



California Energy Commission

Tracking and Improving Reliability of California's Electric Vehicle Chargers:
Increased granularity of reported utilization data

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Agenda

1. Background
2. Revised proposal for utilization reporting
3. IEPR forecasting needs
4. Public feedback / Q&A
5. Next steps
6. Closing



Housekeeping

- Workshop is being recorded on Zoom
- Written comments to docket 22-EVI-04
<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-EVI-04>
- **Deadline for Written Comments: Jan 10, 2025**
- [Workshop event page](https://www.energy.ca.gov/event/workshop/2024-12/workshop-staff-proposal-electric-vehicle-charging-station-utilization)
<https://www.energy.ca.gov/event/workshop/2024-12/workshop-staff-proposal-electric-vehicle-charging-station-utilization>



Commitment to Diversity

The CEC adopted a resolution strengthening its commitment to diversity in our funding programs.

To meet this commitment, CEC staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups
- Notify potential new applicants about the CEC's funding opportunities
- Assist applicants in understanding how to apply for funding
- Survey participants to measure progress in diversity outreach efforts



Diversity Survey



Scan the code on a phone or tablet with a QR reader to access the survey.

One Minute Survey

The information supplied will be used for public reporting purposes to display anonymous overall attendance demographics.

Zoom Participants, please use the link in the chat to access the survey or scan the QR code on the left of the screen with a phone or tablet to access the survey.

Survey will be closed at the end of the day.

Survey Link: <https://forms.office.com/g/J5pJpAevgA>



Background





Original purpose of data collection

- Assembly Bill (AB) 2127
- Senate Bill (SB) 1000
- Zero-emissions Infrastructure Plan (ZIP)
- Directing investments



Original proposal for utilization reporting requirement

The 1st and 2nd drafts of the staff report proposed networked chargers in California be required to report the following data quarterly:

1. Average hours per day the charger drew power during the reporting period.
2. Average hours per day the charger was connected to an electric vehicle during the reporting period.
3. Average kWh per day the charger dispensed energy during the reporting period.

**Both drafts proposed auto-designating these data as confidential.*



Revised Utilization Reporting Proposal



Revised purpose of data collection

- Assembly Bill (AB) 2127
- Senate Bill (SB) 1000
- Zero-emissions Infrastructure Plan (ZIP)
- Directing investments
- Integrated Energy Policy Report



Updated utilization reporting requirement

For each charging session:

1. Identifying information
2. Plug-in / unplug time
3. Active charging start / end time
4. Energy consumed
5. Energy discharged
6. Peak power

**This proposal still auto-designates all utilization data as confidential*



IEPR Need for Session-Level Data





Why does CEC forecast energy demand?

Warren-Alquist Act

Established the CEC

Public Resources Code 25301(a)

Requires the CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices."



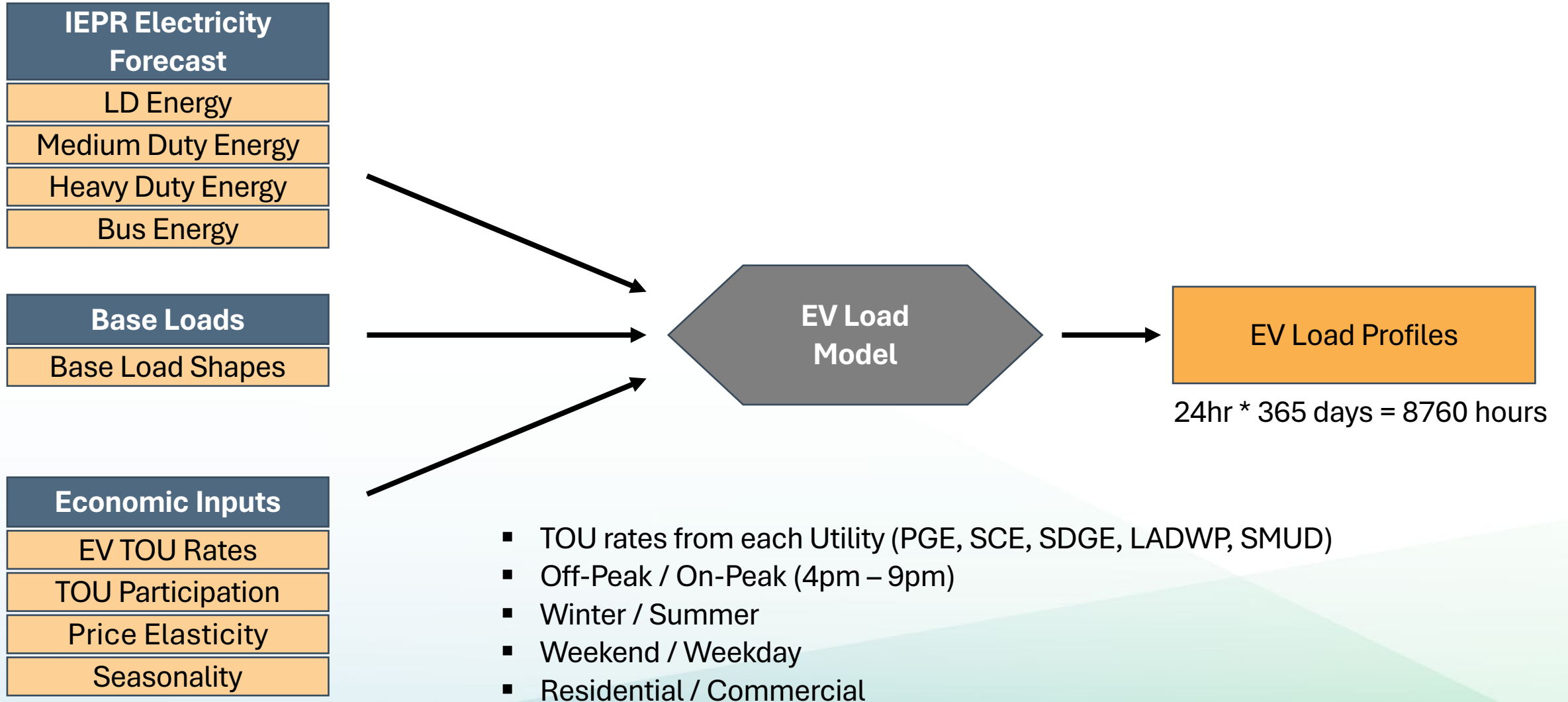


CA Energy Demand Forecast

- Foundational for procurement and system planning in the state
- 15+ year system-level forecast of electricity and gas demand
 - Annual electricity and gas consumption
 - 8760 hourly electricity loads
 - ‘Additional Achievable’ scenarios for energy efficiency, building electrification, and transportation electrification that capture a range of uncertainty
- Used by multiple agencies and entities
 - CPUC for Integrated Resource Planning
 - CAISO for transmission system planning
 - CPUC / utilities for resource adequacy requirements
 - IOUs for planning



EV Load Model

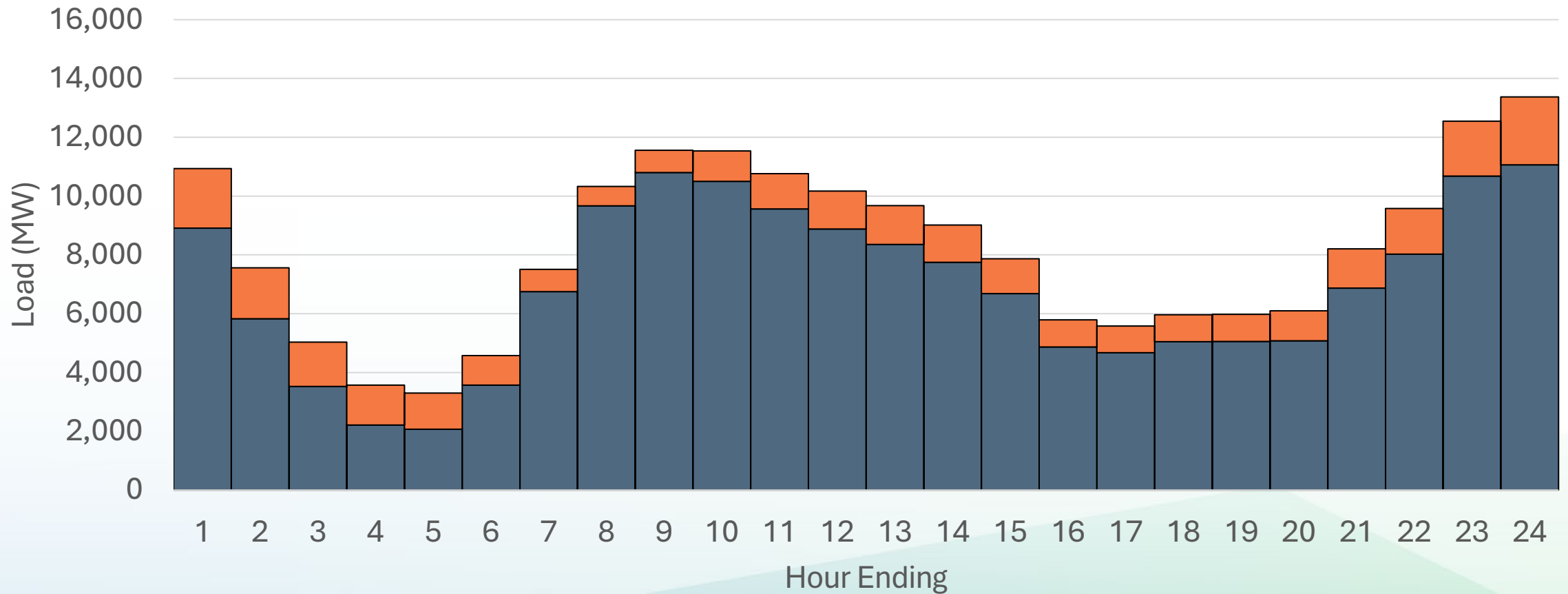




EV Load Profile – System Load

2024 IEPR AATE 3 CAISO
2035 Peak Summer Day

MDHD LDV





Status of Key Inputs for Model

- EV TOU Rates
- Seasonality
- Input Load Shapes
 - Need regularly updated data on current and changing charging behavior
- TOU Participation
 - Need regularly updated data to tie charging behavior to TOU rates
- Price Elasticity Factor
 - Need regularly updated data to tie price impacts to charging behavior
- Proportions of Personal Vehicle Charging Mode Shares
 - Need updated data to determine how consumers react to changing prices, including regional differences



Why Session Data Is Critical

Session-level data is necessary for accurate:

- Forecasting grid and charging needs
 - EV load forecast
 - Supporting grid infrastructure needs
 - Evolving consumer behavior
 - Load factor
 - Congestion
 - Automatic load management systems (ALMS)

Why are aggregated data insufficient?

- Aggregated averages mask:
 - Simultaneity of use at a site level
 - Influence of TOU rates on charging behavior
 - Hourly, diurnal, and seasonal trends necessary for forecasting



Public Comment / Q&A





Public Comment / Q&A

- **Zoom Participants**
- Use “raise hand” feature to make verbal comments
- Use the “Q&A” feature to type your questions
- The chat feature has been disabled
-
- **Telephone Participants**
- Dial *9 to raise your hand
- Dial *6 to mute / unmute you phone line
-
- **Three-minute limit for spoken comments.**



Next Steps





Next Steps

- **Written Comments – January 10, 2025**
- Docket: 22-EVI-04
- [E-Comment Submission](#)

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-EVI-04>

CEC will evaluate stakeholder feedback on this proposal and incorporate into a Final Staff Report. Revised proposed regulations may be adopted by the California Energy Commission.



Thank You!

