

## Chat Questions

- Have you done any emission comparison studies between your existing bus fleet, versus the emissions from generating energy with diesel generators to fuel the EVs?
  - No, the Transit Regulation is in place and mandates the ZEV implementation, but does not specify anything about charging.
- What were the Osha and other regulations that give the requirements for maintenance on large battery vehicles (i.e. the reason for adding the new shop)?
  - OSHA does not have a published regulation manding the space necessary around vehicles with high voltage battery packs, but they did recommend this amount of clearance and said that the first serious injury that results from a lack of sufficient clearance will likely be the catalyst for a regulation.
- Have you done any emission comparison studies between your existing bus fleet, versus the emissions from generating energy with diesel generators to fuel the EVs?
  - No emission comparisons were done. The Transit Rule mandates that ZEV buses be purchased, but does not regulate how the electric energy is produced.
- What is the name of the company you use for tracking LCFS credits?
  - There are a number of companies that provide this type of service.
    - The City of Fairfield uses: XXX
    - The County of Santa Clara uses: XXX
    - Companies that have presented to the Sacramento Clean Cities Coalition include:
      - Sustainability Partners (bfigenshow@s.partners)
      - SRECTrade (justin.goldstein@srectrade.com)
      - John Thornton (john@CleanFuture.us)
- Do you use the CARB LCFS system to report the kwh data yourself or do you outsource this as well? Are you using a vendor for only monetization?
  - City of Fairfield: We provide the charger data from its software to the broker and they handle everything else. We are working on an integration so it's automated in 2023.
  - County of Santa Clara: Sage Energy Consulting, an NV5 Company Katie Crider - Katie.Crider@NV5.com [sagerenew.com](http://sagerenew.com)
- One attendee commented:
  - "For refuse we are already managing lithium ion batteries starting fires in vehicles and facilities."
- Is CARB discussing whether public fleets of 10 or less should begin 2027?
  - CARB Staff were directed by the CARB Board of Directors to research and come back to them with data of the impacts of requiring private fleets of 10 or less to have to comply with the proposed Advanced Clean Fleet (ACF) regulation
- Does anybody have a recommendation of a consultant(s) that could help a City prepare a needs analysis/strategy?
  - Sacramento Clean Cities Coalition has worked with: Frontier Energy: [cwhite@frontierenergy.com](mailto:cwhite@frontierenergy.com). Ms. White and Frontier have done over 60 ZEV Fleet Transition Plans.
  - City of Fairfield has used: Willdan – Taylor Briglio (tbriglio@willdan.com)
  - County of Santa Clara has used: We use Sage Energy Consulting, an NV5 Company Katie Crider - [Katie.Crider@NV5.com](mailto:Katie.Crider@NV5.com) [sagerenew.com](http://sagerenew.com) for reporting and monetization.
  - An attendee, Jennifer Vongsarath, indicated that her company does this type of work - Acumen Building Enterprise, [Jennifer.vongsarath@acumentransit.com](mailto:Jennifer.vongsarath@acumentransit.com)
- Do you know if you buy a year model 2024 internal combustion (ICV) and receive it on 2023, would that be part of the regulation since is not CY-24?
  - The trigger date for the regulation is the date of the purchase order, not the model year of the vehicle.
  - There have been discussions with CARB staff to allow government fleets to take credit for EVs purchased and delivered prior to the first proposed implementation date of 01/01/2024. Otherwise you can apply vehicles delivered after 01/01/24 to the 50% requirement for government fleets. You will also be able to apply purchase orders issued between 01/01/24 and 12/31/24 to your 2024 50% requirement.
- An Attendee commented:
  - "Calculations I did on our 34 Shuttle buses were 208Mwh monthly to operate."
- Do you have incentive/grant information for programs to help pay for infrastructure and vehicles? We've heard of the PGE fleet program
  - ([https://www.pge.com/en\\_US/large-business/solar-and-vehicles/clean-vehicles/ev-fleet-program/ev-fleet-program.page](https://www.pge.com/en_US/large-business/solar-and-vehicles/clean-vehicles/ev-fleet-program/ev-fleet-program.page)) are there others?

- See also: <http://www.cleancitiessacramento.org/grants-and-incentives.html>
- See also: [https://afdc.energy.gov/laws/state\\_summary?state=ca](https://afdc.energy.gov/laws/state_summary?state=ca)
- See also: CVRP Home | Clean Vehicle Rebate Project - <https://cleanvehiclerebate.org/en>
- See also: Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project | California HVIP - <https://californiahvip.org/>
- See also: CALeVIP - <https://calevip.org/>
- See also: EnergiIZE - <https://energiize.org/>
- See also: Charge Ready - <https://www.sce.com/evbusiness/chargeready>
- See also: Carl Moyer Memorial Air Quality Standards Attainment Program | California Air Resources Board - <https://ww2.arb.ca.gov/our-work/programs/carl-moyer-memorial-air-quality-standards-attainment-program> See also: [attainment-program](https://ww2.arb.ca.gov/our-work/programs/carl-moyer-memorial-air-quality-standards-attainment-program)
- Clean Transportation Program | California Energy Commission - <https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program>
- See also: Incentive Search | DriveClean (ca.gov) - <https://driveclean.ca.gov/search-incentives>
- See also: Electric For All - <https://www.electricforall.org/>
- Is bi-directional (V2X) charging being considered for the facility upgrade? If so, are there different infrastructure hardware considerations/needs for bi-directional (V2X) charging?
  - City of Fairfield is not looking at bi-directional charging. Their vehicles need to be available and fully charged in emergencies, nights, weekends, etc. Their vehicles can't be set up to discharge their power because they may be called upon for emergency operations at any time.
  - Most government fleets are not planning on V2X because of emergency response needs and to avoid demand charges the vehicles will be charged overnight and will need as much time to charge as possible so medium/heavy duty trucks are at a full charge level for works shifts beginning as early as 5am.
  - Sacramento Clean Cities reports that some bi-directional systems may require two circuits (one to charge the vehicle and for the vehicle to discharge power into the facility or the grid. Making a charger installation capable of being bi-directional at the time of installation would be inexpensive, even if the charger that is installed at that time is not a bi-directional charger.
- Also interested in above ground conduit and integrated battery charger options that can take in a lower power level to charge a larger battery and discharge higher power rates?
  - This was acknowledged as a very valuable strategy that will need to be employed in order to reduce peak power demands
- How are you funding the 60 mil for your facility upgrades? Is that inclusive of PG&Es portion?
  - That cost is not including any of PG&E's cost. The PG&E Fleet Ready Program might be giving us rebates of up to \$100K. We received an FTA Lo-No grant of \$12M to help purchase 5 BEB's, 3 DCFC's, maintenance facility upgrades and workforce development. The rest is unfunded although a funding source needs to be identified very soon or the project gets put on hold.
- Comments by attendees:
  - "We have a few Mirai's in the fleet, they haven't had any issues. If the Hydrogen infrastructure improves we can overcome the charging hurdles."
  - Want to say thanks for the really good information Gentlemen. This was a lot of data collection and want to thank you for sharing it. (Note: Many comments of this sort were sent.)
  - The Silverado EV will be bidirectional