ET Summit 2024

Presented by

SCE's Vision for the Clean Energy Future

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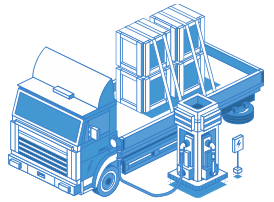
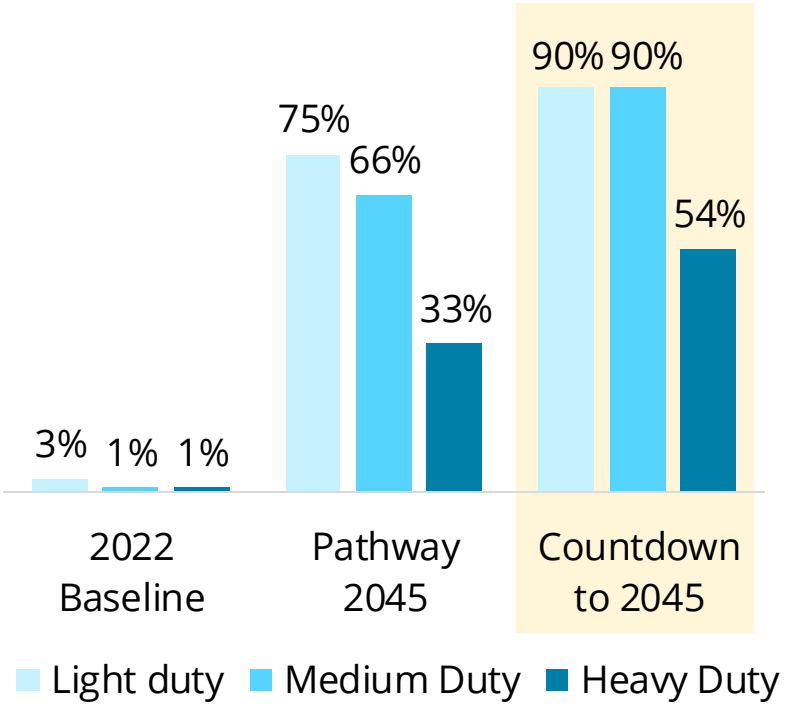
SCE's Vision for the Clean Energy Future

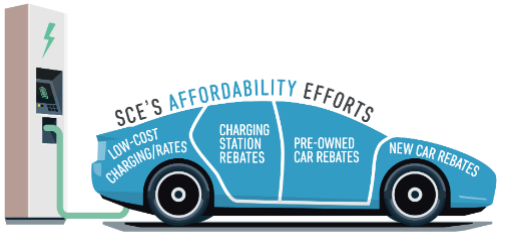
- *Pathway 2045* updated to account for recent state policies, climate impacts, reliability modeling and market/technology advancements
- 90% of light- and medium-duty and over 50% of heavy-duty vehicles are electric.
- 95% of residential and commercial space and water heating is electric
- Electricity consumption will increase by 80%.
- Average SCE household can expect to save ~40% on total energy costs

ELECTRIC VEHICLES
% of vehicle stock





SCE Programs Reduce Barriers to EV Adoption



Availability *>$800M in investments*	Affordability *$260M+ EV Rebates Paid*	Awareness
Charge Ready Schools	EV Time of Use Rates	cars.sce.com
Charge Ready Parks	Pre-Owned EV Rebate	Account Managers
Charge Ready Light Duty	Drayage Truck Rebat	TE Advisory Services
Charge Ready Transport	ZETBIF	
Rule 29 Tariff	Charger Hardware Rebates	

SCE Efforts Accelerate Transportation Electrification

5,000+ Charge Ready Light Duty Ports Installed

4,600+ Commercial EV Ports Installed

1,929 MDHD EVs Converted at 84 Sites

$260M+ EV Rebates Paid:

$142M+ CA Clean Fuel Reward
130K+ Rebates

$28M+ Pre-Owned EV
11K+ Rebates

$90M+ Clean Fuel Reward Program
147K+ Rebates

*As of 8/31/2024

The benefits of electric transportation go beyond our clean energy goals:

- ✓ **Thousands of stable, good-paying jobs**
- ✓ **Total cost of energy decreasing by more than a third**
- ✓ **Better air quality → fewer heart attacks and children diagnosed with asthma**

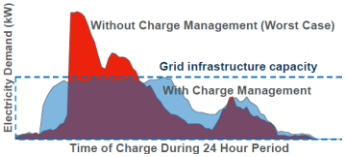
Charging Infrastructure Projects are MAJOR Construction Projects

6 high level factors influence project timelines:

- **Type of Project**. Make Ready or Utility Infrastructure Only? Make-Ready projects take longer, Utility is completing designs, obtaining permits, securing material, & completing construction on both sides of the meter
- **Site Characteristics.** Does electric service already exist, or will site require distribution or service line extension? Environmental Remediation, Existing UG Utilities (natural gas, gasoline, etc.)
- **Capacity.** Does it currently exist, or will added capacity be needed to serve a project? Projects may require a lot of capacity. See us as a partner! We may need to upgrade substation or reallocate circuit load
- **Permits & Clearances.** Utilities have to be given permission to complete the construction work required for EV charging from the AHJ (Cities, Counties, State or Federal Entity). *Permit approval times are taking longer*
- **Materials & Equipment.** Industry has seen a shortage of key materials and equipment needed to complete EV Charging Infrastructure projects to include *Switchgear*, some *Transformers* & *smaller materials*
- **Customer Engagement.** Lead times in receiving customer applications, submitting designs, providing clearances, signing agreements, approving preliminary and final designs, etc. *Customer requested changes*

Innovative Solutions Bridge Near-Term Capacity Issues

Target Customer Program Development. Develop DR programs for locations where capacity constraints impact new customer interconnections.



Load Control Management System (LCMS). Leverage third party owned Load Control Management systems to manage on site demand (e.g., charge management).

Relocatable / Mobile Energy Storage. Develop business case for procuring fleet of Relocatable Energy Storage Units for near term PSA applications.

Temporary Generation Contracts for Peak Shaving Services. Explore procurement of temporary generation contracts for local distribution peak shaving service and for longer term distribution service.

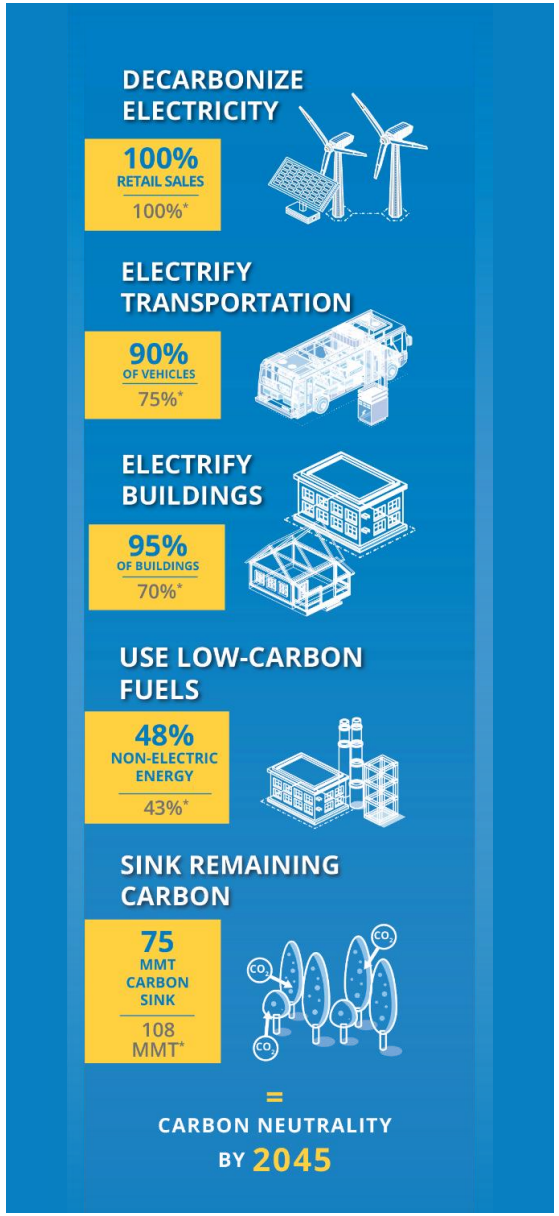
Standardize Relocatable / Mobile Infrastructure Solutions. Industry has seen a shortage of key materials and equipment needed to complete EV Charging Infrastructure projects to include *Switchgear*, some *Transformers* & *smaller materials*

End

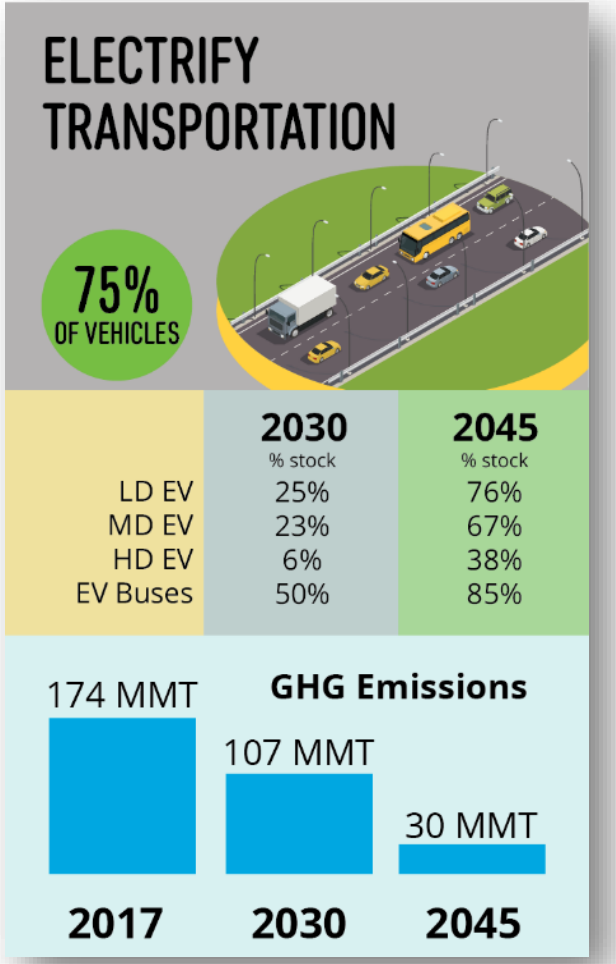
Appendix

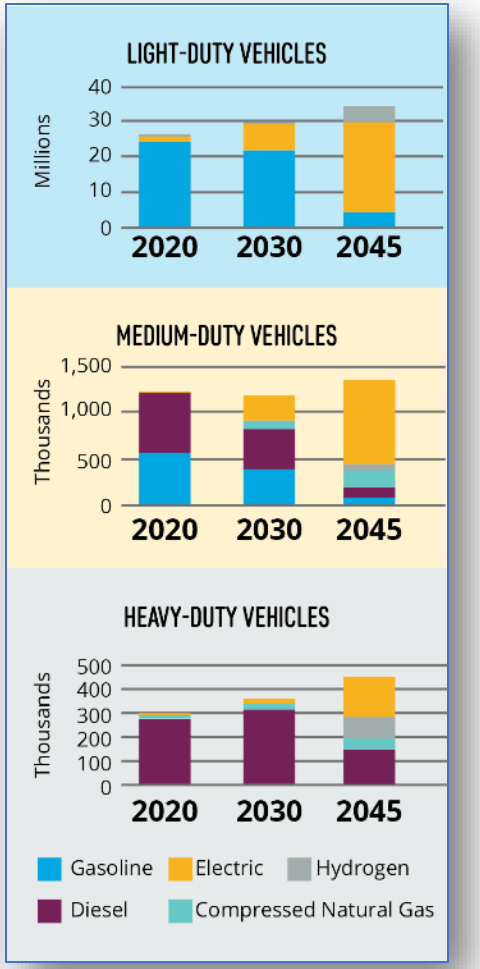
Countdown 2045

- *Pathway 2045* updated to account for recent state policies, climate impacts, reliability modeling and market/technology advancements
- Updated analysis indicates **deeper electrification** by 2045 (90+% of vehicles and appliances) drives greater load and new system peaks
- As a result, **generation mix** in 2045 more than doubles; solar, wind and storage make up majority of capacity; retained gas generation and emerging technologies (e.g., OSW, clean firm baseload) serve important role to ensure system reliability
- New **transmission and distribution** needed at unprecedented scale and speed (4-10x historical rates), requiring policy changes and increased operational efficiencies to plan, build and operate; technology investment to optimize DERs at scale
- Clean power and electrification approach remains **most feasible and cost-effective** way to meet state goals, despite significant level of investments (~$370B statewide); average SCE household can expect to save ~40% on total energy costs



SCE Pathway 2045: The Road to Carbon Neutrality





SCE Targets for 2045

Light Duty

Electrify 26 million passenger cars, 75% of total fleet.

Medium Duty

Electrify 900,000 medium-duty (Class 3-6) vans, trucks & shuttles, or 67% of vehicles on the road.

Heavy Duty

Electrify 170,000 heavy duty (Class 7-8) trucks and buses, or 38% of trucks and 85% of buses.

Decarbonize the transportation sector in Southern California by 144 million metric tons of CO2 annually!

Read the Pathway 2045 White Paper Here