

# R.21-11-014: Clean Miles Standard Workshop

March 8, 2022

Facilitated by:

Consumer Protection and Enforcement Division (CPED)

Terra Curtis, Transportation Policy Supervisor

Stephanie Seki, Lead Analyst



California Public  
Utilities Commission


9:00 – 9:30am

# Opening Remarks from Today's Honored Guests

CPUC Commissioner Rechtschaffen  
on behalf of CPUC Assigned Commissioner Shiroma

Senator Nancy Skinner  
CPUC President Reynolds and Commissioner Houck  
CEC Chair Hochschild and Commissioner Monahan  
CARB Division Chief Jennifer Gress

# Workshop Guidelines

- The purpose of the workshop is to discuss the issues in this proceeding and gain understanding of stakeholders' perspectives and concerns.
- We will have a mix of presentations, Q&A sessions, and breakout group discussion. Please keep discussions related to the topic and questions being discussed.
- Staff will be monitoring the chat and raised hands feature if questions arise throughout the workshop.
- Please add any comments that you are not able to verbalize into the chat, which will be saved. If you need closed captioning, please click the “cc” icon 
- Workshop Summary Report will be filed in the proceeding and open for comment.

9:30 – 9:35am

# Today's Agenda

# Today's Agenda

Item	Session Description	Time
1	Opening Remarks from Honored Guests	9:00 – 9:30 AM
2	Introductory Presentations	9:30 – 10:30 AM
3	Funding and Financing Expert Panel with Q&A	10:30 – 11:30 AM
4	Low- and Moderate-Income (LMI) Drivers and Communities Session – Presentations from driver representatives	11:30 – 12:05 PM
5	Closing Remarks from Honored Guests	12:05 – 12:10 PM
6	Lunch Break	12:10 – 1:00 PM
7	Low- and Moderate-Income (LMI) Drivers and Communities Session – Breakout groups discussion session	1:00 – 2:00 PM
8	GHG Reduction Plans & Regulatory Framework Session [PART A]	2:00 – 3:10 PM
9	Break	3:10 – 3:25 PM
10	GHG Reduction Plans & Regulatory Framework Session [PART B]	3:25 – 4:15 PM
11	Review Schedule & Adjourn	4:15 – 4:30 PM

9:35 – 10:30am

# CARB's Clean Miles Standard Regulation

California Air Resources Board

Gloria Pak, Air Resources Engineer



California Public  
Utilities Commission



# Clean Miles Standard Regulation

CPUC Workshop

March 8, 2022



# Outline

Background on SB 1014

2018 Base Year Activity

Electrification and GHG Targets

Optional GHG Credits

Exemption and Flexibilities

CARB's Role Going Forward



# Senate Bill 1014

## Clean Miles Standard

**GHG Target**  
gCO<sub>2</sub>/PMT

**Electrification  
Target**  
% eVMT

### Applicable to:

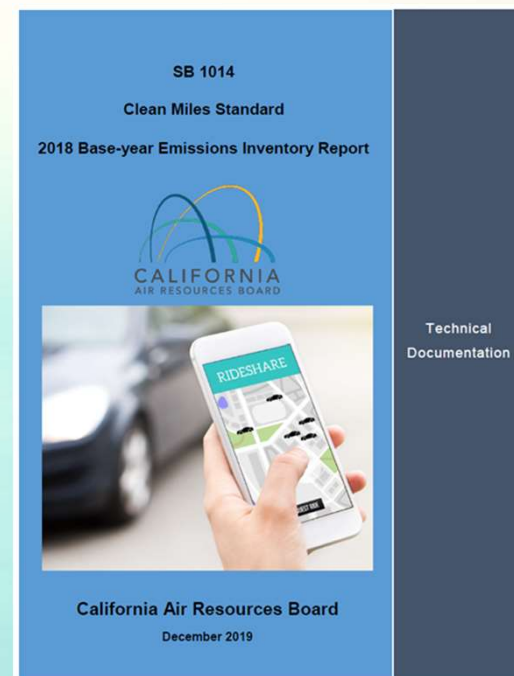
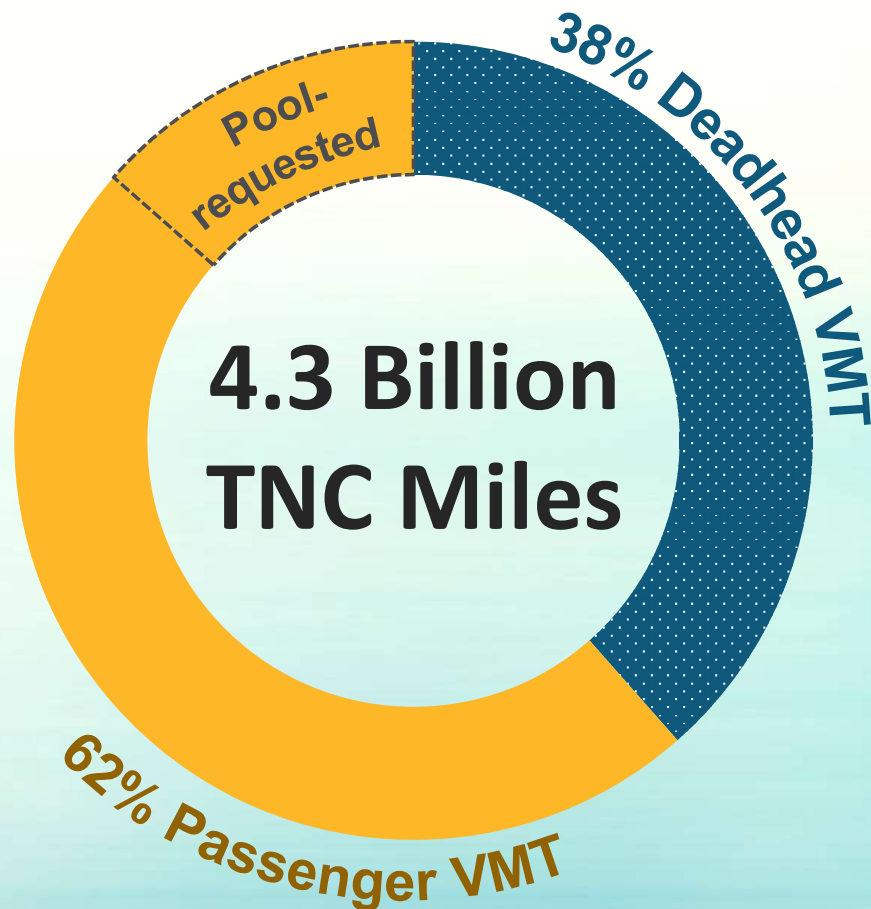
- Passenger service by transportation network companies (TNCs)
- TNC service by autonomous vehicle (AV) fleets

### Key goals:

- Reduce GHG emissions
- Increase electrification
- VMT reduction

# 2018 Base Year Activity

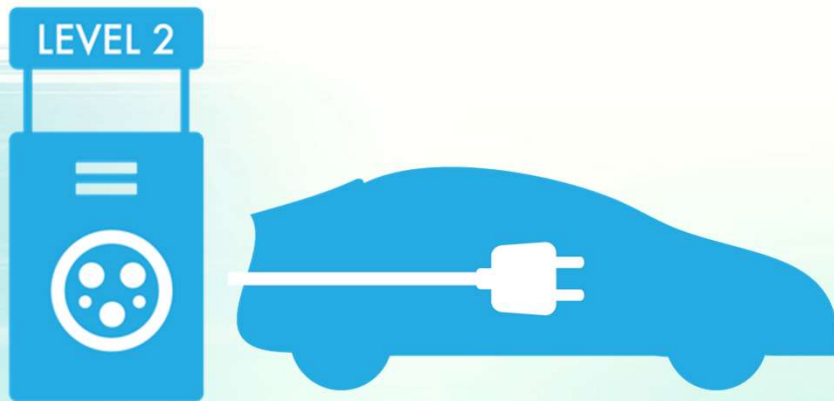
**1.25%** of CA's light-duty VMT was associated with TNCs



# Setting the Targets



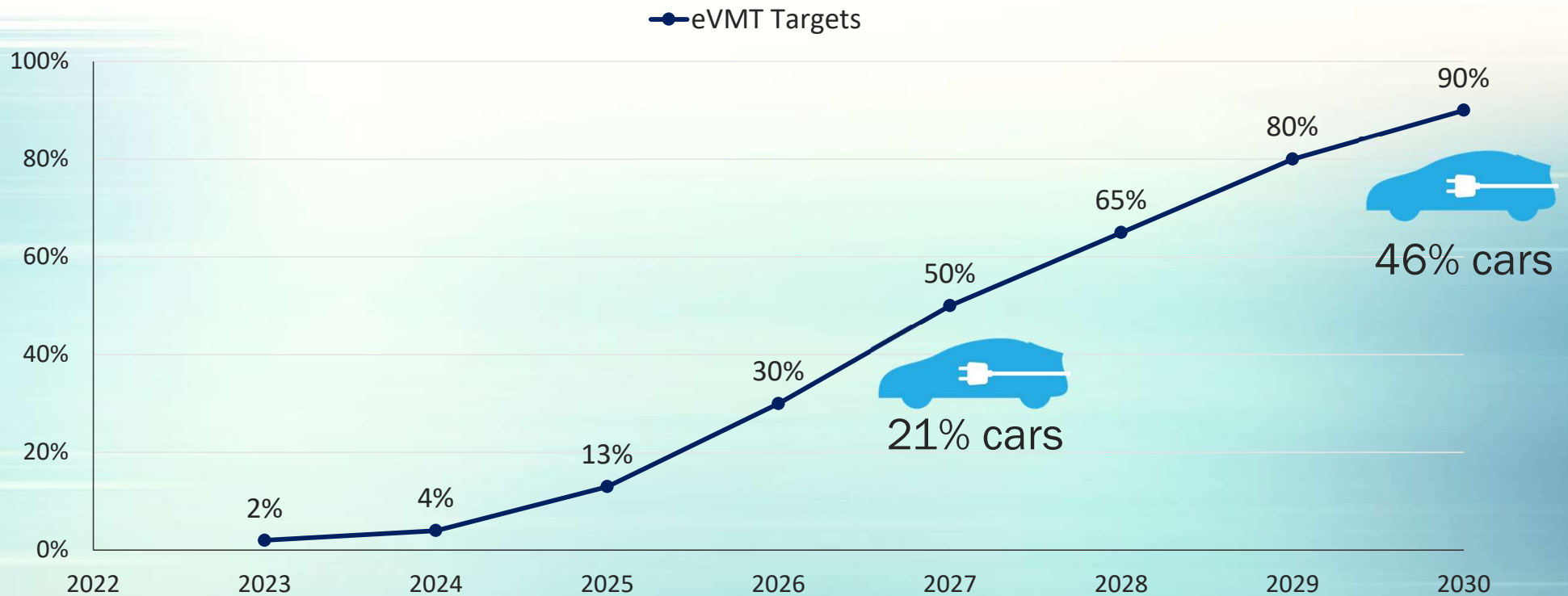
# Electrification Targets



## Electric vehicle miles traveled (eVMT)

Fraction of vehicle miles traveled by battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV)

# Electrification Targets



# How to Meet eVMT Targets

$$\% \text{ eVMT} = \frac{\text{Annual P3 miles completed by ZEVs}}{\text{Annual P3 miles}}$$

## Why Period 3 trip segments only?

- To reduce potential for excess deadhead miles by ZEVs

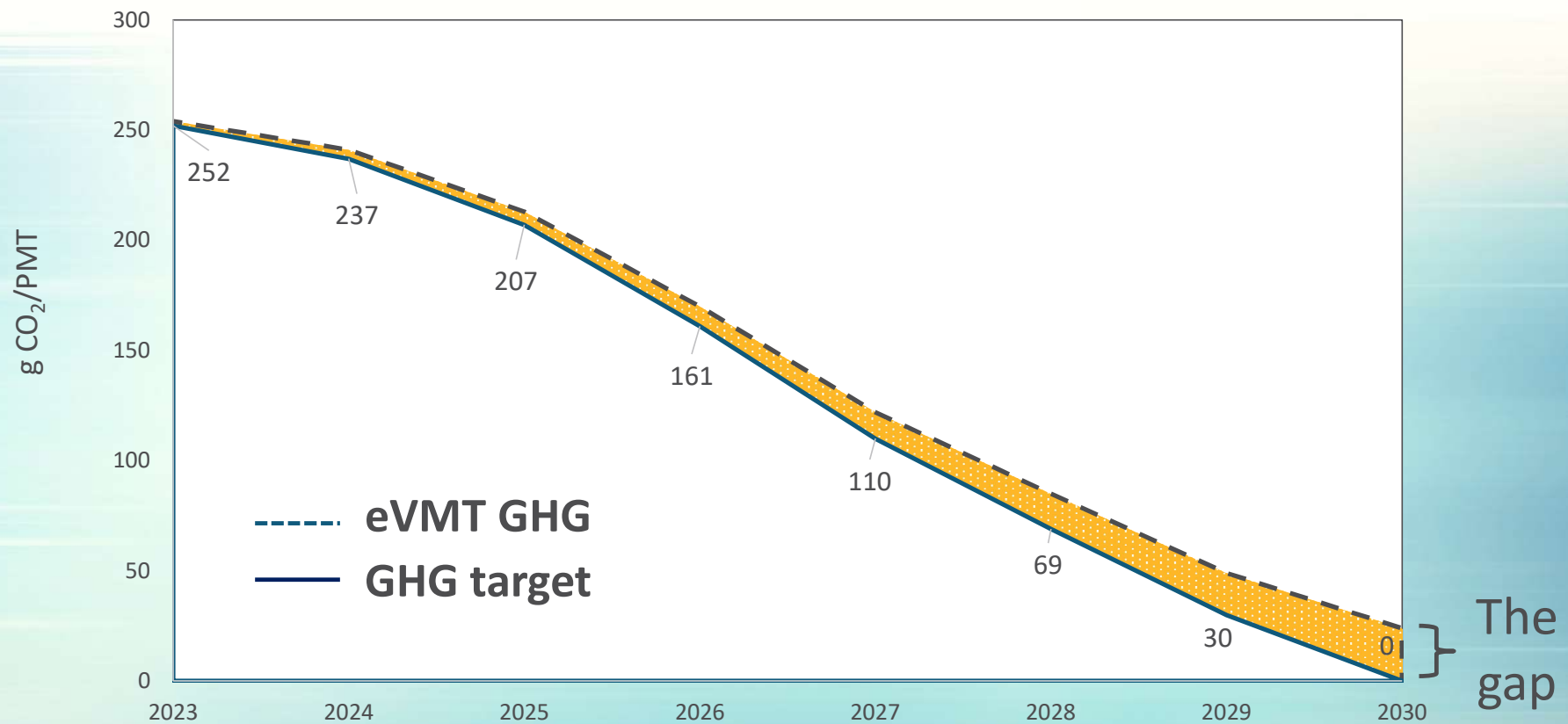
# Greenhouse Gas Targets



## Grams CO<sub>2</sub> per passenger-mile traveled

Total vehicle CO<sub>2</sub> emissions relative to total passenger miles traveled

# Greenhouse Gas Targets





# Grams CO<sub>2</sub> per Passenger-Mile Traveled

↓ Encourages lower fuel consumption vehicles, such as hybrids

↓

$$\frac{g \text{ CO}_2}{PMT} = \frac{\sum(VMT_{All} \times \text{CO}_2 \text{ factor})_{trip}}{\sum(VMT_{Period 3} \times \text{occupancy factor})_{trip}}$$

↑ Encourages higher occupancy, pooling

UNITS:

CO<sub>2</sub> factor – g/mi

Occupancy factor – passengers

# Optional GHG Credits

## Transit Connected Trips

- Vehicle trip connected to a mass transit trip
- Verified through purchase of transit ticket on TNC app or other method of verification

## Bike or Sidewalk Investment

- Must be part of an approved regional transportation plan
- Construction or repair of a sidewalk

Must be used in the same year they are earned and cannot be banked for use in future years

# Exemptions and Flexibility

## 1. Small TNC exemption:

**Applicable to TNCs with annual VMT  $\leq$  5 million**

**Exempt from:**

- Electrification and GHG targets, Annual Compliance Report

**Not exempt from:**

- Continued annual data submittal

## 2. Wheelchair accessible vehicle (WAV) trip exemption

## 3. Flexibility:

**Carry forward over-compliance GHG up to 3 years**

# CARB Role Going Forward

- Support CPUC CMS proceedings
- Monitor infrastructure and costs as directed by Board
  - Charger infrastructure access (e.g., home)
  - Electrification costs (e.g., ZEVs, electricity)
- Evaluate driver impacts
  - Support CPUC's engagement with drivers
  - Research contracts

# Thank You

E-mail: [cleancars@arb.ca.gov](mailto:cleancars@arb.ca.gov)

Website: <https://ww2.arb.ca.gov/our-work/programs/clean-miles-standard>

9:35 – 10:30am

# Questions?

10:30 – 11:30am

# Funding and Financing for ZEV Purchase and Use for TNC Services

Panel Discussion

## Funding and Financing - Panelists

- **Raquel Leon** – Air Pollution Specialist and Light-Duty ZEV Purchase Incentives lead, CARB
- **Shrayas Jatkar** – Interagency Policy Specialist for Equity, Climate, and Jobs, CA Workforce Development Board
- **Alan Jenn** – Research Professor and Assistant Director of the Energy Futures Research Center, UC Davis
- **Audrey Neuman** – Senior Transportation Electrification Analyst, CPUC Energy Division



10:30 – 11:30am

# Questions?

11:30am – 12:05pm

# Low- and moderate-income (LMI) Drivers and Communities

Presentations

## LMI Drivers & Communities - Presentations

- **Dr. Chris Benner**, Professor and Director – Institute for Social Transformation, UC – Santa Cruz
- **Sam Appel**, California State Manager for Climate and Labor Policy, BlueGreen Alliance
- **Jesus Garcia**, Research and Policy Analyst, SEIU Local 721
- **Alvaro Bolainez**, Vice President, Rideshare Drivers United

11:30am – 12:05pm

# Dr. Chris Benner

Professor and Director – Institute for Social Transformation, UC – Santa Cruz

# On-demand and On-the-edge: TNC Drivers, their economic circumstances and the CA Clean Miles Standard Program

**Chris Benner, Ph.D.**  
*Prof, of Env. Studies and Sociology*  
*UC Santa Cruz*

*Presentation to the CPUC*  
March 8, 2022



UC SANTA CRUZ

Institute for  
**Social Transformation**

INQUIRY WITH IMPACT

# Which drivers should we be worried about?

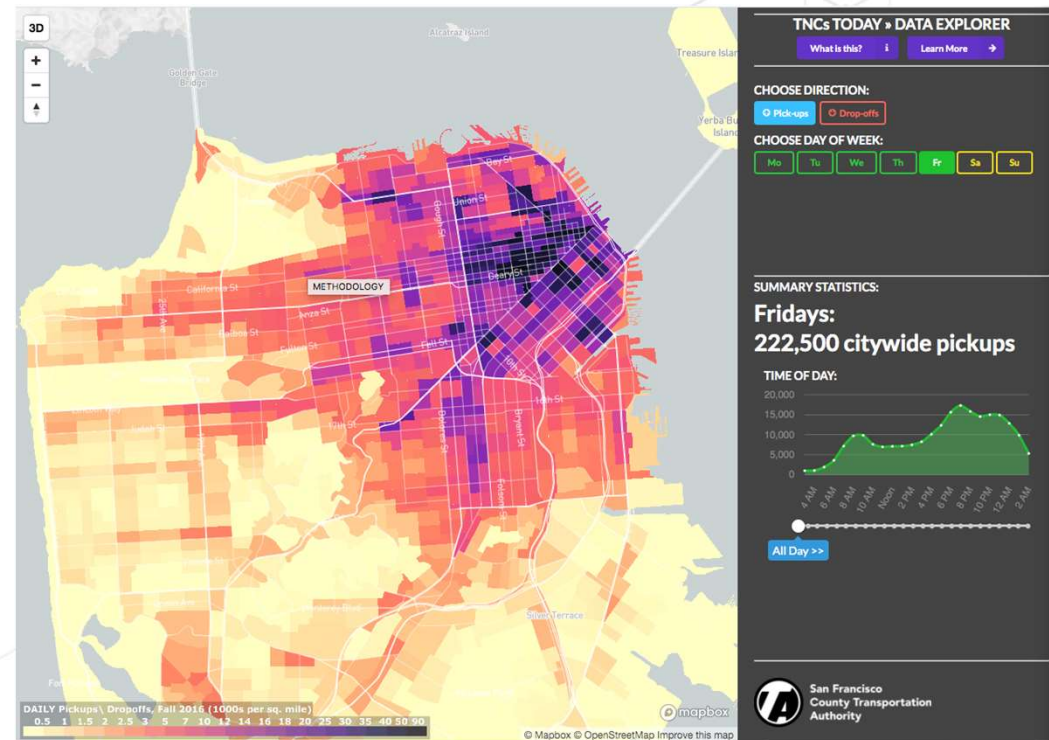
- Incomplete data on hours and pay, but still clear that large majority of trips, hours and earnings are accounted for by a minority of drivers for whom the work is full-time and their primary source of income
  - 57% of quarterly earnings from top 10% of drivers (JP Morgan Chase, 2018). Annual earnings even more concentrated
  - In Seattle, in a typical week, the 32% of drivers who are full-time accounted for 55% of all trips. (Parrott & Reich, 2020)
- Our San Francisco study pioneered methodology for gaining representative sample of this core workforce

Percent of drivers, by number of months with earnings

10 to 12 months	12.5%
7 to 9 months	10.0%
4 to 6 months	19.2%
1 to 3 months	58.3%

# METHODOLOGY

- Survey respondents were recruited through 6 different apps, with recruitment structured to get a representative sample
  - For ride-hailing, survey recruitment varied by time of day, day of the week, and location to match known pick-up location patterns from SF County Transportation Authority data
  - For delivery, survey recruitment was conducted during peak lunch and dinner meal times, spread across 11 different SF neighborhoods
    - Downtown
    - Marina
    - Richmond
    - Sunset
    - Mission Terrace/Excelsior
    - North Beach/Chinatown/Financial district
    - Glen Park/ Bernal Heights
    - Parkside
    - Noe Valley
    - Mission
    - Castro



# Diverse Workforce

- Predominantly male (86%)
- Diverse race/ethnicities:
  - 29% Asian, 23% Hispanic, 22% White, 12% Black, 13% multi-racial or other
- Majority (56%) foreign-born
- Median age is 40 in ride-hailing and 31 in delivery work
- 28% of ride-hailing and 62% of delivery workers in survey live in SF



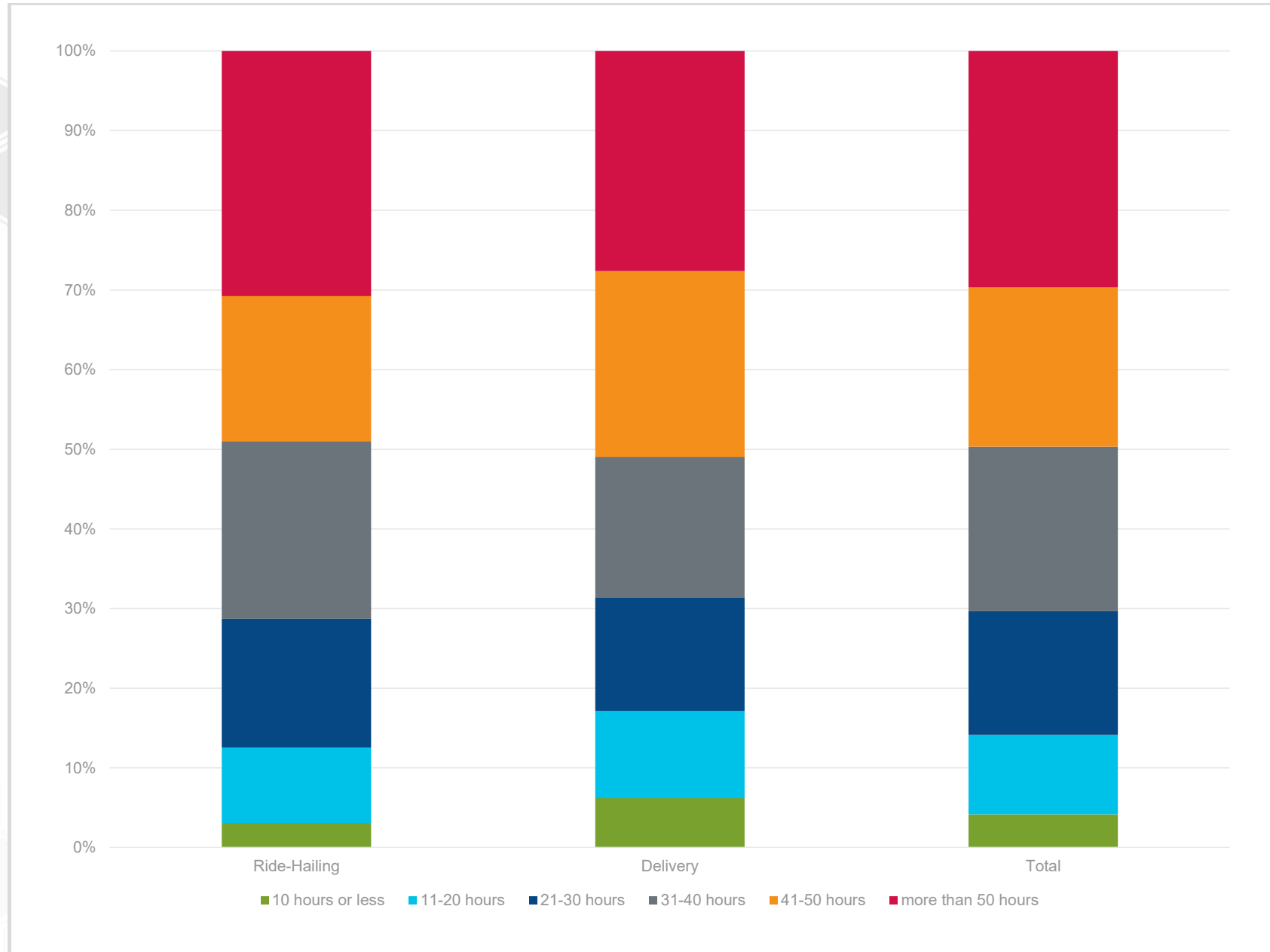




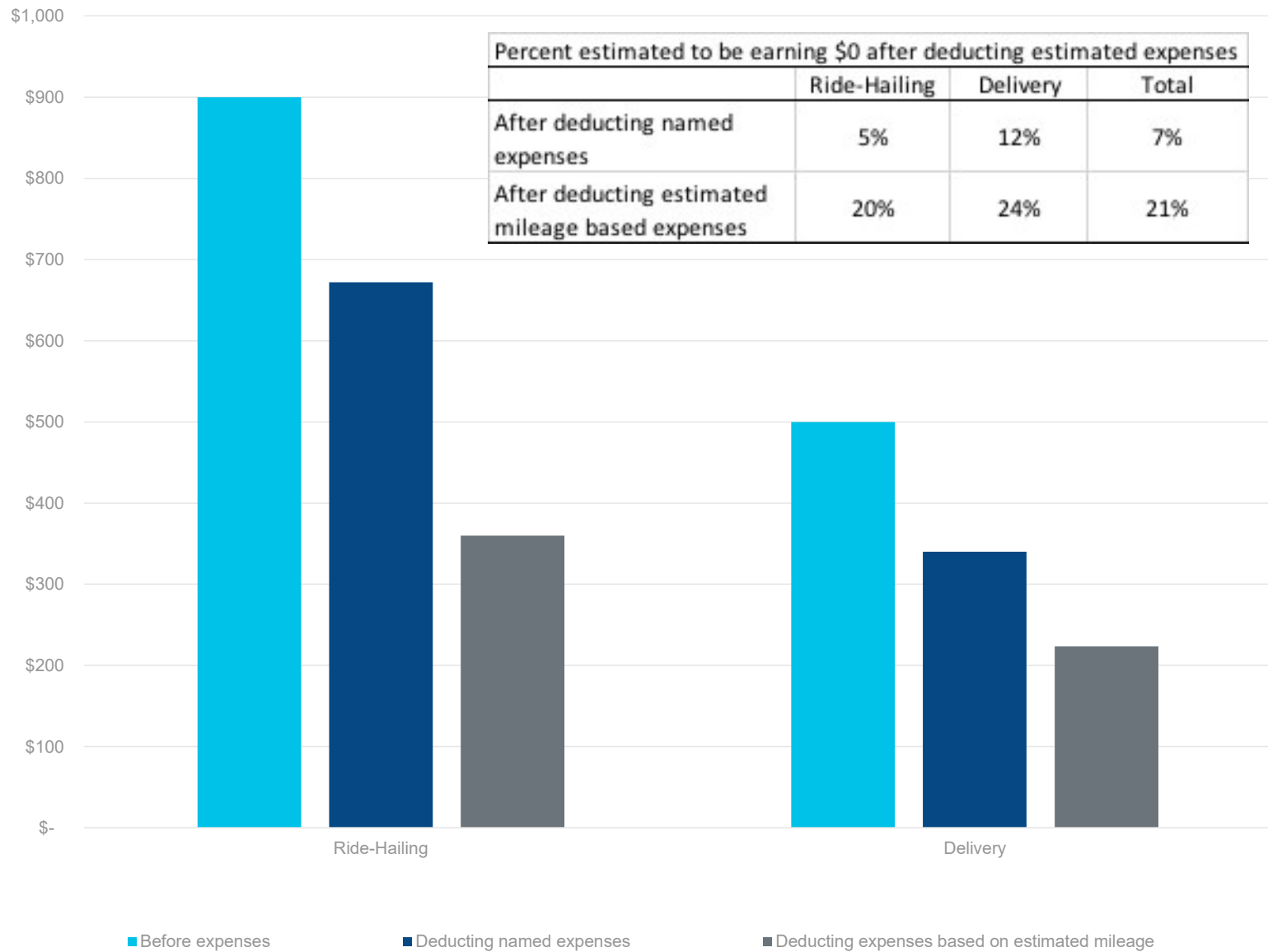
## Difficult Economic Circumstances

- 46% support others with their earnings, including 33% supporting children
- 21% have no health insurance, and another 30% use public or public-access health insurance (e.g. Medi-cal, Covered CA)
- 45% couldn't handle a \$400 emergency payment without borrowing
- 15% receive some form of public support (e.g. food stamps, housing assistance)

How many hours per week do you work on average for all of these apps?



# Median weekly earnings, before/after expenses (using two different methods for calculating expenses)



Large portion are likely paid below legal minimum wage





# Implications for CMS

- Most core drivers could not bear costs of new vehicles
- TNC companies are not currently providing adequate compensation, and should not be counted on to administer a driver assistance fund
- Assistance will require targeted outreach to marginalized populations, especially immigrants
- We need much better data linking earnings, hours and VMT
  - Waiting time (P1), dispatch time (P2) and passenger time (P3)

# Thank you.

UC SANTA CRUZ | Institute for  
Social Transformation

**Chris Benner, Ph.D.**  
**cbenner@ucsc.edu**

<https://transform.ucsc.edu/>

11:30am – 12:05pm

# Sam Appel

California State Manager for Climate and Labor Policy, BlueGreen Alliance

11:30am – 12:05pm

# Jesus Garcia & Wendy Knight

Research and Policy Analyst & Research and Policy Coordinator, SEIU  
Local 721



11:30am – 12:05pm

# Alvaro Bolainez

Vice President, Rideshare Drivers United

12:05 – 12:10pm

# Pre-Lunch Closing Remarks

12:10 – 1:00pm

# Lunch Break

Return to the WebEx by 1 pm (PT)

1:00 – 1:05pm

# Low- and moderate-income (LMI) Drivers and Communities

Break-out Group Discussions

# Break-out Discussion – Low- and Moderate-Income (LMI) Drivers and Communities

1. How should the Commission define and identify low- and moderate-income (LMI) drivers and individuals for the purposes of CMS implementation and monitoring of impact? There were a lot of specific suggestions in the OIR comments, but not a lot of agreement. Please expand on why your proposed definition offers the best opportunity for monitoring impacts on low- and moderate-income drivers.
2. How should the Commission “ensure minimal negative impact on low-income and moderate-income drivers”?
  - a. What part should TNCs play?
  - b. What financial supports or incentives have TNCs provided to drivers in the past, and what are lessons learned from those programs?
  - c. What strategies do TNC drivers hope to see in CMS implementation to minimize negative impacts on low- and moderate-income drivers?

## Break-out Discussion – Low- and Moderate-Income (LMI) Drivers and Communities (cont'd)

3. What is the impact of unpaid time on TNC drivers' compensation, including charging time, and how should the Commission consider this impact in the context of CMS?
4. What role should your organization, Community Based Organizations, or academics play in supporting ongoing engagement and understanding of the impacts on LMI drivers, such as through surveys, working groups, or another forum?
  - a. What new data does the Commission need to collect to evaluate the impact of CMS on low- and moderate-income drivers?
  - b. Are there additional resources or outreach the Commission should consider to support engagement with communities whose primary language is not English? Translation services or other types of resources?

## Break-out Discussion – Low- and Moderate-Income (LMI) Drivers and Communities (cont'd)

5. How do drivers approach accessing an EV for use on a TNC platform? What additional resources or information are needed?
6. How can the Commission and CPUC Staff engage with TNC drivers in this proceeding and during program implementation? What types of outreach and engagement will be effective for TNC drivers?

1:40 – 2:00pm

# Low- and moderate-income (LMI) Drivers and Communities

Group Reconvene



2:00 – 2:20pm

# Regulatory Framework for the Clean Miles Standard

GHG Emissions Reduction Plans, Compliance and Enforcement  
Framework

2:00 – 2:20pm

# Renewables Portfolio Standard

Michael Baltar, CPUC Energy Division

# Renewables Portfolio Standard (RPS) basics

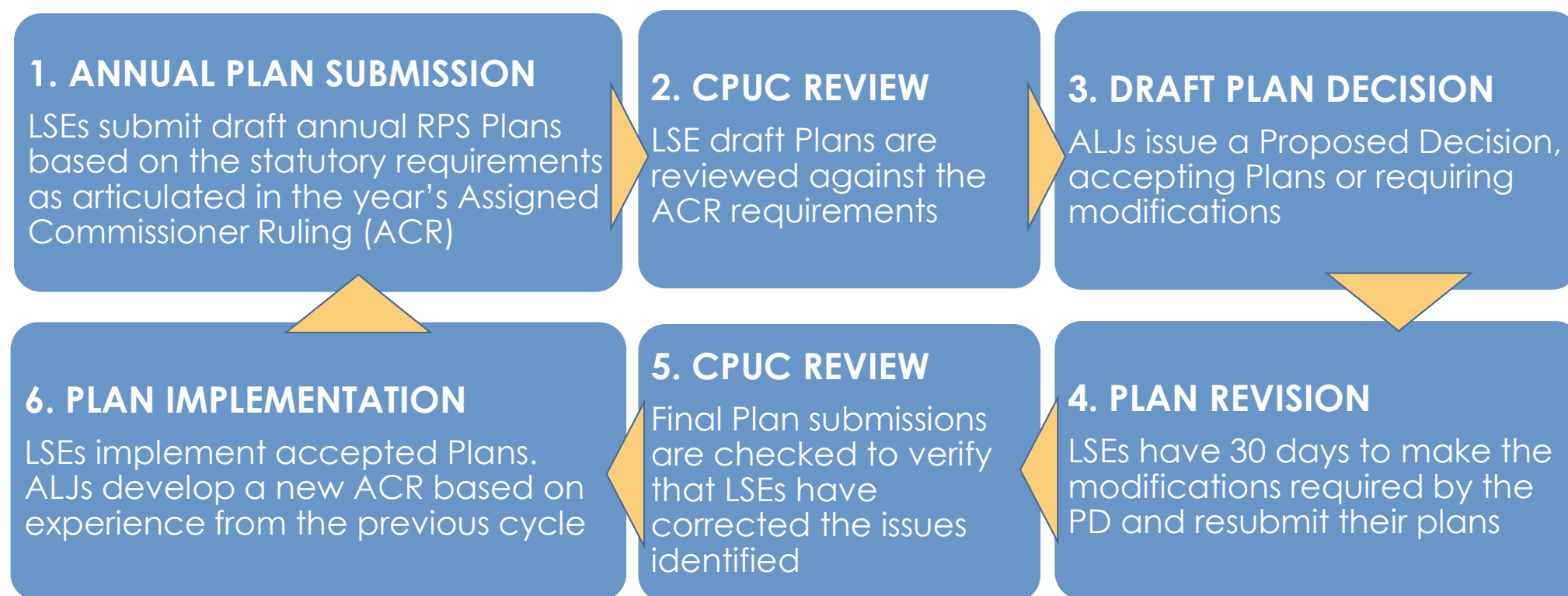
- California's RPS is a statutory market-based program designed to induce all electric load-serving entities (LSEs) to procure increasing amounts of renewable energy
- RPS compliance is measured in terms of renewable energy credits (RECs):  
1 REC = 1 MWh of RPS-eligible electricity generated
- Years are grouped into multi-year Compliance Periods (CPs) with compliance assessed at the CP level
- RPS works by requiring LSEs to procure and retire RECs proportional to their retail sales. This proportion gradually rises, driving increased renewable energy procurement

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6 and beyond
Years	2011-2013	2014-2016	2017-2020	2021-2024	2025-2027	2028-2030 and beyond
RPS %	20%	25%	33%	44%	52%	60%

# RPS Regulatory Frameworks

- The CPUC's RPS regulatory activities are focused on ensuring proper planning, verifying compliance with RPS requirements, and penalizing shortfalls if necessary.
- Forward looking: **Procurement Plans**
  - Annual
  - Qualitative review
- Backwards looking: **Compliance Reports**
  - Both Annual and at the end of a Compliance Period
  - Quantitative review, penalty assessment
- Procurement Plans and Compliance Reports are not linked

# RPS Procurement Plan Process



# RPS Program Compliance Requirements

- Compliance with California's RPS program is determined by the amount of RECs procured for compliance within multi-year compliance periods by an LSE. Procurement is measured against three criteria:
  - **Procurement Quantity Requirement (PQR):** LSEs must meet the overall percentage requirements for RECs based on retail sales
  - **Long-Term Contracting Requirement:** LSEs must procure 65 percent of their Procurement Quantity Requirement from long-term contracts, defined as contracts with terms of 10 or more years
  - **Portfolio Balance Requirement (PBR):** RECs are classified into three different Portfolio Content Categories (PCC) types, and LSEs are required to balance their portfolios in each compliance period by meeting various minimum and maximum quantities for the types

For more information: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-compliance-rules-and-process/60-percent-rps-procurement-rules>

# RPS Annual Compliance Review

- For RPS compliance, retail sellers must submit a **Preliminary Annual Report** to CPUC Energy Division by August 1 each year.
  - This annual report details all RPS procurement for the applicable Compliance Period and estimates any shortfalls in PQR, PBR, and long-term contracting requirements.

## REPORT SUBMITTAL

The CPUC provides templates of the Preliminary Annual Report for LSEs to fill and submit

## CPUC REVIEW

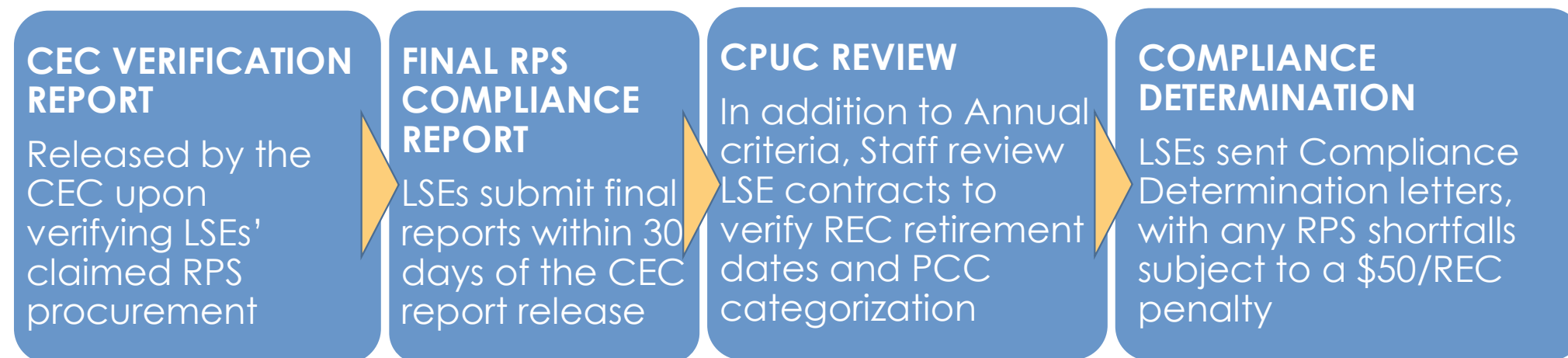
Staff assess LSE reports for accuracy, completeness, and progress towards meeting PQR, PBR, and long-term requirements for the CP

## SB 155 NOTIFICATION

Staff draft notifications to any LSEs deemed 'at risk' of failing to meet compliance requirements along with recommended corrective actions

# RPS End of Compliance Period Review

- LSEs must file a **Final RPS Compliance Report** within 30 days of the California Energy Commission (CEC) issuing its RPS Procurement Verification Report for the applicable Compliance Period.
  - The CEC's Verification Report is based on WREGIS data and not tied to a set schedule – it may be released several years after the CP ends.





2:00 – 2:20pm

# Integrated Resource Planning

James McGarry, CPUC Energy Division

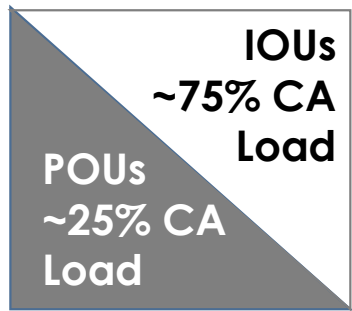
# Integrated Resource Planning (IRP) in California Today

- The objective of integrated resource planning is to reduce the cost of achieving GHG reductions and other policy goals by looking across individual load serving entity (LSE) boundaries and resource types to identify solutions to reliability, cost, or other concerns that might not otherwise be found.
- Goal of the 2019-2021 IRP cycle was to ensure that the electric sector is on track to help California reduce economy-wide GHG emissions 40% from 1990 levels by 2030, per SB 32, and to explore how achievement of SB 100 2045 goals could inform IRP resource planning in the 2020 to 2032 timeframe.
- The IRP process has two parts:
  - First, it identifies an optimal portfolio for meeting state policy objectives and encourages the LSEs to procure towards that future.
  - Second, it collects and aggregates the LSEs' collective efforts for planned and contracted resources to compare the expected system to the identified optimal system. The CPUC considers a variety of interventions to ensure LSEs are progressing towards an optimal future.

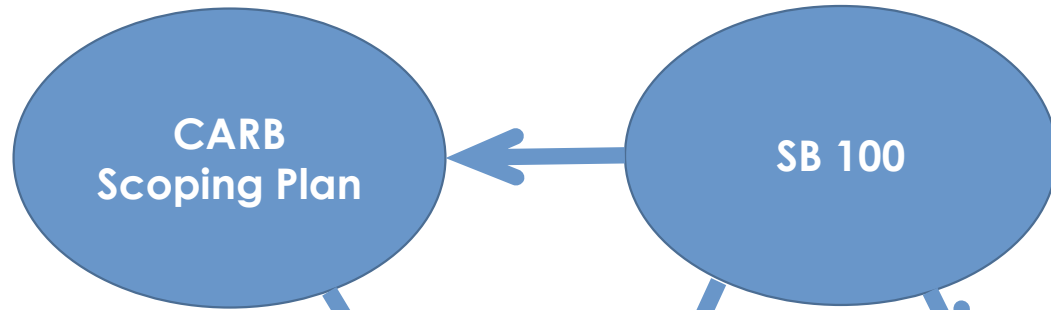
# California's Electricity Planning Ecosystem

- Economy-wide plan to reach GHG targets
- Updated every 5 years

- Demand forecast for infrastructure planning
- Updated annually



- Establishes GHG target within CARB's range for CPUC-jurisdictional LSEs
- Orders procurement + oversees compliance
- Annually transmits portfolios for CAISO transmission planning



- Zero carbon electricity by 2045
- Joint agency report, every 4 years



- Assess transmission needs
- Conceptually approves new projects
- Updated annually

- Plans filed per SB 350 + CPUC guidance
- Procurement in compliance w/ CPUC directives

# Regulated Entities' Filings

Filed by Load Serving Entities (LSEs)

# Filing Requirements

- LSE IRP filings are the vehicle by which the CPUC and stakeholders gain insight into individual LSEs' plans for meeting state goals
- To facilitate the filing of useful, appropriate, and complete information by LSEs, IRP staff provide LSEs with standardized tools, instructions, and templates (aka, IRP "filing requirements documents")
  - LSEs are assigned load forecasts and GHG targets/benchmarks to use in planning
- The September 1, 2020 filings included LSE information on:
  - GHG reductions
  - reliability
  - imports/exports
  - impacts on disadvantaged communities
  - costs
  - other elements of long-term resource planning

## Filing Requirements Documents: Purpose

- **Narrative Template (NT)**: To describe how LSEs approached the process of developing its plan, present the result of analytical work, and demonstrate to the Commission and the stakeholders the LSE's action plans
- **Resource Data Template (RDT)**: To collect planned and existing monthly LSE contracting data, including for future resources which do not exist yet. Provides a snapshot of the LSE contracted and planned monthly total energy and capacity forecast positions over a ten year look ahead period
- **Clean System Power (CSP) Calculator**: To use in estimating the GHG and criteria pollutant emissions of LSE portfolios and verify that LSE portfolios achieve assigned GHG planning benchmarks

# Evaluation of LSE Filings

- Narrative Template (NT)
  - Commission staff utilized a scorecard system to conduct a qualitative review of LSE NTs to determine whether each LSE adequately satisfied the requirements of each NT section established by the Commission
  - NT sections could receive scores of “exemplary,” “adequate,” or “deficient.” LSEs receiving deficient scores were required to re-submit those sections
- Resource Data Template (RDT)
  - Staff built the RDT Error Checking, Aggregation and Reallocation Tool (RECART), which used Python code to aggregate, error check, and analyze LSE RDT filings
  - RECART compiled energy and capacity under contract, contracted resources by technology type and LSE, and aggregated new resources that were in development or planned future purchases
  - LSEs were contacted when errors were found in RECART and re-submitted RDT filings, where necessary
- Clean System Power Calculator (CSP)
  - Staff conducted a quantitative review of each LSE’s CSP Calculator to determine that they achieved their GHG benchmarks and followed all calculator instructions
  - LSEs that did not meet their targets or did not follow instructions were contacted for re-submission

# Observations and Lessons Learned

- LSEs collectively filed plans that were generally consistent in terms of size and resource composition with the optimal portfolio developed by the Commission in part 1 of the cycle
- Commission staff spent considerable time and effort iterating with individual LSEs through up to six re-submission requests from September 2020 through February 2021 to correct and clarify contract information provided by the LSEs
- Provide clear templates and instructions for LSE filings
- Provide clear standards for how templates will be evaluated including guidance on what constitutes an error or incomplete filing
- Design filing templates with the end use for the requested information in mind so that it is clear how plan evaluation will lead to the final Commission decision



2:20 – 2:25pm

# **GHG Emissions Reduction Plans**

Break-out Group Discussions

## Break-out Discussion – GHG Emissions Reduction Plans

1. What are the potential parallel elements from the IRP and RPS Plans that could be used to inform the development of the GHG Emissions Reduction Plans?
2. Are there any elements from the GHG Emissions Reduction Plan as described in the OIR that are potentially missing? Are there elements that could be addressed in a later phase?

## Break-out Discussion – GHG Emissions Reduction Plans (cont'd)

3. How should the Commission balance obtaining adequate GHG Emissions Reduction Plans without being too prescriptive when creating the plan template?
  - a. How prescriptive should a GHG Emissions Reduction Plan template be?
  - b. What template elements are helpful to regulated entities? To the public?
  - c. How should the Commission use the GHG Emissions Reduction Plans to help ensure minimal negative impact on low- and moderate-income drivers? What level of detail do labor advocates recommend requiring in this regard?
4. What strategies do regulated entities anticipate including in their GHG Emissions Reduction Plans? How might these differ between TNCs and AV TCPs?

2:55 – 3:10pm

# GHG Emissions Reduction Plans

Group Reconvene

3:10 – 3:25pm

# Afternoon Break

Return to the WebEx by 3:25 pm (PT)

3:25 – 3:30pm

# Regulatory Framework

Break-out Group Discussions

## Break-out Discussion – Regulatory Framework

1. Both the IRP and RPS contain qualitative review for the LSEs' submitted plans. What are the potential challenges with a qualitative review? What are the potential benefits?
  - a. What should be considered an "exemplary," "adequate," "deficient," "viable," or "complete" GHG Emissions Reduction Plan?
2. What should the structure for submitting, reviewing, and approving plans look like? Should any elements of GHG Emissions Reduction Plan be considered by the Commission as opposed to Staff?

## Break-out Discussion – Regulatory Framework (cont'd)

3. Are there quantitative tools available to assess the viability of strategies included in a regulated entity's GHG Emissions Reduction Plan? What are the pros and cons of using a quantitative evaluation tool?
4. Considering the IRP, RPS, or other models, what are some the benefits and challenges with different types of enforcement mechanisms that the Commission should consider?



4:00 – 4:15pm

# Regulatory Framework

Group Reconvene

4:15 – 4:30pm

# Review of Schedule



# California Public Utilities Commission

Terra Curtis, Transportation Policy Supervisor  
Stephanie Seki, Lead Analyst

[CleanMiles@cpuc.ca.gov](mailto:CleanMiles@cpuc.ca.gov)