



SOUTHERN CALIFORNIA  
**EDISON**

Energy for What's Ahead<sup>®</sup>

# Understanding EV Future Requirements

*SCE's Transportation Electrification Programs*

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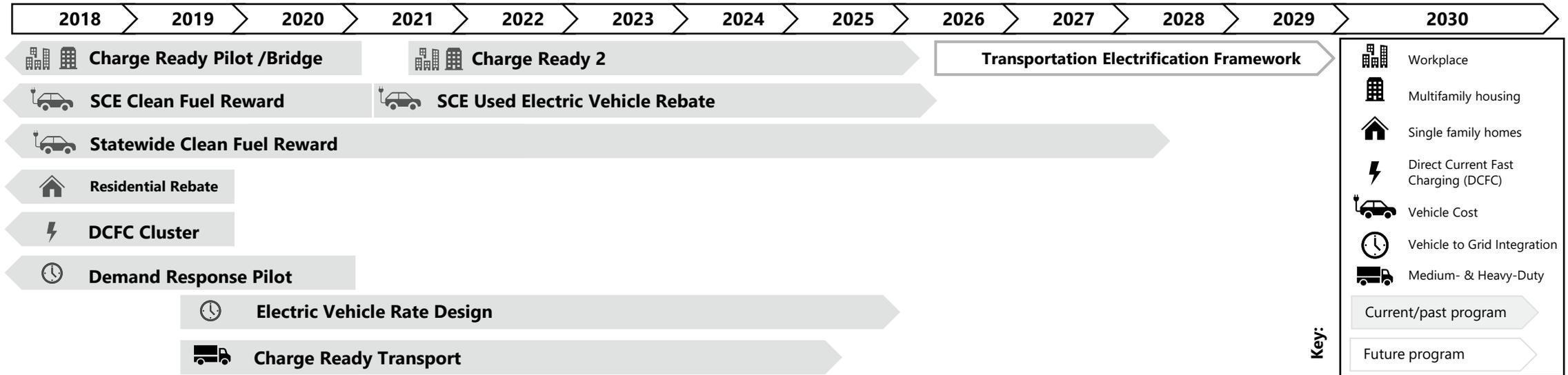
eMobility<sup>®</sup> Operations



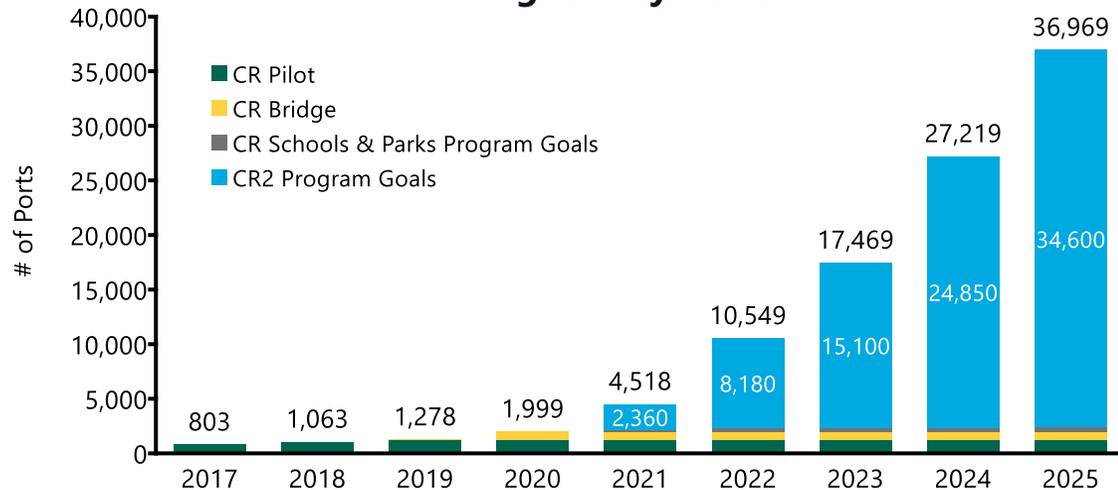
## KEY TAKEAWAYS

- TE site selection must align with program objectives
- Program customers should engage utilities early and often to make informed decisions
- The need to collect, analyze, and share data presents multiple challenges
- SCE's TE roadmap helps define grid upgrade needs and inform future program development

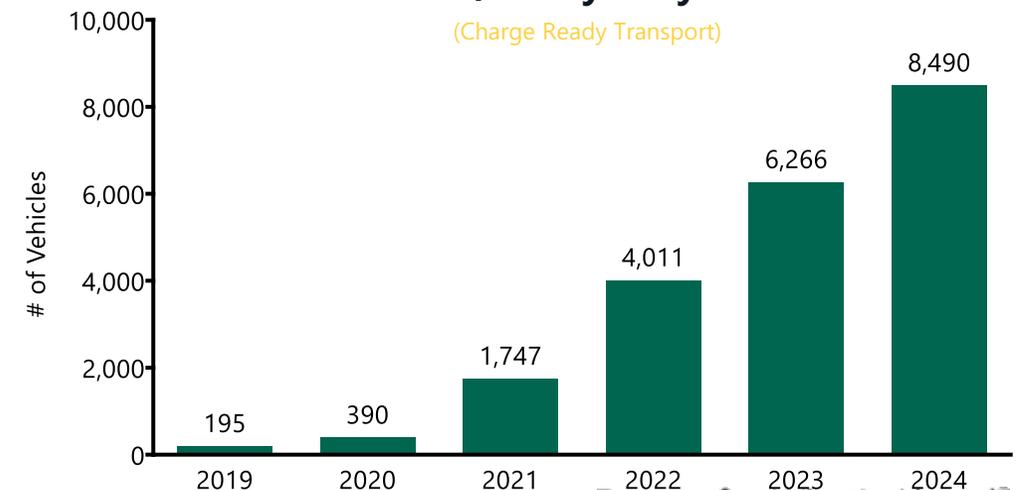
# SCE's current and future TE programs advance California's clean air goals



### Light Duty Ports



### Medium/Heavy Duty Vehicles



# Site selection must align with program objectives



## Regulatory Mandates

- Average cost per port
- Demographics
- Port minimums



## Customer Eligibility

- Site maps, construction records, capacity, easements
- Equipment selection & vehicle acquisition plan
- Share charging data w/ SCE



## Program Evaluation

- SB350 TE Reporting Requirements
- Standardized data across IOUs for program evaluation
- Progress towards EV adoption, GHG reductions, air quality goals

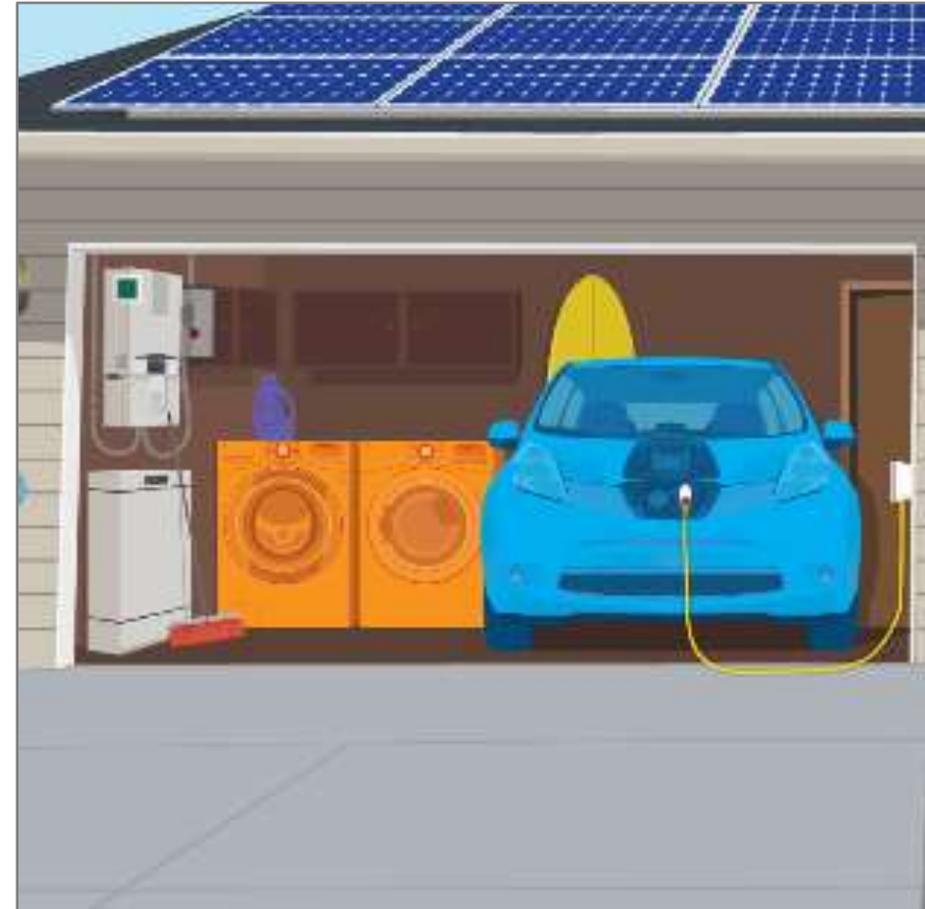
# Customers should engage utilities early and often to help them make informed EV charging infrastructure decisions



- What are my charging needs?
  - Vehicle availability
  - Charging behaviors
  - Future proofing
- What is my commitment?
  - Construction timelines
  - Site ownership vs. SCE own & operate
  - Data sharing requirements
- How much will it cost me?
  - EVSE types and costs
  - Fuel cost savings for fleet customers
  - Special EV time of use (TOU) rates

# Residential charging presents data collection challenges for utilities

- Residential customers who opt to charge at home can use a 240-outlet adaptor or L2 home charging station
  - Do not need to inform utilities
  - May not need service upgrades or separate meter
  - Customer profiles with special EV TOU rates may help identify usage data
- Rebate programs can create opportunities for utilities to collect data
  - Customer rebate information can help utilities isolate usage data from related service accounts
  - Surveying EV rebate recipients can help utilities collect data on charging behaviors
  - Data is available for purchase from residential EV charging installers



# Data collection and sharing must be carefully executed to protect privacy while providing meaningful information



- ❑ Published IOU and evaluator program reports provide regulators, industry stakeholders, and the public with broad information around program operations and results
- ❑ Data must be shared in a secure way and protect confidential, proprietary information such as customer PII or detailed contractor costs
- ❑ Large volumes of interval data amassed from each charge port will require powerful tools to collect, manage, analyze, and report on the information
- ❑ Utilities, evaluators, and regulators continue to work together to identify, define, and standardize reporting metrics and solutions for comprehensive data sharing

# SCE's TE roadmap incorporates EV adoption trends to prepare for future charging needs



- eMobility® closely works with a cross-functional team to:
  - Ensure safe, reliable, and affordable integration of EV charging infrastructure with the electric grid
  - Enhance TE forecasting and strategic grid planning in partnership with regulators and customers
  - Create a consolidated TE data repository for all forecasting and reporting needs
- Predictive and analytical tools are used to assess current capacity and inform future EV charging needs
  - Integration Capacity Analysis (ICA) evaluates the system's ability to host additional load based on current configuration
  - Grid Needs Assessment (GNA) predicts circuit level upgrade needs based on a 5-year forecast based on growth assumptions adopted in the distribution planning process
  - ICA and GNA are public information available through SCE's Distribution Resources Plan External Portal (DRPEP)

**Join us on this ride.**

