



# **Item 5: Information Item - Electric Vehicles as Distributed Energy Resources**

October 3, 2024 Business Meeting

Peter Chen, Supervisor of Transportation Unit  
Energy Research and Development Division



# Transportation electrification growth in CA



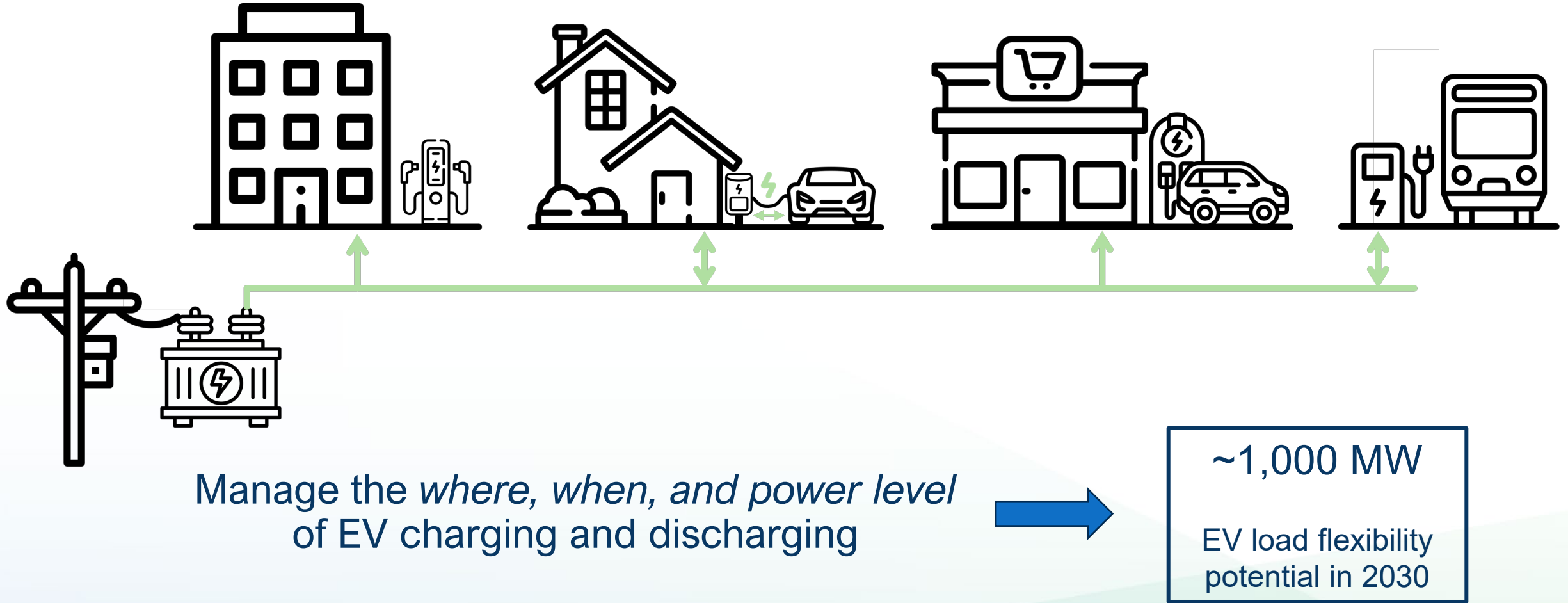
25% of new car sales are ZEVs

150,000 public or shared chargers

500,000 at-home chargers



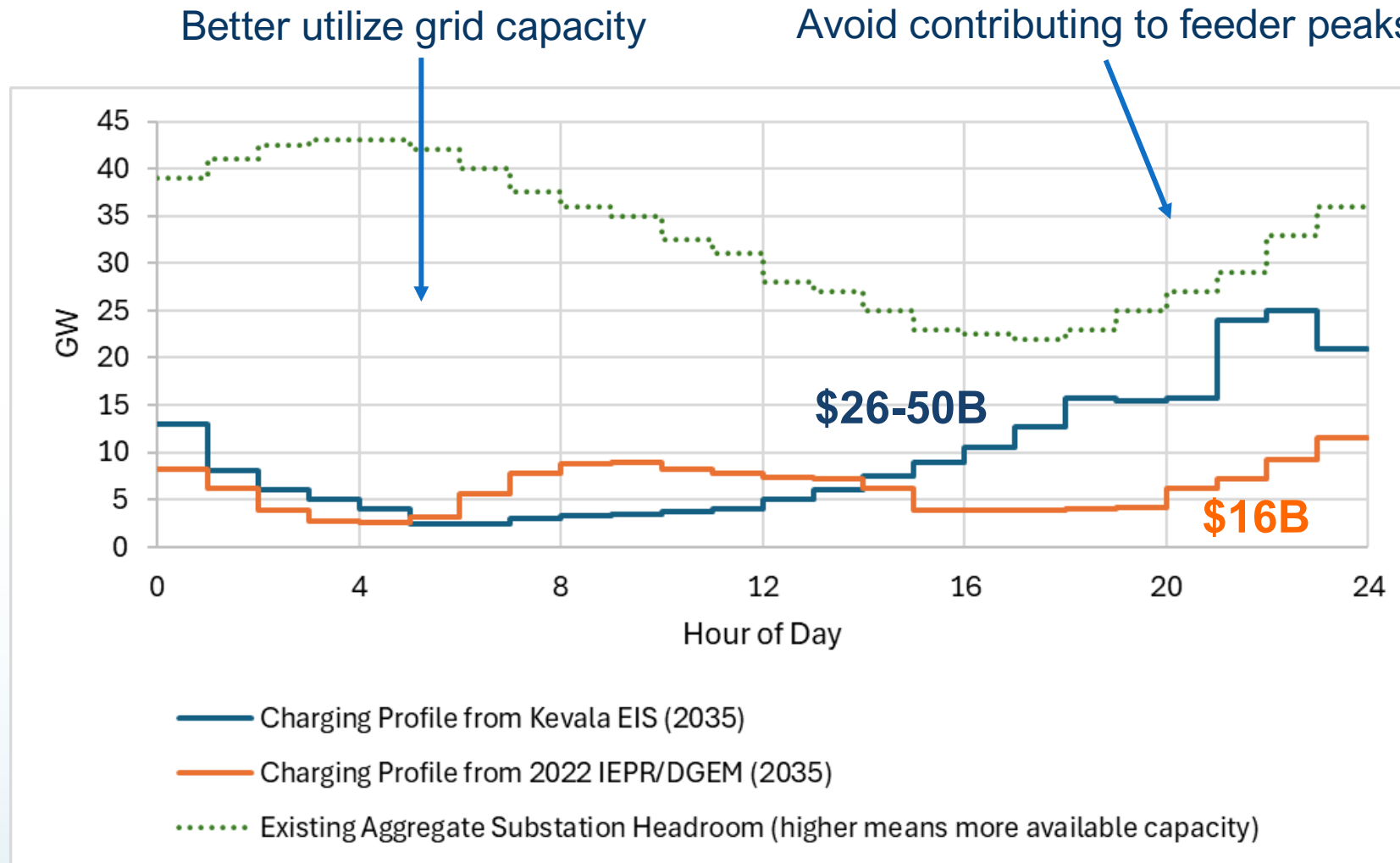
# EVs are uniquely flexible and rapidly growing in potential as distributed energy resources (DERs)



Source: CEC (Reference Scenario from  
SB 846 Load Shift Goal Report)



# Aligning EV charging with grid conditions can save billions for ratepayers



Source: CEC based on studies by Kevala and CalAdvocates



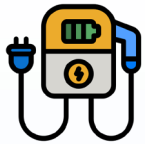
# Vision: widespread vehicle-grid integration (VGI)



Optimized customer signals for grid-friendly charging



Easy-to-use and interoperable products and services



Rightsized infrastructure installed in the right locations



Verifiable and reliable benefits for grid planning

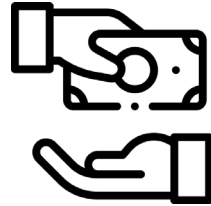


# Actions across CEC are supporting the VGI Vision



## Analysis / Reports

- Integrated Energy Policy Report
- AB 2127 Charging Infrastructure Assessment



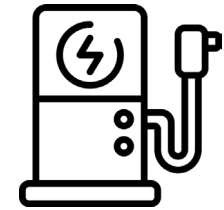
## Regs / Programs

- Load Management Standards
- Flexible Demand Appliance Standards
- Demand Side Grid Support Program



## Standardization

- Minimum standards for CEC funding
- Needs analysis
- V2G Equipment List



## Tech Funding

- Charger and load flex deployment grants
- EPIC RD&D funding



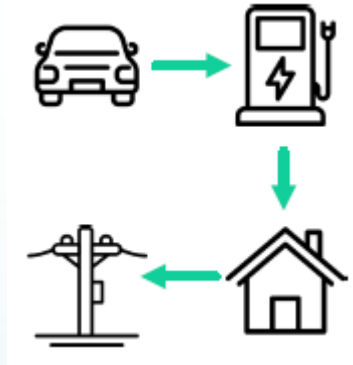
# GFO-24-302 Enabling EVs as DERs

EPIC solicitation with \$12.6M available across three project groups:

Addressing VGI  
Knowledge Gaps



Cost Reduction of V2X  
Enabling Technology



Submetering Solutions to  
Facilitate VGI



Image source: Flaticon.com