#### FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 2-3, 2016 Bellevue, WA

Electric Vehicle Charging and Transportation Electrification Mike Bushey

Director of Government, Institutions, Agriculture, and Water Southern California Edison



Federal Energy Management Program



# Plug In Electric Vehicles

- Plug-in electric vehicle technology represents a major impact to electric utilities
  - Utilities will become the main source of "fuel" for these cars in the future
  - While national sales of EVs have reached an impressive scale, California leads the way especially San Francisco and Los Angeles
  - We are estimating that about 18,000 EV's (about 10% of national sales) are currently registered in SCE's service
- SCE offers multiple rate plans to charge EVs, including time-of-use options with lower costs for charging during off-peak (usually nighttime or morning) hours.
- We are upgrading the grid to accept DER's as well as EV's
- SCE has been a leading supporter of plug-in EVs.
- Our nationally recognized EV Technical Center oversaw the successful deployment of one of the nation's earliest private fleet of EV's which logged over 21 million miles
- In 2009, with the market reintroduction of EVs, SCE launched a readiness effort to support the new wave of EV customers



# We're Revving Up "Charge Ready"

- SCE's program to help increase the availability of electric vehicle (EV) charging stations where cars are typically parked for four hours or more
- We are working with local government agencies, employers, multi-unit dwellings, and charging equipment manufacturers to implement the program
- The program provides infrastructure needed to serve qualified charging stations at participating locations
- Some customers may also qualify for a rebate to cover some or all of the costs of procuring and installing charging stations that they own, operate, and maintain



## **Participation Guidelines**

- Qualify as a non-residential customer (including bundled service, direct access, community aggregator, and community choice aggregator customers)
- Meet the program's guidelines for existing and future EV adoption
- Own, lease, or operate a site that provides long dwelltime parking (including workplaces, fleet, multi-unit dwellings, and other destination centers, such as sports venues or hotels)
- Provide an easement granted to SCE by the property owner
- Deliver proof of purchase of qualified charging equipment



## Infrastructure Electrification

- Policymakers in California are focused on carbon reduction
- The transportation sector represents a significant opportunity for reduction through electrification
  - Ports
  - Heavy-duty trucks
  - Commuter vehicles
  - Will result in load growth
- Water-Energy Nexus accounts for approximately 19% of the electricity consumed in California
  - Recurring scarcity has resulted in greater investment in the treatment and storage of water
  - Will result in load growth
- Since infrastructure is difficult to build we must
  - Store electricity
  - Improve system efficiency



#### Questions

## Mike Bushey Southern California Edison

Federal Utility Partnership Working Group November 2-3, 2016 Bellevue, WA

