

State of California
AIR RESOURCES BOARD

**Final Statement of Reasons for Rulemaking,
Including Summary of Comments and Agency Response**

PUBLIC HEARING TO CONSIDER ELECTRIC VEHICLE SUPPLY EQUIPMENT
(EVSE) STANDARDS

Public Hearing Date: June 27, 2019
Agenda Item No.: 19-6-3

I. GENERAL

The Staff Report: Initial Statement of Reasons for Rulemaking (staff report), “Electric Vehicle Supply Equipment (EVSE) Standards” released May 7, 2019, is incorporated by reference herein. The staff report contained a description of the rationale for the proposed regulation. On May 7, 2019, references relied upon and identified in the staff report were made available to the public.

The EVSE Standards Regulation will reduce barriers for drivers charging their plug-in electric vehicles (PEV) in public. Electric vehicle service providers (EVSPs) must install signage indicating the total cost for charging sessions, install and maintain credit card readers with security measures, and report to the National Renewable Energy Laboratory (NREL) Alternative Fuels Data Center (AFDC) and to the California Air Resources Board (the Board or CARB) for station location information.

On June 27, 2019, following a 45-day comment period, CARB held a public hearing to consider the proposed EVSE Standards Regulation, as described in the staff report and associated Notice of Public Hearing ([45-Day Notice](#)). The regulation requirements are included in Title 13, Division 3, Chapter 8.2, Sections 4360 - 4360.5 of the California Code of Regulations. At the conclusion of the public hearing, the Board adopted Resolution 19-17 which approved the adoption of the proposed regulation.

Written comments were received in 34 comment letters from individuals or organizations during the 45-day comment period. Oral comments were given by 28 individuals during the June public hearing. Six written comments were received at the hearing. After the June 27, 2019, public hearing, staff proposed modifications to the originally proposed regulation to address comments received during the 45-day public comment period, as well as comments received during the Board Hearing.

The text of the proposed modifications to the originally proposed regulation, and supporting documents were made available for a supplemental 15-day comment period through a “Notice of Public Availability of Modified Text and Availability of Additional Documents” (15-Day Notice). The 15-Day Notice with modified regulatory language was posted on August 30, 2019, on CARB’s website ([CARB EVSE Standards Rulemaking Page](#)), and made accessible to stakeholders and interested parties. The comment period commenced August 30, 2019, and ended September 15, 2019. All modifications to the regulatory language are clearly indicated in the [Notice of Public Availability of Modified Text](#). All parties who submitted comments during the 45-day notice and the public hearing, and those who testified at the public hearing, were

notified of the 15-Day Notice. Nine comment letters were received during the comment period.

On February 3, 2020, CARB posted a [second 15-Day Notice](#), adding additional documents to the record, to CARB's website ([CARB EVSE Standards Rulemaking Page](#)) and made the notice accessible to stakeholders and interested parties. The comment period commenced February 3, 2020, and ended February 18, 2020. CARB received no comments during the second 15-day comment period.

The Final Statement of Reasons (FSOR) updates the staff report by identifying and providing the rationale for the modifications made to the originally proposed regulatory text. The FSOR also contains a summary of the process by which CARB adopted the proposed regulation, the comments received by CARB during the formal rulemaking process, and CARB's responses to those comments.

A. MANDATES AND FISCAL IMPACTS TO LOCAL GOVERNMENTS AND SCHOOL DISTRICTS

The Board has determined that this regulatory action will not result in a mandate to any local agency or school district, the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code.

B. CONSIDERATION OF ALTERNATIVES

For the reasons set forth in the staff report, in staff's comments and responses at the hearing, and in this FSOR, the Board determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed, nor would it be as effective and less burdensome to affected private persons, nor would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law than the action taken by the Board. Neither CARB nor any public commenter identified any reasonable alternatives that would lessen any adverse impact on small businesses.

II. MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

A. MODIFICATIONS APPROVED AT THE BOARD HEARING AND PROVIDED FOR IN THE 15-DAY COMMENT PERIOD

1. Modifications to Section 2360 Applicability

§ 2360(b) Staff added a definition for "clearly marked," to describe appropriate signage designating whether workplace EVSE is available to the public or not. Commenters requested that staff elaborate on what would be required to "clearly mark" an EVSE for public or private use. This definition explains that any visible marker can be used to indicate whether an EVSE is available for private or public use.

§ 2360(b) Because confusion was expressed by commenters regarding what was meant by "common interest development", staff modified the definition for "common interest development" to better indicate housing developments considered to be

private locations. The modified definition parallels that used by the Davis-Stirling Common Interest Development Act, now codified at California Civil Code § 4100.

§ 2360(b) Staff modified the definition for "Direct Current Fast Charger (DCFC)" to add the common industry acronym "DCFC EVSE." This acronym is used throughout the proposed regulation.

§ 2360(b) Staff added a definition for "installed" to describe the EVSE condition associated with regulation compliance and reporting requirements in response to public comments received for the 45-day notice. The term "installed" is used throughout the proposed regulation. Commenters voiced confusion on the variety of dates in the EVSE development process that could be considered "installed." The added definition addresses that confusion by specifying that the date to be used is the date the EVSE is made available to the public.

§ 2360(b) Staff modified the definition for "Level 2 Electric Vehicle Supply Equipment (Level 2 EVSE)" to strike the word "energy" from the definition. The word "energy" is, in context, superfluous, and the existing word "electricity" adequately conveys the intended description of the function of a Level 2 EVSE.

§ 2360(b) Staff modified the definition for "Level 2 Electric Vehicle Supply Equipment (Level 2 EVSE)" to strike the "ing" from the word "refueling" in the definition. This change corrects a grammatical error.

§ 2360(b) Staff modified the definition for "mobile payment" to provide more flexibility to industry in providing different types of mobile payment devices. Instead of requiring a near field communication reader, the definition for mobile payment uses a performance-based standard — the ability for the driver to use a cell phone to complete a transaction.

§ 2360(b) Staff modified the definition for "publicly available Electric Vehicle Supply Equipment (publicly available EVSE)" to add the common acronyms "DCFC EVSE" and "Level 2 EVSE." These acronyms are used throughout the proposed regulation.

§ 2360(b) Staff added a definition for "replaced" to indicate EVSE conditions associated with regulation compliance in response to public comments received for the 45-day notice. Some commenters requested a longer period to comply with retrofit requirements. Staff proposed extending the deadline to 2033, but also proposed that EVSE should be retrofitted if they undergo a replacement before 2033. The definition of "replaced" specifies when that condition is met- namely, when the serial number, ID, or model name of the EVSE is changed.

2. Modifications to Section 2360.1 Requirements for Labeling Electric Vehicle Supply Equipment

§ 2360.1(b) Staff added "EVSE" for consistency with the defined acronyms to identify actions to be taken on DCFC units.

§ 2360.1(b) Staff changed the DCFC labeling compliance date to January 1, 2022, to align with the modified payment hardware compliance date in § 2360.2.

This modification is in response to public comments received during the 45-day notice, as well as Board direction, requesting a later compliance deadline to allow completion of current projects under contract.

§ 2360.1(c) Staff moved "Level 2" within the paragraph to clearly identify the object for which action is required.

§ 2360.1(d) Staff created a new section 2360.1(d), moving requirements in the 45-day proposal as section 2360.2(g) to section 2360.1. The modification aligns EVSE labeling requirements under one section.

§ 2360.1(d) Staff made a minor grammatical modification to the existing language, and added the phrase "if the EVSE requires payment for use" to assure regulated parties that the requirements of new section 2360.1(d) only apply to EVSEs that drivers must pay to use. This assurance is necessary because section 2360.1 otherwise applies to all publicly available EVSE.

3. Modifications to Section 2360.2 Payment Method Requirements for Electric Vehicle Supply Equipment

§ 2360.2(c)(1) Staff inserted "EVSE" for consistency with the defined acronyms to identify actions to be taken on DCFC units.

§ 2360.2(c)(1) Staff changed the DCFC payment method hardware compliance deadline to January 1, 2022, for equipment installed on or after January 1, 2022. The 45-day notice had a deadline of July 1, 2020, for equipment installed on or after July 1, 2020. This modification is in response to public comments received during the 45-day notice, as well as Board direction, requesting a later compliance deadline to allow completion of current projects under contract.

§ 2360.2(c)(1) Staff changed the payment method hardware compliance deadline for DCFC EVSE installed prior to January 1, 2022, to when the equipment is replaced but no later than July 1, 2033. The 45-day notice had a deadline of five years from the date of installation or July 1, 2020 (whichever is later). This modification is in response to public comments received for the 45-day notice, as well as Board direction, requesting compliance exemptions or extensions for existing equipment. The proposed change provides additional time for existing equipment to meet payment method hardware requirements, while also requiring equipment to meet payment method hardware requirements if the equipment undergoes replacement prior to the 2033 deadline. With the modifications to the timeline, the proposed regulation will not result in requiring equipment to be replaced prior to the end of its estimated ten-year useful life.

§ 2360.2(c)(2) Staff changed the Level 2 EVSE payment hardware compliance deadline for Level 2 EVSE installed prior to July 1, 2023, to when the equipment is replaced but no later than July 1, 2033. The 45-day notice had a deadline of five years from date of installation or July 1, 2023 (whichever is later). This modification is in response to public comments received for the 45-day notice, as well as Board direction, requesting compliance exemptions or extensions for existing equipment. The proposed change provides additional time for existing

equipment to meet payment hardware requirements, while also requiring equipment to meet payment method hardware requirements if the equipment undergoes replacement prior to the 2033 deadline. With the modifications to the timeline, the proposed regulation will not result in requiring equipment to be replaced prior to the end of its estimated ten-year useful life.

§ 2360.2(d)(1) Staff added the phrase "one of the following credit card types" to address confusion between the requirement to accept a "chipped" card-a Euro Mastercard Visa (EMV) chip-and the requirement for the reader to accept at least one commonly used credit card type.

§ 2360.2(g) Staff moved section 2360.2(g) to section 2360.1(d) as described earlier in this notice.

§ 2360.2(h) Staff changed the lettering of section 2360.2(h) to 2360.2(g) due to moving section 2360.2(g) to section 2360.1(d).

4. Modifications to Section 2360.3 Facilitating Roaming Agreements

§ 2360.3(b) Staff replaced the word "By" with "No later than" in order to eliminate any ambiguity about the deadline to comply with section 2360.3 (b).

§ 2360.3(b) Staff made minor grammatical modifications.

5. Modifications to Section 2360.4 Reporting for Electric Vehicle Service Providers

§ 2360.4(b)(3) Staff deleted "and usage information" for the section because subsection (i) no longer contains usage information.

§ 2360.4(c) Staff added the word "available" to be consistent with the definitions listed in the applicability section.

§ 2360.4(c)(3) Staff deleted section 2360.4(c)(3), which would have required the level of information equivalent to what is required in an annual report as part of the initial reporting. Comments received during the 45-day notice period stated that it would be difficult for EVSPs to provide this level of detail as part of the initial report. Staff is proposing to simplify the initial reporting requirements by eliminating the subsection (c)(3) reporting requirement.

§ 2360.4(e) Staff added language which indicates when and whom shall submit the EVSE payment report. Staff also added clarifying language on who will be responsible for reporting the payment usage information. Public comment indicated that at times, multiple parties can have the same information. Public comment has also indicated there was confusion on what conditions triggered the EVSE payment report. The modifications specify which party will send the required information to CARB. The modifications also specify what conditions will trigger an EVSE payment report.

§ 2360.4(e) Staff changed the due date of the first annual report in section 2360.4(e) to March 1, 2022, for calendar year 2021. The 45-day proposal stated a first annual report due date of March 1, 2021. This modification aligns reporting with when payment hardware requirements start under the proposed modifications in this notice.

§ 2360.4(h)(9) Staff made minor grammatical modifications.

§ 2360.4(h)(10) Staff made minor grammatical modifications.

§ 2360.4(h)(10) Staff added "model photos: front, back, payment hardware, fee display (if display is multiple pages, include photos of complete information)" to the Kiosk reporting information. This addition identifies what information the EVSP will submit for reporting, and makes the reporting requirements for a kiosk consistent with the reporting requirements for an EVSE.

§ 2360.4(i) Staff split the annual report into two subtypes of required information: inventory information as specified in subsection (i), and payment information for all EVSE that require payment, as specified in subsection G). Staff added these requirements to section 2360.4(e). Based on comments received, the prior structure confused potentially regulated parties because it did not adequately separate the annual reporting requirements for all publicly available EVSE from those EVSE that require payment for use. This new reporting structure addresses that confusion.

§ 2360.4(i)(1)(C) Staff added "serial number" as an alternative for EVSE ID. This modification provides flexibility for inventory reporting.

§ 2360.4(j) Staff moved the required annual EVSE payment information in section 2360.4(i)(3) through (8) to section 2360.4(j), for reasons described above.

§ 2360.4(i)(2) Staff added "removed" to the listing of retired or decommissioned EVSE to encompass situations when an EVSE may be removed from a site-thus constituting an inventory change required to be listed in the annual report-even though the EVSE may not technically be "retired" or "decommissioned."

§ 2360.4(i)(2)(C) Staff added "serial number" as an alternative for EVSE ID. This modification provides flexibility for inventory reporting.

§ 2360.4(i)(2)(D) Staff made minor grammatical modifications.

§ 2360.4(i)(2)(E) Staff made minor grammatical modifications.

§ 2360.4(i)(2)(F) Staff made minor grammatical modifications.

§ 2360.4(i)(9) Staff deleted the requirement in section 2360.4(i)(9) that EVSP report the total operational time for various payment options. This modification addresses comments that providing operational time at the requested level of granularity would be very difficult.

§ 2360.4(i)(10) Staff deleted the requirement in section §2360.4(i)(10) that EVSP report the pricing schedule for each EVSE. Some of this information is already captured by the reporting requirements to National Renewable Energy Laboratory (NREL) Alternative Fuels Data Center (AFDC) in section 2360.4(k), and commenters voiced concern with providing pricing schedules at the requested level of granularity.

§ 2360.4(j) Staff placed annual payment reporting requirements in section 2360(j), for reasons described above. Staff also changed the payment information be reported in statewide aggregated numbers by payment type. This addresses concerns about data confidentiality and difficulty in providing data at the level of individual EVSE, voiced by certain commenters.

§ 2360.4(k)(1) Staff added an implementation date for reporting to the NREL AFDC. EVSPs must begin NREL reporting requirements six months after the effective date of the regulation. This modification provides a clear starting date for NREL reporting requirements.

§ 2360.4(k)(4) Staff deleted "NREL" and added "The" to the action that will be completed by the EVSP. This modification identifies the party who is responsible for reporting the information to NREL. Because subsection (k)(1) already specifies that the information in subsection (k) must be reported to NREL, the additional label "NREL" in subsection (k)(4) was superfluous and potentially confusing.

§ 2360.4(k)(4)(D) Staff made minor grammatical modifications.

§ 2360.4(k)(4)(F) Staff made minor grammatical modifications.

§ 2360.4(k)(4)(K) Staff made minor grammatical modifications.

§ 2360.4(k)(4)(S) Staff made minor grammatical modifications.

§ 2360.4(k)(4)(U) Staff made minor grammatical modifications.

§ 2360.4(k)(4)(V) Staff made minor grammatical modifications.

§ 2360.4(l) Staff changed the lettering of section 2360.4(k) from the 45-day notice to 2360.4(l) due to the movement of annual payment reporting requirements section to 2360.4(j).

§ 2360.4(m) Staff changed the lettering of section 2360.4(1) from the 45-day notice to 2360.4(m) due to the movement of annual payment reporting requirements section to 2360.4(j).

B. Non-Substantial Modifications

Subsequent to the 15-day public comment period mentioned above, staff identified the following additional non-substantive changes to the regulation:

§ 2360(b) “Payment Card Industry Data Security Standard Level 1 (PCI-DSS Level 1)” added language incorporating this standard by reference. This language was in the originally proposed regulation text as of the 45-day comment period but was erroneously omitted during the 15-day change.

§ 2360.1 Changed brackets “[]” to parentheses “()” for noting CFR dates.

§ 2360.5 Added Health and Safety Code section 42411 to the Authority cited.

The above described modifications constitute non-substantial changes to the regulatory text because they more accurately reflect the numbering of a section or correct spelling and grammatical errors, but do not materially alter the requirements or conditions of the proposed rulemaking action.

III. DOCUMENTS INCORPORATED BY REFERENCE

The regulation adopted by the Executive Officer incorporate by reference the following documents:

“Payment Card Industry (PCI) Data Security Standard – Requirements and Security Assessment Procedures” published by PCI Security Standards Council (Version 3.2.1) (May 2018), incorporated in section 2360(b).

[“California Open Charge Point Interface Test Procedures for Networked Electric Vehicle Supply Equipment for Level 2 and Direct Current Fast Charge Classes.”](#)

(April 15, 2020) Available at:

https://ww3.arb.ca.gov/regact/2019/evse2019/appb.pdf?_ga=2.67577490.2044228459.1567536946-114612746.1561760038, incorporated in section 2360.3.

These documents were incorporated by reference because it would be cumbersome, unduly expensive, and otherwise impractical to publish them in the California Code of Regulations. In addition, some of the documents are copyrighted, and cannot be reprinted or distributed without violating the licensing agreements. The documents are lengthy and are highly technical test methods and engineering documents that would add unnecessary additional volume to the regulation. Distribution to all recipients of the California Code of Regulations is not needed because the interested audience for these documents is limited to technical staff at a portion of reporting facilities, most of whom are familiar with these methods and documents. The incorporated documents were made available by CARB upon request during the rulemaking action and will continue to be available in the future.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSE

A. 45- DAY COMMENTS AND AGENCY RESPONSES

Written comments were received during the 45-day comment period in response to the June 27, 2019, public hearing notice, and written and oral comments were presented at

the Board Hearing. Listed below are the organizations and individuals that provided comments during the 45-day comment period:

Commenter	Affiliation
Adams, Kitty (May 21, 2019)	Adopt A Charger (AAC)
Hallam, Lynn (May 22, 2019)	Self
Higham, John (June 2, 2019)	Electric Auto Association (EAA)
Bullis, Cory (June 5, 2019)	University of California San Diego (UCSD)
Friedland, Jay (June 5-6), 2019)	Plug In America (PIA)
Gonzalez, Tony (June 12, 2019)	Electrify America (EA)
Garcia, Katherine (June 21, 2019)	Sierra Club California (SCC)
Glenney, Paul (June 21, 2019)	Hubject, Inc.
Barrett, Will (June 21, 2019)	Clipper Creek, Inc.
Goldsmith, Hannah (June 21, 2019)	California Electric Transportation Coalition (CalETC)
Rafalson, Sara (June 24, 2019)	EVgo
Cohen, Josh (June 24, 2019)	SemaConnect
Muller, Miles (June 24, 2019)	Charge Ahead California (CAC)
Mastache, Joy (June 24, 2019)	Sacramento Municipal Utility District (SMUD)
Mondouquette, Marc (June 24, 2019)	eMotorWerks
Bullard, Kent (June 24, 2019)	EV Advocates of Ventura County (EVAVC)
Reyes, Rafael (June 24, 2019)	Peninsula Clean Energy (PCE)
Bullis, Cory (June 24, 2019)	Electric Vehicle Charging Association (EVCA)
Song, CC (June 24, 2019)	Marin Clean Energy (MCE)
Reardon, Neal (June 24, 2019)	Sonoma Clean Power Energy (SCPE)
Allan, Travis (June 24, 2019)	FLO
Alexander, Meredith (June 24, 2019)	CALSTART
Vito, Ariana (June 24, 2019)	City of Santa Monica
Teebay, Richard (June 24, 2019)	Richard Teebay
Leumer, Alexandra (June 24, 2019)	ChargePoint
Wahl, Francesca (June 24, 2019)	Tesla
Venema, Jennifer (June 24, 2019)	City of Sacramento
Denver, Jessie (June 24, 2019)	East Bay Community Energy Authority (EBCEA)
Hefner, Kevin (June 24, 2019)	City of San Jose
Karlen, Erick (June 24, 2019)	Greenlots
Harris, Frank (June 24, 2019)	California Municipal Utilities Association (CMUA)
Staver, Hilary (June 24, 2019)	Silicon Valley Clean Energy (SVCE)
McGhee, Lisa (June 24, 2019)	San Diego Airport Parking Company

The following individuals submitted written comments at the public hearing:

Commenter	Affiliation
Sickler, Heidi	Silicon Valley Leadership Group
Friedland, Jay	Plug In America
Demetre, Cameron	TechNet
Gonzales, Tony	EA
Shah, Rajiv	Freewire Technologies
Garcia, Eduardo	Assembly California Legislature

The following individuals, listed in the order in which they spoke, provided oral testimony at the public hearing:

Commenter	Affiliation
Alvarado, Anna	City of San Jose
Hahn, Jena	City of Sacramento
Harris, Frank	California Municipal Utilities Association
Lakhchaura, Megha	EVBox
Saffian, Scott	FLO, USA, Inc.
Monbouquette, Marc	eMotorWerks
Winkler, Josh	Blink Charging Co.
Sickler, Heidi	Silicon Valley Leadership Program
Bivins, Sam	Siemens
Groters, Brad	EV Connect
Bullis, Cory	Electric Vehicle Charging Association
Muller, Miles	National Resources Defense Council (NRDC)
Friedland, Jay	Plug in America & Open Access Coalition
Demetre, Cameron	TechNet
Rodriguez, Elias	Earth Justice
Wiedman, Joseph	Peninsula Clean Energy
Mohabbat, Adam	EVgo
McGhee, Lisa	San Diego Airport Parking Authority
Rushing, Rocky	Coalition for Clean Air (CCA)
Hitt, Kelly	Computing Technology Industry Association (CompTIA)
Wahl, Francesca	Tesla
Goldsmith, Hanna	CalETC
Lenmer, Alexandra	ChargePoint
Karlen, Erick	Greenlots
Gonzales, Tony	EA
Shah, Rajiv	Freewire Technologies
Hostetter, Obrie	Hubject
Boyce, Bill	SMUD
Dick, Andrew	Electrify America (EA)

Set forth below is a summary of each objection or recommendation made regarding the specific adoption, or amendment proposed, together with an explanation of how the proposed action has been changed to accommodate each objection or

recommendation, or the reasons for making no change. Only objections or recommendations directed at the agency's proposed action or the procedures followed by the agency in proposing or adopting the action are summarized as permitted by Code of California Regulations, title 2, section 11346.9. Repetitive or irrelevant comments have been aggregated and summarized as a group. A comment is "irrelevant" if it is not specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the action. The comments have been grouped by topic whenever applicable.

When comments have been grouped, a brief summary of the comment is given to relay the content of all the comments in the group. All other comments are taken verbatim from the documents submitted during the 45-day comment period, or from the June 27, 2019, Board hearing transcript. Acronyms exclusively used by commenters have been defined by [brackets] throughout this section.

1. State Agency Coordination

This section addresses agency coordination comments. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

We strongly encourage CARB's coordination with the Center for Sustainable Energy (CSE) and the California Energy Commission (CEC) to support state investment in the California Electric Vehicle Infrastructure Program (CALeVIP) and further encourage ongoing collaboration to align the CALeVIP program and proposed regulations. **(EBCEA, City of Santa Monica, PCE, MCE, City of San Jose, City of Sacramento)**

Regarding implementation dates, we urge CARB and the Division of Measurement Standards to continue working together to align implementation dates of both the open access and accuracy regulations. **(Clipper Creek)**

Coordination with DMS' proposed regulation on pricing, metering and accuracy is important. **(Tesla)**

Agency Response: CARB staff modified the proposed regulatory language in response to the received comment. CARB worked with the California Energy Commission (CEC) and the Division of Measurement Standards (DMS) on implementation requirements. The first 15-Day Notice was modified to require existing EVSE to become compliant upon replacement but no later than July 1, 2033. By extending EVSE replacement to 2033, EVSE currently installed can live out a useful life of 10 years. The regulatory language aligns with DMS requirements on how electricity as a transportation fuel pricing is noticed to consumers.

Section 2360.2 requires for prices to charge in U.S. dollars per kilowatt hour or megajoule to align with DMS regulations. However, the DMS regulations have not been promulgated. Given that the DMS regulations are still pending and EVSPs will

be regulated on pricing, metering, and accuracy through that regulation – not through ARB – the Parties believe that this is outside of ARB’s jurisdiction, and this section should be deleted. **(EVCA, EVBox)**

Agency Response: CARB staff made no changes based on the received comment. There is confusion for drivers today in paying for charging because of varying pricing measures. The kilowatt-hour or megajoule unit pricing creates a uniform pricing structure for electricity as a transportation fuel. Health and Safety Code section 44268.2(a)(1) requires charges to be disclosed at the point of sale; this regulation simply implements that requirement in alignment with Department of Measure Standards requirements regarding pricing structure. This requirement aligns with California Department of Food and Agriculture’s Division of Measurement Standards EVSE regulation, in effect January 1, 2020, and gives customers confidence that all fees are displayed ahead of starting a charging session.

2. Existing EVSE Becoming Compliant

This section addresses existing EVSE becoming compliant with hardware and software requirements. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Grandfathering until upgrade

We strongly recommend grandfathering current charging stations to allow rules to be applied only when the stations are upgraded with new equipment. **(EBCEA, PCE, MCE, City of San Jose)**

There should be a form of “grandfathering” of existing EVSEs. The cost of retrofit equipment may result in units taken out of service or converted to being nonpublic access. The proposed regulation should not result in a net loss of public access charging locations. Time, effort and resources should be used to install new publicly accessible compliant EVSE. Let the existing EVSE run through their useful service life and then they are replaced, then they can comply with existing requirements. **(EVAVC)**

Agency Response: CARB staff modified the proposed regulatory language in response to the received comments. The regulation was modified to require existing EVSE to become compliant upon replacement but no later than July 1, 2033. By extending EVSE replacement to 2033, EVSE currently installed can live out a useful life of 10 years.

Phase-in Period 10 years

We strongly support the extended phase-in compliance period to replace existing Level 2 and DCFC EVSE to the time at which the EVSE is replaced, but no later than July 1, 2033. **(City of Santa Monica, City of Sacramento)**

Existing EVSE should be subject to a 10-year phase-in to avoid retrofits and replacements. This will allow the EVSE to live out its useful life of 10 years. **(CMUA)**

The regulation should be amended to include an appropriate compliance phase-in period, of at least 10 years, for all existing charging stations installed before the effective date of the regulations, particularly for the payment-option requirements. **(CalETC)**

Regulatory changes affecting existing EVSE should include an appropriate compliance phase-in period, 10 years. **(CMUA)**

A 10-year phase in is appropriate for existing charging infrastructure compliance. **(Tesla)**

The Parties respectfully request that DCFC EVSEs installed prior to July 1, 2023, and Level 2, EVSEs installed prior to July 1, 2023, have ten years from the date of installation to comply with the regulation. Existing stations should be subject to a 10-year phase-in to avoid retrofits and replacements so that EVSPs can focus on deploying new charging stations to meet state goals rather than spending capital to retrofit and replace hardware. **(EVCA, EVBox)**

If adopted, regulations requiring retrofits of existing EVSE should allow for a phase-in period of at least 10 years. **(CALSTART)**

SMUD recommends additional time for newly installed EVSE to comply with the requirements and additional time before existing EVSE must be retrofitted to comply with the requirements. SMUD recommends that the deadline for retrofitting existing EVSEs to comply with the proposed requirements be extended by an additional 5 years, establishing a 10-year period, starting on the date that requirements are effective for newly installed EVSEs. **(SMUD)**

SDAP is recommending an alternative for small business site host that are not EVSP;s to be allowed an extended period of timer for retrofitting that will at minimum match the life of the EVSE. **(SDAP)**

Agency Response: CARB staff modified the proposed regulatory language in response to the received comments. The regulation was modified in the first 15-day Notice to reflect a period of 10 years where existing EVSE will have to become compliant upon replacement, but no later than July 1, 2033. By extending EVSE replacement to 2033, EVSE currently installed can live out a useful life of 10 years.

Exempting or Grandfathering without upgrades

We respectfully request that the Proposed EVSE Standards (“Standards”) under consideration on June 27th be amended to grandfather existing EVSE into the new payment method requirements. **(Silicon Valley Clean Energy)**

Grandfather all existing charging stations installed before the effective date of this regulations as being exempt from this regulation. **(Clipper Creek)**

We strongly support CARB's efforts and goals in support of TE, but respectfully urge that grandfathering existing EVSE into the new payment method requirements would avoid punishing early EVSE supports and, most importantly, maximize our rate of progress in this critical decarbonization area. **(SVCE)**

Exempt existing stations from the necessity of complying with the new proposed standards. **(AAC)**

Eliminate the retrofit requirement for card readers on publicly available Level 2 chargers installed prior to some effective date for the new regulations, perhaps January 1, 2022. **(Greenlots, PIA)**

No retro-active modifications to electric vehicle charging station requirements should be made, this will add cost to a nascent market. **(SCPE)**

Existing public EVSE should not be required to comply with the going-forward payment regulations. **(eMotorWerks)**

A retroactive mandate will be counterproductive. If CARB does see fit to require a physical card reader, the regulation should apply only to new EVSE installed after a certain date, not to existing EVSE. **(SemaConnect, Blink)**

Agency Response: CARB staff made no changes based on the received comments. Exempting or grandfathering existing EVSE may create confusion for drivers by not providing a common payment method, and prompt site hosts to keep outdated technology installed and operating. The regulation applies to EVSE installed after given dates and has a benefit of ensuring existing equipment becomes compliant as it is replaced. Drivers and site hosts both benefit from having the latest technology available to the public. The regulation was modified in the first 15-Day Notice to allow existing DCFC EVSE installed prior to January 1, 2022, 10 years to become compliant with hardware and software requirements. The regulation was modified to allow Level 2 EVSE installed prior to July 1, 2023, 10 years to become compliant with hardware and software requirements.

Investments

The Energy Commission just invested \$29.4 million for DCFCs within the South Coast AQMD region. Many/most of these new DCFCs will NOT comply with the proposed regulations. How will these retrofits be funded? **(Teebay)**

Agency Response: CARB staff modified the regulatory language in response to the received comment. The regulatory language was modified to move the initial compliance date for DCFC out to January 1, 2022. The regulation was also modified in the first 15-Day Notice to allow existing DCFC EVSE installed prior to January 1, 2022, 10 years to become compliant with hardware and software requirements. CARB recognizes that large investments have been made by public agencies. The 10 years will allow the investments to live out their useful life.

ADA Compliance

Many early sites (2012-2016) do not comply with current ADA requirements (January 2017). These sites are grandfathered until the site is disturbed. At several of these sites, there is a high probability that the EVSE will be removed because it will be cost prohibitive to address ADA. I submitted more than 20 County sites for Edison's Charge Ready Program. Four sites were dropped because ADA could not be addressed within the Program's cost parameters. **(Teebay)**

Agency Response: CARB staff made no changes based on the received comment. Federal Americans with Disabilities Act (ADA) requirements are outside the scope of this rulemaking. The ADA has been in effect since 1990, and existing EVSE sites may already be subject to the requirements of the ADA. Staff anticipate that some EVSE sites may take additional measures to comply with the ADA during future upgrades.

Disadvantaged Communities Retrofit

Retain the retrofit requirement for credit/debit/prepaid EMV card readers on publicly available Level 2 and DCFC chargers for Disadvantaged Communities (DAC). **(Greenlots, PIA)**

Agency Response: CARB staff modified the regulatory language in response to the received comment. The regulation was also modified in the first 15-Day Notice to allow existing DCFC EVSE installed prior to January 1, 2022, 10 years to become compliant with hardware and software requirements. The regulation was also modified in the first 15-Day Notice to allow existing Level 2 EVSE installed prior to July 1, 2023, 10 years to become compliant with hardware and software requirements.

3. Initial Compliance Dates

This section addresses initial compliance dates for EVSE requirements. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulation, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

DCFC Initial Compliance Dates

The date by which new DCFC stations must comply with the proposed regulations should be extended by at least 1 year. **(CalETC)**

If adopted, the compliance date for DC-Fast Charging Stations should be extended. **(CalSTART)**

Agency Response: CARB staff modified the regulatory language in response to the received comment. The regulation was modified to extend the DCFC

EVSE initial compliance date. Section 2360.2(c)(1) now states a DCFC EVSE installed on or after January 1, 2022, shall comply with the requirements of this section. This modification was made in recognition that sufficient lead time is needed to complete sites currently under construction before changing hardware requirements.

Parity in Initial Compliance Dates

Create Parity in timelines with DCFC and Level 2 Chargers by ensuring compliance begins for both technologies in 2023. The initial compliance dates for both technologies should start on July 1, 2023. (**EVCA, EVBox**)

Agency Response: CARB staff made no changes based on the received comment. As Chair Nichols indicated in the board hearing, EVSE have been in non-compliance with Senate Bill (SB) 454 (Corbett, Stats, 2013, Ch. 418) since 2013. It is imperative to move forward with the hardware requirements as quickly as possible while not stifling the manufacturing process. Analyzing the market and working with EVSPs, most DCFC EVSE have some type of credit card mechanism installed, or available as an option. It will take less time in the manufacturing process for them to become compliant with the requirements than a Level 2 EVSE. Therefore, it is in the best interest of drivers and the EVSPs to have the DCFC EVSE new installations be first.

Drop Dead Date

Let this be a “Forward Looking” regulation with some retrofit implications, such as posted pricing. Pick a date after which all new installations must comply with this regulation. For example, all new EVSE and/or DCFC ordered after January 1, 2020, must comply with the regulation. (**Teebay**)

Agency Response: CARB staff made no changes based on the received comment. The regulation is written as the commenter suggested. All new EVSE must comply with the hardware and software requirements, DCFC after January 1, 2022, and Level 2 after July 1, 2023. It is necessary to ensure all operational EVSE will be compliant in time, upon replacement or 10 years whichever is sooner. It is imperative in the changing market to give drivers consistent and reliable hardware options for payment methods.

16 CFR Part 309 Label Date

Existing Federal Trade Commission Code, 16 CFR Part 309--- Labeling Requirements For Alternative Fuels... covers the requirement to label alternative vehicle fuel dispensers. It should be noted that this CFR is currently in force. There is no mention in 16 CFR Part 309 of a grace period to comply with the code, no matter which level of EVSE one operates, whether it is publicly available or is provided by a manufacturer of electric vehicles. (**EVAVC**)

Agency Response: CARB staff made no changes based on the received comment. The commenter has noted correctly that the 16 CFR Part 309 Labeling requirement for Alternative Fuels is currently in force. There is no

specific date of implementation for the label since it is already federal law, and has been required by state statute since 2013. Thus EVSE should already be in compliance. Yet a survey of existing equipment indicated that most EVSE installations in the state are not compliant.

4. Interoperable Billing Standard

This section addresses the interoperable billing standard requirement. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

OCPI Remains Open and Royalty Free

CalETC recommends that CARB staff, in including the Open Charge Point Interface (OCPI) standard, consider version updates and whether the standard remains open and royalty free. **(CalETC)**

If CARB does choose to adopt interoperable billing standards, Electrify America recommends that the regulation state that such standards will rely on solely open protocols, and that the regulation will not require EV charging providers to license or use the intellectual property of other firms. **(EA)**

Greenlots supports CARB and other agencies' efforts to promote interoperability, and therefore supports the proposed interoperable billing standards, as incorporated in "California Open Charge Point Interface ("OCPI") Interim Test Procedures for Networked Electric Vehicle Service Equipment for Level 2 and Direct Current Fast Charge Classes." There is significant benefit in utilizing communication methodologies such as OCPI to provide additional mechanisms to ensure payment interoperability and ease of driver experience across different networks. Greenlots supports CARB's adoption of OCPI at this stage, including the critical current characteristics of open source, [IP] neutrality and royalty-free. **(Greenlots)**

Agency Response: CARB appreciates support for the adoption of the CA OCPI protocol. CARB agrees with the commenter's sentiments on keeping OCPI as an open and royalty-free protocol. CARB staff has indicated it will be monitoring the market for technology changes, including tracking the progress of OCPI through the standards process.

Support of CA OCPI Adoption

As you may know, within the past year, another large public agency opened proposals for networks and EVSE. One of the proposals was very competitive. The agency was stunned to learn from its current network provider that the two systems were incompatible and that the only way the low bidder would be able to control the existing EVSE would be to rip and replace the proprietary legacy EVSE. The agency has a significant investment in the legacy EVSE. The agency will have to operate two systems or pay more to expand the existing proprietary system. What if

the legacy firm were to file for bankruptcy as two other prominent firms did several years ago? Two new firms, one Canadian and one from the East Coast, seeing opportunity, are coming to California this year. Both using proprietary systems. The time is NOW to require EVSE and payment standardization so that agencies and business aren't further locked into proprietary solutions that only advantage the seller. It is important to adopt an interoperable billing standard (OCPI) that will be used commonly amongst all EVSPs. (**Teebay**)

Agency Response: CARB appreciates support for the adoption of the CA OCPI protocol.

OICP Included as Billing Standard

With the opening of [OICP], we respectfully request the California Air Resources Board reconsider [OICP] before a specific protocol is selected and required for all charging stations. (**Hsubject, Inc.**)

Agency Response: CARB staff made no changes based on the received comment. CARB staff is encouraged to know that OICP is now an open and free protocol. Section 2360.3(b) states that the rule does not preclude the additional use of other communication protocols. EVSPs may use OICP as well as OCPI for their customers. We decline at this time to include OICP as a stated protocol adopted in the EVSE Standards Regulation. CARB staff evaluated OCPI and OICP on a number of criteria, including current market acceptance, future standardization, open usability, and features of the communication protocol. The features provided by OCPI and OICP are generally similar.

Currently OCPI has greater market acceptance domestically. Roaming agreement announcements have highlighted the use of OCPI as a common communication protocol for the roaming platform. Stakeholders stated in workshops and meetings that OCPI is a preferred standard to use for facilitating driver roaming. EVSPs have supported having CARB adopt OCPI as an interim test procedure. CARB's adoption of OCPI in this proposed rulemaking may assist industry in having OCPI formally adopted through a traditional standards process with an entity such as OASIS or SAE International. CARB staff is not aware of similar plans for OICP to be standardized. In order to install and implement OICP, an EVSP would need to sign an agreement and make a payment to Hsubject, Inc. Finally, requiring EVSE to implement OCPI does not prevent them from also using OICP, or for that matter, any other additional communication protocols in addition to OCPI.

Consideration of Alternative Protocol In Future

We recognize that ARB is proposing to require [OCPI] installed on each EVSE and appreciate inclusion of regulatory language that does specify that other interoperable billing standards may be used, in addition to [OCPI], and hope staff will continue to consider and assess alternatives as the regulation is implemented and technology progresses. (**Hsubject, Inc.**)

Agency Response: CARB will be monitoring technology changes in the charging infrastructure market, including changes in interoperable billing standard protocols.

Unnecessary to Adopt CA OCPI

Developing, mandating, and testing for California OCPI is an unnecessary administrative cost for ARB. Furthermore, it may set back or negate the roaming agreements already announced and implemented by ChargePoint and other companies. ARB should seek to support implementation locally of global standards and global roaming agreements already underway, rather than developing their own. Allow charging networks to continue to enact peer-to-peer roaming agreements developed using global standard, such as OCPI. (**ChargePoint**)

Electrify America recommends that CARB use its discretion not to establish specific “interoperability billing standards” by regulation. (**EA**)

Language should be added to the rulemaking indicating that ARB shall not develop a California specific protocol and should instead accept industry standard open versions. (**EVCA, EVBox**)

We believe it is unnecessary for California to establish its own state-specific standard for network roaming. The industry is already making significant advances in roaming and new partnerships are being announced regularly. There is no looming problem that warrants regulatory intervention at this time. (**SemaConnect**)

Agency Response: CARB staff made no changes based on the received comment. CARB will not be developing OCPI. The standard is incorporated into the regulation as it stands from Netherlands Knowledge Platform for Public Charging Infrastructure (NKL). Industry has indicated that OCPI will be taken to a standards development organization to become an officially recognized standard. CARB supports industry in its endeavor to have OCPI become a standard. CARB acknowledges that many roaming agreements have been announced between EVSPs. CARB supports EVSPs creating partnerships with these agreements, and notes that all announcements indicated that OCPI will be the conduit for the information transfer between companies.

Delayed Implementation Date

We respectfully request that the requirement for “California Open Charge Point Interface Interim Test Procedures for Networked Electric Vehicle Supply Equipment for Level 2 and Direct Current Fast Charge Classes” be implemented starting in 2023. (**EVCA, EVBox**)

Agency Response: CARB staff made no changes based on the received comment. CARB does not have authority to delay the implementation date of the interoperable billing standard. SB 454 states the EVSPs shall be compliant with the standard one year after the effective date of the regulation.

Open Protocol Adoption

If CARB does elect to designate an interoperable billing standard, we respectfully recommend that it be based on open protocols rather than a proprietary standard. **(Sema Connect)**

Agency Response: CARB staff made no changes based on the received comment. CARB agrees with this comment as OCPI is an open protocol operated by NKL. CARB supports the use of open protocols such as OCPI.

5. Definition of Publicly Available

This section addresses the definition of publicly available. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Non-publicly Available EVSE Definition Schools

Public EVSEs should be defined to exclude charging infrastructure installed in the workplace, multi-unit developments or schools. As an example, my local elementary and high schools have a large number of EVSEs for the employees in publicly available parking lots. These are available to neighbors after school hours. The proposed regulations may cause the schools to discontinue allowing the public access. **(EAA)**

Agency Response: CARB declined to make this requested change. School locations requiring payment for charging sessions must comply with the full regulation. School locations providing free charging sessions must comply with the reporting portions of the regulation. Schools that have networked EVSEs may designate the EVSP that operating that network as the reporting entity.

Non-publicly Available EVSE Definition exemption i

Amend the definition of “publicly available Electric Vehicle Supply Equipment (EVSE)” to clarify that charging stations installed at locations exclusively for the use of visitors, employees, or residents are not considered publicly available EVSE. **(AAC)**

Under definitions, please expand (i) A workplace EVSE and its associated space...” to include “..employees, contract employees, and/or contract drivers.” **(Teebay)**

The proposed definition of publicly available should be clarified to exempt stations that are installed primarily – but not exclusively – for use by employees. **(SemaConnect)**

Agency Response: CARB declined to make this requested change. Some of these comments are already covered by the definition of publicly available in the regulation. Exclusive use parking spaces, as described by commenter AAC, are not considered publicly available EVSE. Parking spaces dedicated to contract drivers are also excluded from the definition of publicly available EVSE.

The definition of “publicly available” and the exclusions in that definition arise from the statutory definition of “publicly available parking space.” The statutory definition excludes “a parking space that is reserved for the exclusive use of . . . employees, tenants, visitors, residents” The regulatory definition similar excludes such parking spaces if they are dedicated to such exclusive uses. But the statutory definition does not speak to split use. If a parking space is limited for use part of the time but is open for public use the rest of the time, it is also considered to be publicly accessible, for the purposes of drivers having consistent access to EVSE.

While the statutory definition excludes parking spaces dedicated to employees, it is silent about parking spaces for customers of businesses or dual-use spaces. Given the intent of the statute to promote accessible EVSE charging, CARB determined that its regulation should broadly apply to such spaces. Not all locations that host EVSE serve the same purpose or the same clientele. It is important for CARB and regulated parties to distinguish when an EVSE will be required to meet some or all of the proposed regulation. To be subject to the requirements of this regulation, the EVSE must serve the general public and not be limited to a select group of people or vehicles. This is to ensure all drivers of PEVs have access to public EVSE. Properties that are designated only for customers or visitors of a specific business are considered accessible by the public.

Non-publicly Available EVSE Definition exemption ii

As also articulated in the coalition letter noted above, we reiterate that the definition of ‘publicly available’ in the regulation should more closely align with the statutory language. It should clarify that workplace and multi-unit dwelling charging stations that are operated for employees, visitors, and MUD residents at least a majority of the time are not “publicly available,” unless they have been “designated by a property owner or lessee to be available to, and accessible by, the public. (**Greenlots, PIA, Freewire Technologies**)

Amend the definition of ‘publicly available Electric Vehicle Supply Equipment (EVSE)’ to clarify that charging stations installed at workplaces, businesses and multi-family dwellings – that are primarily used by designated employees, contractors, visitors or residents or locations that offer only limited public use hours – are not publicly available EVSE. (**Clipper Creek**)

Agency Response: CARB declined to make this requested change. See CARB’s response to Non-publicly Available EVSE Definition exemption i,, above, and Independent Contractors, below. CARB disagrees with the assertion that the definition of “publicly available” does not closely align with

the statutory language. The definition of “publicly available” and the exclusions in that definition arise from the statutory definition of “publicly available parking space.”

The definition of publicly available EVSE already excludes parking spaces for employees, visitors, and MUD residents if the owner reserves the spaces for those persons. If the owner instead chooses to make the spaces available to the public, only then will the regulation apply—and only during the limited period for which the spaces are available to the public. In the event the owner makes the EVSE available to the public for free charging during limited periods, then the primary obligation under the regulation is reporting—and that reporting serves primarily to enable the public to find EVSE. Only if the owner chooses to charge the public to use the EVSE would other requirements of the regulation apply—and in that instance, it is important that the consumer protections required by the statute and this regulation apply.

Non-public Labeling Requirement

Defining the three exemption classes (i- workplace , ii – residential areas , and iii – exclusive networks by manufacturers) as “nonpublic” and thus not covered by these proposed CARB regulations does not excuse those entity’s from their obligation to comply with the Federal Trade Commission, 16 CFR, Parts 309.15, 309.16 and 309.17. This requirement should be identified as a note in this section of the proposed regulation. (**EVAVC**)

Agency Response: The comment is outside the scope of this regulation because CARB is not responsible for obligations imposed on entities by the Federal Trade Commission. CARB’s regulation does not affect the cited federal regulations. As the commenter has noted, EVSE that are not publicly available, per the definition, do not need to comply with the federal requirements. It appears that the commenter is pointing out that the 16 CFR Part 309.15, 309.16 and 309.17 do not have exclusions for non-public locations, while SB 454 (and in turn, CARB’s regulation) does exclude non-public locations.

Independent Contractors

The regulations should be amended to include “independent contractors,” in addition to employees and contracted drivers in the workplace EVSE exemption in section 2360, subsection (b)(i). (**CaIETC**)

Agency Response: CARB staff made no changes based on the received comment. It is unnecessary for the regulation to provide an exhaustive list of workplace personnel in the workplace EVSE exemption. It is up to the site host to decide which independent contractors are on site for work or not. Independent contractors employed at that workplace location would be considered employees and should be given access to the EVSE. Independent contractors not employed at that workplace location should not have access to the EVSE, if the site hosts makes them private.

Public is Commercially Available

Perhaps it would be best to define “public” as “commercially available.” (EAA)

Agency Response: CARB declined to make this requested change. CARB is limited to interpreting Health and Safety Code section 44268, which defines a publicly available parking space in a manner not equivalent to “commercially available.” Therefore, CARB declines to limit “public” to “commercially available” chargers. Commercially available is defined by the future financial gain for the individuals or business entity or entities. Public is defined by who can access these commercially available EVSE.

Definition of Clearly Marked and Operated

The proposed standards apply to publicly available EV supply equipment (EVSE), and provide that a publicly available EVSE does not include “a workplace EVSE and its associated parking space if it is clearly marked and operated as available exclusively to employees or contracted drivers.” Electrify America urges CARB to include in its regulation greater clarity to establish the requirements of being “clearly marked and operated” as a workplace charging station. From conversations with CARB staff, Electrify America understands that a charging station will not be considered publicly accessible so long as the charging provider or site host does not advertise it as such (e.g., through an online EV charging locator). Electrify America respectfully suggests that regulatory language could be refined to clarify this intent, and avoid an impression that workplaces or EV charging providers would be required to install costly signage, striping, or barriers to access, in order to clearly mark the stations as available to employees. (EA)

Agency Response: CARB staff modified the proposed regulatory language in response to the received comment. CARB modified the regulation by adding a definition for “clearly marked.” Clearly marked means a sign, sticker, plaque or any other visible marker that is readable and indicates if the EVSE is available for private or public use. CARB does not intend for workplaces or EV charging providers to install barriers to access in order to clearly mark stations as available to only employees.

6. Reporting

This section addresses comments on the reporting requirements. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Optional Reporting

The Parties respectfully request that CARB allow for these reporting requirements to be optional, but not required. This will help avoid price impacts to drivers, ease the

cost of compliance, and protect sensitive business and customer data. (**EVCA, EVBox**)

ChargePoint respectfully requests that CARB allow for these reporting requirements to be optional, not required. Pages 11 and 12 of the proposed regulation require EVSEs to report annually the following EVSE payment usage information. (**ChargePoint**)

Agency Response: CARB staff modified the regulatory language in response to the received comment. The regulatory language in the first 15-day Notice reduced the annual reporting requirements to statewide aggregated figures covering different payment methods. At this time CARB declines to make any reporting requirement optional. The required information benefits consumers by providing a single point of reference for all charging information, including how much it costs, how many EVSE units are there, the charge rate of the EVSE, and what types of payments are available for use. Reporting will also allow staff to track the EVSE technology for the review process.

Aggregated Reporting for Each Payment Type

Greenlots requests that this requirement be changed to reporting this data in aggregate, such as in sum for each payment type for example, rather than data for each individual EVSE. (**Greenlots**)

With respect to reporting requirements, SMUD recommends that CARB consider the option of aggregated reporting requirements for the information related to the total number of charging sessions associated with each type of payment method. (**SMUD**)

Agency Response: In response to these comments CARB modified the regulation. Annual EVSE payment information will be reported in statewide aggregated numbers for each payment method.

Non-networked EVSE Reporting

Additionally, the regulations should clarify that the collection and reporting of utilization data does not apply to non-networked EVSE. (**Greenlots**)

Free and non-networked stations should not be required to comply with reporting provisions. Language in the rule should be clear that non-networked chargers will not be required to become networked, and the site host should not be obligated to report usage for free stations. (**AAC**)

The reporting requirements should not apply to EVSE that are offered for use free of charge. (**Freewire Technologies**)

Include clarifying regulatory language in the reporting section to confirm that free and non-networked stations are not required to comply with the reporting provisions. (**Clipper Creek**)

Agency Response: In response to these comments CARB modified the regulation. Non-networked EVSE will need to be reported to CARB if they are new locations or decommissioned locations so drivers can easily find these locations. Non-networked EVSE that do not require payment at the unit and are publicly available will not need to report the annual EVSE payment information, only the location data. The regulatory language has been modified to reflect this. Section 2360.4(j) states that no payment data reporting is required for EVSE that does not require payment.

AFDC Reporting Public EVSE Only

The current data reporting requirements should be limited to publicly available charging stations. Section 2360.4 (j)(4)(D) “access type (public, federal, private, hotel, etc.)” the regulations require reporting on how a user accesses the station, including examples that do not fit within the definition of public access. Given that the regulations are intended to apply to publicly accessible stations as stated in section 2360, subdivision (a), the requirements for access type related to the site being private – government only, private – residential, and private should be struck. **(CaIETC)**.

Agency Response: CARB staff made no changes based on the received comment. The reporting requirements are strictly limited to publicly available EVSE. The reporting options of access type are exactly the options that NREL has listed on the AFDC site. If the EVSE is on a private location or is considered a non-public location by the definition of the regulation, then it is not reported. These options are listed for continuity purposes between NREL’s AFDC and CARB’s requirements.

Designated EVSP for Reporting

The proposal being considered may discourage or penalize public agencies from serving as public charging operators. We have a limited budget, and supplemental funding has not been identified by CARB. We will continue to monitor and evaluate the impact of reporting on our EV programs and encourage CARB staff to adopt rules to simplify the reporting requirements. **(City of San Jose, PCE)**

Electric Vehicle Service Providers (EVSP) should be the networks – not the individual public agency or property owner. How many public agencies and individual properties have ChargePoint EVSE? The reporting requirement will be much easier for the networks. As written, this requirement could be VERY burdensome for smaller agencies and businesses, especially those with a limited number of plugs, those with limited staff, and/or those in humble communities. It will create another barrier to increasing the number of public plugs at an agency or business. **(Teebay)**

Agency Response: CARB staff made no changes based on the received comment. CARB understands that reporting for small entities may place a burden on local resources. In the definition of an Electric Vehicle Service Provider, it states “An EVSP may designate another entity to act as the EVSP

for purposes of this chapter.” This means an entity, such as a public agency, may designate another entity such as a network provider to be in charge of the reporting to CARB. CARB staff will be working with all parties to ensure the reporting occurs correctly and entities that can and should designate a different reporting entity do so.

Reporting Templates

ARB should develop a reporting form template for the initial EVSP contact information, EVSE model certification, annual inventory and usage information. This should be either as a document or spreadsheet with all the fields listed and fillable, this will greatly ease the reporting requirement on the EVSP and to help insure that the data received by ARB is compatible and easily rolled up. **(EVAVC)**

I presume that your Board’s staff will provide the form that the EVSP or (hopefully) network provider will fill out and submit. PLEASE make the reporting form the same for both the Low Carbon Fuel Standard and this regulation. Much of the data is the same and it would simplify reporting for those of us that have to do the inputting. **(Teebay)**

Agency Response: CARB staff made no changes based on the received comment. CARB will work with regulated parties to create straightforward reporting templates.

Limiting Scope of Reporting

The proposed regulation significantly expands the scope of data reporting beyond what the statute requires. These added reporting requirements add layers of complexity and expense, and should be carefully weighed against the benefits they are expected to provide. SemaConnect respectfully recommends that CARB limit the scope of reporting requirements to the language explicitly provided for by statute. **(SemaConnect)**

Agency Response: CARB staff made no changes based on the received comment. Each reporting component is intended to track EVSP compliance for the regulation, to avoid complications with enforcement. Each of the items identified as required reporting to NREL have already been reported by the EVSPs. The reporting to NREL should be a minimal change for EVSPs. The annual report is extensive in the data required to be reported. Each of the reporting pieces will be used to track technology acceptance and adoption, as well as compliance and future regulatory development.

Need for Stakeholders and CARB to Work Together

We appreciate CARB’s proposed revisions to simplify data collection and reporting requirements for annual reporting. Local governments and other public agencies often use more than one networking company and receive data in different formats. A coordinated approach to streamline reporting processes is necessary and must engage public agencies, network providers, and CARB staff. We look forward to

continued collaboration with CARB on the monitoring and reporting aspects of the regulation. (**PCE, City of Sacramento, City of Santa Monica, EBCE, MCE, City of San Jose**)

CalETC recommends CARB staff work with interested stakeholders to develop guidance that clarifies certain requirements of the proposed regulations, such as the reporting requirements. (**CalETC**)

Agency Response: CARB staff made no changes based on the received comment. CARB staff agrees to work with all regulated parties to ensure a smooth transition into the reporting requirements. CARB staff will issue guidance and templates for reporting.

Charging Session Payment and Downtime Should be Removed

Annual data reporting requirements on charging session payment methods and payment method downtime should be removed as they would impose significant burdens on EVSPs and serve no purpose. (**eMotorWerks**)

Agency Response: CARB staff modified the regulatory language in response to the received comment. Downtime of payment methods has been removed from the regulatory text. The regulatory text has also been modified to have EVSPs report payment methods use on a statewide aggregated basis instead of per EVSE. See section 2360.4(j)

Contact Information Submitted to NREL

Add section (m) the submittal contact information for the NREL report. (**EVAVC**)

Agency Response: CARB staff made no changes based on the received comment. The submittal contact information, section (m) is for CARB to communicate with one person for the purposes of compliance. In the NREL reporting, there are site and network provider contacts in the event that drivers need assistance. CARB declines at this time to make modifications based on this comment. CARB will be downloading the NREL data for compliance checks and will receive this information.

Form for NREL Reporting

A reporting form should also be created for the NREL Report. (**EVAVC**)

Agency Response: CARB declined to make this requested change. Companies currently use methods to transmit data to NREL by accessing NREL's application programming interface. Stakeholders expressed little concern with the current method. CARB's regulation does not preclude or mandate a specific method of transfer. It is in the best interest of all parties to use the method of transfer currently in use.

7. Payment Methodology

This section addresses payment methodology. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Support for Credit Card Requirement

Installing credit card readers on charging stations is another way to improve the charging experience. If a charger doesn't have a credit card reader, users must either obtain a membership card in advance or download the charging company's mobile app. This means the user must have a smartphone, sufficient cell coverage and ample data. Deploying chargers with credit card readers is critical to help ensure universal access. That said, it's important to implement this policy in a way that considers existing investment and uses state funds as efficiently as possible. **(Sierra Club)**

The proposed regulations would promote reliable access by requiring publicly accessible charging stations to accept credit card payment in the forms that would most align with customer expectations and open access, in addition to mobile payment technology. **(CAC)**

In addition to network interoperability through standards-based solutions to promote and support driver roaming and payment interoperability, credit card-based payment systems have traditionally been the backbone used to support payment interoperability and driver roaming in the U.S. across publicly-accessible EVSE. It is also the familiar payment method known to drivers for "roaming" across different gas stations, and provides a foundational guarantee of being able to use a station in the absence of a mobile phone or existing network membership. For these reasons, Greenlots supports drivers' abilities to utilize credit card functionality as an element of the transition to electrification. **(Greenlots)**

Agency Response: CARB thanks commenters and appreciates their support of the requirement.

Access Via Mobile Phone

CMUA encourages the Board to direct staff to revise the Proposed Regulation Order to reflect that existing public EVSE that provides access to charging via mobile phone is compliant. **(CMUA)**

A smartphone or smartwatch can be a method for NFC and allows the consumer to digitize their credit card. This type of technology is widely used by consumers through electric vehicle service providers, as well as, in many other industries. **(TechNet)**

Agency Response: CARB staff made no changes based on the received comment. The regulation does allow for payment via mobile phone for

compliance. The regulation does not allow for mobile payment to be the only option for compliance. Allowing for multiple forms of payment is critical to achieve open access for consumers.

Toll-free Number and No Credit Card Reader

Rather than requiring a costly physical card reader, SemaConnect supports provision 2360.2(f), which requires each EVSE to display a toll-free number through which a driver can initiate and pay for a charging session. (**SemaConnect**)

For Level 2 chargers that are not retrofitted, add a requirement that a toll-free number be available, prominently posted or displayed on the chargers, to allow for payment over the phone via a toll-free number using a credit, debit or pre-paid card. Such requirement could take effect on January 1, 2020. (**Greenlots, PIA**)

Agency Response: CARB staff made no changes based on the received comment. A driver should have the ability to use a uniform payment method such as a credit card reader on the EVSE to quickly initiate a charging session. Requiring credit card readers on publicly accessible EVSE will provide: (1) PEV drivers greater confidence for extending travel beyond daily use, (2) convenience for fleets to use PEVs throughout the state, and (3) PEV drivers the choice to not sign up for membership with the EVSP yet still pay for fueling. Access to toll-free numbers is important for consumers. However, consumers need choice in how they access EVSE because many locations have limited cell service access. Also, only having a toll-free number limits drivers' ability to pay for a charging session if they do not have a functioning phone or cell service.

Employ vs. Accept Regulatory Language

Comment: 2360.2(d)(1) The credit card reader shall ~~accept~~ employ, at a minimum, Euro Mastercard Visa (EMV) chip, and, at a minimum, one of Visa, MasterCard or American Express. (**CalETC**)

Agency Response: CARB staff made no changes based on the received comment. The definition of employ is "make use of." The definition of accept is "consent to receive." The goal of this language is to ensure the hardware that reads and processes payment with a credit card reader is on the EVSE or kiosk for drivers to use.

Language Change for Level 1 Requirement

The complete financial transaction from credit card reading through payment processor shall comply with PCI – DSS Level 1. (**CalETC**)

Agency Response: CARB staff made no changes based on the received comment. It is our understanding that the entire chain of payment processing must meet PCI-DSS Level 1 requirements for a unit to be PCI-DSS Level 1 compliant.

EBT Acceptance

2360.2(d)(2) accepted cards should also include ones issued as Electronic Benefit Transfer (EBT). **(EVAVC)**

Agency Response: CARB staff made no changes based on the received comment. Electronic Benefit Transfer (EBT) cards are traditionally used for state welfare departments to issue benefits via a magnetically encoded payment card. These cards are traditionally not supported by a credit card company.

Future Alternatives to EMV Chip Reader

Amend the “Payment Method Requirement for Electric Vehicle Supply Equipment” regulatory language to allow for other “open access” payment options as alternatives to EMV chip credit card readers. **(Clipper Creek)**

Agency Response: CARB staff made no changes based on the received comment. Requiring EMV chip credit card payment at EVSE provides PEV drivers with familiar credit card payment methods as they learn how to use charging stations. EMV chip readers are ubiquitous, well understood and standardized for use. As stated at the Board Hearing, CARB is dedicated to a technology review in the coming years. CARB has extensive history with technology reviews to evaluate changes in the markets to which the regulations apply.

Credit Card Readers Will Be Obsolete

Codifying the need for a particular technology – credit card readers – will lead to over-investment in infrastructure which will someday be obsolete. **(SCPE, Blink)**

We strongly encourage flexibility in regulations to avoid the risk of technology obsolescence and encourage deeper consideration of forthcoming technologies in the rulemaking. Requirements to support specific payment methods and reporting are likely to result in burdensome maintenance costs, as well as potential service and reporting gaps. **(EBCE, City of San Jose, MCE, PCE)**

Credit card readers: I am not a fan. I believe that credit cards and debit cards will be little used by 2025. Credit cards, and readers add costs and user fees. It will be interesting to see whether it will be less costly to use one's credit card or pay new roaming charges. I believe that other technologies such as Near Field Communications (NFC), and for newer vehicles, ISO 15118, or something like it, will ultimately become the path of choice. **(Teebay)**

SemaConnect recommends against requiring a physical credit card reader on each charging unit. The notion that we can collectively predict what payment technology will be common eight years from now stretches credulity. And, to require costly retrofitting of charging stations to comply with this eight-years-out projection, though well-intentioned, would be regrettably shortsighted and needlessly expensive. **(SemaConnect)**

Agency Response: CARB staff made no changes based on the received comment. It is not possible to tell if credit cards will be obsolete or not in five years. While the technology that transmits the information is slowly changing, physical cards still exist and are the most-used payment mechanism in the market today. It is the opinion of the Board and staff that to create open access for all drivers in the EV market, credit card readers on EVSE are necessary. At the June 27, 2019, Board Member Fletcher stated, “It is true that markets are changing and the US market is roughly 15 years behind Europe, which has been proven extensively. Even with the technology advancements, contactless transactions are still only 0.18 percent of all transactions. Future flexibility is an option, if the market were to make a rapid change then the regulation would need to make the same leap. It is difficult to futureproof technology and CARB needs to move forward with the technology that is available now. And if it changes, then we as an entity have to be flexible and adaptable in how we would change that.”

Venmo or QR codes

Another option would be platforms like Venmo and/or QR codes, like those used by street food vendors in other countries. **(Teebay)**

Agency Response: CARB staff made no changes based on the received comment. See CARB’s response to Credit Card Readers Will Be Obsolete, above. One of the main pillars of open access is that consumers will not need to download a mobile phone application or obtain another membership with another account, unless they choose it. EVSE providers are free under CARB’s regulation to include Venmo or QR codes as payment options.

Credit Card Readers and Fraud and Vandalism

A physical credit card reader is not needed as section (f) requires the posting of a phone number and the ability to initiate a charging session “at any time.” Physical card readers are subject to vandalism, potential skimming fraud, and weather failure. Further, card readers add a burdensome cost to install, maintain and operate. Analysis of credit card charge activation in two existing EVSP systems show only about one percent usage. Credit card usage overall is falling due to technology advances in forms of optional or digital payment. **(EVAVC)**

We are opposed to the EMV chip reader mandate. We have several concerns there. One of them is largely fraud, which some members of other hit on already -- or some previous speakers. Hear a lot of people talk about the gas station model when they’re using their card. A gas station is a well-attended, well lit, observed station. And most EV charging stations are not. They are in parking lots that are not well lit, that do not have attendants, and will make it easier for a credit card fraud to attach a skimmer to read someone's card and take their data. **(EV Connect)**

Additionally, chip readers significantly increase maintenance costs and heighten risks) credit card fraud. We worry this will be a disincentive for site hosts to invest in publicly available stations. **(SVLG)**

Agency Response: CARB staff made no changes based on the received comment. See CARB's response to Credit Card Readers Will Be Obsolete, above. There are many EVSE locations today where drivers have little to no cell service coverage and cannot make a call to initiate a charging session. As noted by Chair Nichols and several Board members, all forms of payment are open to fraud and vandalism. But with the EMV chip reader, skimming and shimming fraud has significantly dropped as the technology has rolled out. Many public services exposed to extreme weather conditions employ EMV chip readers such as vending machines, street-side parking meters, and parking garage kiosks. In discussions with major cities that operate curb side parking meters, fraud or theft of a credit card number from a parking meter is low to almost non-existent. Board Member Fletcher stated "When it comes to the chip readers, as the Chair mentioning, we have the magnetic strips. The reason that you have chips is because they're more secure. That has been the mass adoption that has happened, why is we've seen a 75 percent reduction in fraud with the adoption of the chips. The chips are exponentially more secure than the other forms."

Cash and Debit Cards

Include other options as accepting cash and debit cards. Not all customers have cell phones that are smart phones or will they necessarily have credit cards. **(SDAP)**

Agency Response: CARB staff made no changes based on the received comment. SB 454, Statutes of 2013, states "an electric vehicle charging station that requires payment of a fee shall allow a person desiring to use the station to pay via credit card or mobile technology, or both." A consumer may use cash to purchase a prepaid debit card for use.

Credit Card Reader and Mobile Payment Requirement Against Statute

Mandating both credit card readers and mobile payments goes against statute. To comply with SB 454, eMotorWerks recommends the following changes to 2360.2 (d) All EVSE subject to this section shall have, at a minimum, either a credit card or mobile payment hardware physically located on either the EVSE unit or a kiosk used to service that EVSE. If an EVSP elects to install credit card hardware, it shall comply with all of the following requirements. **(eMotorWerks)**.

We do not find SB 454 was written in a highly prescriptive manner that specifies hardware requirements, as CARB staff seems to assert in their 45-day language. The legislation was prescriptive regarding the prohibition against a "membership fee" and regarding the ability to pay "via a credit card." CARB Staff has interpreted this to mean the stations require hardware to read a credit card, which we simply wish to point out is an interpretation on the non-explicit statutory language. **(CaISTART)**.

The Parties respectfully request that EVSE be allowed to accept credit card payment in the method of the EVSE's choice, whether that be contactless credit card **or** EMV chip cards. This would provide adequate flexibility to charging station providers to

choose a payment technology they prefer without jeopardizing consumer access to charging stations. (**EVCA, ChargePoint, Tesla, EVBox**)

The regulations should not mandate EMV chip readers for EVSPs that choose to offer drivers credit card payment options. The regulatory language should allow the EVSP to choose either a credit card reader or mobile payment hardware to install on an EVSE. (**eMotorWerks, CompTIA**)

We urge the Board to request a modification in the regulation order to not require E chip readers, but rather allow chargers to accept credit card payment in the method of the EVSE's choice, whether that be contactless credit card or EMV chip cards (per SB 454). This would provide adequate flexibility to charging station providers to choose a payment technology they prefer without jeopardizing consumer access to charging stations. (**SVLG**)

Agency Response: CARB staff made no changes based on the received comments. CARB disagrees with the assertion that the statute does not require EVSEs to accept both credit cards and mobile payments. SB 454, Statutes of 2013, states “An electric vehicle charging station that requires payment of a fee shall allow a person desiring to use the station to pay via credit card or mobile technology, or both.” The statute is meant to increase consumer flexibility and acceptance of payments to charge EVs at EVSEs. In order to accomplish this statutory goal, the statute requires that consumers—not EVSE providers—have the ability to use credit cards, mobile payments, or both. To effect this goal, EVSEs must offer both options. The Board agreed with this approach in the June 27, 2019 Board hearing.

Any hardware requirements will impact current business models. EVSP current business models have not been driver-focused and that was made evident by the California Legislature signing SB 454, Statutes of 2013, into law and giving CARB the authority to implement it. But since the passing of SB 454, Statutes of 2013, industry has ignored those statutory requirements and instead chose to install and maintain mobile payment options which can be restricted to the use of a proprietary mobile application, which drivers need to download. Such proprietary payment measures go against the express intent of the statute.

The author of the bill, Senator Corbett, said, “There’s a reason that the bill was called the Electric Vehicle Charging Station Open Access Act. One of the most important things we wanted to do was create consumer confidence in the use of electric vehicles. We wanted to make sure that this legislation created a situation that it was just as easy and common and understandable as pulling into the gas station and fueling your car. And it was not a bill that was introduced to create barriers for charging electric vehicles, but to allow for very, very easy access just as simple as gassing up your car.”

According to the author’s office, “EV charging stations are currently not as convenient as gas stations. The public has access to only a few stations, and these stations offer few payment options. Most charging stations require a subscription or membership, forcing drivers to buy several memberships and

carry them in order to drive longer distances. The author's office believes this bill will provide the framework for EV charging stations to operate similarly to gas stations, allowing drivers to use their credit cards or phone to pay for charging. Facilitating charging will assist the state in achieving its ZEV, greenhouse gas emission reduction, and air pollution reduction goals, as well as reduce the state's dependence on petroleum."

The Legislature intended SB 454 to benefit consumers and promote EV charging, CARB is interpreting SB 454's mandate to require EVSPs to give consumers a choice: consumers may use a credit card or consumers may use a mobile payment at an EVSE in California. Therefore, CARB staff has proposed in this regulation that a publicly available EVSE that requires payment will have to permit the consumer to pay using either a credit card or a mobile payment, at the consumer's discretion. The proposed regulation sets forth deadlines to comply with this payment requirement and imposes related requirements to benefit the consumer.

As stated above, Health and Safety Code section 44268.2 requires EVSE to enable consumers to use a credit card or mobile payment at the consumer's discretion. Beyond this requirement, however, CARB has determined it is important for EV consumers to have the ability to use either payment technology depending on individual circumstances.

Charging session initiation by a smartphone application is not yet accessible for all drivers. Nearly all California residents (92%) have a cell phone, and 58% have a smartphone. A majority of California residents (56%) access the internet or email by cell phone. However, this usage is associated with higher income and/or younger population segments. Mobile payment remains an important option for future EV adoption, particularly because younger population segments tend to be technology influencers.

However, as PEV adoption expands to a broader and more diverse consumer base, smartphone application or internet-based payment mechanisms may not be convenient or available to all drivers. Additionally, drivers who are borrowing or renting PEVs may not subscribe to EVSP networks with applications on their smartphones.

Most internal combustion engine vehicle drivers use credit cards for purchasing fuel at the over 8,000 gasoline stations in California. Three in four drivers in the United States pay for fuel with a credit card when fueling up according to results from the 2018 National Association of Convenience Stores Consumer Fuels Survey. Total System Services completed a 2017 survey nationwide of consumers who have access to debit, credit cards and mobile transaction technology from which they concluded, "Consumers continue to prefer debit for daily purchases at the gas station, supermarket and discount store." By including credit card payment at EVSE, PEV drivers will be familiar with credit card payment methods as they learn how to use charging stations. Requiring credit card readers on publicly accessible EVSE will provide: (1) PEV drivers greater confidence for extending travel beyond daily use, (2) convenience for fleets to use PEVs throughout the state, and (3)

allow PEV drivers the choice to not sign up for membership with the EVSP yet still pay for fueling.

The hardware required are EMV chip readers, which are non-locking and compliant with PCI-DSS Level 1 security standards. The language in subsection (d)(2) is common for parking meters. In the event of a power failure or issue of any kind, drivers should have the ability to retrieve their card from the reader. Staff is proposing the requirement of PCI-DSS Level 1 compliance to ensure customer and EVSP security when processing credit card payments. Level 1 is the highest security requirement for processing payments because it is for companies that process over 6 million payments in a year or are a high security risk. Some of the EVSE are in unattended locations without monitoring mechanisms for public safety. Therefore, it is important that each of these units have strong security for processing payments. The proposed regulation requires that credit card reader and NFC reader payment systems must be PCI-DSS Level 1 compliant, to secure the payment transactions and protect PEV consumers' personally identifiable information. PCI-DSS Level 1 compliance requires a third party to inspect annually the EVSE, and requires the service provider or network operator to use data encryption from the EVSE to the EVSP and back. PCI-DSS Level 1 compliance is industry standard for curbside parking meters and most DCFCs that currently have credit card readers. This will ensure that EVSPs are using the highest form of security for handling driver payment information. The benefit to this proposed requirement is to provide secure charging session payment transactions at public EVSE locations.

ISO 15118 and Future Payment Methods

The proposed payment method requirements also fail to account for rapid evolution in payment technologies. There are already viable and popular alternatives to physical credit card readers on EVSE, including ISO 15118 protocol favored by the California Energy Commission. **(SVCE)**

Agency Response: CARB staff made no changes based on the received comment. CARB staff has been working with the CEC and the CPUC on ISO 15118 implementation. While that is a viable alternative for the future, it does not negate the responsibility CARB has to implement SB 454, Statutes of 2013, or the widespread availability of payment methodology that drivers have access to right now. CARB is committed to evaluating the regulation requirements as time goes on. This is indicated in Resolution 19-17 "BE IT FUTHER RESOLVED that the Board directs staff to revisit the retrofit and annual reporting requirements and propose modifications as appropriate."

Roaming Agreements

Roaming agreements have been put in place to improve interoperability, nullifying the need for a credit card requirement. **(EVgo)**

Agency Response: CARB staff made no changes based on the received comment. CARB staff is aware and very encouraged by the roaming

agreements that have been announced. Open access for plug-in electric vehicle drivers is looked at in two categories. The first being drivers who are brand new to electric drive and the second are drivers who have been drivers for some time and want to establish a membership with a network to fulfill their fueling needs. The latter category is where roaming agreements create open access for drivers. The drivers who have a single membership and do not want to obtain additional memberships now have the ability to roam on other networked EVSE. These roaming agreements are a vital piece of the puzzle to enable driver access.

Roaming agreements alone do not negate the need for credit cards. New drivers still need to have a reliable, familiar payment method they can use to initiate a fueling session. Chair Nichols said during the Board Hearing almost all electric vehicle drivers has had a bad experience trying to get a charge. Most of the time EVSE are in unattended and dark locations, and these are problems that continue to arise today. Installing credit card readers on EVSE for drivers solves one of the issues with needing a charge in a unfamiliar location and network.

Chip Readers Will Not Increase Low-Income Access

There is no data showing EMV chip readers will increase low-income access to EV charging stations. (EVCA, EVBox)

Agency Response: CARB staff made no changes based on the received comment. While EMV chip readers alone may not increase low-income access to EV charging stations, a simple payment method removes a barrier to access. The alternative supported by the commenters would be mobile payments with no physical credit or debit card option; this alternative would not adequately serve low-income community access.

1 percent Usage Now and in the Future

EVgo payment session data demonstrates that only 1 percent of payment sessions are initiated by credit card. No data has been demonstrated by CARB staff to show that this will increase in the future. (EVgo)

Agency Response: CARB does not have projections of anticipated payment usage of the credit card hardware. Data of past payment sessions are not reliable indicators of future use, because the ability to pay via credit card at EVSE today is quite limited and not well known, and the EV market is expanding rapidly into new consumer groups whose payment patterns will not necessarily mimic those of early EV-adopters. Analyzing the market to see if there needs to be any course correction will occur during the technology review. EVSPs will contribute to the review by completing the Annual Reporting Requirement. Currently 40 percent of DCFC EVSE do not have the ability to take a credit card payment on the machine. An untold number of Level 2 EVSE currently do not have the ability to take a credit card payment on the machine. Consumers need to have a common recognizable method of payment available to them to pay for a charging session. Making credit cards

a common option available to everyone will grow consumer confidence in the market.

EVgo Settlement Requirements

EVgo's \$102 million investment with the California Public Utilities Commission did not require EMV chip; CARB's draft regulation does. In California, EVgo has been implementing a \$102 million EV charging infrastructure program on behalf of NRG Energy, Inc. under their Settlement with the CPUC. Through this program, by the end of the summer, EVgo will have energized more than 550 fast chargers – in addition to Level 2 chargers and make ready stubs – including several Equal Access Charging Hubs (EACH) in Anaheim, Richmond, Oakland, and other locations. Additionally, the program required investments in projects that increased awareness of the social benefits of electric vehicles while creating opportunities for residents of under-served communities to gain access to electric vehicles. One such program was Green Raiteros, an 18-month partnership with the San Joaquin Valley Latino Environmental Advancement Project (Valley LEAP), the Fresno County Rural Transit Authority (FCRTA), the Shared Use Mobility Center (SUMC), and West Hills Community College to build upon an existing grassroots ridesharing program in the San Joaquin Valley, The Raiteros. EVgo worked with the program to establish a sustainable business plan for electrifying the Raiteros program's vehicles, deploy EV charging infrastructure to support electric vehicles for the program, and demonstrate the use case for rural ridesharing.

CARB's regulations, as proposed, jeopardize this \$102 million investment, made under CPUC authority, which began in 2012. The CPUC wisely required multiple forms of access for payment, including credit card readers, but did not require those credit card readers to be EMV chip capable. EVgo believes that the experience and expertise of other state agencies with unique requirements for various state and utility-funded programs should be taken into account when formulating other requirements for the industry. From the EVSP perspective, it is challenging when multiple regulators within California have different program requirements, and this practice limits our ability to rapidly scale to meet California's infrastructure needs. This will be especially true if the regulations do not exempt existing infrastructure. The draft regulations will lead to many existing Level 2 chargers to be either turned off or moved to "private" to avoid expensive upgrade costs. Additionally, much of EVgo's legacy DCFC infrastructure will not be able to be retrofitted and would instead have to be replaced, at a cost of millions of dollars not funded through the CPUC Settlement, unless the 10-year phase in requested by EVCA and other stakeholders is included in the final rule. Additionally, EVgo has also heard from many of its site host partners that due to data security concerns, they do not want credit card readers located on their premises. EVgo worries that this regulation will lead many potential site hosts to reject EV charging on their locations due to these concerns. (EVgo)

Agency Response: CARB staff made no changes based on the received comment. CARB staff considered this settlement. The payment industry has mandated the minimum technology to be used to transmit payments as the EMV chip. Therefore the EMV chip readers are important to drivers, as it is the minimum form of payment hardware for which they will have access, even

as tap-and-go payment hardware is expanding in the market. Credit card companies that supply the hardware ensure that there is backward compatible hardware on the machine.

Not all locations that host EVSE serve the same purpose or the same clientele. It is important for CARB and regulated parties to distinguish when an EVSE will be required to meet some or all of the proposed regulation. The EVSE must serve the general public and not be limited to a select group of people or vehicles. This is to ensure all PEV drivers have access to public EVSE. Properties designated only for customers or visitors of a specific business are considered accessible by the public. If a parking space is limited for use part of the time but is open for public use the rest of the time, it is considered to be publicly accessible, for the purposes of drivers having consistent access to EVSE.

Committed investments will be allowed to continue as planned. The regulatory language was modified in the 15 Day Notice to push back the DCFC implementation date to January 1, 2022. Already committed investments should be installed and operational prior to that date and will be able to live out a 10-year useful life or until 2033.

Credit Card Readers Increase Charging Cost

At the same time, we believe that access includes not just convenience, but also consideration of any price impacts on PEV drivers, particularly low income consumers. Our analysis of the proposed rules, particularly as they relate to requirements to include credit card EMV chip readers in public Level 2 EVSE, suggests that this requirement may actually work against broader objectives of increasing access to charging infrastructure, particularly for Californians who are likely to rely on public Level 2 EVSE because they do not have access to home charging. (Flo)

Agency Response: CARB staff made no changes based on the received comment. Reliable, repeatable and easy to recognize payment hardware is better for consumers who do not have the familiarity of their own residence in which to fuel their vehicle. Pricing will also be posted and the consumer will have the option to become a member or pay with their credit card.

Individuals are not required to comply with the proposed regulation, but may be impacted if compliance costs are passed on to consumers. Staff estimated the direct compliance cost per kWh of EVSE utilization to estimate a potential price impact if all of the compliance costs are passed through to end-users. This represents an upper bound impact which is not anticipated to occur in practice, as some of the costs may be absorbed by the EVSP or site host. The regulation is anticipated to have an upper bound price impact of 2 percent for DCFC and 21 percent for Level 2 EVSEs. Please refer to the EVSE Standard SRIA Section C.6.

Cost of Credit Card Reader in SRIA

Our conclusion is that the SRIA's estimate for the cost of a chip reader (\$371/EVSE/year) are likely accurate, but that the costs for annual maintenance, which in our company's case would include additional annual telecommunications fees to support chip readers, likely understates the additional expenses that will be incurred, and which will need to be passed on to site hosts, along with additional design costs, which will be spread over stations sold. **(Flo)**

Agency Response: CARB staff made no changes based on the received comment. CARB appreciates the confirmation on the cost of the chip reader, and we understand that individual companies, such as Flo, will experience greater or fewer costs. Staff did not receive enough information to analyze those different costs in every scenario but agree that additional costs may be incurred for certain entities.

Cost Recovery for EVSPs

Our preliminary analysis suggests that site hosts deploying standard curbside infrastructure and seeking to recover their investment costs may need to increase the costs ultimately charged to PEV users by 50 percent to 100 percent, compared to the costs that they could charge using stations without a mandatory chip reader. **(Flo)**

Agency Response: CARB staff made no changes based on the received comment. CARB staff understands that individual companies, such as Flo, may experience greater or fewer costs. Staff did not have enough information to analyze those different costs in every scenario but agree that additional costs may be incurred for certain entities.

Item to be Tabled for Discussion

EVgo thanks CARB staff for its willingness to meet with stakeholders on this regulation. However, based on our unique experience in the marketplace, we respectfully oppose the staff recommendation. Given that credit card usage on networks remains low and a number of roaming agreements have been announced, a credit card mandate is no longer needed. Instead, EVgo recommends that this Board item be tabled for discussion, and a workshop on the progress and lessons learned from roaming agreements be held by CARB staff one year from the June board meeting, in June 2020. **(EVgo)**

Agency Response: CARB declines to delay its regulation. The Governor signed the authorizing bill in 2013, and thus the credit card mandate has been law since that time. But in the ensuing years, EVSE providers have not made substantial progress on accepting credit card payments at EVSE. CARB staff held multiple workshops and stakeholder working group meetings starting in late 2017 in order to work with stakeholders on requirements that met the goals of open access.

8. General Opposition

This section addresses general opposition to the regulation. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Free and Non-networked EVSE

The proposed standards should not apply to non-networked charging infrastructure. The same comment applies; the recurring costs will dwarf the costs of the EVSE and energy dispensed. This will have a chilling effect on small businesses who might just want to incentivize patrons to charge while they shop. **(EAA)**

The EVSE Standard should not apply to mobile or non-networked charging systems and should not require a credit card reader on the unit or at a kiosk so long as a physical credit card payment option is available. **(Freewire Technologies)**

The proposed standards should not apply to Level 2 AC EVSE that are free to use. The EAA is concerned about overburdening would-be providers. The cost of an AC L2 EVSE is relatively low, as is the commodity it dispenses. The recurring costs of networking, reporting and handling credit card transactions all dwarf the EVSE and energy dispensed. **(EAA)**

Agency Response: CARB staff made no changes based on the received comment. Please see Agency Response to Section 6. Reporting – Non-networked EVSE.

Staff agrees with this comment regarding card readers only. CARB believes that all publicly available EVSE should be easy to locate and use. Level 2 AC EVSE that are free to the consumer should be easy to locate and clearly marked for the consumer to plug in and charge their vehicle. Staff does believe that it would be unnecessary to install a credit card reader for this use case. Section 2360.2 states the requirements of this section apply to publicly available EVSE installed in California that require payment.

Increased EVSE Hardware Costs

As proposed, the EVSE standards will make EV charging hardware and software more expensive due to greater EVSP operating costs and will unintentionally diminish the supply of accessible-to-all public charging. New entrants may also choose to avoid California altogether given the hardware and reporting requirements, and instead focus on growing EV markets elsewhere in the country. **(eMotorWerks)**

Beware of unintended consequences, Many public agencies struggle to find funding for the expansion of charging infrastructure. There are MANY competing demands.

Every dollar spent to retrofit an existing site is a dollar that won't be spent on additional infrastructure. **(Teebay)**

Agency Response: CARB staff modified the regulatory language in response to the received comment. Please refer to Section 2. Existing EVSE Becoming Compliant – Grandfathering Until Upgrade. CARB is aware of the estimated cost of compliance with the proposed regulation. The economic analysis CARB completed can be found on the California Department of Finance Major Regulations [Standardized Regulatory Impact Assessment website](#). CARB understands many of the existing EVSE in operation today were installed with public funding. Ensuring the useful life of these EVSE are realized, regulatory modifications were made to allow all existing EVSE to become compliant by July 1, 2033, or upon replacement. Allowing existing EVSE to live it out its useful life has substantially reduced the cost of compliance for the regulation.

9. Recommended Modifications

This section addresses general recommended modifications. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Regardless of EVSP Membership

Chargers must be accessible to drivers regardless of membership in an Electric Vehicle Service Provider's Network. **(Hallam)**

Agency Response: CARB staff made no changes based on the received comment. CARB agrees with the commenter. The EVSE regulation makes this possible by requiring credit card readers on EVSEs. The consumer has the choice to become a member if they do not wish to use their credit card at the EVSE. The regulation also prohibits EVSPs from requiring drivers to be a member to use the EVSE.

Civil Penalty of \$300

Establishing civil penalties is within the purview of the board. However, the basis for penalties is a bit harsh, I would recommend each be the same at \$300 per EVSE or kiosk. **(EVAVC)**

Agency Response: CARB staff made no changes based on the received comment. As disclosed in the staff report, where applicable, the cost of these penalties is double the anticipated cost of the hardware that is being required. The penalties are tailored in subsections (a) through (d) to the specific violation. Subsection (e) ensures that repeated infractions are discouraged. Subsection (f) allows CARB to seek penalties per EVSE or per kiosk, so that multiple violations by the same EVSP are deterred. Subsection (g) accounts

for inflation in the penalty amount to ensure that the proposed penalties continue to provide adequate deterrence in the future.

CARB has authority under Health and Safety Code section 43016 to assess a civil penalty not to exceed \$37,500. Section 43016 directs CARB to adjust the maximum penalties for inflation based on the California Consumer Price Index. While CARB could simply assess an appropriate penalty on a case-by-case basis, here staff has decided that setting fixed penalty amounts would improve transparency to the regulated stakeholders and be less burdensome than establish each penalty amount on a case-by-case basis. CARB has included an inflation adjustment provision to maintain the predictable and consistent deterrent effect of these penalties.

This approach maintains consistent penalty deterrence by addressing the erosion inflation that would otherwise cause that effect. It also reflects the approach the Legislature has chosen for a range of penalties. CARB has authority under Health and Safety Code section 43016 to assess a civil penalty not to exceed \$37,500. Section 43016 directs CARB to adjust the maximum penalties for inflation based on the California Consumer Price Index. The Legislature endorsed inflation adjustments using that Index for a wide range of CARB penalties in section 42411 of the Health and Safety Code as well. Thus regulated entities are already on notice that CARB must adjust maximum penalties for inflation. Here, though CARB has decided to set maximum penalties below the statutory maximums, CARB has proposed to set appropriate inflation adjustments to maintain the deterrent effects the Legislature identified. The inflation adjustments will be mandatory, and CARB will lack any discretion to deviate from them.

More specifically, as discussed in the staff report, the penalties in subsections (a) through (d) of the regulation are set, as applicable, to be double the anticipated cost of the hardware required. This regulation requires action by regulated parties that may take place many years in the future—the last deadline in the regulation is 2033. In order to ensure an adequate level of deterrence for actions that may occur well in the future, and for consistency with the Legislature’s direction in section 43016 to adjust penalties for inflation, subsection (g) of the regulation requires CARB to adjust the set penalties for inflation. Without an inflation adjustment, the penalties over time would likely not reflect double the anticipated cost of hardware. In addition, this regulation concerns consumer access to consumer-level EVSE, and therefore the California Consumer Price Index is a reasonable proxy for how such costs may vary over time. This inflation adjustment will ensure a consistent level of deterrence over time, and is not meant to be a proxy for costs faced by either the agency or the regulated public.

Mobile Payment Definition

“Mobile payment” means a near-field communication reader, enabling payment from a cell phone, *or payment via an application running on a cell phone*. This proposed

addition provides clarity about which types of payment should be enabled by the near-field communications device. **(CaIETC)**

Agency Response: In response to these comments CARB modified the definition of “mobile payment” to “hardware that enables a driver to complete a payment from a cell phone via contactless payment.”

Payment Card Industry – Data Security Standard

The regulations should not specify a specific version number. PCI-DSS certification must be renewed and to receive renewal, the electric vehicle service provider must comply with the latest specification. The current proposal is inconsistent with this process and would require an out-of-date specification to be used should the security standard version be updated. **(CaIETC)**

Agency Response: CARB staff made no modifications based off the received comment. The CARB regulatory process for incorporating documents by reference requires a version number. Under the Administrative Procedure Act, CARB cannot specify a future version not yet in existence. Should the version change then CARB will consider incorporating the new version at that time. CARB declines to make this adjustment.

2360.2(f) The EVSP shall provide and display a toll-free number on each EVSE or kiosk used to service that EVSE that provides the user with the option to initiate a charging session and payment at any time that the EVSE is operational and publicly available. If call center accepts credit card payment for charge sessions via phone, the call center must also be PCI-DSS certified. **(CaIETC)**

Agency Response: CARB staff made no modifications based off the received comment. It is our understanding that the entire chain of payment processing, including call center initiated sessions, must meet PCI-DSS Level 1 requirements for a unit to be PCI-DSS Level 1 compliant.

Marketing Campaign

Please create a marketing campaign for sites that fully comply with the new requirements. Label compliant sites as “California Access for All” or something similar so that when a driver uses the PlugShare App or their App on their dash, they will know which sites are truly open access. Require that the networks also label their own sites in their app that are fully compliant with the new regulation. **(Teebay)**

Agency Response: CARB staff will be working closely with stakeholders as implementation occurs. At this time, a true marketing campaign for open access is outside of the scope of the regulation.

Variable Pricing Display

Some chargers may have variable hourly pricing, this should be disclosed. **(SDAP)**

Agency Response: CARB staff made no changes based off the received comment. The regulation is written so variable pricing will need to be displayed for customers to see. CARB agrees that all pricing, no matter what it is, should be disclosed at the point of sale and on the NREL AFDC website.

Power Capability (kW) Display

Be sure to disclose the kW, as at minimum this effects operating EV's dwell time and range when refueling. **(SDAP)**

Agency Response: Section 2360.1 of the regulation requires EVSPs to label each EVSE with a sticker that follows 16 CFR Part 309 Subpart B. This sticker does require the kW capability for the EVSE to be displayed.

Evaluate Regulations at Designated Intervals

CalETC recommends CARB evaluate the regulations at designated intervals after implementation begins to ensure the regulations are not hindering the chargingstations or ZEV market and are achieving the intended benefits. **(CalETC)**

Agency Response: No alterations were made to the regulatory language in response to this comment. CARB is committed to evaluating the regulation requirements as time goes on. This is indicated in Resolution 19-17 "BE IT FUTHER RESOLVED that the Board directs staff to revisit the retrofit and annual reporting requirements and propose modifications as appropriate."

SB 454 Legislative Intent

CARB should consider the Legislative Intent of SB 454 in deciding the best path forward. California's goals for the exponential growth of EV adoption depend upon the expansion of charging infrastructure. The legislative intent of SB 454 is clear: "It is the intent of the Legislature to (1) promote a positive driving experience by assisting in the widespread deployment of electric vehicles, [and] . . . (3) facilitate expanded EV driver access to electric vehicle charging stations in public places." AB 2127 (Ting, Statutes of 2018) codified the connection between EV charging infrastructure, EV adoption, and GHG goals by establishing the need to assess the state's EV charging infrastructure to meet the established goal of 5 million ZEVs by 2030. That bill also clearly connected these EV infrastructure goals to reducing GHGs 40% below 1990 levels by 2030. Therefore, we encourage CARB to proceed with this legislative intent in mind—any regulations adopted as "implementation" of SB 454 should primarily serve to improve the experience of EV charging so that more Californians will buy EVs. If a consequence of adopted regulations is that EV charging companies respond by reducing their overall investment in new chargers that would clearly be contrary to the legislative intent of making EV charging more ubiquitous through "expanded access" in public places. **(CalSTART)**

Agency Response: CARB staff made no changes based on the received comment. Senator Corbett, the author of SB 454, stated at the June 27, 2019, Board Hearing, "I'm sure you want me to tell you a little bit about the intent of the measure. And obviously, if I could sum it up in one word, it's

“access”. One of the more important things we wanted to do was to create consumer confidence in the use of electric vehicles. We wanted to make sure that this legislation created a situation that it was just as easy and common and understandable as pulling into the gas station and fueling your car. We wanted to make sure that people had a knowledge of the costs, they knew once they got in the car where they could fuel up along the way, and obviously, most importantly, the form of payment needed to be very easy and accessible to all. That’s why the requirement for card readers.”

Fees To Be Displayed

Taxes, User fees, etc., should be displayed. In some cases, the Utility charges for "other electricity", a fixed facility charge, demand fees and also charges a varying tax fee that could differ by an additional 6 percent. These fees are charged on top of each kWh. If facilities are charging these extra fees a conversion for the adjusted kWh should be disclosed so that the end user knows how much each kWh actually is, just like at a gas station. This allows the consumer to directly compare these other alternative fuel technologies to other fuels and to other stations providers on the price for fuel. Unless you provide the adjusted kWh price the consumer will not acknowledge that kilowatt hour price that needs to be calculated with the other fees that are directly tied to the number of kWh's dispensed, the kilowatt hour adjusted price disclosure obviates the need for engaging in mathematical calculations at the dispenser and aligns with other conventional fuel prices. (**SDAP**)

Agency Response: CARB staff made no changes based on the received comment. The regulatory text is clear that the sale of electricity will be displayed in kWh or MegaJoule (MJ), which is consistent with the Division of Measurement Standards. If the location implements variable pricing, the cost of electricity shall be displayed in kWh or MJ and will need to have the full variable pricing listed. All fees associated with a charging session that include taxes and user fees will also need to be displayed. These fees may not be in the form of kWh depending on the site and the needs of the EVSP or site host.

16 CFR Part 309

It should be noted that this CFR is currently in force. There is no mention in 16 CFR Part 309 of a grace period to comply with the code, no matter which level of EVSE one operates, whether it is publically available or is provided by a manufacturer of electric vehicles.

The following salient parts of 16 CFR Part 309 should be addressed.

16 CFR Part 309—Labeling Requirements for Alternative Fuels and Alternative Fueled Vehicles, Subpart A—General, Section 309.1 Definitions, (d)(2) *Consumer or ultimate purchaser* in subpart B means, with respect to any non-liquid alternate vehicle fuel (including electricity), the first person who purchases such fuel for purposes other than resale.

16 CFR Part 309—Labeling Requirements for Alternative Fuels and Alternative Fueled Vehicles, Subpart A—General, Section 309.1 Definitions, (bb) *Retailer*

means any person who offers for sale, sells, or distributes non-liquid alternative vehicle fuel (including electricity) to consumers.

16 CFR Part 309—Labeling Requirements for Alternative Fuels and Alternative Fueled Vehicles, Subpart A—General, Section 309.4 Preemption. Inconsistent state and local regulations are preempted to the extent they would frustrate the purpose of this part. (EVAVC)

Agency Response: CARB staff made no changes based on the received comment. This comment is outside the scope of this regulation because this regulation only addresses the label requirement of 16 CFR § 309.17(a)(3) and no other areas of 16 CFR Part 309. 16 CFR § 309.17(a)(3) is specific to labeling requirements for electricity as a transportation fuel.

Implementing 16 CFR Part 309 Label

I have personally visited and inventoried 556 EVSE/Ports in Ventura County, not a single one was labeled in accordance with 16 CFR Part 309.

The bottom line is that it is the responsibility of all EVSPs who offer for sale, sell or distribute electricity to consumers through an electric vehicle fuel dispensing system to post the fuel rating with a label on each face of the dispenser.

One additional issue is that the required label to comply with 16 CFR Part 309.17 is not readily available as a commercial product. Multiple searches online and finally after one conversation with a supplier of 16 CFR Part 309 compliant liquid alternative fuel labels, they said they would take the matter of supplying EVSE labels into consideration. As a stock item, liquid fuel labels cost \$.62, once the demand is there for EVSE labels, similar costs could be expected. (EVAVC)

Agency Response: CARB staff made no changes due to the received comment. As the commenter points out, many EVSE in operation in Ventura County today do not have the 16 CFR Part 309 label. CARB staff acknowledges there is a statewide problem with EVSE not being labeled correctly. Due to this experience, it was important to move forward with the requirement of the label on the EVSE.

Power Capacity Labeling

Be sure to disclose the kW at minimum, as this effects operating EV's, dwell time and range when refueling. Today's EV dispensing power is greatly increasing and thereby the AFV's labeling requirement at that time of the ruling, had very limited power capacity for EV vehicle charging, which is not the case today or in the future. (SDAP)

Agency Response: CARB staff made no changes based on the received comment. The 16 CFR Part 309 label does require the kilowatt rating be displayed on the label.

Reporting Submitted On Time

There needs to be a consequence if a Network doesn't submit the required report in a timely manner. I would like to suggest that the EVSP (Network) would not be able to sell their LCFS credits until they have submitted the required reports. **(Tebbay)**

Agency Response: CARB staff made no changes based on the received comment. Section 2360.5 (c) contains a penalty for violation of the reporting requirements that is \$600. This penalty will be assessed if there is a violation in whole or in part of the section.

10. Out of Scope

This section addresses out of scope comments. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Comment: While we agree that some private businesses across North America are providing Level 2 EVSE, primarily for customers, our experience suggests that this is not sufficient to ensure a comprehensive public charging network for all residents. Curbside charging tends to be attractive to municipalities and utilities particularly because of its relatively low cost, compared to typical DC fast charging. In the City of Montreal, which has one of the most advanced networks of curbside charging in North America, with plans to install 1,000 charging points by 2020, 4 users are charged \$1 per hour (excluding parking charges). While this price may not be fully indicative of costs in California, it provides what we consider to be a useful benchmark against which to assess the per-station costs resulting from a requirement to include a chip reader, particularly when keeping in mind the needs of low-income users. **(Flo)**

I also recommend that, in addition to posting the #3 and #4 items that the equipment's payment options be posted on their equipment as instructions: HOW TO PAY TO USE THIS EQUIPMENT. **(Hallam)**

The EV charging companies should only be allowed to charge per use, not maintain deposits. **(Hallam)**

If you don't want to go that far, please consider standardizing the deposit structures for charging companies, i.e. how much they can take up front, how low the amount has to be before they can add funds from a consumer card, and what the maximum additional upcharge can be. **(Hallam)**

I would also highly recommend that any company that installs EV charging equipment be required to include plug ADAPTERS for any EV, not just have chargers that work with certain vehicles (CHAdEMO or Tesla). **(Hallam)**

The kW power of each EVSE should be standardized to its actual throughput and tested at installation to determine the EVSE electric vehicle charger throughput and

consider including this factor as the trenching distance creates line loss which creates other cost and will impact the kW throughput regardless of the rating of the EVSE and this should be the kW number disclosed on the label. **(SDAP)**

And lastly, equipment operators must be held responsible for timely maintenance of broken or inoperable machines. I have visited the same equipment month after month and the same machines are still broken. The screen is unreadable, the machine won't accept my card, some idiot has broken the hose/plug, etc. The thing is, the company knows immediately when their machines are not functioning. They don't bother to fix them to save themselves the cost of a maintenance crew. Broken equipment is very discouraging to EV drivers. **(Hallam)**

There should be a penalty for non-operation after X amount of days of service call. Lack of a response by the [OEM] impacts the consumer and there should be a standard for maintaining the operation of the EVSE if the malfunction requires the [OEM] to diagnose the failure or the repair. **(SDAP)**

Agency Response: CARB declined to make these requested changes. These comments are out of scope of the regulation.

Interoperability Agreements

To carry out the intent and spirit of SB 454 to enable true interoperability, we recommend that the regulation require interoperability agreements and include reporting requirements for all charging sessions using the roaming protocol. **(Hubeck, Inc.)**

Agency Response: CARB staff made no changes based on the received comment. CARB acknowledges that interoperability agreements between EVSPs have been announced. CARB agrees with the commenter on reporting charging sessions that use the roaming protocol. This will be captured in Section 2360.4(j)(6), the total number of charging sessions started with other methods of payment, including sessions that did not require payment. Requiring interoperability agreements between parties is out of scope for the regulation because SB 454 only authorizes the state board to select an interoperability billing standard for networks to use.

11. General Support

This section addresses general support for the regulation. Except as otherwise described in the response to the comments, CARB declined to make changes to the proposed regulations, and did not find that any proposed alternative was more effective in carrying out the purposes of the proposed regulation, as effective and less burdensome, or more cost effective to affected private persons and equally effective.

Comment: We support the intent of the proposed standard, and respectfully request the noted revisions to ensure a fair and reasonable approach to realize the State goals that do not pose undue burdens on the wide range of stakeholders necessary to deploy and operate EVSE. We believe this balance is critical to attain our shared

vision of a zero-emission mobility future. **(City of San Jose, City of Sacramento, PCE, City of Santa Monica)**

We sincerely appreciate ARB's efforts to help electrify the transportation sector, as it is paramount to achieving California's long-term climate goals. EV charging stations continue to be a critical piece of this overall vision. **(EVCA, EVBox)**

We urge CARB to adopt the EVSE standards. Californians want a state in which all residents can anticipate clean air days every day, and where we can reduce climate pollution from internal combustion engines. Developing reliable and easy-to-use charging infrastructure is fundamental to accelerating the transition to zero-emission vehicles in California. **(SCC)**

The proposed regulations set out standards that are aligned with both the present and the future of customer charging needs, ensuring equitable access to charging as electric vehicle adoption expands to a broader and more diverse base of drivers. **(Charge Ahead)**

Senate Bill 454 was enacted by the Legislature to accomplish exactly this. And ARB's proposed regulations appropriately align with the vision of SB 454 by setting EVSE performance standards that provides drivers convenient and simple payment methods for charging. The proposes regulations would promote reliable access by requiring stations to accept credit card payment in the forms that most align with customer expectation and open access, in addition to mobile payment technology. Customers should be able to pay for charging at these stations, just as they would expect to be able to at gas stations or parking meters, not resigned to the alternative payment methods which many customers may lack. The proposed regulation set out standards that are aligned with both the present and the future of customer charging needs ensuring equitable access to charging as electric vehicle adoption expands to a broader and more diverse base of drivers. **(NRDC)**

To meet the goals of the Charge Ahead California Initiative (SB 1275, De Leon, Statutes of 2014) of creating a mainstream market for electric vehicles and increasing access to those vehicles for low- and moderate-income households and for residents in disadvantaged communities, customers need reliable access to electricity as a transportation fuel where they live, work and play. Senate Bill 454 (Corbet, 2013) was enacted by the Legislature to accomplish exactly this, and ARB's proposed regulations appropriately align with the vision of SB 454 by setting EVSE performance standards that provide drivers convenient and simple payment methods for charging. **(Charge Ahead)**

First and foremost, I fully support the efforts of your staff as they try to address numerous long-standing issues. **(Teebay)**

We urge CARB to adopt the EVSE standards. California wants a state in which all residents can anticipate clean air days every day, and where we can reduce climate pollution from internal combustion engines. Developing reliable and easy-to-use charging infrastructure is fundamental to accelerating the transition to zero-emission vehicles in California. **(Sierra Club)**

The adoption of consumer protections and open protocols and standards is essential to support transportation electrification, grow the market for EVs and EV charging products and services, enhance the driver/customer experience, and lower the cost of ownership of both EVs and EV charging infrastructure. For these reasons, and with the comments provided, Greenlots supports and is appreciative of CARB's efforts in implementing the requirements of SB 454. (**Greenlots**)

As a company, we agree in the strongest terms with the objectives of increasing plug-in electric vehicle (PEV) owners' confidence in electric vehicle supply equipment (EVSE) and improving PEV drivers' ease of charging access to encourage PEV adoption and market development, which we understand to be central objectives of California Senate Bill 454 ("SB 454"). (**Flo**)

Section (g) is a very good thing. The consumer needs to be informed of the purchase parameters in order to make an educated decision prior to the transaction. (3) Requiring the price to be in U.S. dollars per kilowatt-hours or megajoule is spot on. (**EVAVC**)

We appreciate the work staff has done and share the goals of wanting to expand access to EV charging stations across the state in order to support California's ambitious climate goals. (**SVLG**)

Siemens is grateful for the opportunity to express its support for staff's proposed regulation in order to adopt the new Electric Vehicle Supply Equipment standard. We stand for open universal access to public chargers for all Californians, especially for chargers that will be funded by public dollars. (**Siemens**)

CCA supports the proposed Electric Vehicle Supply Equipment standard. We'd like to thank staff for its diligent work on this matter and we -- which we think will be far reaching in giving all EV drivers reliable and equitable payment options. SB 454 provided the framework so EV charging stations could be, as Senator Corbett earlier referenced, just as simple as gassing up your car. If approved today, the proposed resolution before this Board would realize the spirit of SB 454 by setting performance standards for charging stations that provide convenience and easy payment methods. Drivers can fill up at gas stations with a charge card and they should be able to do so at charging stations. (**CCA**)

For the following reasons, Earth Justice supports the Air Resources Board's measures to make publicly accessible Electric Vehicle Supply Equipment available to all users. First, opening up Electric Vehicle Supply Equipment to non-remembers and requiring credit card readers ensures not only uniformity of service, but critical access to infrastructure that users from local communities may be lacking. Second, bringing common billing standards to all suppliers provides consumers with less confusion and ease of access. And finally, transparent fees and energy capabilities ensure clarity to users and safe use of potentially dangerous equipment. (**Earth Justice**)

Agency Response: CARB staff appreciates support for the proposed rulemaking.

B. 15-Day Comments and Agency Responses

Written comments were also received during the 15-day comment period in response to the September 4, 2019, public notice. Listed below are the organizations and individuals that provided comments during the 15-day comment period:

Commenter	Affiliation
Dick, Andrew	Electrify America (EA)
Goldsmith, Hannah	CalETC
Wahl, Francesca	Tesla
Muller, Miles	Charge Ahead California (CAC)
Leumer, Alexandra	ChargePoint
Bullis, Cory	Electric Vehicle Charging Association (EVCA)
Venema, Jennifer	City of Sacramento
Friedland, Jay	Plug In America
MeGhee, Lisa	San Diego Airport Parking Company
Nagler, Asaf	ABB
Shah, Rajiv	FreeWire Technologies

Shorten Annual Reporting Requirements

EVCA respectfully requests that ARB drop the following reporting requirements in the annual report: total number of charging sessions started with a toll free number, service provider application and other methods of payment, including sessions that did not require payment. **(EVCA, Freewire, ABB, ChargePoint)**

Agency Response: CARB staff made no changes based on the received comment. It is important to understand all the technologies that are being used by drivers. Reporting the number of times these technologies are used will allow staff to develop a robust technology assessment to inform potential regulatory changes in the future as requested by several commenters.

Additional Guidance on Reporting

We also believe that payment categories for reporting session initiations could lead to confusion. For instance, debit cards are not included in the list, and could be treated by some reporters as “other methods of payment,” and treated by other as falling into the “credit card” category. Additionally, if a user initiates a session by providing credit card information via a toll free number, it is unclear whether the session should count towards both the “credit card” and “toll free number” categories. We encourage CARB to provide additional guidance on how sessions should be categorized to avoid confusion. **(EA)**

Agency Response: CARB staff made no changes based on the received comment. While debit cards are their own technology, they do have major credit card company logos on them. If the card is swiped on an EVSE it would likely process as a credit card, therefore it would be counted as a credit card use. If a driver chooses to use the toll-free number this transaction

should count as the toll free number regardless if the transaction is processed as a credit card. The reporting is written to track the different technology usage of each of the available options. If an EVSP is using technology that is beyond the scope of the regulation, then the number the EVSP would report will be zero. CARB staff will continue to work with all regulated parties to ensure reporting is consistent. This includes templates for EVSPs to use for reporting.

Commit to Review Process

We respectfully request that the CARB initiate this technology review by January 2021 and conclude it by mid-year to allow for plenty of time to discuss and assess the state of payment technologies. It will be critical to develop appropriate indicators to determine whether other payment technologies have become ubiquitous among consumers, which will take significant time to identify, research, and then appropriately measure. Additionally, metrics to measure developments in the payment industry should be based on external data such as number of percentage of credit cards issued that have contactless capability or percent of drivers with smartphones, not simply on reporting from EVSPs, to capture a comprehensive picture of the larger market. (**EVCA, Freewire, ABB, ChargePoint, Tesla**)

CalETC recommends CARB evaluate the regulations at designated intervals after implementation begins to ensure the regulations are not hindering the charging-stations or ZEV market and are achieving the intended benefits. (**CalETC**)

Agency Response: CARB staff made no changes based on the received comment. CARB is constantly monitoring the EVSE market. If the market shifts through market developments, CARB will consider amending the regulation in the future as circumstances warrant.

Access Type Reporting

CalETC supports CARB's efforts to clarify and streamline the reporting requirements. However, the current data reporting requirements should be limited to publicly available charging stations. 2360.4 (k)(4)(D) "access type" has options that are non-public locations. (**CalETC**)

Agency Response: CARB staff made no changes based on the received comment. Access type choices have been set previously by NREL. If the location is not a public location, it does not need to be reported. Please refer to Section 6. Reporting – AFDC Reporting Public EVSE Only.

Definition of Publicly Available Visitors and Workplaces

Definition of "publicly available" should reflect parity in the treatment of "visitors" at workplace and residential sites. On page 3, the exceptions to "publicly available" are defined as follows: A publicly available EVSE does not include: (i) A workplace EVSE and its associated parking space if it is clearly marked and operated as available exclusively to employees or contracted drivers. For the purposes for this chapter contracted drivers includes participating drivers, as that term is defined in

Public Utilities Code § 5431, regardless of the physical accessibility of the EVSE to the public; (ii) An EVSE and associated parking spaces reserved exclusively to residents, tenants, visitors, or employees of a private residence or common interest development; or a residential building adjacent to private residence;...” (emphasis added). Similar to visitors who charge at a residential site, workplace visitors are limited to those who have business with the workplace and thus the station is not open to anyone from the general public. Recommendation: ChargePoint respectfully urges parity in these definitions so that workplaces who allow their visitors to charge do not threaten their “private” status: (i) A workplace EVSE and its associated parking space if it is clearly marked and operated as available exclusively to employees, visitors, or contracted drivers. (**ChargePoint**)

Agency Response: CARB staff made no changes based on the received comment. See CARB’s response Non-publicly Available EVSE Definition exemption i and Non-publicly Available EVSE Definition exemption ii to the 45-day comments, above.

Employee Only, No Visitors

Electrify America notes that the definition of “publicly available parking space” in SB 454 excludes spaces reserved for the exclusive use of groups of drivers, including both employees and visitors. This definition would not establish a requirement that businesses exclusively allow employees and disallow visitor from using charging equipment, in order to be deemed not publicly available. (**EA**)

Agency Response: CARB staff made no changes based on the received comment. It will be up to the site host to determine if they want to only allow employees of the site to be able to use the EVSE, or permit visitor use as well. CARB cares that no matter what situation occurs, that the driver is notified. And if the station is available at any time to the public that it adhere to the requirements of this regulation.

Definition of Producer of Electric Vehicles

The text of SB 454 states that a publicly available parking space covered by these regulations shall not include “a parking space provided by a producer of electric vehicles as a service.” However, the proposed regulation exempts “an EVSE provided manufacturer of electric vehicles for the exclusive use by vehicles it manufactures.” The addition of the “exclusive use” requirement deviates from statutory language, excluding manufactures that provide charging as a service to vehicles other than their own. Electrify America recommends that CARB modify this provision to reflect the statutory language. (**EA**)

Agency Response: CARB staff made no changes based on the received comment. CARB disagrees with the commenter’s assertion that the regulatory definition deviates from statutory language. SB 454 did not define “producer of electric vehicles as a service.” Staff believe the exemption for “EVSE provided by a manufacturer of electric vehicles for the exclusive use by vehicles it manufactures” addresses the legislative intent for “producer of electric vehicles as a service.” If CARB did not limit the exemption to

exclusive use, it would permit any vehicle manufacturer to enter the market for EVSEs—no matter what vehicles are allowed to charge at those EVSEs—without being subject to the regulation at all. This would create a serious discrepancy and potential competitiveness concerns between EVSE providers that are not vehicle manufacturers and those that are, and CARB does not believe the Legislature intended for that to occur. Furthermore, the phrase “as a service” implies that the manufacturer is providing public charging to benefit its customers, and thus the exemption should be limited to use by the vehicles it manufactures.

EVSE ID and Serial Number

Given that the industry is not uniform in its usage of EVSE ID or serial number, we recommend that EVSPs be allowed flexibility to choose which indicator is more appropriate to identify replacement or substantial modification of a charger. If neither of these are appropriate, they should be able to work with ARB on developing or identifying another surrogate that is appropriate. “Replaced” means that the EVSE has been substantially modified or substituted with another unit, as indicated by a change in only one of the following: the serial number, EVSE ID or the model name of the EVSE. EVSPs shall select one of these indicators as the appropriate measure and notify the Executive Officer of its selection upon submission of its first annual report. If none of these indicators is appropriate, the EVSP may request for use of another indicator that is subject to approval from the Executive Officer. **(EVCA, Freewire, ABB, CalETC)**

Agency Response: CARB declined to make this requested change. For reporting purposes, CARB is looking for the EVSE ID and serial number that are linked to other sources, such as NREL, for tracking purposes. CARB is looking for the EVSE ID and the serial numbers reported to other entities as part of device registration and AFDC reporting. While these numbers may change for upgrades of the unit or movement of the unit, these numbers are traceable and staff will be using them to help confirm regulation compliance by all regulated parties. CARB staff will work with reporting entities to ensure everyone is clear on what is being reported and provide reporting templates.

Clearly Marked and Operated Parking Space

The proposed standards provide that a publicly available EVSE does not include a workplace EVSE if it is “clearly marked and operated as available exclusively to employees or contracted drivers.” In previous comments, Electrify America highlighted specific concern with the phrase “clearly marked and operated,” pointing out that it did not establish a clear standard regarding what constitutes clear marking or operation. We recognize that CARB has partially addressed this concern by defining “clearly marked,” but we note that CARB has still not defined the “operated” part of the requirement. It remains unclear what electric vehicle service providers (EVSPs) or site hosts must do to satisfy this requirement. **(EA)**

Agency Response: CARB declined to make this requested change. CARB disagrees that this requirement is unclear. The dictionary definition of “operated” is “control the function of,” which in the case of a publicly available

EVSE typically would be the site host. The site host, for example, would determine if the public is able to come in and fuel vehicles on site, and must provide signage to indicate if that is not the case.

Reporting

We also appreciate the revisions to allow for aggregated reporting by payment type. However, monitoring may still pose some challenges to local governments. Agencies may use more than one networking company and receive data in different formats. A coordinated approach and partnership with EV network providers will be important to streamline reporting. Any resources local agencies dedicate to reporting, whether staff time or funds for technical support, is public money diverted away from installing new EVSE in our communities. We will monitor and evaluate the impact of reporting on our EV programs, and look forward to collaborating with CARB staff to identify additional opportunities to simplify reporting while providing informative, transparent data. **(City of Sacramento)**

Agency Response: CARB declined to make this requested change. CARB staff understands some site hosts who are considered an EVSP will have issues with providing enough staff to complete reporting. In the regulatory language, the EVSP may designate another entity to be the reporting entity. It is expected as more site hosts transition to having networked EVSE operating on the properties the site host will designate the network provider of said EVSE to be the reporting entity. CARB staff will work diligently with all parties to ensure reporting will come from the correct entity and use the correct reporting template. No change was made to the regulatory language in response to this comment.

Reward for Early Adoption

In order to send the strongest possible signal to the market, we believe that ARB should encourage incentives to reward early adoption of card readers prior to the implementation dates, especially in disadvantaged communities, via both internal ARB programs and working with other State agencies, like CEC and CPUC. **(Plug In America)**

Agency Response: CARB thanks the commenter for this recommendation, but declines to go further at this time. CARB staff is working with state agencies through the implementation process to ensure all programs will be compliant according to the regulation and participants are aware of the coming requirements.

Support of Regulatory Modifications

I write to express the City of Sacramento's support for the modified regulatory language developed in response to comments and Air Resources Board direction. We commend staff's efforts throughout the process. We believe that the revised regulatory language meets the intent of the legislation while balancing the limitations and barriers for public agencies like ours. Specifically, we applaud the revisions to provide a longer compliance timeline for retrofits or replacement of existing

infrastructure. We believe the revised compliance timeline of 2033 is appropriate for Direct Current Fast Chargers (DCFC) installed before January 1, 2022, and Level 2 EVSE installed before July 1, 2023. This extended timeline ensures that early public investment in charging infrastructure is not penalized, and that public agencies can continue participating as EV charging operators. With the extended timeline, the City of Sacramento can keep existing infrastructure open while planning and budgeting for future compliance upgrades. This timeline also allows us to take advantage of CALeVIP rebates, since it would not require us to prematurely replace non-compliant CALeVIP infrastructure prior to the end of useful life. **(City of Sacramento)**

As one of the original supporters of Senator Corbett's SB 454 (2013), Plug In America's goal was to make charging an EV as simple for a consumer as filling your tank with gasoline. We wish to thank ARB staff and the Board for moving the concept of real open access for EV charging so much closer to fruition. **(Plug In America)**

The regulations would promote reliable access by requiring public charging stations to accept credit card payment in the forms that would most align with customer expectation, in addition to mobile payment technology. Customers should be able to pay for charging at these stations just as they would expect to be able to at gas stations or parking meters, and that entails a physical chip card reader—not contactless cards or proprietary RFID tags, which ARB has recognized many customers currently lack. The proposed regulations set out standards that are aligned with both the present and the future of customer charging needs, ensuring equitable access to charging as electric vehicle adoption expands to a broader and more diverse base of drivers. We also understand ARB's intent is to conduct a technology review over the next few years, and we believe this is an appropriate solution to address concerns that the credit card market may shift in the near future. **(Charge Ahead)**

CalETC supports the amendments made to the compliance timeline for the payment option requirements of existing Level 2 and direct current (DC) fast charging stations. **(CalETC)**

CalETC supports the revised deadline by which newly installed DC fast charging stations must comply with the payment requirements of the proposed regulations. **(CalETC)**

Agency Response: CARB thanks the commenters for their support.

C. Second 15-Day Comments

No written comments were received during the second 15-day comment period in response to the February 18, 2020, public notice.

V. Peer Review

Health and Safety Code Section 57004 sets forth requirements for peer review of identified portions of rulemakings proposed by entities within the California Environmental Protection Agency, including CARB. Specifically, the scientific basis or scientific portion of a proposed rule may be subject to this peer review process.

Peer review is not required for the EVSE Standards Regulation. The EVSE Standards Regulation is implementing SB 454, Statutes of 2013, and sets purely technical standards in accordance with that statute. Consistent with section 57004 and California EPA guidance, the regulation is not premised upon and does not derive from empirical data or other scientific findings CARB received no comments suggesting that the regulation should be subject to the peer review process.