



SOUTHERN CALIFORNIA
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EV Bus Fleets

Case Study in Electricity Costs

Andrew Papson

eMobility Advisor

Southern California Edison



About Southern California Edison – An Edison International Company

Who We Are

- One of the nation's largest electric utilities
- Headquarters in Rosemead, California
- More than 130 years of history

Who We Serve

- 50,000 square miles of SCE service area across Central, Coastal and Southern California
- 15 million residents in service territory
- 5 million customer accounts

EV Fleet Expertise

- Working with EV bus fleets since 2014
- *Charge Ready Transport* program funds EV infrastructure for fleets
- New light duty fleet program coming soon

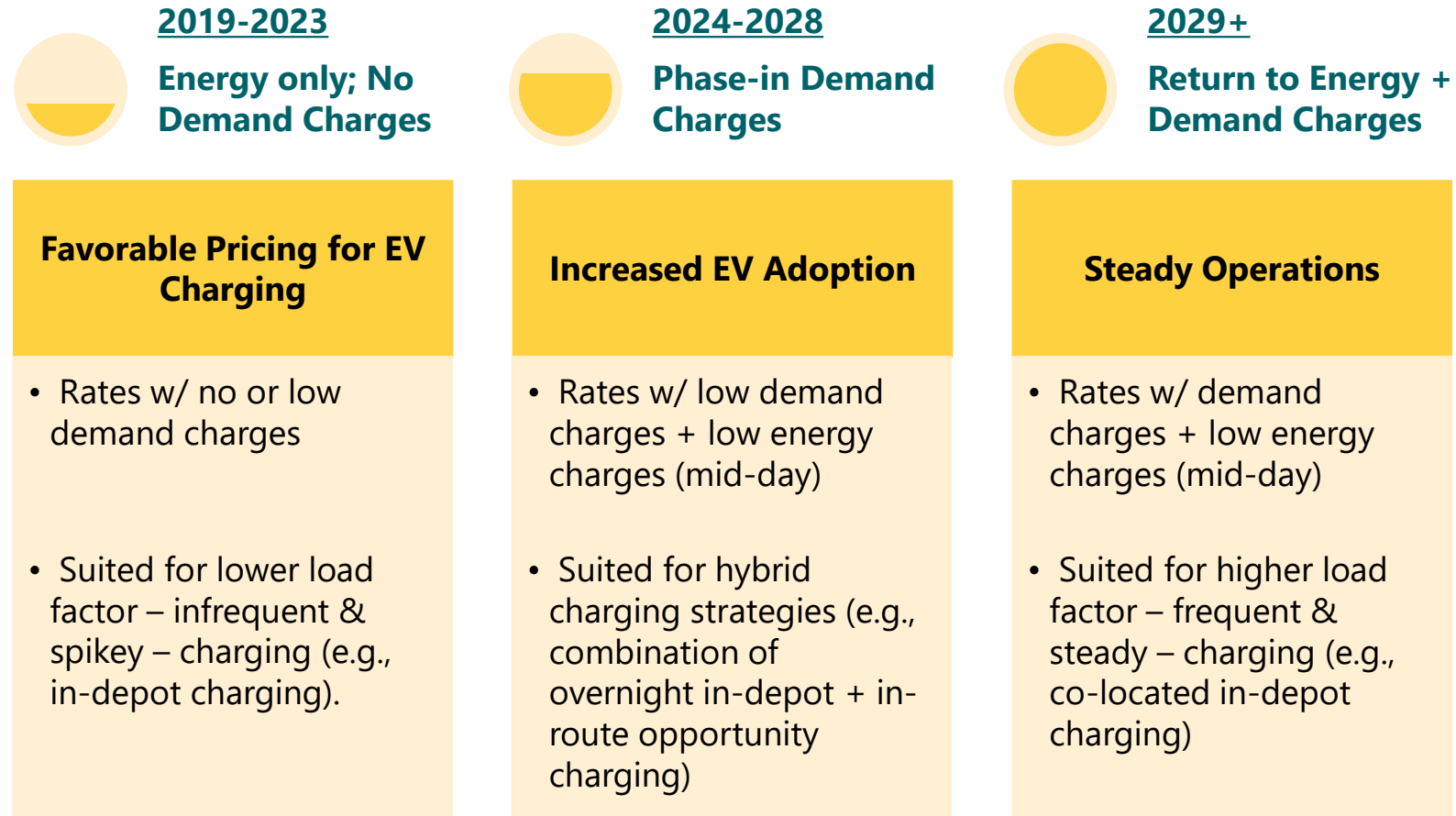


SCE History with EV Trucks and Buses

- First large-scale EV bus deployment in 2014 – two 500kw chargers
- As of 2019, four transit agencies running EV buses in daily revenue service in SCE territory
- Very high use in 2019:
 - 103 EV buses
 - More than 2 million EV bus miles
 - More than 4.6 million kwh consumed



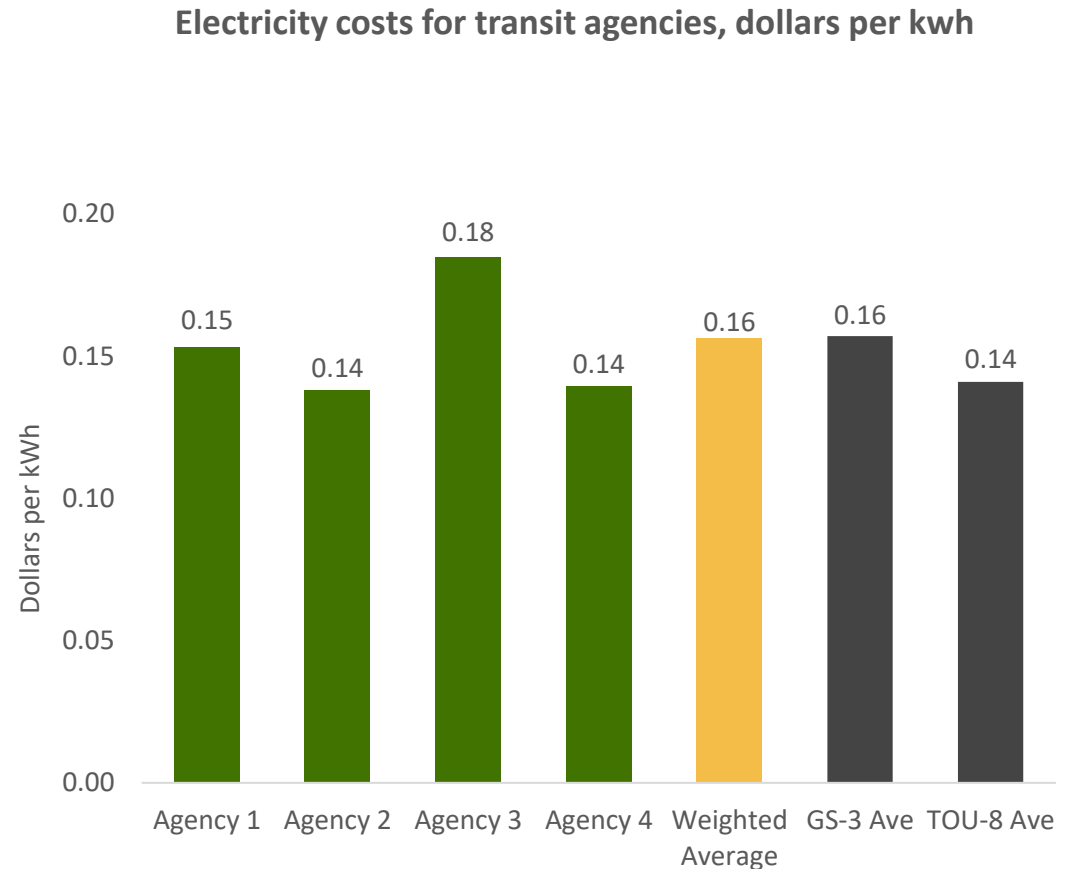
New SCE EV rates waive demand charges for five years



* TOU-EV-7, TOU-EV-8, and TOU-EV-9 rates are applicable to commercial customers whose monthly max demand is 20 kW or less, 21 kW to 500 kW, and above 500 kW, respectively. Rates are available starting March 1, 2019.

Case Study: Electricity costs at EV bus transit agencies

- Case study: all-in 2019 electricity costs for four transit agencies
- Average 16 cents per kilowatt hour, with tight bound +/- 15%
- Electricity cost 36 cents per bus mile, more than CNG but ~3x less than diesel (depending on fuel price)
- Conclusions:
 - SCE's new EV rates are stable, when swings of demand charge are removed
 - When you average for the year, the "law of averages" smooths out the fluctuations from day to day
 - LCFS credits can provide an additional 30 cents or more per kwh



Implications for EV Truck Fleets



- EV trucks may face similar electricity costs as EV buses (same vehicle size, usage)
- Operating savings may be significant – electricity may be ~3x cheaper than diesel
- LCFS credits can completely offset electricity bill, and then some
- Your mileage will vary – depending on utility, vehicle type, daily usage, charging pattern

Charge Ready Transport

More Information:

Andrew Papson

andrew.papson@sce.com

www.sce.com/crt



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