the proposed regulations, the amended text, with the changes clearly indicated, will be made available for an additional 15−day public comment period, before the Department adopts the regulations. The Department will accept written comments on the modifications to the regulations during the 15−day public comment period.

AVAILABILITY OF FINAL STATEMENT OF REASONS

Upon completion, the Final Statement of Reasons will be available on the Department's website at https://oag.ca.gov/. You may also obtain a written copy of the final statement of reasons by contacting:

Shayna Rivera, CalGang Unit Manager
Bureau of Criminal Identification and Investigative Services
California Justice Information Services Division
4949 Broadway
Sacramento, CA 95820
(916) 210−4296

AVAILABILITY OF DOCUMENTS ON THE INTERNET

Copies of the Notice of Proposed Action, the Initial Statement of Reasons, and the text of the regulations in underline and strikeout format, as well as the Final Statement of Reasons once completed, are available on the Department's website at https://oag.ca.gov/.

TITLE 13. AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER PROPOSED ELECTRIC VEHICLE SUPPLY EQUIPMENT STANDARDS

The California Air Resources Board (CARB or Board) will conduct a public hearing at the time and place noted below to consider approving for adoption the proposed standards for Electric Vehicle Supply Equipment (EVSE).

DATE: June 27, 2019

TIME: 9:00 a.m.

LOCATION: California Environmental Protection Agency
California Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento, California 95814

This item will be considered at a meeting of the Board, which will commence at 9:00 a.m., June 27, 2019, and may continue at 8:30 a.m., on June 28, 2019. Please consult the agenda for the hearing, which will be available at least ten days before June 27, 2019, to determine the day on which this item will be considered.

WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS

Interested members of the public may present comments orally or in writing at the hearing and may provide comments by postal mail or by electronic submittal before the hearing. The public comment period for this regulatory action will begin on May 10, 2019. Written comments not physically submitted at the hearing must be submitted on or after May 10, 2019, and received by June 24, 2019. CARB requests that, when possible, written and email statements be filed at least ten days before the hearing to give CARB staff and Board members additional time to consider each comment. The Board also encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action. Comments submitted in advance of the hearing must be addressed to one of the following:

Postal mail: Clerk of the Board,
California Air Resources Board
1001 I Street
Sacramento, California 95814

Electronic submittal:
http://www.arb.ca.gov/lispub/comm/bclist.php

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

Additionally, the Board requests but does not require that persons who submit written comments to the Board reference the title of the proposal in their comments to facilitate review.

AUTHORITY AND REFERENCE

This regulatory action is proposed under the authority granted in California Health and Safety Code, sections

39600, 39601, 43016, 44268, and 44268.2. This action is proposed to implement, interpret, and make specific sections 44268 and 44268.2 of the Health and Safety Code.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW
(GOV. CODE, § 11346.5, subd. (a)(3))

Sections Affected: Proposed adoption to California Code of Regulations, Title 13, sections 2360, 2360.1, 2360.2, 2360.3, 2360.4, 2360.5

Documents Incorporated by Reference (Cal. Code Regs., tit. 1, § 20, subd. (c)(3))

The following documents and test procedures would be incorporated in the regulation by reference as specified by section:

- "Payment Card Industry (PCI) Data Security Standard — Requirements and Security Assessment Procedures" published by PCI Security Standards Council (Version 3.2.1) (May 2018), Section 2360.
- "California Open Charge Point Interface Test Procedures for Networked Electric Vehicle Supply Equipment for Level 2 and Direct Current Fast Charge Classes", [Insert Adoption Date], Section 2360.3.

The above−listed document is also being adopted by this regulation and thus the adoption date would be the date that the regulation is adopted by CARB.

Background and Effect of the Proposed Regulatory Action:

CARB proposes to add and adopt the California Code of Regulations, Title 13, Chapter 8.3, Section 2360, to establish hardware and software standards for EVSE. The proposed regulation affects publicly accessible Level 2 and direct current fast charger (DCFC) EVSE. Under the proposed regulation, electric vehicle service providers (EVSP) will be required to install and maintain credit card readers and mobile payment technology on publicly accessible EVSE, post signs for all fees associated with charging, attach a Code of Federal Regulations (CFR) Title 16 Part 309 sticker, and adopt an interoperable billing standard. The proposed regulation imposes specific reporting requirements for EVSPs including annual reporting to CARB, the National Renewable Energy Laboratory's (NREL) Alternative Fuels Data Center (AFDC), and an initial statement of compliance for new models of EVSE.

Background

CARB and the State of California are committed to the growth of the zero emission vehicle market. These vehicles are critical to meeting the State's health−based air quality and climate change targets. As increasing numbers of plug−in electric vehicles (PEV) are added to California roads, public charging infrastructure to support the vehicles is also being added.

Existing public charging infrastructure is often confusing to PEV drivers due to varying access and payment modes. Drivers have encountered EVSE being non−functioning upon arrival, toll−free numbers not being staffed, inconsistent charging session prices, and not being able to find EVSE at a given location. The proposed regulation will address these problems so drivers will have greater confidence in charging infrastructure.

The California Legislature adopted Senate Bill (SB) 454, "Electric Vehicle Charging Stations Open Access Act," in 2013. The purpose of SB 454 was to set EVSE performance standards allowing for open access. California Health and Safety Code sections 44268 and 44268.2 gave authority to CARB to implement the requirements.

The proposed regulation establishes six requirements for publicly accessible EVSE:

1. Public chargers must be accessible to drivers regardless of membership in an EVSP network.
2. EVSPs must operate credit card readers and mobile payment options on Level 2 and DCFC EVSE allowing payment by members and non−members.
3. EVSPs must place, on each EVSE, a sticker informing drivers of voltage (V) and amperage (A) capabilities of that EVSE.
4. EVSPs must post all fees associated with a charging session.
5. EVSPs must install the interoperable billing standard Open Charge Point Interface (OCPI) on each EVSE. In addition, other interoperable billing standards may also be used.
6. EVSPs must report new, current, and decommissioned EVSE locations and access information to the NREL AFDC and CARB. The information reported will include pricing, EVSE model and location information.

EVSPs will also be subject to initial statement of compliance requirements for EVSE models and annual location and usage reporting requirements.

Staff have continued stakeholder engagement on the proposed regulatory requirements. Should compromises on areas of contention be reached before the board

hearing, additional modifications resulting from this coordination will be presented at the Public Hearing.

Objectives and Benefits of the Proposed Regulatory Action:

The proposed regulation's primary objective is to address consumer access to publicly available EVSE. Access to an EVSE includes finding the location of an EVSE, identifying fees associated with use, and paying for a charging session.

Implementation of the proposed regulation will: (1) enable drivers to more readily locate public EVSE, (2) provide drivers charging session pricing before use, (3) provide drivers convenient and simple payment methods for charging sessions, (4) provide standardized power information on each EVSE, and (5) facilitate EVSP roaming agreements.[1] Consumer benefits of the proposed regulation include familiar payment methods, clear pricing information, and uniform station location.

Timeline

This proposed regulation does not require EVSE to be installed for public use; it establishes hardware and software requirements for new and existing EVSE. New DCFC installations shall be fully compliant starting July 1, 2020. Existing DCFC EVSE must meet necessary hardware and software requirements by July 1, 2024, depending on installation date. New Level 2 EVSE installations shall be fully compliant starting July 1, 2023. Existing Level 2 EVSE must meet necessary hardware and software requirements by July 1, 2027, depending on installation date.

Credit Card and Mobile Technology

The proposed regulation requires EVSPs to ensure that all EVSE have a physical credit card reader and a physical near field communications (NFC) reader (to accept mobile payment). EVSPs may install the credit card reader and NFC reader either on the EVSE itself or at a nearby kiosk that services one or more EVSE at the site. This provision is to comply with SB 454's requirement that an EVSE "shall allow a person desiring to use the station to pay via credit card or mobile technology, or both."[2] The objective of this proposed requirement is to ensure consumers convenient charging session payment access. The benefit of this proposed requirement is to provide public charging access for all consumers including those who may not have smart phones or may not be familiar with using public charging infrastructure.

Disclosure of Fees

The proposed regulation requires EVSPs to provide the user a complete listing of all fees that the user may incur at the time of a charging session. The fees may include, but are not limited to, the kilowatt−hour (kWh) or megajoule (MJ) cost of electricity, credit card fees, parking fees, non−membership plug−in fees, increased charges after plug−in session ends, and any other fees chargeable to the PEV user. Fees must be displayed at the point of sale to ensure the fee structure is transparent to the driver. Consumers paying for a charging session must be billed for electricity by the $/kWh or $/MJ. The Electric Power Research Institute completed a study of National Charging Costs,[3] which found over 350 unique charging cost structures. As a result, there is ongoing confusion for drivers today when paying for charging. This proposed requirement will align with California Department of Food and Agriculture Division of Measurement Standards[4] proposed regulation for EVSE charging as well as give customers confidence that all fees will be displayed ahead of starting a charging session. The purpose of this proposed requirement is to ensure consumers know exactly what they will be paying at the time of starting a charging session. The benefit of this proposed section of the code is that drivers will be able to see clearly what they will be charged for a charging session.

Payment Card Industry Data Security Standard Level 1 Compliance

The proposed regulation requires that credit card reader and near field communications (NFC) reader payment systems must be Payment Card Industry Data Security Standard (PCI−DSS) Level 1 compliant to secure the payment transactions and protect PEV consumers' personally identifiable information.[5] 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. For example, this technology is commonly re-

[1] Roaming agreements are contracts between EVSPs that allow members to seamlessly use the networks covered by the contract.

[2] Cal. Health & Safety Code § 44268.2(a)(1).

[3] Dunckley, Jamie, December 2017. Electric Power Research Institute "National Charging Costs"

[4] DMS, 2018. California Department of Food and Agriculture. "ISOR: Electric Vehicle Fueling Systems" https://www.cdfa.ca.gov/dms/pdfs/regulations/EVSE_ISOR.pdf

[5] Control Scan, 2018. "What's the point of PCI DSS compliance requirements?" https://www.controlscan.com/data−sheet−pci−dss−compliance−solutions/?utm_source=pcicomplianceguide.org&utm_medium=referral&utm_campaign=pcicg−overview, Accessed September 10, 2018

quired as a minimum security measure on parking meters that use credit card readers or other payment technologies.[6] The purpose of this proposed requirement is to ensure that users' information will be protected from exposure. The second purpose of this proposed requirement is to ensure that EVSPs are using the highest form of security for handling driver payment information. The benefit of this proposed requirement is to provide secure charging session payment transactions at public EVSE locations.

Interoperable Billing Standard

SB 454 authorizes CARB to adopt interoperable billing standards for EVSE network roaming payment methods. Roaming enables a member of one EVSP to use that membership credential on a different EVSP. Upon completing the charging session, the two EVSPs send and receive billing information to complete the transaction. Drivers benefit from roaming by using one membership card or mobile device application (app) at other networked EVSE.

Open Charge Point Interface (OCPI), an open source communication protocol−enabling driver roaming, is used by many domestic and international charging infrastructure providers. A number of EVSPs announced roaming agreements using OCPI in 2018.[7,8,9] As no national interoperability billing standards have been adopted, CARB is proposing the use of OCPI 2.1.1, as incorporated in "California Open Charge Point Interface Interim Test Procedures for Networked Electric Vehicle Supply Equipment for Level 2 and Direct Current Fast Charge Classes." CARB supports the use of open source communication protocols and acknowledges that other products are currently in development. Proposal of the OCPI standard ensures at least one common communications protocol is in use by all EVSE to facilitate roaming agreements, but does not preclude the use of additional communications protocols that would enable roaming. The proposed standard is being used widely in industry today. The benefit of this proposed requirement is that EVSPs should see increased EVSE use from non−members once a roaming agreement is in place. Another benefit of this proposed requirement is for drivers by providing confidence in quickly starting a charging session through a roaming agreement.

Labeling Requirement

The proposed regulation requires EVSPs to label each EVSE in accordance with CFR Title 16 Part 309 label. CFR Title 16 includes Commercial Practice rules and regulations set by federal agencies. Part 309.17 describes labeling requirements for electric vehicle fuel dispensing systems. The label must indicate the type of fuel (electricity), if the method of delivery is conductive or inductive, and the voltage, amperage and kilowatt (kW) capabilities of the EVSE. The Federal Trade Commission adopted Section 309.17 on April 23, 2013. The purpose of this proposed requirement is to implement proper signage on the EVSE in accordance with the CFR.

Data Reporting

The proposed regulation requires each EVSP to disclose to NREL the station's geographic location, schedule of fees, accepted payment methods, and the amount of network roaming fees charged to non−members.[10] Through the AFDC website,[11] NREL provides information and tools to help transportation decision−makers reduce petroleum consumption through the use of alternative and renewable fuels, advanced vehicles, and other measures. The AFDC website also includes an Alternative Fueling Station Locator.[12] Largely through collaboration with infrastructure service providers, NREL gathers and verifies EVSE data. The AFDC website and mobile applications disseminate information on EVSE location, fees, and other relevant data to PEV owners. Requiring a central resource of information for a PEV driver will help provide confidence that infrastructure is ready for drivers to use. The purpose and benefit of this proposed requirement is to provide consumers with uniform information on public charging infrastructure.

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[6] City of Sacramento, May 29, 2013. "Request for Proposal: Parking Meter Procurement" http://dockets.sandiego.gov/sirepub/cache/2/3lh0hxykr0stpot3e3bz2hpx/678426114201811053259 5.PDF

[7] Greenlots, 2018. "Greenlots and ChargePoint Partner to Increase Access to EV Charging Throughout North America." December 20, 2018. https://greenlots.com/greenlots−and−chargepoint−partner−to−increase−access−to−ev−charging−throughout−north−america/

[8] Moran, 2018. Mike Moran. "Network Interoperability Agreements announced with EV network providers EV Connect, Greenlots and SemaConnect" October 18, 2018. https://www.electrive.com/wp−content/uploads/2018/10/2018−10−Electrify−America_Interoperability.pdf

[9] ChargePoint, 2018. "ChargePoint and EVBox Pave the Way for Fully Electric Future with Forward−Thinking Partnership" October 9, 2018. https://www.chargepoint.com/about/news/chargepoint−and−evbox−pave−way−fully−electric−future−forward−thinking−partnership/

[10] NREL is a federally affiliated organization that collects and distributes information on energy efficiency, sustainable transportation, and renewable power technologies. U.S. Department of Energy National Renewable Energy Laboratory, 2018. https://www.nrel.gov/. Accessed July 25, 2018.

[11] Alternative Fuels Data Center, 2018. https://www.afdc.energy.gov/. Accessed July 25, 2018.

[12] Alternative Fueling Station Locator, 2018. https://www.afdc.energy.gov/stations#/find/nearest?fuel=ELEC, Accessed July 1, 2018.

Public Process for Development of the Proposed Regulation

CARB staff has engaged with stakeholders via forums and public processes from the onset of the proposed rulemaking. Initially, outreach and input focused on stakeholder forum settings to define potential actions by CARB on SB 454. On December 8, 2017, CARB staff hosted the first forum with industry stakeholders to discuss requirements as stipulated by the legislation and to introduce other regulatory considerations CARB was investigating. During the forum, CARB staff sought input on factors for developing open access charging infrastructure requirements for PEVs, including payment for use, data reporting, network roaming and interoperable billing, and that pose barriers for electric vehicle consumer adoption. On March 30, 2018, CARB staff hosted a second forum to further discuss and seek input on the regulatory framework, definitions, proposed data format, and proposed compliance timelines. At this time, CARB staff solicited stakeholders for alternatives to the proposed regulation.

CARB staff also gathered public feedback on the proposed regulation through public workshops and a webinar. Staff distributed notice of the May 30, 2018, workshop through a public listserv that includes 5,000+ recipients and posted notice[13] of the public meeting. Information regarding the workshop[14] and associated materials were also posted on the SB 454 website.[15] This public workshop, which was webcast, solicited stakeholder feedback on the proposed regulation and the regulatory process. CARB staff also sought public input regarding alternatives to the proposed regulation. Subsequent to this workshop, CARB staff hosted a public webinar on June 21, 2018, to present proposed definitions for regulated parties and to discuss reporting requirements. CARB staff held a second public workshop[16] on November 7, 2018, during which CARB staff presented draft regulatory language and requested feedback from stakeholders. CARB staff held a second public webinar on April 2, 2019, to present the draft regulatory text updated based on stakeholder feedback from the November 7 workshop.

Comparable Federal Regulations:

CARB is implementing SB 454, which was created and signed into law by the California State Legislature in 2013. SB 454 requires EVSE to be labeled in accordance with CFR Title 16 Part 309.[17] The proposed regulation effects that requirement. With that exception, there are no other federal regulations at this time that address the same issues as the proposed regulation.

An Evaluation of Inconsistency or Incompatibility with Existing State Regulations (Gov. Code, § 11346.5, subd. (a)(3)(D)):

During the process of developing the proposed regulatory action, CARB conducted a search of any similar regulations on this topic and concluded these regulations are neither inconsistent nor incompatible with existing State regulations.

MANDATED BY FEDERAL LAW OR REGULATIONS (Gov. Code, §§ 11346.2, subd. (c), 11346.9)

CFR Title 16 Part 309 mandates that EVSE have a label identifying that the EVSE conducts electricity, at a specified voltage, amperage, and kilowatt. As stated above, SB 454 requires EVSE to be labeled in accordance with CFR Title 16 Part 309.[18] The proposed regulation effects that requirement.

DISCLOSURES REGARDING THE PROPOSED REGULATION

Fiscal Impact/Local Mandate Determination Regarding the Proposed Action (Gov. Code, § 11346.5, subds. (a)(5)&(6)):

The determinations of the Board's Executive Officer concerning the costs or savings incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulatory action are presented below.

Under Government Code sections 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the Executive Officer has determined that the proposed regulatory action would create costs but not savings to State agencies, would not create costs or savings in federal funding to the State, would create costs (but not a mandate) to any local agency or school district, which would not be reimbursable by the State under Government Code, title 2, division 4, part 7 (commencing with section 17500), and would not create any other nondis-

[13] CARB, 2018. Public Workshop Notice to Discuss Implementation of the Electric Vehicle Charging Stations Open Access Act. https://www.arb.ca.gov/msprog/mailouts/ecars1803/ecars1803.pdf. Accessed July 25, 2018.

[14] CARB, 2018. Public Workshop to Discuss Implementation of the Electric Vehicle Charging Station EVSE Open Access Act (Senate Bill 454, Statutes of 2013). https://ww2.arb.ca.gov/public−workshop−discuss−implementation−electric−vehicle−charging−stations−open−access−act−senate. Accessed July 25, 2018.

[15] CARB, 2018. Electric Vehicle Charging Station EVSE Open Access (Senate Bill 454). https://ww2.arb.ca.gov/our−work/programs/electric−vehicle−charging−stations−open−access−senate−bill−454. Accessed July 25, 2018.

[16] CARB, 2018. Mail−Out ECARS #18−06. "Public Workshop to Discuss the Implementation of the Electric Vehicle Charging Stations Open Access Act." https://www.arb.ca.gov/msprog/mailouts/ecars1806/ecars1806.pdf

[17] Health & Safety Code § 44268.2(c).

[18] Health & Safety Code § 44268.2(c).

cretionary costs nor savings to State or local agencies. The proposed regulation does not create a mandate for several reasons: Operating vehicle charge equipment is generally a discretionary decision for local governments, so the costs are not required; moreover, the proposed amendments apply generally to all entities operating electrical vehicle supply equipment rather than applying specific mandates to local governments. Because they do not impose unique new requirements on local agencies, they are not a reimbursable mandate for this reason as well (County of Los Angeles v. State of California, 42 Cal. 3d 46 (1987)).

Housing Costs (Gov. Code, § 11346.5, subd. (a)(12)):

The Executive Officer has also made the initial determination that the proposed regulatory action will not have a significant effect on housing costs.

Significant Statewide Adverse Economic Impact Directly Affecting Business, Including Ability to Compete (Gov. Code, §§ 11346.3, subd. (a), 11346.5, subd. (a)(7), 11346.5, subd. (a)(8)):

The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

Results of The Economic Impact Analysis/ Assessment (Gov. Code, § 11346.5, subd. (a)(10)):

MAJOR REGULATION: Statement of the Results of the Standardized Regulatory Impact Analysis (SRIA) (Gov. Code, § 11346.3, subd. (c)):

(A) The creation or elimination of jobs within the state.

CARB staff anticipates that the proposed regulation will have a small impact on employment growth in California. Directly impacted industries such as EVSPs and site hosts may see negative impacts to employment due to increased costs of compliance. Because the EVSP industry is currently facing an expansion of the market and major shift in technology, employees of the EVSPs that may reduce jobs are likely to be hired by larger EVSPs looking for qualified employees.

Various indirectly impacted industries that supply goods and services to EVSPs, such as businesses that replace Level 2 EVSE and businesses that supply credit card readers, mobile payment, and interoperability compatibility, may see an increase in demand as a result of the proposed amendments and may also see some employment growth, particularly in years where many Level 2 EVSE need to be replaced. Based on the Regional Economic Models, Inc. (REMI) analysis in the Standardized Regulatory Impact Assessment (SRIA), the overall impact of the proposed regulation from 2020 to 2030 is a reduction in job growth of about 460 jobs by 2030. This change in employment is small relative to the California economy, corresponding to a change of less than −0.01 percent.

(B) The creation of new businesses or the elimination of existing businesses within the state.

Overall, staff expects the proposed regulation to have a small impact on business creation or elimination. Some EVSP businesses, including some small businesses, may struggle with the increased compliance costs and be eliminated.

The compliance costs incurred for the installation of equipment and other items may result in increases in demand for industries supplying those goods and services. Increases in demand for Level 2 replacements may result in an increase in the number of electrical contractors and other wiring installation contractors. A decrease in individual contractors offering their services to EVSPs may result due to EVSPs hiring larger electrician firms to help maintain the EVSE as a larger account versus individual work orders. Increased demand for maintenance on the EVSE may create new businesses in the EVSE maintenance industry.

(C) The competitive advantages or disadvantages for businesses currently doing business within the state.

EVSPs that support networked EVSE (Level 2 and DCFCs) that require fee for service are subject to the same proposed requirements. Businesses that predominantly support Level 2 EVSE will have a higher per EVSE compliance cost compared to those that primarily support DCFCs. The potential price impacts for Level 2 chargers is estimated to be larger than for DCFCs; however, the business models for these charger types are often different. DCFCs are charging−focused, providing a draw to drivers due to their fast charging speeds. Level 2 chargers are slower and less desirable for public charging, but can benefit site hosts who install these chargers. Many site hosts provide Level 2 charging for free in order to attract customers; thus, charging revenue is not always a primary goal for Level 2 EVSE. These varied business models may mitigate some of the impacts of differential compliance costs.

PEV owners primarily charge their vehicles within the range of their residence; thus, CARB staff anticipates little competition for charging services across state lines. CARB staff does not anticipate compliance costs for California EVSE to impact competitiveness with out−of−state businesses.

(D) The increase or decrease of investment in the state.

The proposed amendment would likely have small impacts on private investment growth, resulting in less than 0.01 of baseline private investment. The modeling

results suggest a slight decrease of investment growth from 2020 to 2030, likely driven by cost of compliance for the proposed regulation.

(E) The incentives for innovation in products, materials, or processes.

The proposed regulation could provide incentives to improve EVSE and network operations to reduce compliance costs. The proposed regulation does require certain technology types to be used; there may be technology innovation from multiple parties to ensure the hardware and software is properly integrated. Due to the proposed regulation, CARB staff anticipates growth in the monetary authorities, credit intermediation, and related activities industry, which will provide the credit card reader, mobile payment hardware, and PCI compliance. As EVSPs integrate the proposed interoperable billing standard, staff expects innovation to streamline operations and reduce costs.

(F) The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency.

The proposed regulation is intended to make public charging more consistent, transparent, accessible and easy for consumers to use. CARB staff anticipates multiple benefits because of the proposed regulation, which are described in this section.

Emissions benefits

CARB staff do not anticipate this proposed regulation alone to increase the population of PEVs on the road or increase the number of EVSE installed compared to the baseline. This regulation is one initial piece of a multipronged strategy, which sets the stage to allow broader PEV adoption once other actions are in place. The proposed regulation is also complementary to and supports realization of the statewide emission benefits expected from the existing ZEV Regulation that increases in stringency to 2025.[19,20] The proposed regulation also supports realization of California's 2030 greenhouse gas (GHG) target of 40 percent emissions reductions below 1990 levels.[21]

The proposed regulation is anticipated to increase driver access to EVSE and allow a more consistent and transparent charging experience. This increased access is anticipated to result in drivers having confidence to transition more of their driving miles to PEVs, which could increase electric vehicle miles traveled (eVMT) statewide and provide emissions benefits. Consumers have a wide variety of mobility and charging options, which results in a complex matrix of consumer choices with vastly different emissions profiles. Currently, there is insufficient data available to understand how increased access will quantitatively change eVMT statewide, and therefore reduce emissions.

The proposed regulation is anticipated to increase utilization of public charging, which will likely increase eVMT. To estimate the emissions benefits, it would be necessary to quantitatively identify how much of this eVMT is new miles traveled that would not have otherwise occurred, substitution of gasoline vehicle miles traveled (VMT) for eVMT, or simply a shift in charging behavior resulting in no emissions difference (i.e., less home charging and more public charging). Increased eVMT that is new VMT that would not have otherwise occurred could result in a slight increase in emissions due to increased electricity use. Substitution of eVMT for other modes could result in increased emissions or significant emissions benefits. For example, if increased confidence in charging causes a consumer to use an electric vehicle in place of walking or public transit, then emissions may increase. Where consumers are substituting personal conventional vehicle use for eVMT the emissions benefits are significant.

Given that approximately 75 percent of trips in California use a personal vehicle,[22] CARB staff anticipate the proposed regulation to result in net statewide emissions benefits, but there is insufficient data currently to quantify the results. Substitution of transit, walking or biking for eVMT is likely a small proportion of the change, as the CARB staff expects the majority of substituted miles to be from a conventional personal gasoline vehicle since these trips dominate mode share in California. This will decrease tailpipe emissions and emissions from production of fossil fuels resulting in decreased emissions of GHGs, particulate matter (PM), oxides of nitrogen (NOx) and other air pollutants. Reductions of these pollutants provide climate and health benefits.

[19] CARB, 2011. California Environmental Protection Agency Air Resources Board. Staff Report: Initial Statement of Reasons Advanced Clean Cars 2012 Proposed Amendments to the California Zero Emission Vehicle Program Regulation. Page 78 accessed September 1, 2018.

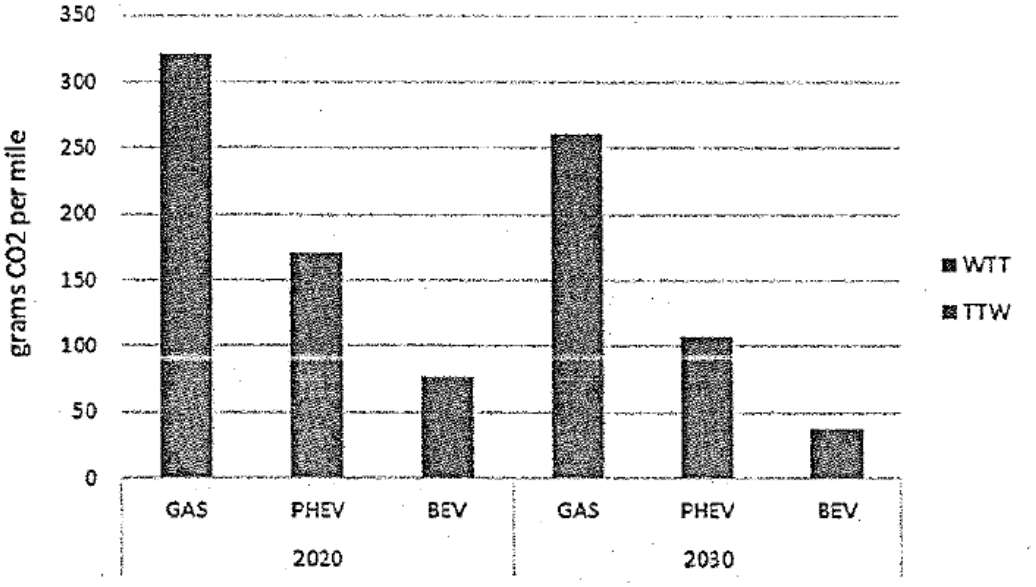
[20] Projections of the statewide fleet emission benefits were recently updated to support the LEV III regulation changes for the "Deemed to Comply" provision. CARB, August 7, 2018. "Public Hearing to Consider Proposed Amendments to the Low−Emission Vehicle III Greenhouse Gas Emission Regulation: Staff Report: Initial Statement of Reasons" https://www.arb.ca.gov/regact/2018/leviii2018/leviiiisor.pdf

[21] https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

[22] CalTrans, 2013. 2010−2012 California Household Travel Survey Final Report. Table 1.2.3 on pg 4. http://www.dot.ca.gov/hq/tpp/offices/omsp/statewide_travel_analysis/Files/CHTS_Final_Report_June_2013.pdf

To convey the potential scale of emissions reductions from trips that switch to electric miles, CARB staff have quantified the marginal difference in GHG emissions between driving a mile with a gasoline conventional vehicle compared to an electric drive vehicle. Figure 1 shows the GHG emissions per mile for a gasoline vehicle (GAS) compared to a PHEV and battery electric vehicle (BEV) in California in two time periods. The data displays both the tailpipe emissions ("tank to wheel" or TTW) and upstream emissions associated with producing and delivering the fuel to the vehicles ("well to tank" or WTT). Combined, this is called a well−to−wheel emissions analysis comparing varying vehicle technologies.

Figure 1 -Greenhouse gas emission factors (grams of CO2/mile) for three technology types on new passenger cars, accounting for direct vehicle emissions (TTW) as well as fuel production and delivery emissions (WTT)



In addition to comparing emissions between technology types, the analysis also compares new passenger vehicles in two different years to account for improved vehicle efficiency and fuel carbon content (both electricity and gasoline) over time. CARB staff estimated emissions from vehicles using the most current CARB on−road vehicle inventory, the Emission Factor (EMFAC) 2017 model approved by the United States Environmental Protection Agency (U.S. EPA) for state implementation plan (SIP) purposes. Emissions from producing gasoline in 2020 and 2030 account for the anticipated lower carbon fossil and renewable fuel blends expected in the market due to the recently adopted Low Carbon Fuel Standard (LCFS) amendments. CARB staff based emissions from producing electricity on California's power generation mix in 2020 and 2030 under the SB 100[23] renewable requirements (a 60 percent renewable portfolio standard by 2030) and the phase−out of coal generation. These assumptions, therefore, account for the unique conditions in California and show that driving an electric vehicle produces significantly lower GHG emissions, as compared to other states or regions with different vehicle and fuel policies. The well−to−wheel GHG emissions from a new BEV are anticipated to be about 75 percent lower than a new gasoline (GAS) vehicle in 2020, and 85 percent lower in 2030.

In addition to GHG emissions, CARB staff evaluated other pollutants in this analysis. In 2020, the BEV has approximately 80 percent lower NOx emissions than the conventional vehicle, and in 2030, CARB staff expects the difference to be even slightly larger. For PM pollutants, the difference is slightly smaller at approximately 50−percent−reduced emissions compared to a conventional vehicle. These values represent the full well−to−wheel emissions factor.[24]

Fuel Cost Savings

If the proposed regulation reduces conventional personal vehicle use and replaces this with eVMT then vehicle operators could enjoy fuel cost savings. CARB staff could not quantify these potential cost savings for the reasons described in the last section, but staff qualitatively discusses these savings here. As above, the substitution of conventional personal vehicles for eVMT is

[23] Cal. Health & Safety Code §§ 399.11, 399.15, 399.30 and 454.53 to the Public Utilities Code

[24] Emissions Factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant.

only one of the possible outcomes of the proposed regulation, but CARB staff expect it represents the majority of the substitution choices.

On average, electric vehicles are estimated to save consumers between $440 and $1,340 per year on fuel, relative to a conventional vehicle, if all the annual VMT is shifted to the electric vehicle.[25] Thus, substitution of a portion of conventional VMT for eVMT would likely result in small fuel savings for consumers. The range is large because savings depend on the relative prices of gasoline and electricity, as well as the fuel economy of the conventional vehicle. The annual savings of $440 assumes a low gasoline price and high fuel economy conventional vehicle, and the $1,340 represents the high gasoline price and low fuel economy conventional vehicle. CARB staff anticipate gasoline prices to increase in the future relative to today,[26] which could increase the potential fuel cost savings to consumers.

Benefits to a typical business

CARB staff anticipate the proposed regulation will increase consumer confidence in public charging and result in increased utilization of public chargers. These public chargers could be located at or near any number of businesses including retail locations and work places. In addition, compliance with the proposed regulation will increase demand for credit card and mobile payment equipment and electrical contracting services from businesses within California.

The proposed regulation may provide a benefit to EVSE operators from increased utilization of public charging stations. Easier access to EVSE and a transparent pricing structure could reduce barriers to public charging, enabling drivers to confidently use their PEVs for longer trips or switch some charging from home to public locations. This could result in increased revenue to some of these businesses.

Additionally, compliance with this proposed regulation, would enable EVSE to be eligible for the new LCFS amendments generating marketable credits for new EVSE installations.[27] These credits would go to the station owner, which in the proposed regulation could be the EVSPs or site hosts such as retail centers. The recent change to the LCFS program requires all DCFCs seeking LCFS credit to be able to accept credit cards. The proposed regulation defines how the DCFCs should accept credit cards.

Benefits to Small Business

Small businesses may obtain benefits similar to those described for typical businesses. Some small businesses in California may choose to provide EVSE to attract PEV drivers to their businesses or may obtain increased revenue from higher use of existing EVSE. Some electricians and contractors that retrofit or replace EVSE are small businesses, and will see increased demand.

Benefits to Individuals

Individuals will benefit from increased access, transparency, and ease of use of EVSE in public locations. Transparency in pricing will help consumers make informed decisions about the costs of charging at different locations compared to home charging. Ease of access will reduce anxiety about charging and could save consumers time in searching for, and traveling to, a useable charging location. The ability to use standard payment methods such as credit card readers will simplify payment and allow individuals with limited mobile technology to utilize public chargers seamlessly.

Individuals from multiple income groups will benefit from the proposed regulation because they will have greater accessibility to EVSE. The proposed regulation will allow for lower−income groups to pay for fueling a PEV by requiring credit card and mobile payment options on EVSE. With the required reporting to AFDC, drivers from all income groups will be able to see how many existing EVSE stations are available. Knowing where to fuel a PEV in public is very important for drivers. As drivers see more EVSE in public, they will have more confidence in their ability to charge in public if they need to.

CARB staff expect no quantifiable benefits relating to worker safety as a result of this regulation.

(G) Department of Finance Comments and Responses.

Finance generally concurs with the methodology used to estimate impacts of proposed regulations, with one exception.[28] The SRIA must include a quantitative analysis of increased purchase of electric vehicles and some quantification of statewide benefits from the regulations. Implementing common billing standards is a key unlocking mechanism for broad deployment of electric vehicles and for advancing towards the state goal of five million zero emission vehicles on the road by 2030. Electric vehicles are expected to be four million of the goal. One of the barriers to electric vehicle adoption is access to charging infrastructure, and lowering this barrier should provide higher benefits than the SRIA estimates. If there are other barriers to in-

[25] CEC 2017. Preliminary Analysis of Benefits from 5 million Passenger Vehicles in California. https://www.energy.ca.gov/2017publications/CEC−999−2017−008/CEC−999−2017−008.pdf

[26] DOF 2018. Consumer Price Index Forecast — Annual & Monthly. http://www.dof.ca.gov/Forecasting/Economics/ Eco_Forecasts_Us_Ca/documents/FRCPI0418.xlsx

[27] Page 93. https://www.arb.ca.gov/regact/2018/lcfs18/frolcfs. pdf

[28] http://www.dof.ca.gov/Forecasting/Economics/Major_Regulations/Major_Regulations_Table/documents/ARB%20Electric%20Vehicle%20Charging%20−%20Finance%20Comments%202019.pdf

creased adoption that would prevent this regulation from having these benefits, the SRIA should discuss how this regulation fits in with future regulations to remove those other barriers.

CARB Response

CARB continues to conclude that the proposed regulation may not incentivize adoption of new electric vehicles and will not increase the number of chargers in the state due to significant remaining barriers, which remain to be addressed through other means. The proposed regulation implements the statutory mandates in SB 454 (Corbett, Chapter 418, Statutes of 2013) but is not designed to address all of the remaining barriers to adoption of electric vehicles necessary to meet the 2030 goals. As described in the SRIA, while CARB anticipates there will be emissions benefits as a result of the proposed regulation, the current data is insufficient to quantify the statewide benefits and quantification by CARB would be speculative and difficult to support. Further detail is provided in the following paragraphs.

Remaining Barriers

The proposed regulation is anticipated to increase driver access to charging stations and allow a more consistent and transparent charging experience. This increased access is anticipated to result in drivers having confidence to transition more of their driving miles to electric vehicles, which could increase electric vehicle miles traveled statewide and provide emissions benefits. There are multiple unquantified benefits of this access, which the SRIA describes in detail. While the proposed regulation lowers barriers, there are multiple remaining barriers to widespread adoption of electric vehicles, which must be addressed through other mechanisms including the number of chargers and the cost of electric vehicles.

CARB staff expects the benefits of the proposed regulation to be magnified once future actions or regulations address these barriers. Because these actions or regulations are not yet defined or adopted, CARB could not estimate the likely magnifying effects of the current proposal. Additional information on the remaining barriers and actions to address those barriers follows.

Infrastructure Needs

While the proposed regulation makes infrastructure easier to use, the number of charges in California is still far too low to support widespread electric vehicle adoption. The California Energy Commission (Energy Commission) estimates California needs 229,000 to 279,000 connectors[29] to support 1.5 million ZEVs by 2025.[30] To date, the state has approximately 18,000 connectors installed, representing only 7 percent of the anticipated future need. The proposed regulation does not require installation of additional EVSE, and there is no evidence that the proposed regulation will indirectly incentivize providers to install more EVSE.

Additional electric vehicle infrastructure is being rolled out statewide with support from several funding programs, including the Energy Commission's Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007) program and the subsequent AB 8 (Perea, Chapter 401, Statutes of 2013) legislation. The Energy Commission has allocated or awarded more than $80 million to support plug−in electric vehicle infrastructure and has allocated an additional $134.5 million through 2019 to help support the governor's 2025 goal of 250,000 connectors and 200 hydrogen−fueling stations. SB 350 (de Leòn, Chapter 547, Statutes of 2015) also authorizes electric utilities to undertake transportation electrification activities. In 2016, the California Public Utilities Commission (CPUC) approved charging infrastructure pilot programs to install up to 12,500 connectors for a combined budget of $197 million.

In 2012, the State of California reached a settlement with Dynegy which provides over $100 million for the installation of 200 public direct current fast charging "Freedom Stations" and the infrastructure to support 10,000 lower level charging stations. These projects, developed by EVgo Services, formerly, NRG EV Services LLC, and overseen by the CPUC, are nearing completion. In addition, Volkswagen, through its subsidiary Electrify America, has agreed to invest $800 million over a 10−year period for zero emission vehicle (ZEV) infrastructure, education, and access in California as part of a settlement with CARB. In the first 30−month cycle of the settlement, Electrify America is expected to invest $45 million in community chargers in major metropolitan areas and $75 million in highway fast charging throughout California. In the second 30−month cycle of the settlement, Electrify America is expected to invest up to $145 million in community and highway charging infrastructure.

[29] Connectors, also known as ports, are the number of locations that an electric vehicle may charge at a given location. There are typically one or two ports at each distinct charging location.

[30] CEC 2018. 2018 California Plug−In Electric Vehicle Infrastructure Projections: 2017−2025. https://www.nrel.gov/docs/fy18osti/70893.pdf

These investments are significant but are not anticipated to meet the Energy Commission's estimated infrastructure needs. CARB staff conducted a high−level analysis of existing, in progress, and proposed charging infrastructure projects and concluded that there remains an estimated infrastructure connector gap of 46 percent by 2025.[31] CARB staff projects the charging infrastructure gap to grow to approximately 86 percent by 2030. Additional actions will be needed to address this gap, and the State is working to do so. For example, the Governor's Office of Business and Economic Development (GO−Biz) is working with local governments and businesses to streamline the infrastructure permitting process and provide subject matter expertise. Additionally, CARB has shepherded new California Green Building Code standards requiring greater percentages of charge ready installations in new construction, and the California Department of Housing and Community Development is continuing to increase the number of PEV−capable parking spaces in new residential buildings and assessing strategies to increase PEV charging options in existing residential buildings.

Vehicle Cost

California's Advanced Clean Cars Midterm Review[32] finds that "battery technology has improved and battery costs (as well as other component costs) have fallen dramatically (largely due to reduced material costs, manufacturing improvements, and higher manufacturing volumes), leading to an increase [in model availability] from 25 plug in hybrid electric vehicle and battery electric vehicle models offered today to manufacturer announcements of more than 70 unique models to be released over the next 5 model years."

Despite this cost reduction, advanced technology vehicles still cost more than comparable internal combustion engine vehicles, which represents a remaining barrier to adoption. CARB continues to develop future Advanced Clean Cars regulations, which will help transition the California light−duty vehicle fleet towards zero emission technology. These planned regulations join actions by a host of other countries and jurisdictions and will help drive down zero emission technology costs in the future.

Quantification of Statewide Emissions Benefits

For the reasons described above, CARB does not anticipate the proposed regulation alone will incentivize significant additional ZEV adoption. As described in the SRIA, the proposed regulation does lower some barriers, and for this reason, CARB anticipates some emissions benefits. CARB anticipates these emissions benefits will primarily take the form of increased eVMT from the vehicles already on the road.

However, quantification of statewide emissions benefits from the proposed regulation is complex and would require data that is not currently available. CARB staff expect the proposed regulation to increase access to charging infrastructure but it may also slightly increase public charging prices. Consumers have many options for vehicle charging including charging at home, charging at work, free public charging, and paid public charging. There are no studies or data that CARB is aware of which quantifies increased consumer use in context of increased access, particularly in context of this complex set of consumer options. Further, the consumer response to the competing effects of minor price increases versus enhanced access have not been studied. Some of this data will be collected because of the reporting required in the proposed regulation and may better constrain these effects. CARB recommends additional research in this area to inform future regulations and other actions.

Quantification of benefits is complicated further by the inability to predict what percentage of eVMT would be a substitution for other charging options or would be VMT that is a substitution for internal combustion miles. Substitution for other charging options means that an electric vehicle driver uses a public charger impacted by the proposed regulation rather than another charging option. The increased access provided by the proposed regulation would benefit the consumer by providing more charging options but would not result in new eVMT or emissions benefits. It is only in the case that a consumer substitutes conventional VMT for eVMT that emissions benefits would occur. In this case, consumers would drive their electric vehicles in place of their conventional vehicles, resulting in emissions benefits. The data necessary to estimate the substitution of eVMT with conventional VMT because of the increased access provided by the proposed regulation is not currently available.

Business Report (Gov. Code, §§ 11346.5, subd. (a)(11); 11346.3, subd. (d)):

In accordance with Government Code sections 11346.5, subdivision (a)(11) and 11346.3, subdivision (d), the Executive Officer finds the reporting requirements of the proposed regulatory action that apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

In order to know with accuracy which EVSE will need to be retrofitted or replaced for the proposed requirements, staff proposes an initial reporting of current

[31] CARB, 2018. Staff Assessment of Electrify America's Cycle 2 Zero Emission Vehicle Investment Plan. https://www.arb.ca.gov/msprog/vw_info/vsi/vw−zevinvest/documents/cycle_2_staff_analysis_110918.pdf

[32] CARB, 2017. California's Advanced Clean Cars Midterm Review. https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_finalreport_full.pdf

EVSE models. This information will also enable tracking of EVSE that are currently operating in the State of California. Staff expects new models to be designed at any point in time during a calendar year and would need to know how they comply with the proposed regulation before it is installed. This is to ensure the requirements of the proposed regulation are being met.

Cost Impacts on Representative Private Persons or Businesses (Gov. Code. § 11346.5, subd. (a)(9)):

In developing this regulatory proposal, CARB staff evaluated the potential economic impacts on representative private persons or businesses. CARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The proposed regulation does not result in direct compliance costs to individuals in California. Individuals may incur increased charging costs if EVSPs and site hosts are able to pass on compliance costs. If compliance costs were passed on, then the costs to regulated businesses described above would be less.

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.

To estimate the potential price impact, CARB staff first divided annual compliance costs for Level 2 and DCFC chargers by the corresponding population of EVSE averaged for 2020 through 2030. This provided the average annual cost of $152 per DCFC and $493 per Level 2 EVSE. Staff then estimated the cost per kWh by dividing this annual cost by the annual energy utilization per EVSE. The energy utilization for an EVSE depends on many factors and may vary significantly; it may also change as the industry grows in the future. However, based on reports and data available to staff,[33] the annual average utilization of a typical EVSE is estimated to be 19,600 kWh per DCFC and 6,400 kWh per Level 2 EVSE.[34] Staff estimate the price increase as a result of the proposed regulation to be $0.01 per kWh for DCFCs and $0.08 per kWh for Level 2 chargers. The average market rates in California for Level 2 and DCFC EVSE are $0.36 per kWh and $0.41 per kWh respectively.[35] Staff estimate the upper bound price impact to be 2 percent for DCFC and 21 percent for Level 2 EVSE.

Based on the current EVSE business model, it is not likely that all Level 2 EVSE compliance costs would be passed through to end−users. Currently 1,245 EVSE[36] do not require payment for public use. While some of these free chargers could be subsidized by incentives, a proportion are operated by businesses as a means to attract customers. These businesses absorb the costs to own and operate the EVSE along with the annual electricity necessary to provide free charging. Using the typical charging rates and electricity prices cited in the previous paragraph, the annual electricity costs absorbed by these businesses would be approximately $2,304 for a Level 2 EVSE. This is over four times larger than the typical annual compliance cost that results from the proposed regulation. Given that these levels of costs are routinely absorbed, and that this is an increasingly competitive industry, full compliance costs may not be passed through to consumers.

Even if the compliance costs were fully passed on to end−users, it is unlikely that driving habits or the adoption of PEV technology would change significantly. The price change calculated for Level 2 chargers above would only constitute a portion of total annual charging costs. To demonstrate the change in overall annual charging prices, staff calculated the average increase in total annual charging costs that could result from the Low PEV Scenario. Typical charging behavior indicates approximately 65 percent home charging[37] and 35 percent of public charging. Of the public charging, approximately 20 percent is at free Level 2 EVSE, 71 per-

[33] Based on information received from a survey of stakeholders one submitted as business confidential information on the utilization of Level 2 charging.

[34] Southern California Edison. Charge Ready and Market Education Program Pilot Report. April 2018. EVSE California utilization reporting data. 2016−2017.

[35] Dunckley, 2017. Jamie Dunckley, Electric Power Research Institute. “National Charging Costs”

[36] AFDC, 2018. Alternative Fuels Data Center. “Alternative Fueling Station Locator: Advanced Filters Downloaded Results” June, 2018.

[37] Menser, 2018. Paul Menser for INL Public Affairs and Strategic Initiatives. “Large Nation Studies Analyze EV Infrastructure Needs”. December 19, 2018.

cent is at for pay Level 2 EVSE, and 9 percent is at for pay DCFC.[38]

Using these typical charging behaviors, Staff estimates the total cost for charging in one year is $1,190 on average. This assumes a PEV is driven 15,000 miles per year,[39] consumes 0.3 kW of electricity per mile driven, and that charging prices are $0.19 per kWh for residences,[40] $0.36 per kWh for public Level 2,[41] and $0.41 per kWh for DCFC.[42] This also includes costs for home charging infrastructure ($1,616),[43] annualized over 10 years at a 5 percent interest rate. Assuming all the costs were passed through to the end user, the new total cost for charging would be $1,280 under the proposed regulation. The end user would see an increase of $79 per year or about 6.6 percent of total cost.

Although Level 2 public charging is a relatively small portion of the total charging needs for PEV drivers, it provides an important service. Making Level 2 more accessible enables more usage by drivers who do not have memberships to EVSPs and also supports PEV drivers who do not have home charging options.

Effect on Small Business (Cal. Code Regs., tit. 1, § 4, subds. (a) and (b)):

The Executive Officer has also determined under California Code of Regulations, title 1, section 4, that the proposed regulatory action would affect small businesses. For the purposes of this regulation, CARB staff defined a small business as having fewer than 100 employees and not dominant in its industry. Of the seven EVSPs operating in California, six meet the definition of a small business, and one of these small businesses is headquartered in California.

To calculate the costs to a typical small EVSP, staff first calculated the costs borne by all EVSPs operating in California from 2020 through 2030. EVSPs are responsible for the replacement costs of EVSE for which they are the site hosts and are responsible for all the other costs of the regulation. EVSPs are the site hosts for 58 percent of the Level 2 EVSE and are therefore assumed to bear 58 percent of the Level 2 replacement costs.

Next, staff separated out the costs borne by the small business EVSPs for Level 2 replacement, credit card and mobile payment, signage, and the CFR Title 16 Part 309 sticker based on market share. Small business EVSPs are the service providers for approximately 85 percent[44] of the total Level 2 EVSE and 19 percent[45] of the total DCFC EVSE. CARB staff averaged the total costs borne for Level 2 replacement, credit card, mobile payment, signage, and Title 16 sticker requirements among the six small businesses to arrive at the cost for a typical small business.

PCI−DSS Level 1 compliance includes an annual $8,125 per EVSP cost for all required checks from the PCI governing body and a one−time $25,000 per EVSE model cost for PCI compliance certification. CARB staff estimates 30 new EVSE models each year so that the annual cost is $750,000. Staff assumed this cost would be spread evenly across all seven EVSPs. In total, the annual cost for PCI−DSS Level 1 compliance for one EVSP is approximately $115,268.

A small business EVSP will also be required to implement the OCPI interoperability standard. As discussed above, this requires a one−time cost of $120,000 that would occur in 2020.

Table 1 summarizes the annual and total direct costs of the proposed regulation for a typical small business providing EVSEs. The initial cost for a typical small business is $0.24 million in 2020 and an average of $1.26 million each year from 2021 through 2030.

[38] AFDC, 2018. Alternative Fuels Data Center. "Alternative Fueling Station Locator: Advanced Filters Downloaded Results" June, 2018.

[39] FuelEconomy.gov, 2018. "Electric Vehicles: Learn More About the Label". https://www.fueleconomy.gov/feg/label/learn−more−electric−label.shtml

[40] U.S. Energy Information Administration, 2018. Electric Power Monthly. March 2018−October 2018 reports. Average yearly cost of residential electricity cents per kilowatt hour, California.

[41] Dunckley, 2017. Jamie Dunckley, Electric Power Research Institute. "National Charging Costs — L2: Average cost by state".

[42] Dunckley, 2017. Jamie Dunckley, Electric Power Research Institute. "National Charging Costs — DCFC: Average cost by state".

[43] CARB, 2017. California Air Resources Board. "California's Advanced Clean Cars Midterm Review Report: Appendix D: Zero Emission Vehicle Infrastructure Status in California and Section 177 ZEV States". January 18, 2017.

[44] Alternative Fuels Data Center, Alternative Fueling Station Locator, https://afdc.energy.gov/stations#/analyze. Accessed June 2018. Low Carbon Fuel Standard Ownership, 2018. Data Dashboard, Underlying Data Table. Accessed August 6, 2018. https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm

[45] Ibid.

Table 1 — Costs for a Typical Small Business providing EVSEs (Million 2018$)

Year	Level 2 Replace-ment Costs	Credit Card and Mobile Payment Costs	Signage Costs	Title 16 Part 309 Costs	PCI−DSS Level 1 Costs	Inter−operability Costs	Grand Total
2020	0.00	0.00	0.00	0.00	0.12	0.12	0.24
2021	0.00	0.01	0.00	0.00	0.12	0.00	0.12
2022	0.00	0.01	0.00	0.00	0.12	0.00	0.12
2023	0.65	0.54	0.02	0.01	0.12	0.00	1.34
2024	0.66	0.64	0.03	0.01	0.12	0.00	1.45
2025	0.68	0.75	0.03	0.01	0.12	0.00	1.58
2026	0.67	0.86	0.04	0.02	0.12	0.00	1.70
2027	0.68	0.99	0.04	0.02	0.12	0.00	1.84
2028	0.30	1.03	0.04	0.02	0.12	0.00	1.51
2029	0.25	1.07	0.04	0.02	0.12	0.00	1.50
2030	0.18	1.10	0.05	0.02	0.12	0.00	1.47
Total	4.07	7.01	0.29	0.13	1.27	0.12	12.89

Alternatives Statement (Gov. Code, § 11346.5, subd. (a)(13)):

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost−effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

Alternative 1: Compliance timeline lengthened to seven years from date of installation.

This alternative would require any new installation of DCFC from January 1, 2020, and Level 2 January 1, 2023, to be fully compliant with the hardware and software requirements. Any installation that occurs prior to January 1, 2020, for DCFC and January 1, 2023, for Level 2 would have seven years from date of installation to become compliant with the hardware and software requirements (as compared to five years in the proposed regulation). This alternative would result in significantly fewer compliant Level 2 and DCFC EVSE in the early years of implementation. Specifically, in 2023, there would be less than half the number of compliant Level 2 EVSE under this alternative. It is important to have as many compliant EVSE in the ground and operational as possible. The PEV market is changing monthly and adoption rates are steadily increasing in California. It is imperative that drivers have confidence that charging infrastructure is available and easy to use. Having a robust infrastructure will provide driver and regulatory confidence for future ZEV regulation development. CARB staff rejected alternative one because it did not provide the maximal benefits, which can be achieved through the proposed regulation.

Alternative 2: Compliance timeline shortened to three years from date of installation.

This alternative would require any new installation of DCFC from January 1, 2020, and Level 2 January 1, 2023, to be fully compliant with the hardware and software requirements. Any installation that occurs prior to January 1, 2020, for DCFC and January 1, 2023, for Level 2 would have three years from date of installation to become compliant with the hardware and software requirements (as compared to 5 years in the proposed regulation). CARB staff rejected alternative 2 because it would not be feasible for all regulated parties. There are thousands of locations that have EVSE installed. It will take time and coordination to bring all the non−compliant EVSE into compliance. This will put a strain on the supply chain, which is already struggling to keep up with the fast−paced demand. While the goal is to get open access EVSE into the market as quickly as possible, forcing the EVSE to be compliant in three years may not be feasible. This proposed alterative could lead to non−compliance issues and place strain on enforcement activities. By speeding up the compliance time requirement, consumers will have publicly available open access to EVSE more quickly. Open access for consumers is vital, but industry needs sufficient time to retrofit or replace existing EVSE or there will likely be non−compliance, requiring enforcement action. CARB staff also rejected this alternative because it is less cost−effective, and the implementation timeline may not be feasible for all regulated parties.

ENVIRONMENTAL ANALYSIS

CARB, as the lead agency for the proposed regulation, has concluded that this action is exempt from the California Environmental Quality Act (CEQA), as described in CEQA Guidelines §15061, because the action is both an Action Taken by Regulatory Agencies for Protection of the Environment (as described in CEQA Guidelines §15308 for "class 8" exemptions); and it is also exempt as described in CEQA Guidelines §15061(b)(3) ("common sense" exemption) because it can be seen with certainty that there is no possibility that the proposed action may result in a significant adverse impact on the environment. A brief explanation of the basis for reaching this conclusion is included in Chapter VII of the Staff Report.

SPECIAL ACCOMMODATION REQUEST

Consistent with California Government Code Section 7296.2, special accommodation or language needs may be provided for any of the following:

- An interpreter to be available at the hearing;
- Documents made available in an alternate format or another language; and
- A disability−related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk of the Board at (916) 322−5594 or by facsimile at (916) 322−3928 as soon as possible, but no later than 10 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia;
- Documentos disponibles en un formato alterno u otro idioma; y

- Una acomodación razonable relacionados con una incapacidad.

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor llame a la oficina del Consejo al (916) 322−5594 o envié un fax a (916) 322−3928 lo más pronto posible, pero no menos de 10 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

AGENCY CONTACT PERSONS

Inquiries concerning the substance of the proposed regulatory action may be directed to the agency representative Stephanie Palmer, Air Resources Engineer, ZEV Implementation Section, at (916) 322−7620 or (designated back−up contact) Elise Keddie, Manager, ZEV Implementation Section, at (916) 323−8974.

AVAILABILITY OF DOCUMENTS

CARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: Staff Report: Initial Statement of Reasons for Electric Vehicle Supply Equipment (EVSE) Standards.

Copies of the ISOR and the full text of the proposed regulatory language may be accessed on CARB's website listed below or may be obtained from the Public Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, on or after May 7, 2019.

Further, the agency representative to whom non−substantive inquiries concerning the proposed administrative action may be directed is Chris Hopkins, Regulations Coordinator, at (916) 445−9564. The Board staff has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Government Code, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340).

Following the public hearing, the Board may take action to approve for adoption the regulatory language as originally proposed, or with non−substantial or grammatical modifications. The Board may also approve for adoption the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice and that the regulatory language as modified could result from the proposed regulatory action. If this occurs, the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before final adoption.

The public may request a copy of the modified regulatory text from CARB's Public Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814.

FINAL STATEMENT OF REASONS AVAILABILITY

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on CARB's website listed below.

INTERNET ACCESS

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on CARB's website for this rulemaking at https://ww2.arb.ca.gov/rulemaking/2019/evse2019.

TITLE 23. STATE WATER RESOURCES CONTROL BOARD

Title 23. Waters
Division 3. State Water Resources Control Board and Regional Water Quality Control Boards
Chapter 16. Underground Storage Tank Regulations

Underground Storage Tank Biodiesel Regulations

NOTICE IS HEREBY GIVEN that the State Water Resources Control Board (State Water Board) proposes to amend, adopt, or repeal the underground storage tank (UST) regulations described below after considering all comments, objections, and recommendations regarding the proposed regulatory action.