

**SB-438-SD-1**

Submitted on: 2/24/2019 10:15:09 AM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Melodie Aduja	Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:

# TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Electric Vehicle Charging System Tax Credit

BILL NUMBER: SB 438, HD-1

INTRODUCED BY: Senate Committee on Transportation

EXECUTIVE SUMMARY: Provides an income tax credit to taxpayers who install or operate an electric vehicle charging system that is available for use by the public. A direct appropriation would be preferable as it would provide some accountability for the taxpayer funds being utilized to support this effort. Meaning, we as taxpayers know what we're getting and we know how much we're paying for it.

SYNOPSIS: Adds a new section to chapter 235, HRS, to establish the credit. The credit applies to an electric vehicle charging system that the taxpayer installs and places in service during the taxable year. The amount of the credit would be:

(1) For the installation of a new electric vehicle charging system:

(A) Thirty per cent of the qualified costs incurred by the taxpayer for a level two charging system with a single port; provided that the tax credit for installing a level two charging system with a single port shall not exceed \$2,000 per taxable year;

(B) Fifty per cent of the qualified costs incurred by the taxpayer for a level two system with two or more ports; provided that the tax credit for installing a level two system with two or more ports shall not exceed \$6,000 per taxable year; and

(C) Seventy per cent of the qualified costs incurred by the taxpayer for a level three charging system; provided that the tax credit for installing a level three charging system shall not exceed \$35,000 per taxable year; and

(2) The upgrade of an electric vehicle charging system shall be equal to:

(A) Fifty per cent of the qualified costs incurred by the taxpayer for a level two charging system with two or more ports; provided that the tax credit for upgrading a level two charging system with two or more ports shall not exceed \$3,000 per taxable year; and

(B) Seventy per cent of the qualified costs incurred by the taxpayer for a level three charging system; provided that the tax credit for upgrading a level three charging system shall not exceed \$28,000 per taxable year;

Requires that unless otherwise provided by law, use of the electric vehicle charging system is provided to the public.

States that the total amount of tax credit allowed pursuant to this section shall not exceed \$3,000,000 in qualified costs in any taxable year.

The credit is not refundable but may be carried forward until exhausted.

Provides that all claims for this credit, including any amended claims, shall be filed on or before the end of the twelfth month following the close of the taxable year for which the credits may be claimed.

Defines "electric vehicle charging system" by reference to HRS section 291-71.

Defines "qualified costs" as all costs and expenses directly resulting from the installation and operation of an electric vehicle charging system that is made available for public use.

EFFECTIVE DATE: Taxable years beginning after December 31, 2018.

STAFF COMMENTS: Lawmakers need to keep in mind two things. First, the tax system is the device that raises the money that they, lawmakers, like to spend. Using the tax system to shape social policy merely throws the revenue raising system out of whack, making the system less than reliable as there is no way to determine how many taxpayers will avail themselves of the credit and in what amount. The second point to remember about tax credits is that they are nothing more than the expenditure of public dollars, but out the back door. If, in fact, these dollars were subject to the appropriation process, would taxpayers be as generous about the expenditure of these funds when our kids are roasting in the public school classrooms, there isn't enough money for social service programs, or our state hospitals are on the verge of collapse?

If lawmakers want to subsidize the purchase of this type of equipment, then a direct appropriation would be more accountable and transparent.

Furthermore, the additional credit would require changes to tax forms and instructions, reprogramming, staff training, and other costs that could be massive in amount. A direct appropriation may be a far less costly method to accomplish the same thing.

As a technical matter, the Committee may wish to define a Level 2 and Level 3 charger. SAE International, formerly known as the Society of Automotive Engineers, has published the J1772 standard for charging, but that standard only defines Level 1 and Level 2 chargers. See [https://en.wikipedia.org/wiki/SAE\\_J1772#Charging](https://en.wikipedia.org/wiki/SAE_J1772#Charging). Level 3 charging is not defined by that standard. Some define Level 3 charging with reference to the Japanese CHAdeMO standard, which only some electric vehicles can accept. See <https://en.wikipedia.org/wiki/CHAdeMO>.

In addition, the bill provides that the charging system is to be made available for public use, but leaves the door open for those providing the charging to require payment (*i.e.*, charge for the charge). If this is not what is intended, the language should be amended.

Digested 2/22/2019

**TESTIMONY BEFORE THE SENATE COMMITTEE  
ON WAYS AND MEANS**

**S.B. 438, SD1**

**Relating to Taxation**

Monday, February 25, 2019  
10:25 a.m., Agenda Item # 10  
State Capitol, Conference Room 211

Brennon Morioka  
Director, Electrification of Transportation  
Hawaiian Electric Company, Inc.

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Committee Members,

My name is Brennon Morioka and I am testifying on behalf of Hawaiian Electric Company, Inc. its subsidiary utilities Maui Electric Company and Hawai'i Electric Light Company (collectively, "the Hawaiian Electric Companies") in support of S.B. 438, SD1, Relating to Tax Credits.

S.B. 438, SD1 has the potential to be a landmark bill for Electric Vehicle ("EV") charging in the state, by taking an important step towards supporting and incentivizing the development of one of the crucial components of a clean transportation future. As a developer of electric vehicle charging infrastructure, the Hawaiian Electric Companies recognize that the robust availability of vehicle charging infrastructure is essential to reducing barriers to adoption of electric vehicles. Studies have shown that the availability of public vehicle charging is a key factor when car buyers consider purchasing a new electric vehicle, even if the customer ultimately intends to charge solely at their residence.

The Hawaiian Electric Companies appreciate the many challenges individuals and organizations face when trying to convert to electrified transport. In particular, the

upfront cost to purchase and install charging equipment can be daunting, and S.B. 438, SD1 promises to alleviate these concerns for many future electric vehicle drivers and facility owners. Providing increased access to EV charging in public, at workplaces, commercial locations, and multi-family buildings are all key priorities identified in the Companies' *Electrification of Transportation Strategic Roadmap*. This bill will continue the tremendous progress that the state has made towards a cleaner and more sustainable transportation future.

As one of the leaders in the state's clean transportation efforts, the Hawaiian Electric Companies remain committed to an EV strategy that is sustainable and helps create a bridge to a cleaner future. Thank you for the opportunity to testify on S.B. 438, SD1.



**SanHi**

GOVERNMENT STRATEGIES

A LIMITED LIABILITY LAW PARTNERSHIP

DATE: February 23, 2019

TO: Senator Donovan Dela Cruz  
Chair, Senate Committee on Ways and Means  
*Submitted Via Capitol Website*

FROM: Tiffany Yajima

RE: **S.B. 438, S.D.1 – Relating to Taxation**  
**Hearing Date: Monday, February 25, 2019 at 10:25 a.m.**  
**Conference Room: 211**

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Dear Chair Dela Cruz and Members of the Committee on Ways and Means:

On behalf of the Alliance of Automobile Manufacturers (“Alliance”), we submit this testimony in support of S.B. 438, S.D.1.

The Alliance is a trade association of twelve car and light truck manufacturers including BMW Group, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of North America, and Volvo Car USA.

S.B. 438, S.D.1 would establish a tiered income tax credit for the installation and upgrade of electric vehicle charging systems that are made available for public use. This measure would also establish a total cap of \$3 million in qualified costs in any taxable year.

This measure would incentivize the installation of public electric vehicle charging systems. Incentives that facilitate the build out of electric vehicle charging stations will help to make electric vehicles a more viable option for consumers by easing fears about range anxiety and would encourage greater consumer uptake of passenger electric vehicles in Hawaii.

Hawaii has one of the highest rates of adoption of passenger electric vehicles in the nation and currently there are over 8,330 passenger electric vehicles registered in the state. Although the number of electric vehicles registrations continues to increase, electric vehicles still comprise less than 1% of all vehicles on the road in the state today. A robust network of publically available EV charging stations will make EVs more accessible to consumers.

Thank you for the opportunity to submit this testimony.



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEE ON WAYS & MEANS  
Monday, February 25, 2019 — 10:25 a.m. — Room 211

## **Ulupono Initiative Supports SB 438 SD 1 with an Amendment, Relating to Taxation**

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

My name is Murray Clay and I am the Managing Partner of Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable clean renewable energy; and better manage waste and fresh water resources.

**Ulupono supports SB 438 SD 1 with an amendment**, which provides an income tax credit to taxpayers who install or operate an electric vehicle charging system that is available for use by the public, because it will increase the use of more efficient, cleaner forms of transportation and help to reduce Hawai'i's dependence on imported fossil fuels.

### **Recommended Amendment**

Ulupono strongly supports the intent and concept of this bill and offers the following amendment for the committee's consideration:

- Apply the tax credit to the qualified costs incurred by the taxpayer to install or upgrade the EV charging system. Operating costs should not be eligible. Delete "and operation" from page 4, line 18.

### **Support Clean Transportation**

Electric vehicles (EVs) are an important avenue to address Hawai'i's pressing climate issues and align with the State's health, energy and environmental goals. While Hawai'i's electric power sector continues to make progress toward its 100 percent renewable portfolio standard (RPS) mandate, our transportation sector has received little attention.

EVs currently offer an effective option to progress clean renewable ground transportation and immediate benefits to Hawai'i:

- EVs can alleviate Hawai'i's high cost of living

*Investing in a Sustainable Hawai'i*

- EVs provide immediate impact to reduce our dependence on fossil fuels and decrease greenhouse gas (GHG) emissions
- EVs are prime for market acceleration
- Hawai'i should be doing more to promote EVs and EV infrastructure

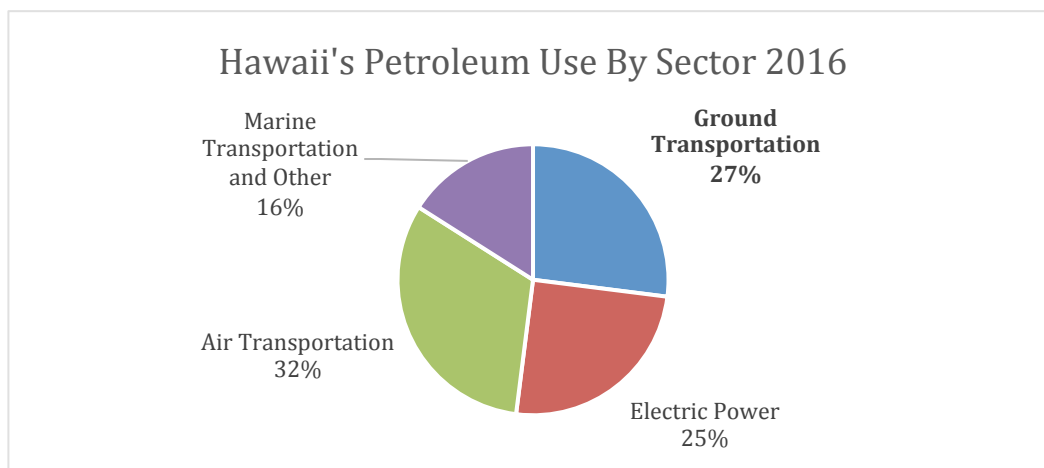
### **EVs Can Alleviate Hawai'i's High Cost of Living**

EVs are an increasingly affordable option for all. For example, the 2019 Nissan Leaf's average MSRP is \$33,095. After the Federal tax credit is considered, the purchase price is \$25,595, which is less than the best selling sedan in the country, the 2019 Toyota Camry. Attachment A to our testimony compares the purchase price of non-luxury EVs with top-selling sedans and the Toyota Tacoma (the top selling vehicle in Hawai'i).

EVs are also cheaper to operate and maintain because they have fewer moving parts and are more fuel-efficient. According to a recent study by the Union of Concerned Scientists, Honolulu drivers could save more than \$500 per year by switching to an EV.

### **EVs Provide Immediate Energy and Environmental Impact**

Ground transportation alone utilizes more than a quarter of the state's imported petroleum. Electrifying ground transportation will reduce our demand for imported fossil fuels, keeping millions of dollars in the state and cutting harmful tailpipe pollution from the air that we all breathe.



*Source: Hawaii State Energy Office – Hawaii Energy Facts & Figures*

Converting from petroleum-based vehicles to EVs immediately reduces GHG emissions, helping combat climate change and its impacts on our islands. EVs produce zero-emissions at the tailpipe, and even when full lifecycle emissions (from manufacturing through disposal) are considered, EV emissions are approximately 50 percent lower than internal combustion engine (ICE) vehicles. Thus, EVs directly improve the health of our communities as well as the globe.



EVs can also support the integration of more renewables on the electric grid with smart charging technology and rate structures. Thus, proliferating EVs throughout Hawai'i can help accelerate progress towards the State's 100 percent RPS goal, as well as contribute to the State's Paris Agreement commitments and carbon neutral goal.

### **EVs Are Prime For Market Acceleration**

From a market perspective, EV adoption in Hawai'i has shown impressive growth, and the state ranks second in the nation behind California in the number of EVs per capita. As of November 2018, there were more than 8,000 passenger EVs registered in Hawai'i, a 24 percent growth from the previous year, but lower than the national average of 81 percent growth. This progress is despite not having strong supporting policies as seen in other states, municipalities and countries.

Based on global and local trends, these adoption numbers are expected to increase exponentially by 2030. Major automobile manufacturers, from Volvo to Volkswagen, have announced plans to offer electric versions of all their vehicle models. Even Ford has announced plans for an all-electric F-150 pickup truck, the top selling vehicle in the country. Policies across the globe are further supporting this transition; in fact, Britain and France have committed to end sales of gas-powered vehicles by 2040.

However, we simply cannot wait. A new report by the United Nation Intergovernmental Panel on Climate Change warns global human-caused emissions of carbon dioxide need to fall 45 percent by 2030, and it will "require rapid, far-reaching and unprecedented changes in all aspects of society." We must be proactive and act now with strong policy.

### **Hawai'i Should Be Doing More**

EVs are the future, but they currently only represent less than one percent of all passenger vehicles in the state. Hawai'i must be proactive to encourage this still nascent market and be prepared with the necessary infrastructure.

Public EV charging stations are a vital component of the EV system. They provide access to charging for drivers who may not be able to charge at home, such as residents who live in multifamily dwellings, and alleviate range anxiety for all EV drivers, a top cited barrier to purchasing EVs. Similar to the benefits that community solar offers to renters and apartment residents, public chargers open up the opportunity and feasibility of owning an EV to more people, increasing equity and access.

Additionally, public charging stations can promote the adoption of EVs in the tourism industry and rental car fleets. According to a survey we commissioned in June 2018, 56 percent of visitors said they probably would have rented an EV if the option were available to them. Of the respondents that indicated they probably would not rent an EV, the top



reason for not wanting to rent one was concerns about driving range and finding a charging station. Increasing the number and visibility of public charging stations should encourage rental car companies to add EV options.

Hawai'i's EV charging infrastructure has not kept up with current demand and is ill-prepared for future projected EV adoption levels. In October 2015, there were 8 EVs for every public charging station in Hawai'i, and in June 2018, there were 13 EVs per charger. This worsening ratio implies it is becoming more difficult for EV owners to find public charging stations and signals inadequate infrastructure support for EVs, which impedes EV adoption and our transition away from fossil fuel vehicles.

Based on our experience as investors in multiple charging station companies, it is currently financially challenging for private businesses to own and operate charging stations. Another challenge for private entities is supplying charging stations in underserved areas, which are particularly unprofitable due to underutilization but are needed to provide broad EV coverage. An EV charging station tax credit would reduce the financial burden and promote the proliferation of EV charging stations, helping ensure an encompassing charging network that serves low-income and multi-unit dwellings residents across the island.

More than 25 other states and municipalities, including Delaware, Maryland and Pennsylvania, recognize the importance of EV infrastructure and already offer generous EV charging station incentive programs. To build momentum, Ulupono recently partnered with Hawai'i Energy to fund and launch a pilot EV charging station rebate program. The limited pilot, which ends in June 2019, aims to promote the installation of Level 2 charging stations at workplaces and multi-unit dwellings and to demonstrate the potential of a larger, statewide incentive program.

If the State of Hawai'i is serious about the health, sustainability and resiliency of our communities, it should encourage EVs and EV infrastructure.

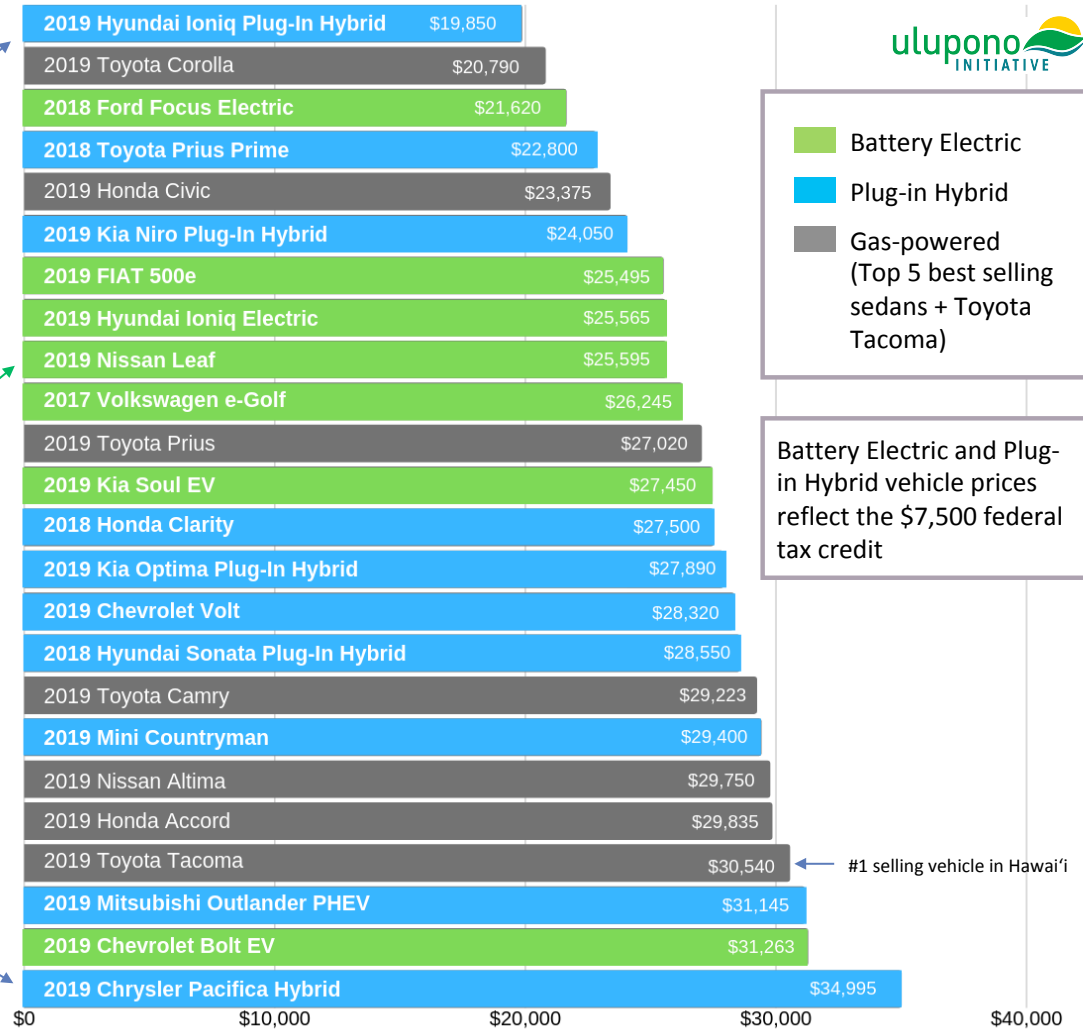
As Hawai'i's energy issues become increasingly complex and challenging, we appreciate this committee's efforts to look at policies that support clean ground transportation.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay  
Managing Partner

## Many Affordable EV Options Non-Luxury Vehicle Models (attachment A)



Nationwide Average MSRP Data from Edmunds – January 2019

**SB-438-SD-1**

Submitted on: 2/24/2019 9:26:14 AM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Bernard M Moret	Individual	Support	No

Comments:

Dear Senators,

My wife, Carol Fryer, and I, both registered voters in the County of Hawaii, would like to register our strong support for this bill. EV transportation (whether for private cars, public transport, or commercial use) will get rid of most noise pollution in our citis, will drastically cut atmostpheric pollution, and will significantly reduce the state's dependency on imported fuel. SB 438 is a critical step toward EV transportation, by encouraging the development of a suitable charging infrastructure in the state. Along with SB 1000 SD1 and SB 653 and 657, these measures are creating a positive environment for EV adoption and a cleaner future for the state.

**SB-438-SD-1**

Submitted on: 2/24/2019 8:50:40 AM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Michelle Matson	Individual	Support	No

Comments:

**SB-438-SD-1**

Submitted on: 2/23/2019 11:16:42 PM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Nanette Vinton	Individual	Support	No

Comments:

Honorable Chairs and Committee Members,

I am writing in support of SB438 SD1 which provides a tiered income tax credit to taxpayers who install or upgrade an electric vehicle charging system that is available for use by the public.

I have been an EV owner since 2013 and am happy to see the significant growth in the number of EVs over the past few years. However, it seems that the number of EV chargers/parking available has not grown at the same pace.

I believe that having a proper charging infrastructure to support EVs at home, work and public places is key to continued EV adoption and to support the State's Clean Transportation goals. This bill helps to accomplish this.

Sincerely,

Nanette Vinton

**SB-438-SD-1**

Submitted on: 2/22/2019 4:55:19 PM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Don McLeish	Individual	Support	No

Comments:

**SB-438-SD-1**

Submitted on: 2/22/2019 4:25:42 PM

Testimony for WAM on 2/25/2019 10:25:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Douglas Perrine	Individual	Support	No

## Comments:

The shortage of charging stations for electric vehicles is the Achilles heel stymying our attempts to reduce carbon emissions in the transportation sector. This bill provides a welcome incentive to install more charging stations, which will encourage more sales of electric vehicles, which will reduce our carbon emissions and other pollutants and move us along the path to meeting our renewable energy goals. Please pass SB438, which is an essential component of our move to a cleaner, greener future.



DAVID Y. IGE  
GOVERNOR

JOSH GREEN M.D.  
LIEUTENANT GOVERNOR



**LATE**

LINDA CHU TAKAYAMA  
DIRECTOR

DAMIEN A. ELEFANTE  
DEPUTY DIRECTOR

**STATE OF HAWAII  
DEPARTMENT OF TAXATION**

830 PUNCHBOWL STREET, ROOM 221

HONOLULU, HAWAII 96813

<http://tax.hawaii.gov/>

Phone: (808) 587-1540 / Fax: (808) 587-1560

Email: Tax.Directors.Office@hawaii.gov

To: The Honorable Donovan M. Dela Cruz, Chair  
and Members of the Senate Committee on Ways and Means

Date: Monday, February 25, 2019  
Time: 10:25 A.M.  
Place: Conference Room 211, State Capitol

From: Linda Chu Takayama, Director  
Department of Taxation

Re: S.B. 438, S.D. 1, Relating to Taxation

The Department of Taxation (Department) offers the following comments regarding S.B. 438, S.D. 1, for the Committee's consideration.

S.B. 438, S.D. 1, establishes a new nonrefundable tiered income tax credit for taxpayers who install or operate an electric vehicle charging system that is made available for public use. A summary of key provisions are as follows:

- Adds a new section to chapter 235, Hawaii Revised Statutes (HRS), establishing an electric vehicle charging system tax credit;
- Sets the amount of the credit for the installation of a new electric vehicle charging system as equal to:
  - 30% of qualified costs incurred by the taxpayer for a level two charging system with a single port, with a cap of \$2,000 per taxable year;
  - 50% of qualified costs incurred by the taxpayer for a level two system with two or more ports, with a cap of \$6,000 per taxable year; and
  - 70% of the qualified costs incurred by the taxpayer for a level three system, with a cap of \$35,000 per taxable year.
- Sets the amount of the credit for the upgrade of an electric vehicle charging system as equal to:
  - 50% of qualified costs incurred by the taxpayer for a level two system with two or more ports, with a cap of \$3,000 per taxable year; and
  - 70% of the qualified costs incurred by the taxpayer for a level three system, with a cap of \$28,000 per taxable year.
- Provides that unless otherwise provided by law, use of the system must be provided to the public in order to qualify for the credit;
- Sets an overall aggregate cap on the credit of \$3,000,000 in any taxable year;

- Establishes a carryforward by which if the credit exceeds the taxpayer's net income tax liability, the excess of credit may be used as a credit against the taxpayer's net income tax liability in subsequent years until exhausted;
- Authorizes the Director of Taxation (Director) to require the taxpayer to furnish information to verify the taxpayer's claim for the credit;
- Defines "electric vehicle charging system" as having the same meaning as in section 291-71, HRS;
- Defines "qualified costs" as meaning all costs and expenses directly resulting from the installation and operation of an electric vehicle charging system that is made available for public use; and
- Applies to taxable years beginning after December 31, 2018.

The Senate Committee on Transportation amended the previous version of this measure by dividing the credit into separate tiers for installing new systems versus upgrading old systems, establishing caps on the allowable credit per taxpayer, and establishing an overall aggregate cap of \$3,000,000. The Committee also added language categorizing and differentiating the systems into "level two" or "level three," with the amount of the credit dependent on the system's particular level.

First, the Department notes that section 291-71, HRS, defines "electric vehicle charging system" as a system that:

- (1) Is capable of providing electricity from a non-vehicle source to charge the batteries of one or more electric vehicles;
- (2) Meets recognized standards, including Standard SAE J1772 of SAE International; and
- (3) Is designed and installed in compliance with Article 625 of the National Electrical Code.

The Department appreciates the inclusion of a definition of "electric vehicle charging system" in this measure, but notes that it lacks the subject-matter expertise to properly verify compliance with the definition's three criteria. The criteria are vague, but both of the institutions mentioned in subsection (2) and (3) appear to be comprised of expert industry professionals. SAE standards are published by SAE International, which describes itself as "a global association of more than 128,000 engineers and related technical experts in the aerospace, automotive and commercial-vehicle industries." The National Electrical Code is published by the National Fire Protection Association, which describes itself as "the leading information and knowledge resource on fire, electrical, and related hazards." A review of both Standard SAE J1772 and Article 625 of the National Electrical Code indicates that significant familiarity with electrical engineering is required to properly interpret and apply their guidance. Moreover, most of the "standards"-related documents on SAE International's appear to be behind a paywall. Thus, the Department respectfully suggests that another agency with the necessary technical expertise be required to certify the credit.

Similarly, the Department also notes that the meanings of and distinction between "level two" systems and "level three" systems are unclear. This language did not appear in the previous version of this measure and no guidance is provided on interpretation. The Department strongly

recommends that the Committee define the meanings of "level two" and "level three" and explain how they differ. This will help improve tax administration and better effectuate the legislative purpose of the measure.

Second, the Department notes that the measure's definition of "qualified costs" is very broad. The Department recommends amending the definition to specifically enumerate the installation and operational costs that the legislature wishes to include in the definition, such as permitting, construction, and insurance. Including a specific list of items will help minimize taxpayer confusion, prevent improper claims and abuse of the credit, and avoid unexpected losses in revenue.

Additionally, the Department suggests adding a provision that specifies that for pass-through entities such as partnerships, the credit amount is determined at the entity level and that distribution of the credit must be consistent with Internal Revenue Code section 704.

Third, the Department is unable to administer the aggregate cap of \$3,000,000 as written. All other existing income tax credits with aggregate caps are certified by another government agency. Those agencies stop certifying credits once the cap has been reached. If the Committee wishes to advance this measure the Department strongly suggests that a certification by another agency be added to the measure.

Finally, the Department respectfully requests that this new income tax credit be made available for taxable years beginning after December 31, 2019. This will allow the Department sufficient time to make the necessary form and instruction changes to properly administer the new credit.

Thank you for the opportunity to provide comments.



**LATE**

## SENATE COMMITTEE ON WAYS AND MEANS

February 25, 2019, 10:25 A.M.

Room 211

(Testimony is 2 pages long)

### TESTIMONY IN STRONG SUPPORT OF SB 438 SD1

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the Committee:

Blue Planet Foundation **strongly supports** SB 438 SD1, establishing an electric vehicle (EV) charging system tax credit. This policy will help to address the critical gap in our transition to a low-cost, low-carbon future: the lack of charging for EVs, particularly at businesses and multi-unit residential properties.

Electric vehicles are the fastest growing segment of new cars in Hawaii. In 2018, EV registrations grew 25 percent, while registrations of gasoline-powered vehicles grew only 0.8 percent.<sup>1</sup> We expect over 10,000 EVs registered in Hawaii by the end of the year—a number that is expected to grow exponentially as new EV models with longer ranges and lower prices hit the market.

Electric vehicles will play an integral role in Hawaii's clean energy future. While EVs that use the existing electricity grid to charge still use mostly fossil fuel, they use that fuel more effectively than burning fuel directly in a typical gasoline engine. This is why EVs are much less expensive to "fuel" per mile than their gasoline counterparts. Further, by using stored electrical energy, EVs can take advantage of intermittent solar, wind, and other clean energy resources. Most vehicles sit idle over 22 hours of the day, so they can become *de facto* energy storage devices if their batteries are plugged into the grid when they are not in use. With smart grid infrastructure in place, EVs become an essential component to electricity load and clean energy resource balancing—in addition to providing clean mobility solutions for Hawaii residents.

Over one million gasoline-powered vehicles are on Hawaii's roads—and from them comes nearly five million metric tons of climate-changing carbon pollution. What's worse, while Hawaii has made good progress in reducing its carbon emissions from the electricity sector, emissions from ground transportation have been increasing in recent years.

Senate Bill 438 helps to overcome a key barrier to EV adoption: the lack of adequate EV charging infrastructure.

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<sup>1</sup> DBEDT Monthly Energy Trends, January 2019 (<http://dbedt.hawaii.gov/economic/energy-trends-2/>).

The International Energy Agency has found that “the availability of chargers emerged as one of the key factors for contributing to the market penetration of EVs.” Unlike gasoline car owners, charging behavior for EV owners indicates that more than 80% of EV drivers charge their cars at home or at work.<sup>2</sup> In addition, a large share of the Hawaii population lives in high density, multi-unit residential buildings. The vast majority of parking facilities currently lack EV chargers.

Senate Bill 438 creates a tiered tax credit system to incentivize the installation of EV charging stations that are available for public use. This can dramatically expand charging options for the many Hawaii residents that don’t currently have access to charging at home, such as those living in multi-family residential buildings. This bill could also spark an increase in charging options for the tourism sector, as hotels, businesses, and popular tourist destinations utilize the tax credit. This bill could boost visitors’ confidence in renting an EV, knowing that they’ll have adequate options for charging during their stay on our islands.

We respectfully request that the Committee forward SB 438 SD1.

Thank you for the opportunity to testify.

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<sup>2</sup> <https://www.iea.org/publications/freepublications/publication/GlobalEVO Outlook2017.pdf>



**LATE**

**TESLA'S TESTIMONY REGARDING SB 438 SD1**

**being heard by the Senate Committee on Ways and Means  
on Monday, February 25, 2019 at 10:25 a.m.**

**Conference Room 211**

Aloha Chair Dela Cruz and Members of the Committee:

Thank you for the opportunity to provide testimony regarding SB 438 SD1, which would establish a tax credit to support the deployment of electric vehicle (EV) charging infrastructure. For reasons further detailed below, Tesla strongly supports efforts to expand EV charging infrastructure, recognizing the fundamental role it plays in driving EV adoption, including through the establishment of a tax credit program like that proposed in the bill.

Tesla's mission is to accelerate the world's transition to sustainable energy. The electrification of the transportation sector is a critical part of this to the degree it represents among the most significant sources of greenhouse gas emissions through the combustion of fossil fuels. Nationally, the transportation sector accounts for almost 30% of GHG emissions.<sup>1</sup> By supporting efforts to transition to EVs, Hawaii can leverage its 100% renewable energy goals to greatly advance efforts to address climate change, reduce pollution and improve air quality, and enhance the state's economic and energy security.

Access to charging represents one of the more fundamental challenges that impedes wider scale adoption of electric vehicles. Without easy and convenient access to EV charging, drivers will be less inclined to choose an EV over a conventional vehicle. State or utility support can be especially helpful in expanding the availability of charging infrastructure.

It is worth noting that such support can offer meaningful benefits beyond the direct recipients of the funding and associated charging services. As HECO has detailed in its Electrification of Transportation Strategic Roadmap, by increasing the utilization of its fixed infrastructure, EV adoption can actually help reduce energy costs to all ratepayers.<sup>2</sup> This is in addition to the broad, public policy benefits that EV adoption provides in terms of reduced greenhouse gas emissions, improved air quality, etc.

Tesla supports the percentage-of-cost framework whereby the tax credit value is calculated as a percentage of eligible charging system costs, capped by a dollar per project amount. This is consistent with the approach we've seen in other jurisdictions and ensures that project developers have some

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<sup>1</sup> US Environmental Protection Agency; see <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

<sup>2</sup> Electrification of Transportation Strategic Roadmap, pp. 35-36; Available for download at <https://www.hawaiielectric.com/clean-energy-hawaii/electrification-of-transportation>.



“skin in the game”.<sup>3</sup> It also ensures that tax credits provided are commensurate with project costs while ensuring equitable access to funds.

Tesla offers a number of amendments to the bill that we believe will improve the extent to which the program supports EV adoption.

First, Tesla encourages modifying the eligibility criteria so that the program allows for the deployment of infrastructure in dedicated parking stalls, particularly in the context of multi-unit dwellings and workplaces. As currently drafted, the bill requires eligible infrastructure to be publicly accessible, i.e. non-dedicated. While Tesla understands the intuitive appeal of this approach, because public accessibility necessarily means that an EV driver cannot be certain that a given charging station will be available at a given time, it undermines the confidence that prospective EV need, in terms of knowing they will be able to conveniently charge their vehicle, in order to feel comfortable purchasing and relying on an EV. Additionally, for entities that own and operate parking facilities that serve multi-family buildings or private workplaces, they may be reluctant to allocate parking spaces for public use and will be disinclined to utilize the tax credit.

A potential middle-ground solution to address this concern would be to require any Level 3 chargers supported by the program to be publicly accessible but allow Level 2 chargers to be deployed in dedicated parking stalls located in parking facilities serving multi-unit buildings or workplaces. Because Level 3 chargers can provide a significant charge in 20-30 minutes, as compared to 4-8 hours for Level 2 charging, this bifurcated approach is also consistent with how one would expect these different chargers to be used, with drivers leaving their vehicles in a spot overnight or over the course of the work day (if charging at home or at work) for Level 2 charging, but “filling up” and moving on relatively quickly if using a Level 3 charging station.

Second, the bill should clarify that entities are eligible to claim multiple tax credits if they are deploying more than one charging system. The current language appears ambiguous, referring to receiving a tax credit for “a” Level 2 or Level 3 charging system. Tesla believes that entities, specifically those that are deploying charging infrastructure in parking facilities serving multi-family buildings or workplaces, should be eligible to receive a tax credit for multiple charging systems, recognizing that it is more cost-effective to deploy multiple systems at a given location.

Third, given the overall cap on total value of tax credits that can be issued pursuant to the measure, Tesla recommends modifying the bill such that it focuses on Level 2 charging station deployments. The relative cost between Level 2 and Level 3 chargers is significant. According to the US Department of Energy, the all-in costs of a Level 2 charging station range from \$1000 to \$19,200. The all-in costs of a

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<sup>3</sup> See, for example NV Energy’s program. Details available at <https://www.nvenergy.com/cleanenergy/electric-vehicles>.



Level 3 charging station range from \$14,000 to \$91,000.<sup>4</sup> Given these huge differentials in cost, Tesla recommends limiting the amount of funds that can go to Level 3 systems to no more than 25% of the proposed annual budget. By focusing on Level 2 deployments, Tesla believes the limited funding for this tax credit can go much further in supporting EV adoption.

Tesla appreciates the opportunity to submit this testimony in support of SB 438 SD1 and encourages the Committee to pass this important measure with the amendments discussed above.

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<sup>4</sup> "Costs Associated with Non-Residential Electric Vehicle Supply Equipment"; pg. 3 U.S. Department of Energy, November 2015; Available for download at [https://afdc.energy.gov/files/u/publication/evse\\_cost\\_report\\_2015.pdf](https://afdc.energy.gov/files/u/publication/evse_cost_report_2015.pdf)