DOCKETED	
Docket Number:	23-IEPR-05
Project Title:	Accelerating Distribution Grid Connection
TN #:	250264
Document Title:	Volvo Group's Comments
Description:	N/A
Filer:	System
Organization:	Volvo Group/Aravind Kailas
Submitter Role:	Public
Submission Date:	5/22/2023 9:53:26 PM
Docketed Date:	5/23/2023

Comment Received From: Aravind Kailas
Submitted On: 5/22/2023
Docket Number: 23-IEPR-05

Volvo Group's Comments on 23-IEPR-05

Additional submitted attachment is included below.

VOLVO

2023-05-22

California Energy Commission
715 P Street
Sacramento, CA 95814

Re: Comments regarding Commissioner Workshop on Clean Energy Interconnection – Electric Distribution Grid – May 9, 2023 (Docket Number 23-IEPR-05)

Dear Commissioners Monahan and Gunda,

Volvo Group North America (Volvo Group) welcomes the opportunity to provide comments to the California Energy Commission (CEC) 2023 Integrated Energy Policy Report's workshop on Clean Energy Interconnection – Electric Distribution Grid.

First, we applaud the CEC for addressing the interconnection issues and bringing the discussion to this high-level forum. We firmly believe this type of session is how solutions to barriers to a robust charging infrastructure will be resolved. We believe strongly that interconnection issues are the most critical facing the transition to zero emissions for fleets and vehicle manufacturers today in California.

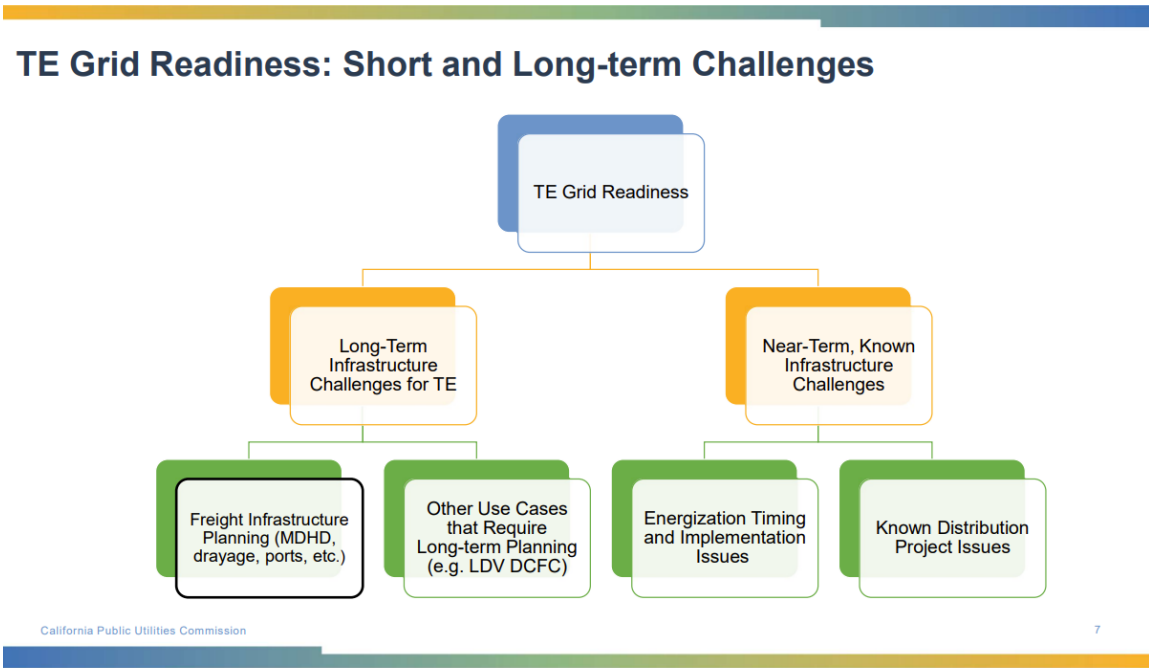
Volvo Group shares the state's electrification and carbon reduction goals and aims to work with the state and our customers to reach a net-zero carbon economy on the timelines and milestones established by the Governor's Office and the state Legislature.

Overall Comments

- There is an urgent need for the timely provision of power from energy providers to charging infrastructure deployed at public sites, truck stops, dealerships and fleet sites in order to meet the timelines established California's zero-emission (ZE) vehicle regulations. While we are experiencing truck build delays due to supply chain issues, we have delivered 250+ battery-electric Class 8 trucks across the U.S. and accumulated in excess of one million miles in customer operations. Due to infrastructure and other site related delays, only about 70% of these delivered trucks have been placed in service to-date. Additionally, we have also lost 5% of

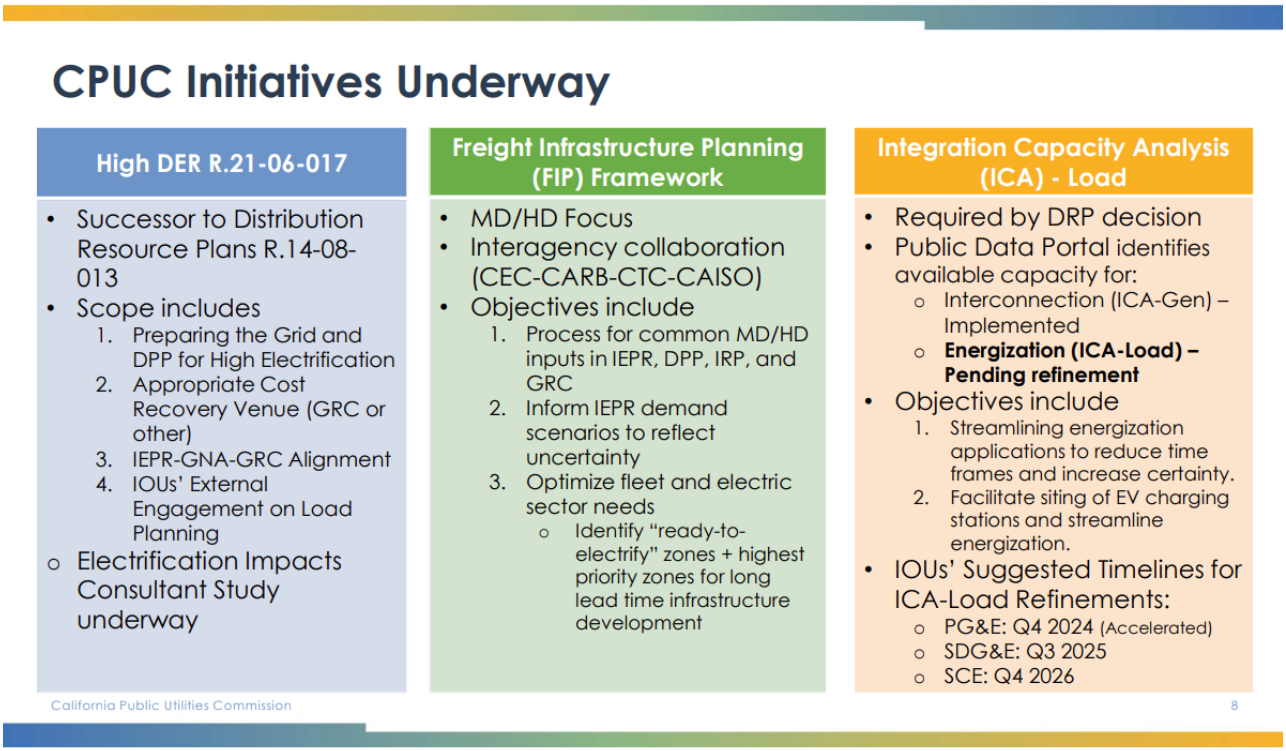
our Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) vouchers as a result of the utility's inability to bring power to the designated fleet location, and are seeing impacts of delayed infrastructure projects on HVIP voucher redemptions and future sales.

The presentations at the May 9th workshop acknowledged the barriers (see slide below), but offered no actionable solutions to this institutional problem. The utilities continue to operate on a timeline that has served them well for decades, but it is not suited to meeting the goals and regulations for the transportation sector in the 21st century. The 2023 Integrated Energy Policy Report (IEPR) is where policy changes to address this urgent need should be highlighted.

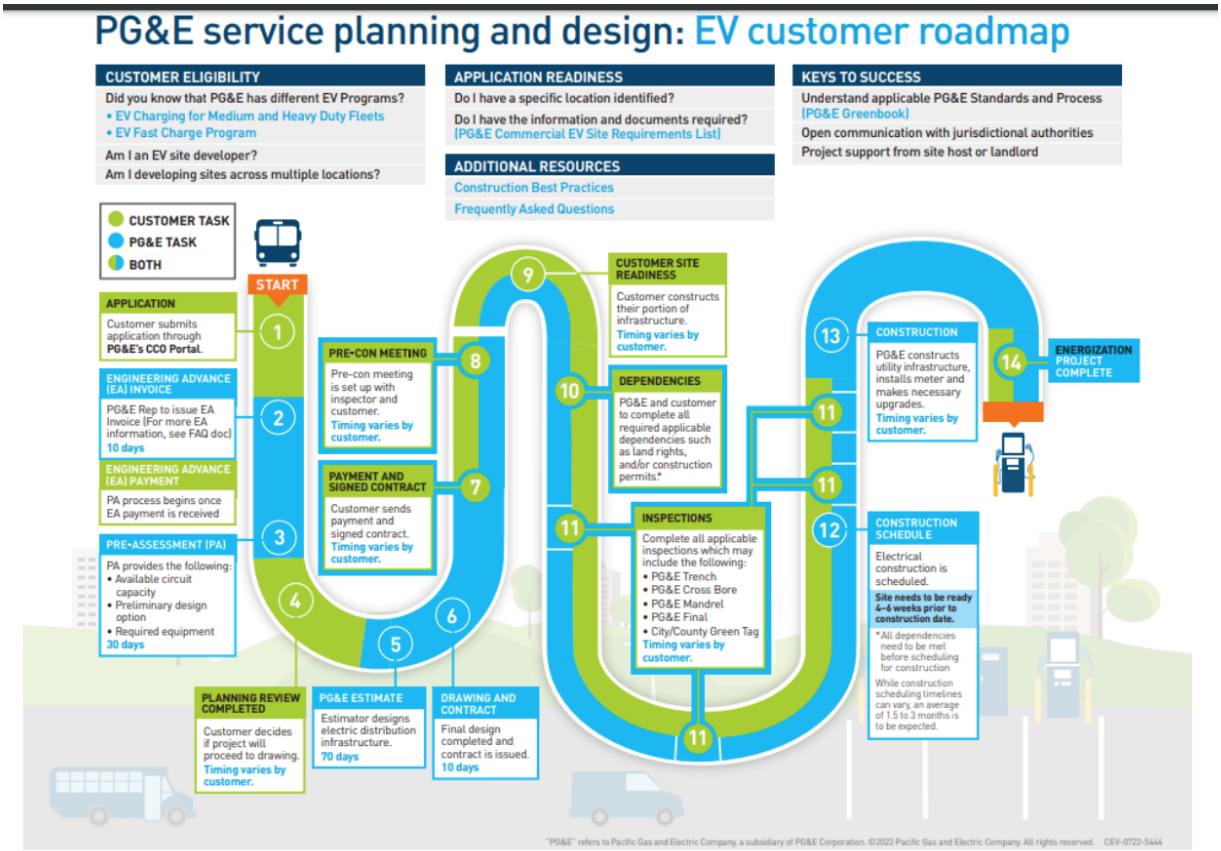


- Initiatives by utilities and state agencies were described (see slide below) but little was presented that syncs up with the timelines truck manufacturers and their fleet customers must meet under CARB's Advanced Clean Trucks (ACT) Rule and Advanced Clean Fleet (ACF) Rule. While we appreciate interagency meetings, collaborative gatherings and studies for fleets and vehicle manufacturers, it is now time for definitive actions in order to meet the compliance deadlines starting January 1, 2024. Long utility timelines for interconnection and energization were presented as accepted facts. Those timelines need to be scrutinized and made to more closely align with those of the impending regulations. "Streamlining

energization" was presented as a goal, but the timelines presented for the action do not show how this goal aligns with the requirements under the ACT and ACF rules.



- A good illustration of this pressing issue was in the PG&E "Customer Roadmap" (see below). Its serpentine depiction is an accurate replication of the process we have experienced in the field. We believe the goal of this IEPR should be to present a "repaving" – or straightening out and shortening – of that roadmap to enable a smoother and quicker development of infrastructure for medium- and heavy-duty fleets. A new template is needed to make this an efficient path to success.



We present two examples from our ongoing projects to underscore that we need a new template to drastically shorten the timelines for charging infrastructure projects.

1. Our CEC-funded BESTFIT project [1] has been significantly delayed because the electric utility is prohibited by current California Public Utilities Commission (CPUC) regulations from including public truck stop chargers in their make-ready programs. The utility make-ready program requires the station operator to own the battery-electric trucks. An advice letter to the CPUC addressing this issue has gone unanswered for more than two years. Our BESTFIT project was (eventually) forced to switch to a new tariff (Electric Vehicle (EV) Infrastructure Rule 29), thereby restarting the entire sequence of utility steps and setting back the project by another six months – there is no provision to seamlessly transfer between the make-ready program and Rule 29. After more than two years into the project, one of the sites was informed by the electric utility that there was not enough electric grid capacity to support

[1] https://www.volvotrucks.us/news-and-stories/press-releases/2022/july/constructing-california-electrified-charging-corridor-for-medium-and-heavy-duty-electric-vehicles/

additional chargers beyond BESTFIT project, thereby jeopardizing the future plans for the site owner.

2. It took more than two years to energize just two 150kW chargers at our Producer's Dairy project[2] due to several factors. However, site permitting and utility interconnection delays could have been avoided. Despite being on the "streamlined" list (per AB 970) maintained by GoBiz, the city took five months to issue an At-Risk Permit. The electric utility took three months to complete interconnection even with two years of advance preparation time.

As was noted in one of the utility presentations, "increasing complexity is driving the need for more advanced distribution planning tools and processes." We could not agree more and would encourage those new "tools and processes" to be a major outcome of the IEPR process.

- The focus of the 2023 IEPR is to examine barriers and potential solutions to the decarbonization path in California with the stated goal of making "recommendations for policy." We strongly recommend that the policy recommendations stemming from this IEPR process be rapidly enacted to create alignment between CARB's ACT and ACF rules and the energization of charging infrastructure (affecting energy providers). In this regard, the roles of CEC and the CPUC cannot be overstated.

- The success of the ACT and ACF regulations is predicated on the reliable and widely available Class 7-8 electric truck charging and hydrogen or other renewable fueling infrastructure, the "third leg of the stool" in decarbonizing California's freight sector. The first two legs of the stool – vehicle manufacturers and fleets – are required to decarbonize beginning in 2024. Conversely, there is no requirement to adopt the third leg, charging and fueling infrastructure. Unfortunately, the success of ACT and the ACF regulations are under threat without resolving a major bottleneck also identified in the 2023 IEPR-interconnection delays.

- We would like to present four recommendations that we believe will speed up needed access to energy for medium- and heavy-duty vehicle (MHDV) charging infrastructure.

[2] https://www.volvotrucks.us/news-and-stories/press-releases/2022/april/producers-dairy-deploys-first-volvo-vnr-electric-trucks-to-operate-in-california-s-central-valley/

- Streamline service connection processes for electric vehicle load electrification.

- Remove limitations on companies to self-generate power for MHDV fleets (including promoting opportunities for commercial rooftop solar deployment).

- Reform the interconnection process for distributed front-of-the-meter projects considering power demands of large MHDV deployments.

- Support the efforts of the California Independent System Operator (CAISO) and investor-owned and municipal-owned utilities, and community choice aggregators to improve the cluster study process and incorporate ACT and ACF timelines.

Moreover, we suggest all of this be expedited for adoption by the end of 2023 so that it takes effect on January 1, 2024. This is critical if vehicle manufacturers and fleets are to begin complying with the ACT and ACF rules beginning in 2024.

We look forward to continuing our productive work with CEC and other state agencies, and other stakeholders to support the transition to the cleanest transportation in the Golden State while ensuring all communities benefit, especially those overburdened by air pollution.

Kind regards,

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Attn:

Commissioner Patricia Monahan

Commissioner Siva Gunda

About the Volvo Group

Volvo Group drives prosperity through transport and infrastructure solutions, offering trucks, buses, construction equipment, power solutions for marine and industrial applications, financing and services that increase our customers' uptime and productivity. Founded in 1927, the Volvo Group is committed to shaping the future landscape of sustainable transport and infrastructure solutions. The Volvo Group is headquartered in Gothenburg, Sweden, employs some 100,000 people worldwide, and serves customers in more than 190 markets. Volvo Group North America, with headquarters in Greensboro, NC, employs more than 13,000 people in the United States and operates 11 manufacturing and remanufacturing facilities in seven states. In 2022, the Volvo Group's global net sales amounted to about $47 billion.

In California, the Volvo Group and its dealers employ more than 1,000 people with locations in Costa Mesa, Mountain View, Corona, Hayward, Fontana, Stockton, Fresno, La Mirada, and other locations. Volvo Group is in the process of training and certifying dealers to sell and service its electric products. Currently, dealers at four locations in California have been certified as Class 8 electric vehicle dealers, with more expected to be added soon.

Volvo Group's Electromobility Solutions

The Volvo Group has spent years developing complete solutions for electromobility, and today – in North America – we are selling five configurations of the Volvo VNR Electric[3] truck, the Mack LR Electric[4] waste hauler, the Mack MD Electric[5], five electric Volvo Construction Equipment models[6], and the Nova Bus LFSe+ electric bus[7]. Both Class 8 truck models are assembled exclusively in the U.S. for the North American market. While battery-electric vehicles are a suitable solution for local goods distribution, city buses, regional haulage and similar applications, hydrogen fuel cells (to power the electric driveline) will be a viable option for heavy transport and challenging long-haul applications. For use cases involving heavier loads and/or longer distances, the weight of the batteries themselves becomes a limiting factor, and hydrogen fuel cells are likely to be an interesting alternative.

[3] https://www.volvotrucks.us/trucks/vnr-electric/
[4] https://www.macktrucks.com/trucks/lr-series/lr-electric/
[5] https://www.macktrucks.com/trucks/md-electric/
[6] https://www.volvoce.com/global/en/our-offer/emobility/
[7] https://novabus.com/blog/bus/lfse-plus/

With this in mind, the Volvo Group has formed cellcentric, a joint venture with Daimler Truck AG to accelerate the development, production, and commercialization of fuel cell technology for Class 8 vehicle applications in the second half of this decade. Volvo Group appreciates the efforts to develop a refueling infrastructure to support the future deployment of fuel cell Class 8 vehicles and sees this as an important investment. Fuel cell Class 8 vehicles will need demonstration projects to further prove their role in the commercial vehicle world.

Within the Volvo LIGHTS[8] project in California, we have successfully demonstrated the viability of battery-electric Class 8 trucks in real-world applications, putting 30 battery-electric Class 8 trucks in commercial operations across 11 different fleets.

The Volvo Group is the first traditional truck manufacturer to sell battery-electric Class 8 trucks to customers and is the current market leader with more than 48 percent of the battery-electric Class 8 truck market. Based on this experience, and our ongoing ZE product development efforts, our biggest concerns about the Class 8 truck market are not related to technology viability, but rather factors beyond our control that are critical to ensure a conducive market environment.

Last year, the Volvo Group released a guidebook outlining many key lessons learned from the Volvo LIGHTS project, many of which are similar to those encountered by other vehicle manufacturers and stakeholders in similar projects. They include:

- Critical charging infrastructure deployment takes far more time than anticipated and therefore engagement with local utilities and permitting agencies should be done early.
- Issues such as property ownership can complicate, delay or even prevent infrastructure deployment.
- Early stakeholder engagement and coordination are essential for infrastructure deployment. Local government planning and electric utilities can be allies or obstacles in the project implementation process.
- The entire charging ecosystem needs to be considered. A fleet's business goals must align with the vehicles' capabilities. That may dictate the type and cost of charging infrastructure. Options such as on-site energy generation and storage may need to be factored into project planning.
- Fleet operators may not know what charging infrastructure they need until after they conduct a thorough duty-cycle analysis. It is critical this is done well

[8] https://www.lightsproject.com

prior to placing a truck order to help manage misalignment between vehicle deliveries and infrastructure readiness.

- Workforce development is needed. Drivers, technicians, fleet staff, first responders, charging providers and utility companies need training to maximize electric vehicle efficiency and uptime.
- Companies will need to build relationships with a diverse set of stakeholders to minimize operational disruptions from the introduction of new, advanced technology vehicles.
- Higher vehicle purchase prices, plus new infrastructure costs, can be a cost impediment to a business. While these costs may be partially offset by government-sponsored programs, navigating those programs is another new, added complexity and cost for the business.

Volvo Group also has applied some of these lessons internally, which helped spur the development of a new division, Volvo Energy, to provide customers with infrastructure solutions for ZE vehicles.