



DAVID Y. IGE
GOVERNOR

MIKE MCCARTNEY
DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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Statement of
MIKE MCCARTNEY
Director

Department of Business, Economic Development, and Tourism
before the

HOUSE COMMITTEE ON FINANCE

Friday, February 22, 2019

11:00 AM

State Capitol, Conference Room #308

In consideration of

HB 1585, HD1

RELATING TO THE ENVIRONMENT.

Chair Luke, Vice Chair Cullen, and Members of the Committee. The Department of Business, Economic Development, and Tourism (DBEDT) **offers comments** on HB1585, HD1 that establishes an electric vehicle (EV) charging system rebate program within the DBEDT, creates and appropriates moneys out of the EV charging station rebate program special fund, and amends the purposes for which moneys from the Energy Security Special Fund (ESSF) may be used.

DBEDT supports the creation of an electric vehicle charging system rebate program and the creation of an electric vehicle charging system special fund; authorizing use of ESSF funds for the Zero Emissions Clean Energy Target, building energy efficiency and the state building code council.

However, Section 3 amends 201-12.8, HRS, which prevents DBEDT from using ESSF moneys to pay DBEDT's energy division staff positions. Thirty-three (33) positions would be subject to layoffs unless a different source of funding is provided for retaining these positions. DBEDT respectfully requests that funds from the ESSF or some other source be authorized and appropriated to pay staff to carry out the Clean Energy Initiative.

DBEDT appreciates the over-all concept of this bill as it includes initiatives supportive of our goals and objectives; however, we are concerned about the employee layoffs proposed in this bill.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR



RODERICK K. BECKER
DIRECTOR

ROBERT YU
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
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ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY
TESTIMONY BY RODERICK K. BECKER
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE HOUSE COMMITTEE ON FINANCE
ON
HOUSE BILL NO. 1585, H.D. 1

February 22, 2019
11:00 a.m.
Room 308

RELATING TO THE ENVIRONMENT

House Bill (H.B.) No. 1585, H.D. 1: establishes an Electric Vehicle Charging System Rebate Program (EVCSR) within the Department of Business, Economic Development and Tourism that provides rebates to persons who install a new electric vehicle charging system or upgrade an existing electric vehicle charging system; caps the total value of rebates issued each year at \$1,000,000; and creates the EVCSR Special Fund (Fund) and appropriates an unspecified amount out of the Fund for FY 20 and FY 21.

The department generally does not support, as a matter of general policy, the creation of a special fund that does not meet the requirements of Section 37-52.3, HRS. Special funds should: 1) serve a need as demonstrated by the purpose, scope of work and an explanation why the program cannot be implemented successfully under the general fund appropriation process; 2) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries or a clear link between the program and the sources of revenue; 3) provide an appropriate means of financing for the

program or activity; and 4) demonstrate the capacity to be financially self-sustaining. In regards to H.B. No. 1585, H.D. 1, it is difficult to determine whether the proposed special fund would be self-sustaining.

Thank you for your consideration of our comments.

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: FUEL, Earmarks Barrel Tax for EV Charging System Rebate Program

BILL NUMBER: HB 1585, HD-1

INTRODUCED BY: House Committee on energy & Environmental Protection

EXECUTIVE SUMMARY: Establishes an electric vehicle charging system rebate program within DBEDT that provides rebates to persons who install a new electric vehicle charging system or upgrade an existing electric vehicle charging system. Caps the total value of rebates issued each year at an unspecified sum. Creates the electric vehicle charging station rebate program special fund, and feeds it with yet another earmark on the barrel tax.

SYNOPSIS: Adds a new section to chapter 201, HRS, to establish the electric vehicle charging system rebate program and special fund. The amount of the rebate is unspecified.

Amends section 201-12.8, HRS, to prohibit the use of moneys from the energy security special fund to support the state energy office.

Amends section 243-3.5, HRS, to change the earmarks on the environmental response, energy, and food security tax (“barrel tax”) such that the 15 cents per barrel to the energy security special fund is changed to an unspecified amount, and to add an additional earmark of an unspecified amount to the electric vehicle charging system rebate program special fund.

EFFECTIVE DATE: July 1, 2100.

STAFF COMMENTS: Act 300, SLH 1993, enacted an environmental response tax of 5 cents per barrel on petroleum products sold by a distributor to any retail dealer or end user. The collections of the tax were deposited into the environmental response revolving fund until such time the balance in the fund reached \$7 million at which time the imposition of tax was suspended until the balance in the fund declined.

Act 73, SLH 2010, increased the amount of the tax to \$1.05 per barrel and provided that 5 cents of the tax shall be deposited into a newly established environmental response revolving fund; 15 cents shall be deposited into a newly established energy security special fund, 10 cents shall be deposited into a newly established energy systems development special fund; 15 cents shall be deposited into the newly established agricultural development and food security special fund; and the residual of 60 cents shall be deposited into the general fund between 7/1/10 and 6/30/15. Act 107, SLH 2014, extended the sunset date of the \$1.05 environmental response, energy, and food security tax from 6/30/15 to 6/30/30. Act 185, SLH 2015, extended the tax to fossil fuels other than petroleum products as well, based on the BTU equivalent.

The environmental response tax was initially adopted to set up a reserve should an oil spill occur on the ocean waters that would affect Hawaii’s shoreline. The nexus was between the oil importers and the possibility that a spill might occur as the oil product was being imported into

the state. Now that the fund has become a cash cow, lawmakers have placed numerous and sundry other responsibilities on the fund, including environmental protection, food security, and natural resource protection programs, energy conservation and alternative energy development, air quality, global warming, clean water, polluted runoff, solid and hazardous waste, drinking water, and underground storage tanks, including support for the underground storage tank program of the department of health.

The basic problem with the barrel tax is that it lacks transparency, and because the funds are earmarked they largely avoid scrutiny by either lawmakers or the public. Rather than perpetuate the problems of the barrel tax, lawmakers should consider repealing it and funding all programs that are funded out of the environmental response fund through appropriations against the general fund. At least program managers would then have to justify their need for these funds. If general funds are insufficient to underwrite all the essential programs and programs such as those funded through the barrel tax, then lawmakers need to justify any increase in taxes which underwrite the general fund or lawmakers will be forced to set priorities for those precious general funds. Currently, lawmakers can sidestep that difficult task by creating these hidden taxes and earmarked funds like the barrel tax. By continuing to special fund these programs, it makes a statement that such programs are not a high priority for state government. This sort of proliferation of public programs needs to be checked as it appears to be growing out of hand and at the expense of the taxpayer.

Digested 2/20/2019



**TESTIMONY TO THE HOUSE COMMITTEE ON FINANCE
State Capitol, Conference Room 308
415 South Beretania Street
11:00 AM**

February 22, 2019

RE: HOUSE BILL NO. 1585 HD 1, RELATED TO THE ENVIRONMENT

Chair Luke, Vice Chair Cullen, and members of the committee:

My name is Gladys Quinto Marrone, CEO of the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, the Building Industry Association of Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii. Our members build the communities we all call home.

BIA-Hawaii **supports the intent** of H.B. 1585 HD 1, which would require the Department of Business, Economic Development, and Tourism to provide rebate to persons who install a new electric vehicle charging system or upgrade an existing electric vehicle charging system. This bill also creates and appropriates money from the electric vehicle charging station rebate program special fund.

The purpose of the bill is to create an incentive to build out a more robust electric vehicle infrastructure, with the intent of making electric vehicles a more viable option for more consumers, especially those who may not have a rooftop solar system that allows them to charge their electric vehicles at home at a lower cost.

We would suggest that "persons" be defined in the bill as any homeowner or residential home builder. This would allow for greater acceptance of electric vehicle charging stations in new residential developments.

We appreciate the opportunity provide comments on H.B. 1585 HD 1.



To: The House Committee on Finance
From: Brodie Lockard, Hawaii State Climate Lead, Organizing for Action
Date: Friday, February 22, 2019, 11:00 am

In strong support of HB 1585 HD1

Dear FIN Chair Luke, Vice Chair Cullen, and Committee Members—

Organizing for Action strongly supports HB 1585 HD1.

As of January 2018 there were 8,431 passenger electric vehicles in the state, out of 1,071,488 total registered passenger vehicles, or an anemic 0.79 percent [1]. We should be doing everything we can to increase that percentage.

Nearly every major automaker said in 2017 that they plan to move to all-electric vehicles (EVs), and will each introduce 10 to 50 new EV models within one to seven years. Volkswagen and General Motors have already scheduled the end of their gasoline vehicle production.

As the number of zero-emissions vehicles (ZEVs) in Hawaii inevitably grows, the number of designated parking spaces and supply equipment points must grow to accommodate them. Large parking areas are especially important because ZEV drivers cannot just park "next door" where there might be a parking space and supply equipment point available. When gas-powered cars are no longer for sale—not long from now—will Hawaii be equipped to charge its ever-growing number of ZEVs?

The transportation sector uses almost two-thirds of all petroleum consumed in Hawaii [2]. This bill will also help reduce Hawaii's greenhouse gas emissions by helping to make parking and charging ZEVs a non-issue.

Please support HB 1585 HD1. It will help pave the way for our clean energy goals, and the imminent end of gasoline cars.

Thank you for the opportunity to testify.

[1] http://files.hawaii.gov/dbedt/economic/data_reports/energy-trends/Energy_Trend.pdf

[2] <https://www.eia.gov/state/analysis.php?sid=HI>

Brodie Lockard
Hawaii State Climate Lead, Organizing for Action



SanHi

GOVERNMENT STRATEGIES

A LIMITED LIABILITY LAW PARTNERSHIP

DATE: February 21, 2019

TO: Representative Sylvia Luke
Chair, Committee on Finance

Submitted Via Capitol Website

FROM: Tiffany Yajima

RE: **H.B. 1585, H.D. 1 – Relating to the Environment**
Hearing Date: Friday, February 22, 2019 at 11:00 a.m.
Conference Room: 308

Dear Chair Luke and Members of the Committee Finance:

On behalf of the Alliance of Automobile Manufacturers (“Alliance”), we submit these comments on H.B. 1585, H.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.

The Alliance supports section 2 of this measure with respect to the establishment of a rebate program that incentivizes the installation or upgrade of electric vehicle charging systems in the state. Hawaii has one of the highest rates of adoption of passenger electric vehicles in the nation and currently there are roughly 8,330 passenger electric vehicles registered in the state. Although the number of electric vehicles registrations continues to increase, passenger electric vehicles still account for less than 1% of all registered vehicles on the road in Hawaii.

A larger network of electric vehicle charging infrastructure is essential to greater adoption of electric vehicles. Publically available electric vehicle charging infrastructure is a top consideration for consumers interested in driving an electric vehicle. Incentives that facilitate the build out of electric vehicle charging stations will help to make these vehicles a more viable option for consumers and would encourage consumer uptake of passenger electric vehicles in Hawaii.

Thank you for the opportunity to submit testimony on this measure.



Environmental Caucus

The Democratic Party of Hawai'i

HOUSE COMMITTEE ON FINANCE

February 22, 2019 11:00 a.m. Room 308

In **SUPPORT** of **HB1585 HD1**: Relating to the Environment

Aloha Chair Luke, Vice Chair Cullen, and Committee Members,

On behalf of the Environmental Caucus of the Democratic Party of Hawai'i (ECDPH), we **support HB1585 HD1**, relating to the environment.

Climate change and efforts to mitigate its effects is the single most pressing issue of our time. There is no question that we must address climate change posthaste. With the recent Intergovernmental Panel on Climate Change (IPCC) special report (2018) there is clear consensus among scientists globally that we must limit global warming to 1.5 degrees Celsius to avoid catastrophic and irreversible effects that would impact all of humankind. To reach this goal, we must cut global anthropogenic carbon emissions in half by 2030 and reach net zero emissions by mid-century. It is evident that “rapid and far-reaching transitions in energy, land, urban and infrastructure, and industrial systems (IPCC SR 2018)” are necessary.

There are two central ways to combat climate change: 1) Reduce/eliminate carbon and other greenhouse gas emissions and 2) sequester carbon back into the Earth. This bill addresses the former. The electrification of the transportation sector is critical as it represents among the most significant sources of greenhouse gas emissions through the combustion of fossil fuels. By supporting efforts and incentivizing the to transition to electric vehicles (EVs), Hawai'i 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. However, access to charging represents one of the more fundamental challenges impairing demand for EVs. Without



Environmental Caucus

The Democratic Party of Hawai‘i

easy and convenient access to EV charging, drivers will be less inclined to choose an EV over a conventional vehicle. Please pass this bill.

Mahalo for the opportunity to testify in **support of HB1585 HD1**.

Kimiko LaHaela Walter

Interim Chair, Energy and Climate Change Subject Committee, Environmental Caucus of the Democratic Party of Hawai‘i

State Central Committee Representative, Environmental Caucus of the Democratic Party of Hawai‘i



**TESTIMONY OF TINA YAMAKI
PRESIDENT
RETAIL MERCHANTS OF HAWAII
February 22, 2019**

Re: HB 1585 HD 1 Relating to the Environment

Good morning Chairperson Luke and members of the House Committee on Finance. I am Tina Yamaki, President of the Retail Merchants of Hawaii and I appreciate this opportunity to testify.

The Retail Merchants of Hawaii (RMH) is a statewide not-for-profit trade organization committed to supporting the retail industry and business in general in Hawaii. The retail industry is one of the largest employers in the state, employing 25% of the labor force.

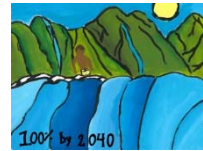
We are in SUPPORT of HB 1585 HD1 Relating to the Environment. This measure requires the Department of Business, Economic Development, and Tourism that provides rebates to persons who install a new electric vehicle charging system or upgrade an existing electric vehicle charging system. Creates, and appropriates moneys out of, the electric vehicle charging station rebate program special fund. Amends the uses funds from the energy security special fund may be used for.

We strongly believe that this bill is a step in the right direction instead of Government mandates that force all business' like retailers to install costly EV charging stations that in turn not only drives up the cost of doing business but also the cost of living in Hawaii. Businesses respond to the wants of the majority of customers that patronize their establishments all the while operating on a very thin profit margin. This would include installing EV charging stations.

Electric Vehicles charging stations come at a cost to businesses for the installation and maintenance and in some cases electricity. Each existing building and facility varies on where stations can be installed and it is often determined by the accessibility to electricity as many existing infrastructures' are not wired to be plug in ready like parking lots and structures and buildings. One of the major cost factors is having to dig up the asphalt to pull in the electricity from across the mall or to tear into the structure to install the electrical infrastructure. We must also mention that the charging stations themselves are very expensive. This can be very costly and a rebate would help to offset some of the costs and even be an incentive for businesses to install more charging stations.

In addition, this may also be an incentive for people to begin new business ventures that creates fast charging station locations – like a current “gas” station - and incentivize more residential buildings to install the stations so that people are able to charge their vehicles at home.

Mahalo for this opportunity to testify.



HOUSE COMMITTEE ON FINANCE

February 22, 2019, 11:00 A.M.

Room 308

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF HB 1585 HD1

Aloha Chair Luke, Vice Chair Cullen, and members of the Committee:

Blue Planet Foundation **strongly supports** HB 1585 HD1, establishing an electric vehicle (EV) charging system rebate program. 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.¹ 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.

House Bill 1585 helps to overcome a key barrier to EV adoption: the lack of adequate EV charging infrastructure.

¹ 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.² 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.

House Bill 1585 creates a rebate program—funded by the existing fossil fuel tax—to incentivize the installation of EV charging stations. Blue Planet Foundation supports the use of the fossil fuel tax for this purpose. It makes sense to tap the source of our problem—imported fossil fuels—to help fund solutions, such as EV charging infrastructure.

Blue Planet Foundation also supports the amendments made in the HD1 version that better align the use of funds from the energy security special fund with our state’s clean energy and renewable transportation goals. Monies from this fund can be used to deploy new solutions for resiliency, enhanced electric vehicle adoption and infrastructure buildout, and improved energy efficiency in our existing building stock and new construction.

We respectfully request that the Committee forward HB 1585 HD1 amended to take effect upon approval.

Thank you for the opportunity to testify.

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

**TESTIMONY BEFORE THE
HOUSE COMMITTEE ON FINANCE**

H.B. 1585, HD1

Relating to the Environment

Friday, February 22, 2019
11:00 am, Agenda Item #20
State Capitol, Conference Room 308

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

Aloha Chair Luke, Vice Chair Cullen, and Committee Members,

My name is Brennon Morioka and I am testifying on behalf of Hawaiian Electric Company Inc. and its subsidiary utilities Maui Electric Company, Limited and Hawai'i Electric Light Company, Inc. ("the Hawaiian Electric Companies") in support of HB 1585, HD1, Relating to the Environment, which seeks to establish an electric vehicle charging system rebate program within the Department of Business, Economic Development, and Tourism.

This bill has the potential to be a landmark bill for 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. Hawaiian Electric Companies have been at the forefront of the transition to clean transportation and continues to make investments and develop programs that will eventually eliminate the need to import fossil fuels for transportation and energy production in the state. 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 their vehicles 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 HB 1585, HD1 promises to reduce or eliminate 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.

Accordingly, the Hawaiian Electric Companies support HB 1585, HD1. Thank you for this opportunity to testify.



TESLA'S TESTIMONY REGARDING HB 1585 HD1

**being heard by the House Committee on Finance
on Friday, February 22, 2019 at 11:00 a.m.**

Conference Room 308

Aloha Chair Luke and Members of the Committee:

Thank you for the opportunity to provide testimony regarding HB 1585 HD1, which would establish a rebate program 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 rebate programs like those proposed by 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.¹ 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 impairing demand for electric vehicles. Without easy and convenient access to EV charging, drivers will be less inclined to choose an EV over a conventional vehicle. EV charging currently suffers from the "last mile" problem, or more accurately, the "last fifty feet" problem. Specifically, while the electrical grid is fairly ubiquitous, in order to support EV charging it needs to be expanded to bring the power to where EVs are actually parked. This typically requires incremental investments in infrastructure on the customer side of the meter including electrical panel capacity, conduit and wiring, in addition to, in the case of Level 2 and Level 3 charging, the charging station itself. While for new construction, where EV charging infrastructure can be incorporated into the initial plans, the costs of deploying Level 2 EV charging infrastructure are quite modest, in the case of retrofits to existing buildings, these costs can be non-trivial.² State or utility support can be especially helpful in these instances.

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

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

² See "Plug-in Electric Vehicle Infrastructure Cost Effectiveness Report"; Energy Solutions and Pacific Gas and Electric, November 2016. Available for download at <http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>



Strategic Roadmap, by increasing the utilization of its fixed infrastructure, EV adoption can actually help reduce energy costs to all ratepayers.³ 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.

Regarding the bill's proposed incentive structure, Tesla supports the percentage-of-cost framework, 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 "skin in the game".⁴ It also ensures that incentives 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 any infrastructure supported by the program 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 depend on the charging station being available when they get home or go to work it undermines the certainty that prospective EV drivers need in order to feel comfortable purchasing and relying on an EV. Additionally, for entities that own and operate parking facilities that serve multi-unit dwellings or private workplaces, they may be reluctant to allocate parking spaces for public use and will be disinclined to participate in the program.

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. 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, Tesla seeks clarification regarding the eligible costs the incentives proposed in the bill would address. The measure defines "electric vehicle charging system" in a manner that could be interpreted as limiting eligible costs to only the charging station itself. However, in Tesla's experience, the more substantive cost tends to be in the "make-ready" infrastructure, essentially all of the componentry needed to bring sufficient electrical service to the charging station itself. Tesla requests that these elements be part of the cost-basis for determining the level of incentives a given project is eligible to receive.

³ Electrification of Transportation Strategic Roadmap, pp. 35-36; Available for download at <https://www.hawaiianelectric.com/clean-energy-hawaii/electrification-of-transportation>.

⁴ See, for example NV Energy's program. Details available at <https://www.nvenergy.com/cleanenergy/electric-vehicles>.



Third, Tesla encourages 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 Level 3 charging station range from \$14,000 to \$91,000.⁵ 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 envisioned under the program can go much further in supporting EV adoption.

Tesla appreciates the opportunity to submit this testimony in support of HB 1585 HD1 and encourages the Committee to pass this important measure with the amendments discussed above.

⁵ "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



LATE

Email: communications@ulupono.com

HOUSE COMMITTEE ON FINANCE
Friday, February 22, 2019 — 11:00 a.m. — Room 308

RE: HB 1585 HD 1 - Relating to the Environment - Support, Request Amendments

Dear Chair Luke, Vice Chair Cullen, 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 the intent and concept of this bill, which establishes an electric vehicle charging system rebate program, 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. We offer the following amendments for the committee's consideration.

1. Stipulate the following rebate percentages and caps:

	<u>Level 2 – Single</u>	<u>Level 2 – 2+</u>	
	<u>Port</u>	<u>Ports</u>	<u>Level 3</u>
New Charger: Percent of Cost	30%	50%	70%
New Charger: Rebate Cap	\$2,000	\$6,000	\$35,000
Upgrade Charger: Percent of Cost		50%	70%
Upgrade Charger: Rebate Cap		\$3,000	\$28,000

2. Increase the limit of the annual total rebate funding to \$3 million per year. With this level of funding, more than 350 new/upgraded stations could be added. This increase would represent 61 percent growth from the current number of charging stations in Hawai'i. If the committee prefers to keep the \$1 million cap, we respectfully recommend that the bill language explicitly state that the \$1 million cap is only for rebates and not administrative costs. If administrative costs are intended to be included in the cap, then the annual cap should be increased accordingly.

3. Potentially assign the Public Benefits Fee Administrator (PBFA) to administer the rebate program, as it already manages rebate programs that promote energy efficiency and they are currently responsible for implementing our EV charging rebate pilot

Investing in a Sustainable Hawai'i

program. If the Department of Business, Economic Development, and Tourism is not willing to manage the program, then this could be another viable option. However, further legislation would be required to enable the PBFA to administer the EV charging rebate program, as the Public Benefits Fee Administrator is not currently authorized to receive funding directly from the State and run such a program (per Hawaii Revised Statute 269-122).

4. Specify that the program administrator must set up and be prepared to launch the EV charging rebate program by December 31, 2019 to align with the rebate eligibility date stated in the bill.
5. Lastly, we have concerns over the removal and inability of barrel tax funding to directly support the energy division. We defer to the committee's preference of funding sources to maintain the objectives and goals of the energy division.

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
- 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

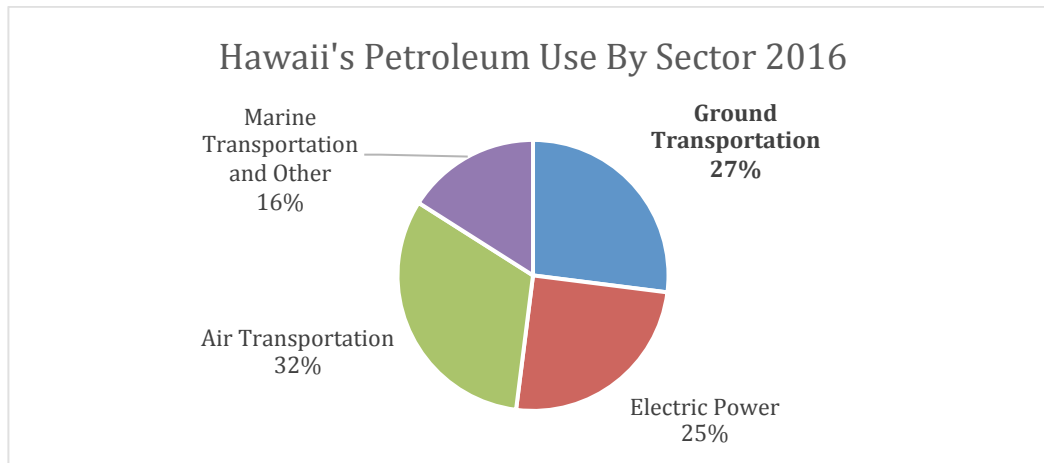
EVs are an increasingly affordable option for all. For example, the 2019 Nissan Leaf's average MSRP is \$33,095. After the Federal tax credit is considered, the purchase price is \$25,595, which is less than the best selling sedan in the country, the 2019 Toyota Camry. Attachment A to our testimony compares 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 cut harmful tailpipe pollution that our we all breath-in.



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 rebate program 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.

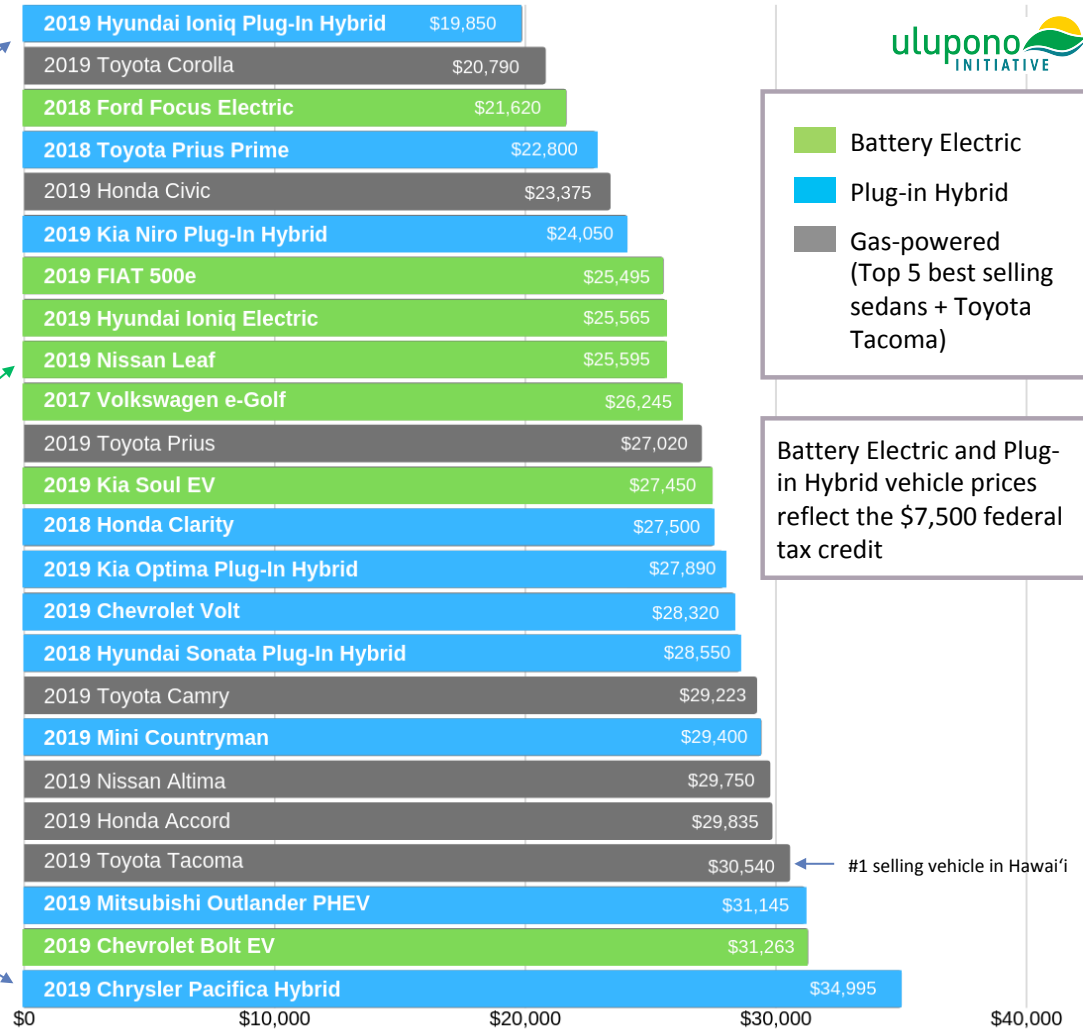
If the State of Hawai'i is serious about the health, sustainability and resiliency of our communities, it should encourage EVs and EV infrastructure.

As Hawai'i's energy issues become more 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)



- Battery Electric
- Plug-in Hybrid
- Gas-powered
(Top 5 best selling sedans + Toyota Tacoma)

Battery Electric and Plug-in Hybrid vehicle prices reflect the \$7,500 federal tax credit

#1 selling vehicle in Hawai'i

Nationwide Average MSRP Data from Edmunds – January 2019

LATE

HB-1585-HD-1

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Testimony for FIN on 2/22/2019 11:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1585 to protect Hawaii's fragile marine ecosystem.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei