

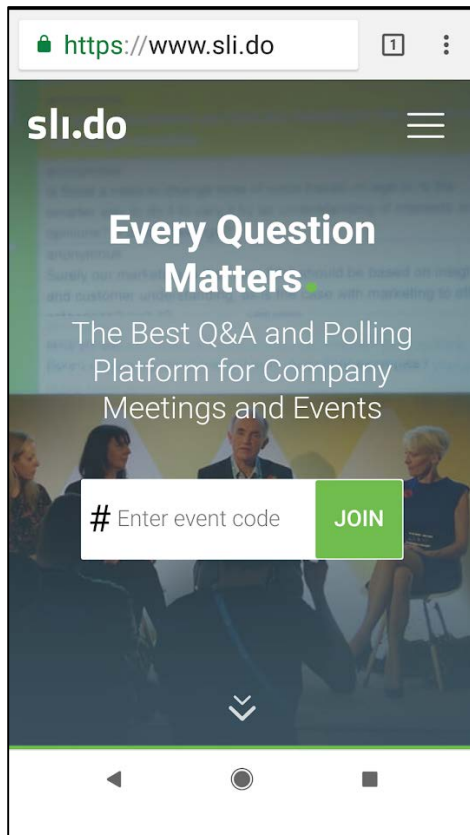
# Medium Duty/Heavy Duty (MD/HD) EV Charging Infrastructure Program Kick-Off & Public Advisory Council Meeting



Energy Innovation Center  
October 22, 2019



# slido



- Open a browser on your phone or computer  
(Safari/Apple, Chrome/Android)
- Go to Slido.com
- Enter code MDHD

**Which category best describes your organization?**

- A. Fleet Manager/Operator
- B. Original Equipment Manufacturer (OEM)
- C. Electric Vehicle Service Provider (EVSP)
- D. Government Agency/Municipality
- E. Trade Organization
- F. Regulatory Agency
- G. Non- Profit

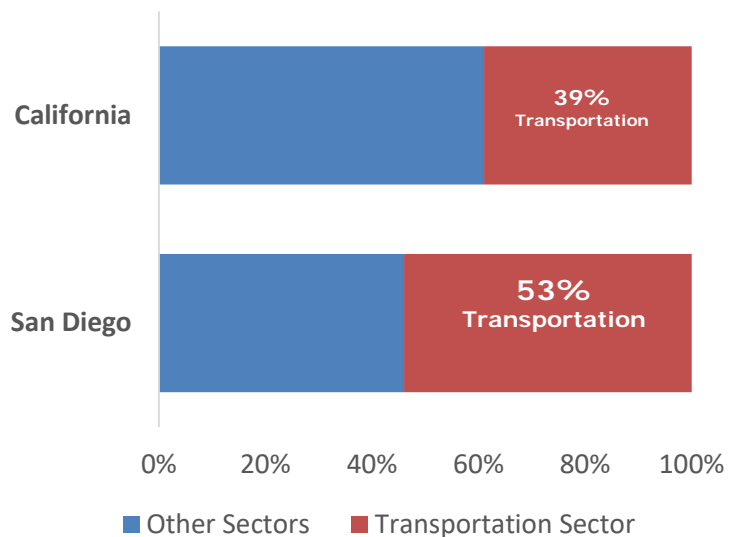
# **Brittany Syz**

**Director of Clean Transportation**

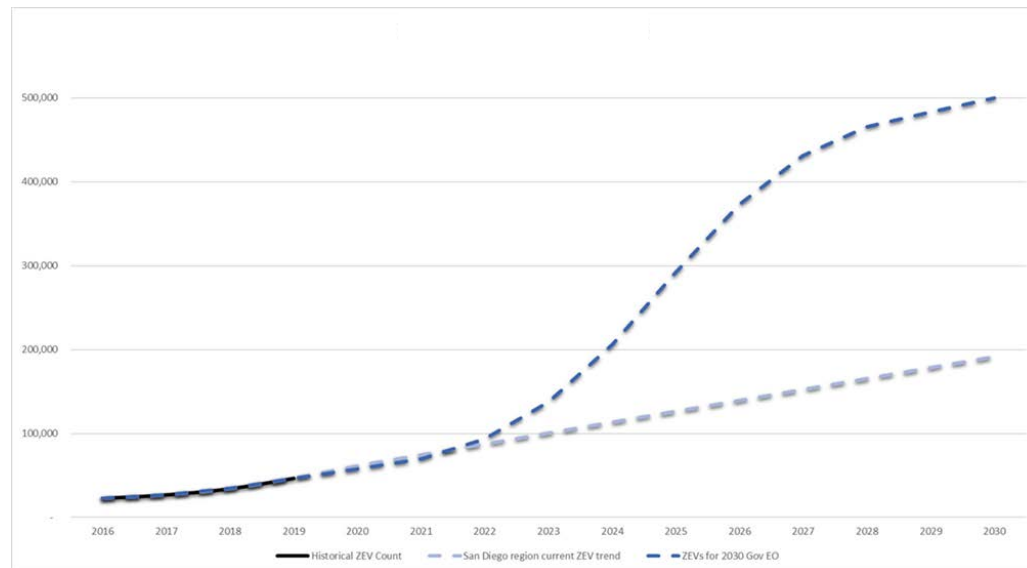
# Transportation Electrification

Electric Vehicles play a key role in meeting GHG emission reduction targets in the transportation sector

### GHG Emissions



### San Diego's EV Outlook



# California Policy Goals and Legislation



**Senate Bill 350**  
Recognizes TE as  
necessary to reduce GHG

**Senate Bill 32**  
GHG Reduction: 40%  
below 1990 levels by  
2030

## CARB Regulation

**Road Repair &  
Accountability  
Act**

**Advanced Clean  
Trucks**

**Innovative  
Clean Transit  
Regulation**

**Zero-Emission  
Airport Shuttle  
Regulation**

# SDG&E is Well-Positioned to Advance Transportation Electrification

- SDG&E has a well-established track record in utility infrastructure development, management, and operations
- SDG&E is already a key partner in local, regional, and state efforts to reduce greenhouse gas emissions
- Given the market for EV charging infrastructure has not proliferated, we can help stimulate the market by making the initial investments



**How many vehicles are currently in your fleet?**

- A. Less than 10
- B. 11-49
- C. 50-99
- D. More than 100



# Chris Faretta

## Clean Transportation Programs Manager

## MD/HD Program Advisory Council (“PAC”)

- A diverse group of stakeholders composed of consumer, environmental, low-income, and industry representatives that will provide advice to SDG&E on program modifications.
- Example roles for the PAC:
  - Review and provide input on charger qualifications list for the MD/HD Program.
  - Review and provide input on charger categories and cost baselines for program charger rebates for the MD/HD Program.
- If you would like to attend future PAC meetings, please sign up today!
  - We will send an invitation to the next PAC meeting via the Docket Service List.
  - An email will be sent to all of today’s participants with a link where you sign up to participate in the PAC if you are not on the Docket Service List.

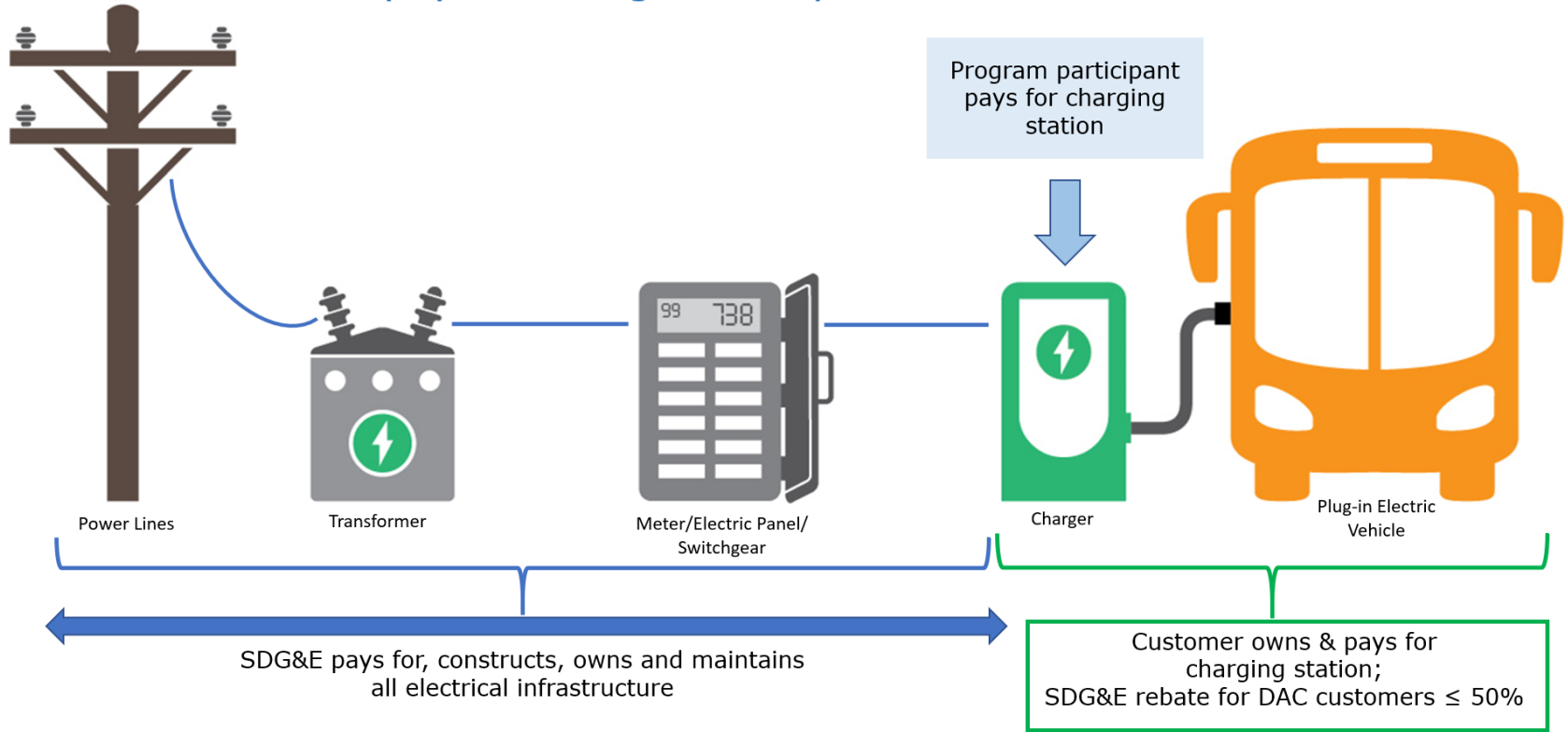
# Medium-Heavy Duty (MD/HD) EV Infrastructure Program

- SDG&E to install charging infrastructure for minimum 3,000 MD/HD on-road and off-road EVs (Class 2-8)
- 5-year program; \$107M; final Decision - August 23, 2019
- Make-ready charging infrastructure program
  - “To-the-meter” (SDG&E)
  - “Behind-the-meter” (customer-choice)
- Charging station rebates for qualified customers:
  - Disadvantaged Communities



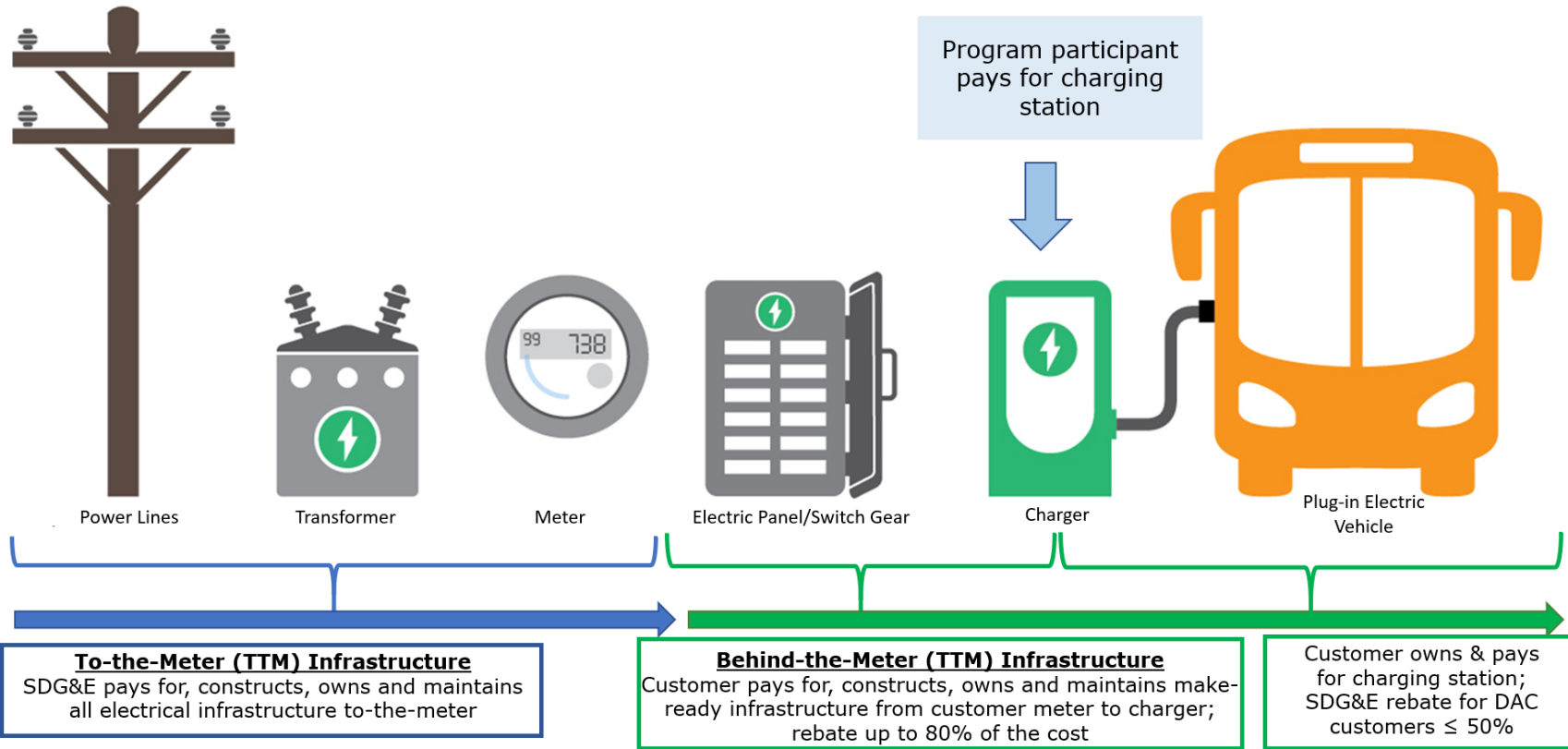
# Option 1: SDG&E-Owned

SDG&E pays for a significant portion of the total costs



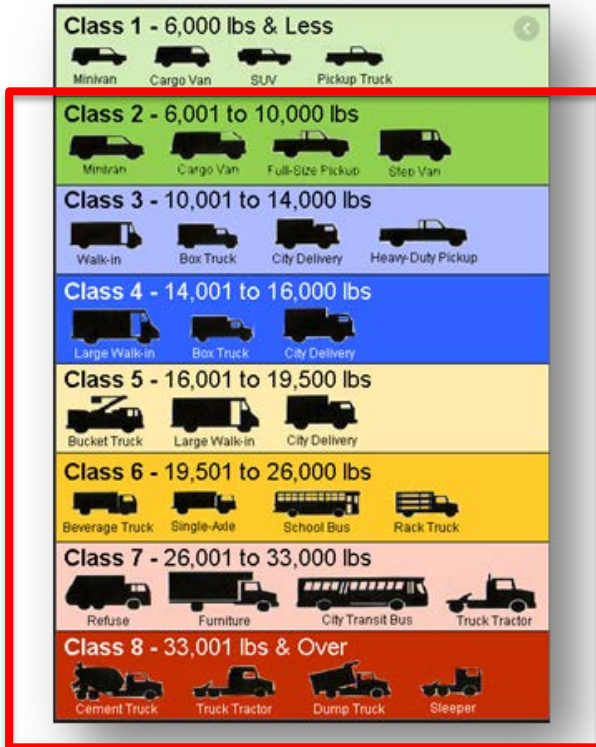
# Option 2: Customer-Owned

SDG&E pays for infrastructure cost up to the customer meter



# Medium-Heavy Duty (MD/HD) EV Infrastructure Program

## Class 2 - 8 Vehicles



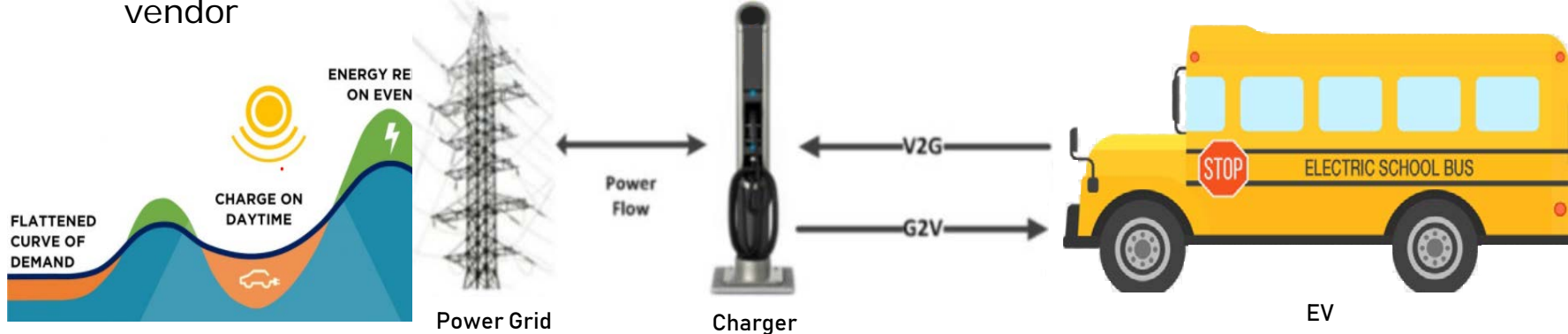
Gross Vehicle Weight Rating (lbs)	Federal Highway Administration	US Census Bureau	
	Vehicle Class	GVWR Category	VIUS Classes
<6,000	Class 1: <6,000 lbs	Light Duty	Light Duty
10,000	Class 2: 6,001–10,000lbs	Medium Duty 10,001–26,000 lbs	<10,000 lbs
14,000	Class 3: 10,001–14,000 lbs		
16,000	Class 4: 14,001–16,000 lbs		
19,500	Class 5: 16,001–19,500 lbs		
26,000	Class 6: 19,501–26,000 lbs	Heavy Duty >26,001 lbs	Medium Duty 10,001–19,500 lbs
33,000	Class 7: 26,001–33,000 lbs		Light Heavy Duty: 19,001–26,000 lbs
>33,000	Class 8: >33,001 lbs		Heavy Duty >26,001 lbs

- MD/HD trucks and vans
- Transit buses
- School buses
- Transport Refrigeration Units (TRUs)
- Airport ground support equipment
- Port equipment
- Forklifts and other off-road equipment

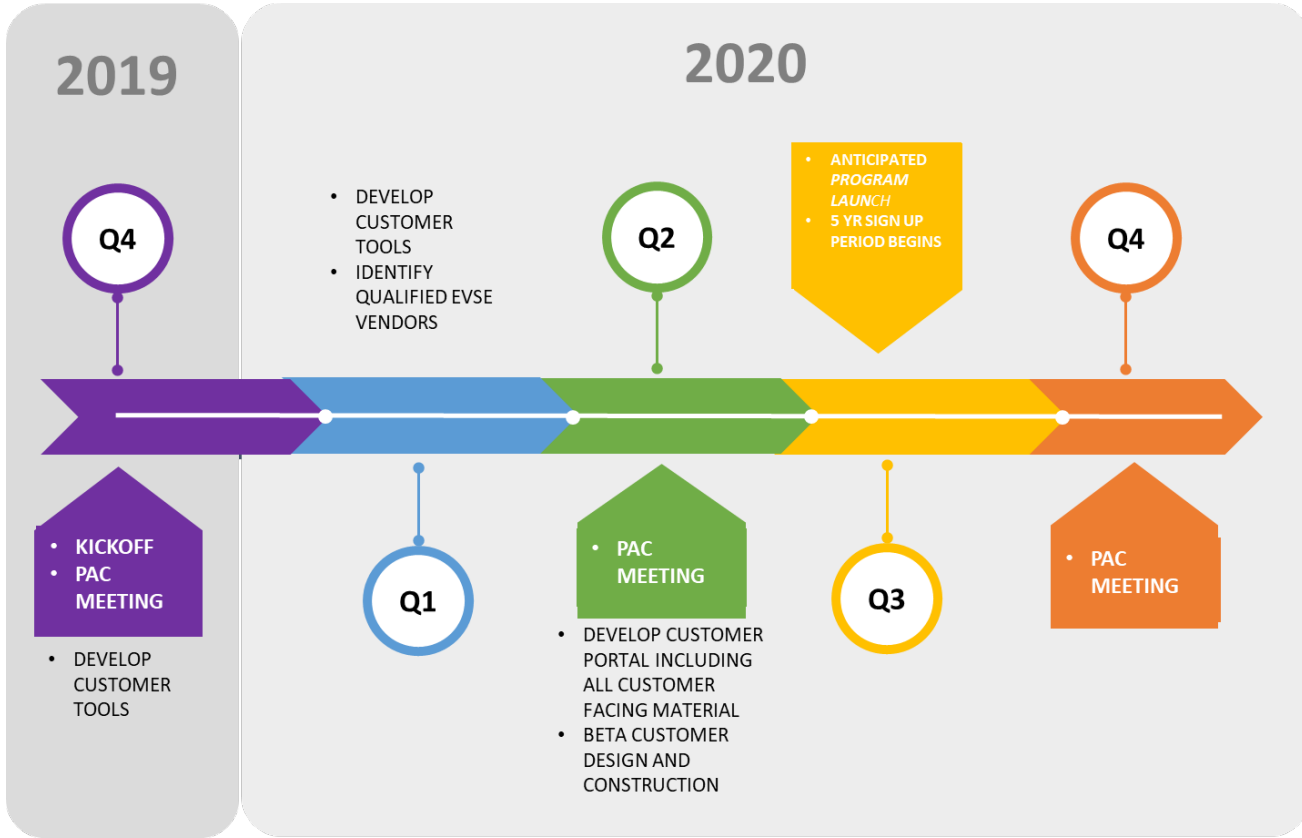
# Vehicle-to-Grid ("V2G") School Bus Pilot

## Proposed Pilot Design:

- Ten electric school buses at one school
- SDG&E installs, owns, and maintains the V2G chargers
- Buses operate normally, but during down time buses charge and discharge to optimize total cost of ownership
- Multi-year pilot with data collection analysis performed by SDG&E vendor

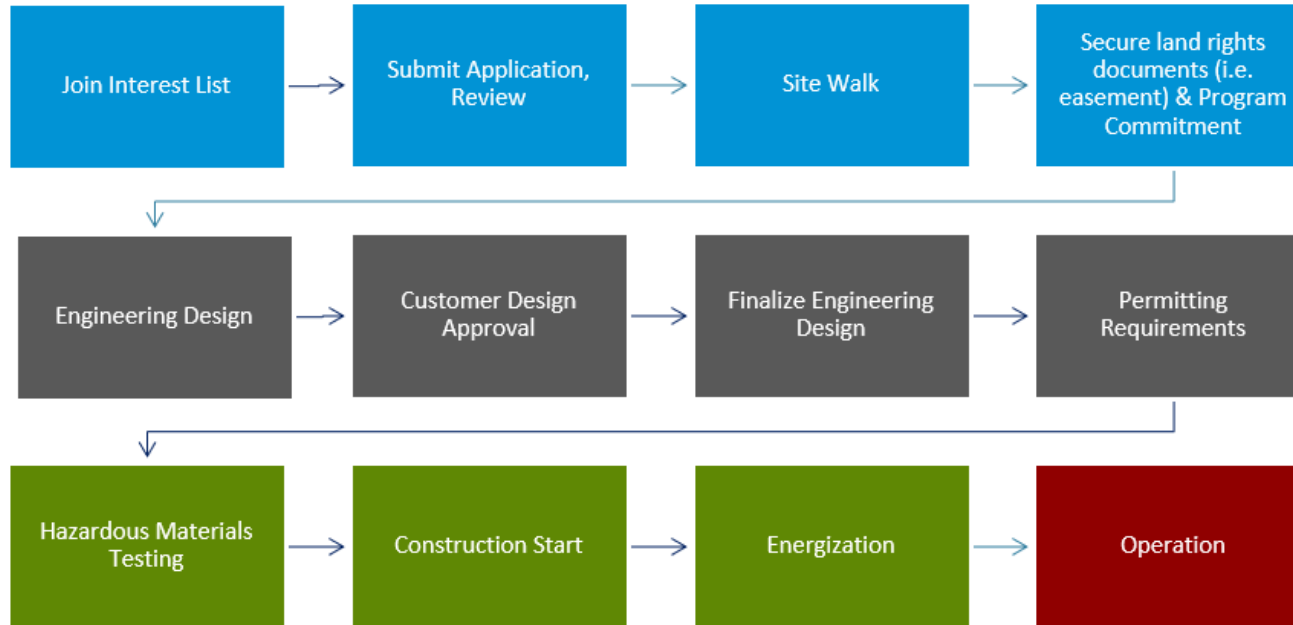


# MD/HD Timeline





# Example MD/HD Customer Journey



# Lianna Rios

## Electric Vehicle Customer Solutions Manager

# MD/HD Electric Vehicle Benefits



- Lower operating costs



- Reduced maintenance costs



- Minimize environmental impact

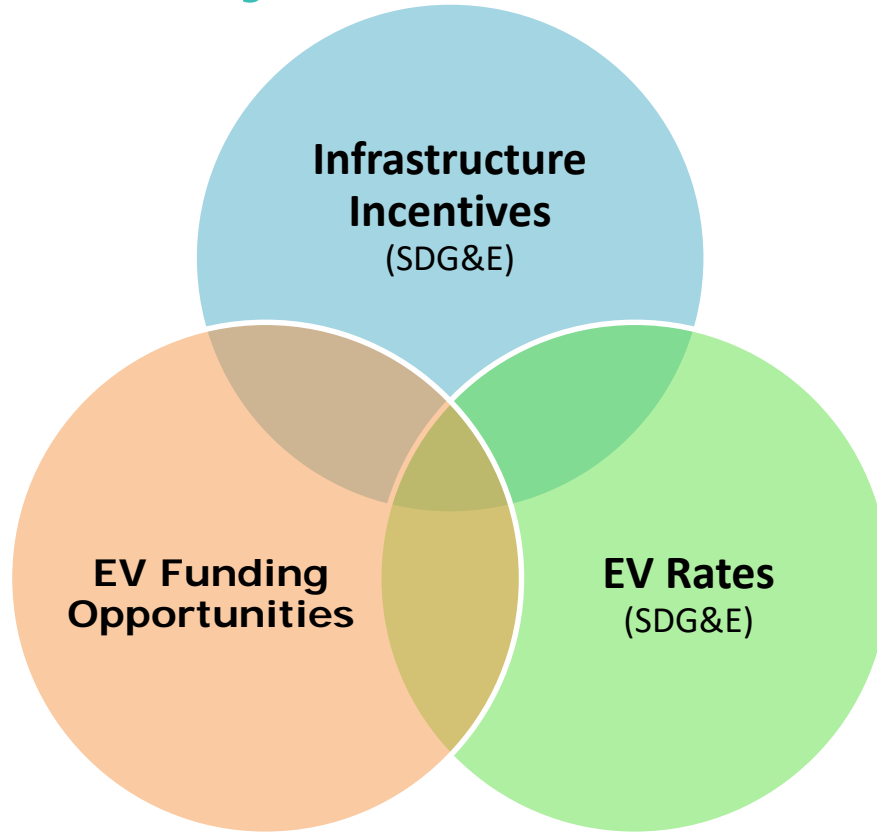


- Lead by example

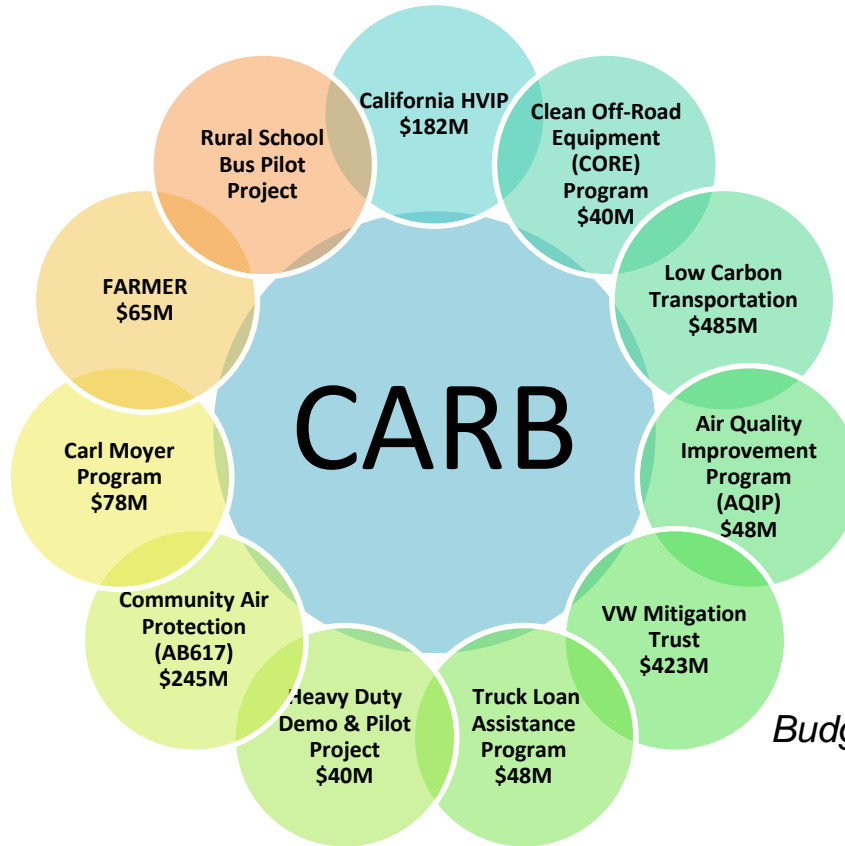
- Generous grant funding available to convert to electric **before** regulations take affect



# Resources to Electrify Your Fleet



# MD/HD Electric Vehicle Funding Opportunities



**\*\*Important Note:\*\***  
*Budget allocations are “proposed” until CARB meeting on 10/24/19*

# MD/HD Electric Vehicle Funding Opportunities



# MD/HD Electric Vehicle Funding Opportunities

## “Clean Air for All”

### Carl Moyer Program (regional focus)

- Fleet turnover for cost-effective, near-term SIP reductions
- Trucks, buses, utility vehicles, construction, agriculture, marine vessels, cargo handling, infrastructure

### Community Air Protection Program (AB617) (community focus)

- Investments in most burdened communities
- Priority on community needs and input
- Stationary sources eligible

### Voucher Incentive Program (VIP)

- Trucks, buses, fleets of 10 or less
- Diesel replacements
- Must already be compliant

### Prop 1B Goods Movement (GMERP)

- PM & NOx reductions in goods movement corridors
- Trucks, cargo handling, TRUs
- Leftover funds will be available soon



- Administered by [County of San Diego Air Pollution Control District \(APCD\)](#)

# MD/HD Electric Vehicle Infrastructure Incentives

## CA Utility Programs

- Charging infrastructure service upgrades and electricity rates
- ~\$700M
- SDG&E's MD/HD program accounts for ~\$107M

## Low Carbon Fuel Standard (LCFS)

- Credits for using low carbon transportation fuels





# Electric Vehicle High Power (EV-HP) Charging Rate

*Pending Application*



- A new rate for DC Fast Charging and Medium Duty/Heavy Duty EV charging
- Filed application with the CPUC - July 2019 (A.19-07-006)
- EV-HP rate is expected to simplify and increase the competitiveness of charging for many DCFC and MD/HD EV customers

## **Monthly Subscription Charge**

Customer subscribes to desired power level – lower power, lower subscription charge.

A declining ten-year discount encourages customers to adopt electric vehicles sooner.

## **Time-of-Use Energy Charge**

Customers save money by avoiding charging between 4 – 9pm.

# MD/HD Preliminary Eligibility Requirements

- ✓ Must procure at least 2 EVs
- ✓ Submit vehicle acquisition plan
- ✓ Agree to enroll on an eligible TOU rate
- ✓ Provide proof of purchase (chargers & vehicles)
- ✓ Operate & maintain charging equipment for at least 10 years
- ✓ Must provide charging data for at least 5 years after charger is installed
- ✓ Must submit a Load Management Plan



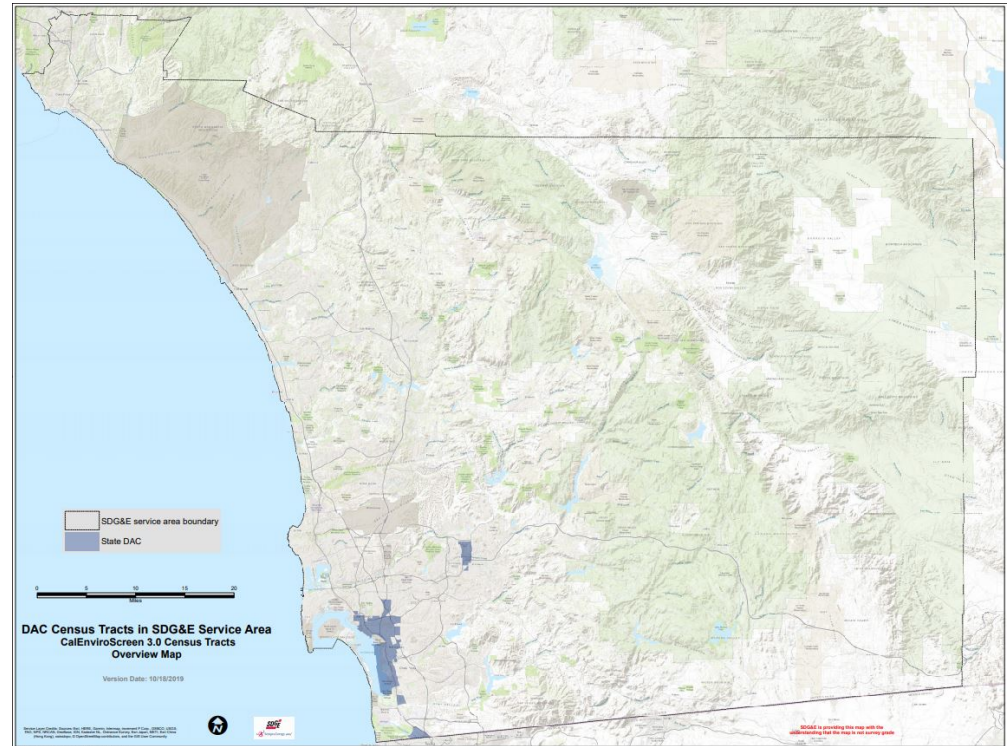
# MD/HD Preliminary Eligibility Requirements

- ✓ Own or lease property where chargers to be installed or be the customer of record associated with the meter
- ✓ Be an SDG&E customer (this includes Direct Access & CCA customers)
- ✓ Site must include an appropriate location to deploy charging equipment in a cost-effective manner
- ✓ Provide a signed land rights document (i.e. easement) by the site owner
- ✓ Agree to program terms & conditions
- ✓ Procure EV charging station from approved vendor list



# Goals - Disadvantaged Communities (DAC)

- Top 25% most burdened/vulnerable census tracts from a statewide perspective.
- GHG emissions reductions in the areas most impacted by poor air quality within our region and throughout the state.
- ≤ 50% rebate for the charger
- ~5% of SDG&E's territory
- Statewide DAC = **Blue**



**How many electric vehicles do you plan to add to your fleet in the next 3-5 years?**

A. 1-5

B. 6-15

C. More than 15

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Questions?

# Next Steps

- Expect an email with:
  - PowerPoint slide deck
  - Link to join the PAC
  - Link to MD/HD customer interest list
  - Help us name this program



**\*\* Please join us in the courtyard for a networking opportunity. Appetizers & beverages will be served. \*\***

**Thank You!**

