft](#)) guidance will inform the IOUs' "applications for programs and investments to accelerate widespread transportation electrification"
- Key guidelines pertaining to Transit include:
  - Consider regional transportation conditions and plans, leveraging federal funds
  - Protect competitive markets and complement private investments
  - Consider potential technology maturation and market transformation for high emissions reduction potentials
  - Align with and complement State policy (e.g. SB 1275, Vehicle-Grid Integration, Technology Demonstrations)



# Next Steps in R.13-11-007

- April 29 Workshop at CPUC
  - Goal: Present Straw Proposal Guidance and receive stakeholder input on the utilities' submission of transportation electrification applications
  - CPUC, ARB, CEC, ISO, researchers will help stakeholders understand current market and state investments
  - ARB will brief parties on Summary of April 8 Utility/Transit Work Group Meeting
  - Stakeholders provide informal feedback at CPUC
- Comments filed formally
  - Opening due May 18 and Reply due May 31
- Energy Division considers comments and builds upon Guidance for Utilities Q2-Q3 2016
- Assigned Commissioner Ruling inviting utilities' Transportation Electrification applications in Q3 2016



# Thank you!

**Noel Crisostomo**

[nc1@cpuc.ca.gov](mailto:nc1@cpuc.ca.gov)

415-703-5404

**Amy Mesrobian**

[ak1@cpuc.ca.gov](mailto:ak1@cpuc.ca.gov)

415-703-3175

For more information:

**CPUC Transportation Electrification**

[cpuc.ca.gov/General.aspx?id=5597](http://cpuc.ca.gov/General.aspx?id=5597)

**CPUC SB 350**

[cpuc.ca.gov/sb350](http://cpuc.ca.gov/sb350)

