



**Metropolitan  
Transit  
System**

September 15, 2022  
Jacob Englander  
Low Carbon Fuel Standard Division  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**RE: Requested Change to the LCSF Program (Cal. Code Regs tit. 17CCR 95491 (d)(3)(C)1)**

Mr. Englander:

On behalf of San Diego Metropolitan Transit System (MTS), I write to you today to formally request for changes and/or amendment to the Low Carbon Fuel Standard (LCSF) that require non-residential EV charging industries and agencies generating credits from grid electricity to report the quantity of electricity (in kWh) from the fuel service equipment (FSE), or electric charger. This is required under Low Carbon Fuel Standard regulation (Cal. Code Regs. tit. 17 CCR 95491(d)(3)(C)1). This request is being made in accordance with the guidance issued by the California Air Resources Board (ARB) to industries and agencies participating in LCSF credit reporting, and information presented during ARB's public workshop "Potential Changes to the LCSF Program" on August 18, 2022, which establishes the request for stakeholder comments through September 19, 2022. MTS appreciates that ARB has provided this opportunity to comment on LCSF's program process, specifically to reporting electricity quantity data and the source from where this data resides.

Prior to the public workshop, MTS was working diligently to complete and submit our LCSF FSE registration and electricity data to ARB for the Q2 deadline. In particular, MTS's process includes:

- Submit each individual FSE required information for registration
- Receive approval for FSE registration from ARB
- Submit each individual FSE's electricity consumption (in kWh)
- Await approval and receive designated credits based on current market prices from ARB

However, during this process MTS identified concerns with reporting strictly from each individual FSE. As our agency continues to implement toward a 100% zero-emission fleet, specifically with electric buses and charging infrastructure, MTS is planning to install 150+ FSEs throughout our system. With the existing reporting procedures and compliance, MTS's concern and request for amendment is based on two issues outlined below:



- Administrative constraints on staff with existing reporting compliance, that is unique to MTS's infrastructure design (overhead charging system) and associated FSE's for an electric bus fleet
- Loss of credits based on energy loss data from energy meter to FSE (or line loss) is not accounting for the true cost of electricity and consumption.
  - In regards, to the loss of credit (energy loss data) consumption from meter to FSE (in kWh), this also doesn't reflect an accurate well-to-wheel GHG impact and analysis, especially as the scale for ZEB deployments increase over time.

### Administrative Constraints:

MTS is concerned with the administrative constraints when registering and reporting from each individual FSE. MTS has designed for an overhead charging system that will implement power cabinets (power source), and depot pantographs (dispenser to conductively charge on top of buses). The overhead charging design is a 3-to-1 ratio (3 pantographs to 1 power cabinet or 3 buses connected to 1 charger). MTS is concerned with how data will be reported from this type of design, and the need to register and report from each individual charger (power cabinet) and/or pantograph (dispenser). To manage this type of overhead charging system, MTS is also planning to implement a charge management system (CMS) software to efficiently manage charging cycles optimally for getting buses ready for service each day and at its most cost effective. These CMS platforms are still in their infancy stages, with most vendors being third-party to charger manufacturers. It's currently unknown how a third-party vendor's CMS platform will manage multiple charger manufacturers (interoperability) data components and if proprietary parameters will impact data communication when exporting this data. At this time, to maximize credits using time-of-use energy consumption, MTS would need to report from the meter/utility bill.

### Loss of Credit (Energy Loss/Line Loss):

Since January 2022, MTS has experienced approximately a **7%** total loss of energy or line loss from what's reported at the meters (**all MTS meters for FSE are separate/isolated**) to what's been reported at the FSEs (see Attachment A). At full deployment (approximately 600 electric buses) this loss can equate to an estimated \$850,000 credit loss per quarter (this based off current rate of \$90 per credit) (up to \$3.4 million annually).

Reporting with an energy loss or line loss (consumption in kWh), also doesn't accurately reflect the well-to-wheel GHG analysis for running a battery electric bus in-service, based on the actual 7% energy consumption loss.

In closing, MTS greatly values our partnership with ARB in advancing clean transportation service and we appreciate the flexibility option you are providing to transit agencies during these difficult times. If you have any questions about this letter, please contact me at 619-238-0100 x6400 or [michael.wygant@sdmts.com](mailto:michael.wygant@sdmts.com).

Sincerely,

Michael Wygant  
Chief Operating Officer, Bus



cc: Yachun Chow, Manager, Zero Emission Truck and Bus, Mobile Source Control Division  
Rachel Connors, Implementation Manger, Low Carbon Fuel Standard Division  
Michael Pimentel, Executive Director, California Transit Association  
Julia Tuer, Manager of Government Affairs, San Diego Metropolitan Transit System  
Kyle Whatley, ZEV and Sustainability Manager, San Diego Metropolitan Transit System

**Attachment(s) Utility Meter kWh vs. FSE kWh (Energy Loss Data)**

## **Attachment A**

### **Utility Meter kWh vs. FSE kWh (Energy Loss Data)**

**1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • [sdmts.com](http://sdmts.com)**

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.



**\*Utility kWh source is from SDG&E utility bill kWh used during billing period**

<b>Jan-22</b>	<b>Charger kWh</b>	<b>Utility kWh*</b>	<b>Loss</b>
East County Division	4548	5002	-10%
Kearny Mesa Division	8683	9409	-8%
South Bay Division	5047	5458	-8%
Imperial Ave Division	26023	27874	-7%
<b>Total</b>	<b>44301</b>	<b>47743</b>	<b>-7%</b>

<b>Feb-22</b>	<b>Charger kWh</b>	<b>Utility kWh</b>	<b>Loss</b>
East County Division	5517	5961	-8%
Kearny Mesa Division	11605	12384	-6%
South Bay Division	7509	7495	0%
Imperial Ave Division	23155	25015	-8%
<b>Total</b>	<b>47786</b>	<b>50855</b>	<b>-6%</b>

<b>Mar-22</b>	<b>Charger kWh</b>	<b>Utility kWh</b>	<b>Loss</b>
East County Division	7863	8401	-7%
Kearny Mesa Division	9829	10541	-7%
South Bay Division	8518	9312	-9%
Imperial Ave Division	24664	26486	-7%
<b>Total</b>	<b>50874</b>	<b>54740</b>	<b>-7%</b>

<b>Apr-22</b>	<b>Charger kWh</b>	<b>Utility kWh</b>	<b>Loss</b>
East County Division	5205	5925	-13%
Kearny Mesa Division	6807	7316	-7%
South Bay Division	10397	11256	-8%
Imperial Ave Division	27185	29129	-7%
<b>Total</b>	<b>49594</b>	<b>53626</b>	<b>-8%</b>

<b>May-22</b>	<b>Charger kWh</b>	<b>Utility kWh</b>	<b>Loss</b>
East County Division	4150	4616	-11%
Kearny Mesa Division	8459	9159	-8%
South Bay Division	2076	2579	-22%
Imperial Ave Division	19355	20777	-7%
<b>Total</b>	<b>34040</b>	<b>37131</b>	<b>-9%</b>



Jun-22	Charger kWh	Utility kWh	Loss
East County Division	8190	8543	-4%
Kearny Mesa Division	7355	7523	-2%
South Bay Division	4774	4605	4%
Imperial Ave Division	22127	23563	-6%
Total	42446	44234	-4%
<b>Average</b>			<b>-7%</b>

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