

DAVID Y. IGE
GOVERNOR



Testimony by:
JADE T. BUTAY
DIRECTOR

Deputy Directors
ROY CATALANI
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

March 16, 2018
1:20 p.m.
State Capitol, Room 225

H.B. 2274, H.D. 1
RELATING TO ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

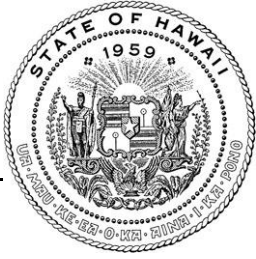
Senate Committee on Transportation and Energy

The Department of Transportation (DOT) **supports** H.B. 2274, H.D. 1 **with concerns**. This bill expands the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces.

The DOT supports this bill insofar as it seeks to strengthen the State's electric vehicle charging requirements. However, jurisdiction over and responsibility for ensuring compliance with the State's electric vehicle parking space requirements would perhaps best be placed in a State agency with investigative and compliance functions involving regulatory matters and should not reside with the Director of the DOT.

In addition, ideally, charging infrastructure should be generating electricity from a renewable energy source.

Thank you for the opportunity to provide testimony.



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

DAVID Y. IGE
GOVERNOR

LUIS P. SALAVERIA
DIRECTOR

MARY ALICE EVANS
DEPUTY DIRECTOR

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Statement of
LUIS P. SALAVERIA
Director
Department of Business, Economic Development and Tourism
before the
SENATE COMMITTEE ON TRANSPORTATION AND ENERGY
Friday, March 16, 2018
1:20 p.m.
State Capitol, Conference Room 225

in consideration of
HB2274, HD1
RELATING TO ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.

Chair Inouye, Vice Chair Espero and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) offers comments on of HB2274, HD1, which looks to expand the State's existing electric vehicle charging requirements.

DBEDT provides comments on Part II, Section 3 of HB2274, HD1; which seeks to establish a working group to address the installation of electric vehicle supply equipment at multiple unit dwellings such as apartments, condominiums, cooperative housing corporations, and planned community associations.

The measure proposed in this bill is reflective of the task force established under Act 164 of the 2015 legislature. The purpose of the task force was to examine the issues regarding the installation of electric vehicle charging stations in multiple unit dwellings. DBEDT suggests that forming a new working group would likely duplicate the previous working group, as recommendations and findings, such as including charging infrastructure in building codes for new construction, have not yet been adopted, and further assessed. The results from the aforementioned EV task force can be accessed at http://energy.hawaii.gov/wp-content/uploads/2013/07/Act-164_EV-Working-Group-Report_FINAL.pdf.

Thank you for the opportunity to provide DBEDT's comments on HB2274, HD1.

DAVID Y. IGE
GOVERNOR

RODERICK K. BECKER
COMPTROLLER



An Agency of the State of Hawaii

ROSS I. YAMASAKI
CHAIRMAN, STADIUM AUTHORITY

SCOTT L. CHAN
MANAGER

RYAN G. ANDREWS
DEPUTY MANAGER

TESTIMONY
OF
SCOTT L. CHAN, STADIUM MANAGER
STADIUM AUTHORITY
TO THE
SENATE COMMITTEE
ON
TRANSPORTATION AND ENERGY
ON
March 16, 2018

H.B. 2274, H.D. 1

RELATING TO ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

Chair Inouye, Vice Chair Espero, and members of the Committee, thank you for the opportunity to testify in the form of comments on H.B.2274, H.D. 1

The Stadium Authority (Authority) appreciates the opportunity to articulate its strong concern, reservation, and impact of H.B. 2274, H.D. 1 on the Aloha Stadium but does appreciate the Legislature's foresight and impetus in transforming vehicular transportation in Hawaii.

While we understand the Legislature's intent of the bill, we have very strong reservations specifically as it relates to the negative financial impact, utilization rate, and the operational and logistical challenges that would result in an unfeasible and operationally challenging project for the special funded Aloha Stadium.

HB 2274, H.D. 1 seeks to establish an electric vehicle supply equipment (EVSE) installation schedule and ratio of one (1) charging station to every 100 vehicles by July 1, 2012 and increases the EVSE ratio in subsequent years.

CONCERNS:

- The Authority has significant concern over the proposed ratio requirement. The Aloha Stadium maintains an approximate capacity of 7,000 – 7,600 total parking spaces that essentially must be available on event days and/or these spaces are also used as an area to host events. At 7,000 total spaces, this bill requires the Authority to initially install a minimum of 70 charging stations at an approximate cost of \$4,000 to \$6,000 per installed commercial EVSE. Using a total estimated cost of \$6,000 per commercial pedestal unit (installed), this would cost the Authority approximately \$420,000 initially and an additional \$420,000 for each incremental ratio increase, costing the Authority a total of \$1.2 million by July 1, 2024 as an unfunded-unbudgeted project. We believe this will be extremely difficult for the Authority to absorb from within its existing self-sufficient special funded budget. As a self-sufficient operation, the Authority relies solely on funds generated through various business revenue streams to address its recurring operating expenses. H.B. 2274, H.D. 1 imposes a significant unfunded/unbudgeted, non-revenue generating financial hardship on the Authority’s operating budget.
- It is also important to note that the Aloha Stadium parking lot is also used as a venue to host events such as large and small-scale fairs, car shows, concerts, driver training, swap meet, etc. Events held in the parking lot could operationally and/or logistically render the EVSE stations inaccessible due to an event’s layout and its operational and safety requirements.

- Further, it should be noted that the Aloha Stadium parking lot is not a site that is open 24 hours a day/seven days a week. Its priority and program objective is to provide a venue for sporting and entertainment events. While not hosting an event in the bowl or in its parking lot, the property is secured and closed to the public to ensure public safety and to minimize property damage, vandalism, and theft.

Respectfully, we believe that it is not the intent of the Legislature to include the Authority (Aloha Stadium) in this bill. Based on the foregoing, the Authority is clearly a “statistical outlier” and we ask that the committee provide the Authority with an exemption from HB 2274, H.D. 1 given the critical operational and logistical factors that influence utilization, feasibility, practicality, and cost.

Thank you for the opportunity to testify on this matter.



From: Uchida, Russell T
Sent: Monday, March 19, 2018 1:00 PM
To: Sen. Lorraine R. Inouye <seninouye@capitol.hawaii.gov>; Sen. Will Espero <senespero@capitol.hawaii.gov>; Sen. Maile Shimabukuro <senshimabukuro@capitol.hawaii.gov>
Subject: HB 2274, HD1 - Electric Vehicle Charging Infrastructure - Comments and RECOMMENDED Language

Afternoon Chair Inouye, Vice Chair Espero, Member Shimbukuro,
As a follow-up to Friday's HB 2274, HD1 hearing, I am providing the following information in response to your inquiry and request:

1. Vice Chair Espero posed a very fair and reasonable question in the Senate TRE hearing on March 16, 2018.
Vice Chair Espero asked "*Do you believe some charging stations should be installed at Aloha Stadium?*"
 - In response to Vice Chair's question above:
 - Idealistically, the Stadium Authority fully supports the concept of EV charging stations at sites where utilization of EV charging stations support the cost of install and availability of regular use.
 - Realistically, the Stadium Authority does not believe it is prudent to support a proposed statutory requirement where utilization of EV charging stations would be limited and the cost to install far exceeds the intent of the statutory requirement. While the Authority agrees with the concept of transitioning Hawaii's vehicle base to EV vehicles, we strongly believe that there are outliers to this proposal and believe that installation and availability of charging stations is not a prudent operational and financial decision where utilization at the Aloha Stadium would be limited.
 - On a secondary note, we would also be concerned with media's criticism and questioning of the installation of multiple charging stations where utilization is limited and citing government waste.
2. Based on the foregoing and in conjunction with Chair Inouye's open request for proposed language, the Stadium Authority provides the following recommended language:

"§291-71 Designation of parking spaces for electric vehicles; [~~charging system.~~] provision of electric vehicle supply equipment.

(g) The designation of parking spaces and ratio requirement for electric vehicle supply equipment requirements of subsection (a) shall not apply to the Stadium Authority."

Thank you for the opportunity to respond to your question and to provide recommended language to the bill.

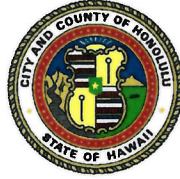
Should you have any questions, please feel free to call me (483-2753) or email me.

Russell Uchida
Administrative Services Officer
Aloha Stadium
483-2753

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
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Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR



WES FRYSZTACKI
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

March 16, 2018

The Honorable Lorraine R. Inouye, Chair
and Members of the Senate
Committee on Transportation and Energy
State Capitol, Room 225
415 South Beretania Street
Honolulu, Hawaii 96813



Dear Chair Inouye and Members of the Committee:

**SUBJECT: Testimony on House Bill No. 2274, H.D. 1
Relating to Electric Vehicle Charging Infrastructure**

The Department of Transportation Services, on behalf of the City and County of Honolulu ("City"), expresses concern regarding the passage of House Bill No. 2274, H.D. 1, Relating to Electric Vehicle Charging Infrastructure.

Since 2012, subject to the availability of funds, the City has installed charging stations at seven public parking facilities. The City will need to plan to program capital funds and contract for the design and installation of the electric vehicle charging stations in our remaining City parking facilities. The bill provides for relief through the facilities exemption for some or all the requirements if documented cost estimates for construction, equipment, and installation costs exceed \$200 multiplied by the number of parking spaces within the parking facility.

There is existing mobile charging infrastructure technology that may satisfy this requirement. Mobile charging infrastructure can be remotely directed to the vehicle, rather than current infrastructure that requires a vehicle to drive and park next to the charging station. Mobile stations can be recharged within the parking facility. The City intends to conduct a pilot project of the mobile charging stations at one of our facilities in the near future.

The Honorable Lorraine R. Inouye, Chair
and Members
March 16, 2018
Page 2

We request that the following sentence from the original legislation be reinstated:

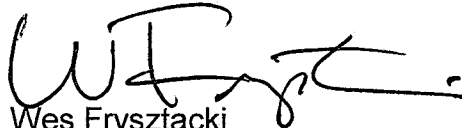
“Owners of multiple parking facilities within the State may designate and electrify fewer parking spaces than required in one or more of their owned properties; provided that the scheduled requirement is met for the total number of aggregate spaces on all of their owned properties.”

Lastly, although the bill covers charging equipment, the City and the contracted public parking operators are losing monthly parking revenues due to the exemption from parking fees for electric vehicles in Act 168, Session Laws 2012. A balance will need to be struck between the incentives to encourage electric vehicle use and decreasing parking revenues.

While the City is committed to providing electric vehicle charging stations in our public parking facilities, we have strong concerns with the parking fee exemption and the effect on decreasing revenues in the City public parking facilities.

Thank you for the opportunity to submit this written testimony.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Frysztacki', with a long horizontal flourish extending to the right.

Wes Frysztacki
Director

Testimony before the Senate Committee on Transportation and Energy

Friday, March 16, 2018

1:20 pm

**By Brennon Morioka
General Manager, Electrification of Transportation
Hawaiian Electric Company, Inc.**

House Bill 2274 HD1 – Relating to Electric Vehicle Charging Infrastructure

Chair Inouye, Vice Chair Espero, and Members of the Committee:

My name is Brennon Morioka and I am testifying on behalf of Hawaiian Electric Company and its subsidiary utilities, Maui Electric Company and Hawai'i Electric Light Company (collectively, the "Hawaiian Electric Companies").

House Bill 2274, HD1 seeks to expand the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces, and sets goals for implementing increased electric vehicle charging at public facilities and workplaces.

The Hawaiian Electric Companies support the intent of this bill charging infrastructure will play an important role in the adoption of electric vehicles, but we do share concerns about potential financial impacts significant retrofits or upgrades may have on existing and older parking structures or facilities. The Hawaiian Electric Companies also express our concerns about the removal of language from the original bill requiring design and installation of electric vehicle supply equipment to be in compliance with Article 625 of the National Electrical Code. This bill continues to support the adoption of electric vehicles through strong initiatives that send a clear message that the State supports clean transportation. The Hawaiian Electric Companies applaud the proposal's acknowledgment of the value and challenges associated with installing higher capacity charging facilities for public use by providing greater credits in the bill for fast charging facilities. This will lead to more efficient utilization of limited public space and support burgeoning high-capacity charging technologies. Numerous studies have shown that increased availability of electric vehicle charging infrastructure is the true linchpin for the adoption of electric vehicles, and will become increasingly necessary as more residents and visitors choose electric vehicles as their primary mode of transportation.

However, placing this requirement on existing multi-unit buildings and older parking structures where the cost to provide such infrastructure upgrades may be difficult and focus should perhaps be placed on charging requirements for new construction. Secondly, there are potential permitting and safety issues with the removal National Electrical Code requirements for the design and installation of electric vehicle supply equipment. We therefore recommend reinstating this language.

In recent years, the Hawaiian Electric Companies have undertaken several efforts to support the adoption of electric vehicles, such as the development of a growing DC Fast Charger network, with over 12 locations across the Companies' service territory. The Companies currently have time-of-use rates for home electric vehicle charging, and are developing a strategy filing with the Public Utilities Commission to explore and expand our participation in Hawaii's transition to electrified transportation. Likewise, HD1 of this bill inserts language that establishes a working group to address the installation of electric vehicle supply equipment at apartments, condominiums, cooperative housing corporations, and planned community associations. The proposed amendment calls for a designated representative from Hawaiian Electric Companies to serve on this working group, and we appreciate being included to discuss and formulate workable solutions within this forum.

In short, this bill supports the momentum and progress already achieved in transforming Hawaii's ground transportation to electric vehicles. To support the State's efforts in eliminating dependence on fossil fuel, it is important that electric vehicles have the support of robust charging infrastructure investment.

Thank you for the opportunity to testify.



**Testimony to the Senate Committee on Transportation & Energy
Friday, March 16, 2018 at 1:20 P.M.
Conference Room 225, State Capitol**

**RE: HOUSE BILL 2274 HD1 RELATING TO ELECTRIC VEHICLE
CHARGING INFRASTRUCTURE**

Chair Inouye, Vice Chair Espero, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **opposes** HB 2274 HD1, which proposes to expand the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces. Beginning July 1, 2021, a parking facility with more than one hundred total public parking spaces shall be required to achieve two electric vehicle supply equipment for every one hundred public parking spaces. Beginning July 1, 2024, a parking facility with more than one hundred total parking spaces shall be required to achieve three electric vehicle supply equipment for every one hundred public parking spaces. Allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements.

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

The Chamber has consistently opposed "unfunded government mandates" such as what is being proposed in this bill. The proposed bill mandates that for all parking lots with 100 stalls or more, the number of stalls required to accommodate electric vehicles will double from the current requirement of one (1) in July of 2021 and triple in July of 2024. The cost to restripe and install the necessary equipment for charging electric vehicles is to be borne by the owner/operator of the parking lot.

Thank you for the opportunity to testify.



Testimony for
Senate Committee on Transportation and Energy
Friday, March 16, 2018, 1:20 p.m. Room 225

Senator Lorraine R. Inouye, Chair
Senator Will Espero, Vice Chair

HB 2274 HD1 Relating to Electric Vehicle Charging Infrastructure

Dear Chair Inouye and Members of the Committee:

This testimony is in **SUPPORT** of HB 2274 HD1 to expand the State's requirement for electric vehicle charging stations to include multi-unit buildings and workplaces, beginning July 1, 2021.

I am Lynn McCrory, Senior Vice President of Government Affairs for Pulama Lanai. Pulama Lanai is the entity that was set up by Larry Ellison to work with the community and government as we move the island of Lanai toward sustainability.

Pulama Lānaʻi has in its vehicle fleet over 100 electric vehicles for use on the island of Lānaʻi. We have charging stations at multiple facilities, and are experiencing the positive difference that electric vehicles have on the environment. While Lānaʻi has some of the higher rates in our State for both gasoline and electricity, there is a savings with electricity and reduced maintenance costs with the electric vehicles.

The placement of charging stations in more facilities will encourage the purchase of electric vehicles. The exemption language should cover the situations whereby the required installation is detrimental to the existence of the facility, and they can opt out.

If we want our environment to not be dependent on foreign fuels, we need to provide the infrastructure that allows as many people as possible to easily fuel their vehicles. This is one of the more important components of having a sustainable Hawaiʻi.

We humbly ask that you SUPPORT HB 2274 HD1. Mahalo!

Me ke aloha pumehana
With warm aloha,

Lynn P. McCrory
Senior Vice President of Government Affairs



Email: communications@ulupono.com

SENATE COMMITTEE ON TRANSPORTATION & ENERGY
Friday, March 16, 2018 — 1:20 p.m. — Room 225

Ulupono Initiative Supports the Intent of HB 2274 HD 1, Relating to Electric Vehicle Charging Infrastructure

Dear Chair Inouye, Vice Chair Espero, and Members of the Committee:

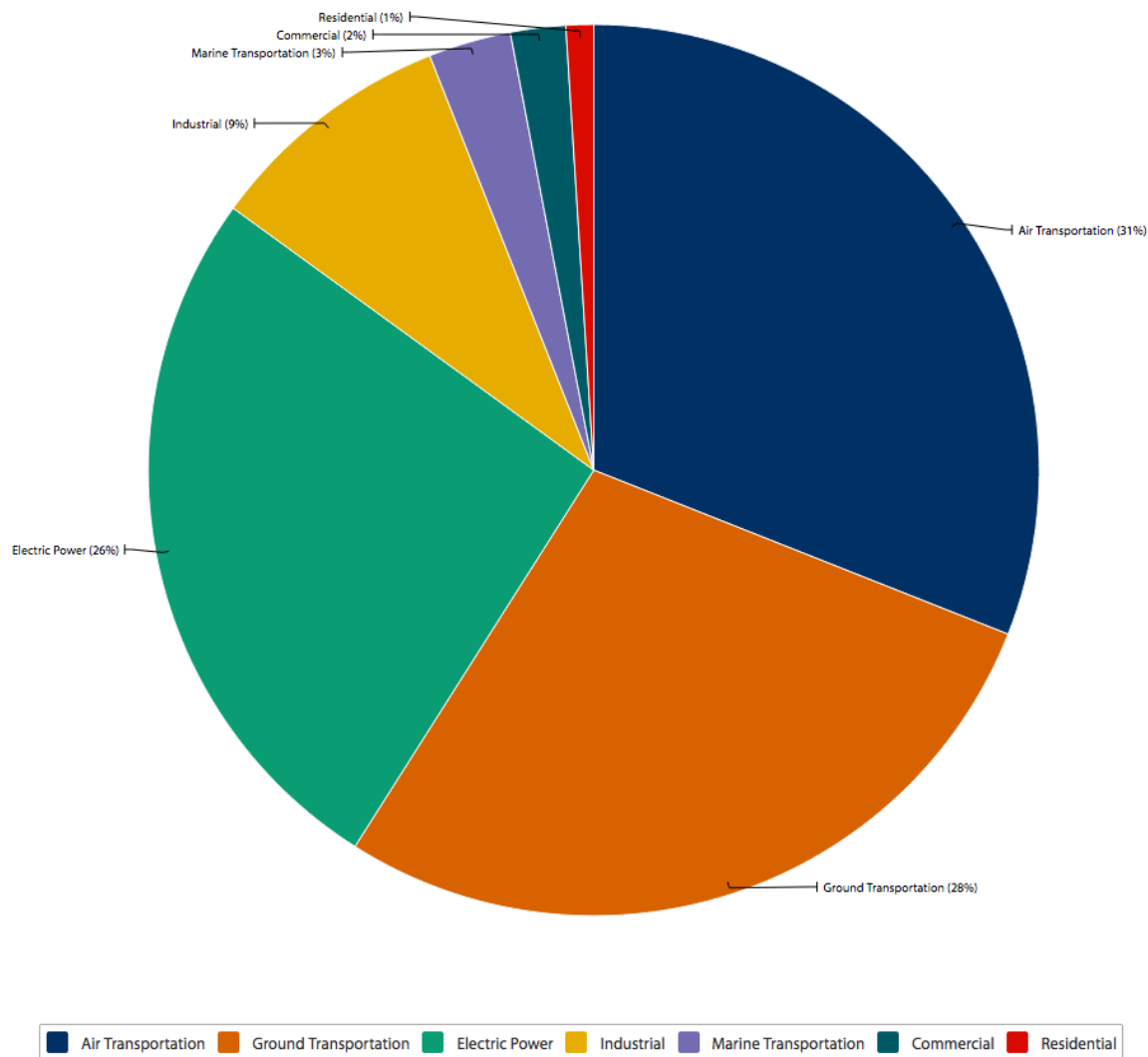
My name is Murray Clay and I am Managing Partner of the Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better management of waste and fresh water. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono supports the intent of HB 2274 HD 1, which expands the State's existing electric vehicle charging requirements for parking lots in multi-unit buildings and workplaces and creates a point system for compliance.

Ulupono is supportive of a parking requirement that recognizes that faster charging stations provide better support to EV drivers and should therefore obtain more credit towards compliance than with the existing parking requirement law.

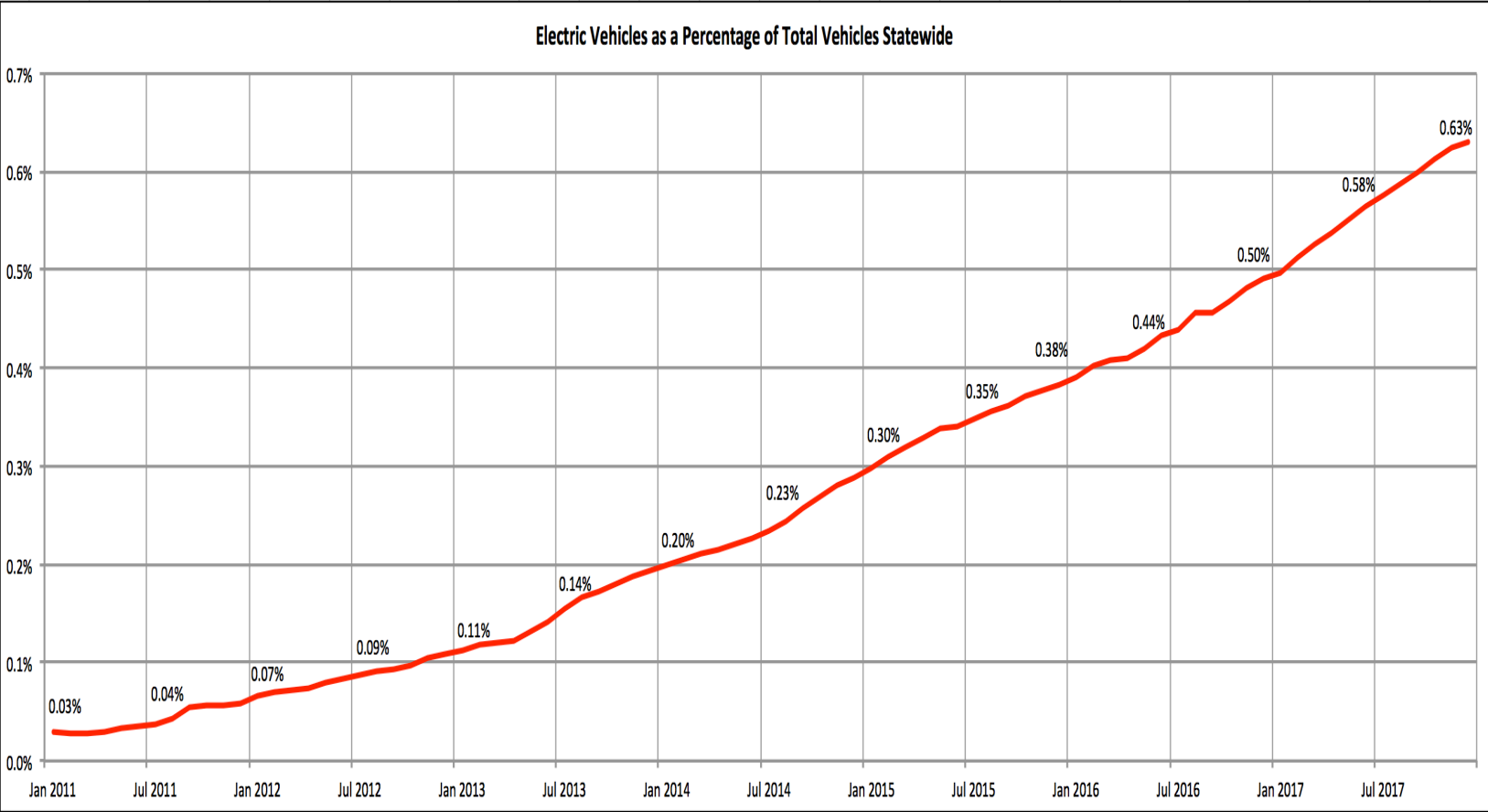
In Hawai'i, while ~25 percent of electricity generation is renewable energy, less than 1 percent of energy use in transportation is renewable. Meanwhile, the transportation sector requires more energy than the electricity sector. Furthermore, about 28 percent of the state's primary energy usage is due to ground transportation, such as cars and trucks, which rely almost exclusively on imported fossil fuels for its energy. Electrifying ground transportation is presently the most efficient and impactful way to move transportation toward more renewable energy.

Investing in a Sustainable Hawai'i



This bill would create greater demand for electric vehicle charging infrastructure, a precursor to making electric vehicle ownership more appealing by reducing range anxiety. More electric vehicle charging stations would have the additional benefit of providing the potential to add battery storage capacity and/or demand response capacity to the electric grid.

Hawai'i ranks second in the nation behind California in the number of electric vehicles registered as a percentage of vehicles. As of December 2017, electric vehicles represented 0.63 percent of all registered vehicles. In 2017, electric vehicle registrations increased by 31 percent while gasoline vehicle registration only increased by 1 percent. Electric vehicles are only going to grow in market share of vehicles and therefore this bill takes a reasonable proactive approach to support new technology.



Source: DBEDT Figures





Yet even as electric vehicle ownership is growing in Hawai'i, public electric vehicle charging infrastructure is not keeping up. In October 2015, there were 8.43 electric vehicles for every public level 2/3 charger in Hawai'i. Yet, in March 2017, there were 10.40 electric vehicles for every public level 2/3 charger in Hawai'i.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner



**TESTIMONY REGARDING HB 2274, HD1
Support with Amendments**

**being heard by the Senate Committee on Transportation and Energy
on Friday, March 16, 2018 at 1:20 p.m. in Room 225**

Aloha Chair Inouye, Vice Chair Espero and Members of the Committee:

Tesla supports HB 2274, HD1, and proposes several amendments described below to improve the bill's efficacy in achieving its intended aims.

HB 2274, HD1 recognizes that a significant barrier to greater adoption of electric vehicles (EVs) is the availability of charging locations. Particularly in localities where many prospective EV drivers do not live in single family detached housing, which lends itself to the deployment of dedicated EV charging infrastructure, there is an unambiguous need to support deployment in parking facilities, workplaces and multi-unit buildings to ensure potential EV drivers are confident that they will be able to conveniently recharge their vehicles. This bill would take an important step in supporting Hawaii's efforts to expand adoption of EVs by updating requirements for the minimum number of parking spaces that provide EV charging capabilities in publicly accessible parking facilities.

Tesla's mission is to accelerate the world's transition to sustainable energy through electric vehicles, including light duty and now heavy duty with the Tesla Semi, as well as through sustainable energy products. Tesla supports this legislation, but we recommend the Committee adopt the following amendments.

First, the bill should implement the requirement of three parking stalls per 100 spaces from the outset, rather than ramping the requirement over time. While ramping up the requirement may be premised on scaling EV charging infrastructure investments as a function of EV adoption, this approach overlooks the reality that the availability of charging infrastructure is a key driver of EV demand. In other words, if the State wishes to electrify the transportation sector, it should proactively invest in EV charging infrastructure, not wait for EV adoption to occur.

Second, the bill should be amended to clarify the type of charging capability that needs to be deployed to achieve compliance. Specifically, the bill should clarify that compliance requires the deployment of Level 2 charging capabilities, defined as charging infrastructure, including the charging unit itself (sometimes referred to as the "electric vehicle service equipment") that allows a vehicle to charge at 240 volts/40 amps.

Third, the compliance date should be moved forward to July 1, 2019. This will ensure the bill results in near-term charging availability, helping to drive EV adoption in the near term.

Fourth, Tesla observes that the building code should also be updated to help drive the deployment of EV charging infrastructure at scale. The lowest cost means of deploying EV charging infrastructure is at the time of facility construction rather than as a retrofit. A study conducted by Energy Solutions and



Northern California utility Pacific Gas & Electric Company prior to adopting building standard changes in San Francisco identified that installing EV infrastructure at the time of construction can be 64-75% less expensive than post-construction retrofits.¹ For this reason Tesla recommends modifying the State's building code to require some minimum level of EV charging infrastructure be deployed in all newly constructed or significantly renovated parking facilities serving multi-unit residential buildings, workplaces or commercial entities. For example, requiring the greater of one parking stall or 20% of all parking stalls in a facility be equipped with "EV-ready" infrastructure (which includes all of the wiring, conduit and breaker capacity necessary to charge an EV at 240 volts/40 amps, but excludes the charging port) would ensure that all newly constructed parking facilities are designed and built with EVs in mind.

Finally, the utilities have an important role to play in supporting investments in EV charging infrastructure. For example, in California the largest investor owned utilities are in process of implementing multi-year plans pursuant to legislation through which they are making significant investments in charging infrastructure to address the current gap in the amount of infrastructure necessary to both catalyze and support the Governor's goal of having 5 million EVs on the state's roads by 2030. Tesla encourages the Legislature, the Hawaii Public Utilities Commission and the state's utilities to consider establishing a similar program, for example, by establishing a goal of deploying sufficient EV charging infrastructure to support 250,000 EVs on Hawaii's roads by 2045. This would provide a basis to determine the level of investment in charging infrastructure needed to facilitate the State's interest in driving mass adoption of EVs to electrify the transportation sector and help achieve climate, clean transportation, and clean air goals.

Thank you for the opportunity to submit this testimony.

¹ Energy Solutions & Pacific Gas and Electric (November 2016), "Plug-in Electric Vehicle Infrastructure Cost-Effectiveness Report for San Francisco."



ORGANIZING *for* ACTION

To: The Senate Committee on Transportation and Energy
From: Brodie Lockard, OFA Hawaii Climate Lead, 808-262-1285
Date: Friday, 3/16/18

In strong support of HB 2274 HD1

Dear Chair Inouye, Vice Chair Espero and Committee members,

I am the Hawaii Climate Lead for Organizing for Action, a progressive group that played a lead in electing President Barack Obama twice. OFA Hawaii strongly supports HB 2274 HD1.

As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent [1]. We should be doing everything we can to increase that percentage.

As the number of (zero-emissions vehicles (ZEVs) 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.

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

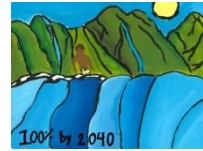
Please support HB 2274 HD1. It will help pave the way for our clean energy goals.

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 Climate Lead, Organizing for Action



SENATE COMMITTEE ON TRANSPORTATION

March 16, 2018, 1:20 P.M.

Room 225

(Testimony is 6 pages long)

TESTIMONY IN STRONG SUPPORT OF HB2274 HD1

Aloha Chair Inouye, Vice Chair Espero, and members of the Committee:

Blue Planet Foundation strongly supports House Bill (HB) 2274 HD1, which updates the language on the state's electric vehicle charging requirements and, beginning in 2021, expands the requirements to workplaces and multi-family residential properties with over 200 parking stalls. The bill also defines three different levels of charging equipment and creates a point system to give parking facilities the flexibility to meet the requirements with a variety of charging levels in order to best meet the needs of each facility.

Blue Planet Foundation is a local, mission-driven nonprofit committed to clearing the path for 100% clean energy in Hawaii and believes that electric vehicles (EVs), will play a pivotal role in helping to eliminate fossil fuel use for both the ground transportation and the electricity sector. EVs are better for the environment, can lower household transportation costs, and can help Hawaii's electric utilities achieve 100% renewable electricity while lowering household electric bills.

The volume and model types of battery electric vehicles coming onto the market are expected to dramatically increase in the next five to seven years due to falling costs and EV-supportive policies from nations around the world, particularly those of China, the world's largest vehicle market.

The longer driving ranges, lower costs, and larger selection of models will make it possible for many of Hawaii's residents to lower their carbon footprints and take advantage of the economic benefits that EVs offer. However, the availability and accessibility of charging facilities will likely become a significant barrier in coming years, particularly for those living in apartments and condominiums.

Over the past year, Blue Planet Foundation did an extensive study of the existing public charging network in the state and compliance with the state's existing charging requirements. We found that compliance with the requirements is low, around 25%, and that the public charging network is already under strain in some areas due to the growth in EVs sales. We anticipate that with the tremendous influx of new EVs coming onto the market in the next few years with lower prices and longer driving ranges, the current charging requirements will not be sufficient to accommodate the charging needs of the state, even if compliance levels were much higher.

House Bill 2274 aims to tackle this problem by increasing the charging requirements and extending them to workplace and multi-family residential properties, and by adding a compliance mechanism. At the same time, the bill differentiates between three levels of charging and allows for workplaces and multi-family properties to meet the requirements through level 1 charging equipment, which can dramatically reduce costs.

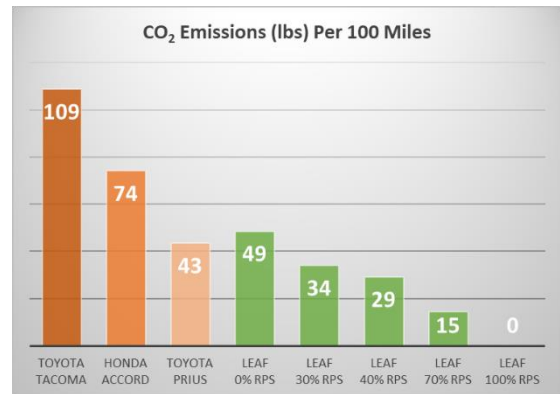
info@blueplanetfoundation.org

55 Merchant Street 17th Floor • Honolulu, Hawaii 96813 • 808-954-6142 • blueplanetfoundation.org

Environmental and Cost Benefits

Electric vehicles produce less carbon than conventional vehicles, even when the electricity used to power them comes from fossil fuels. And with the State’s 100% renewable portfolio standard, EVs will be carbon free by 2045.

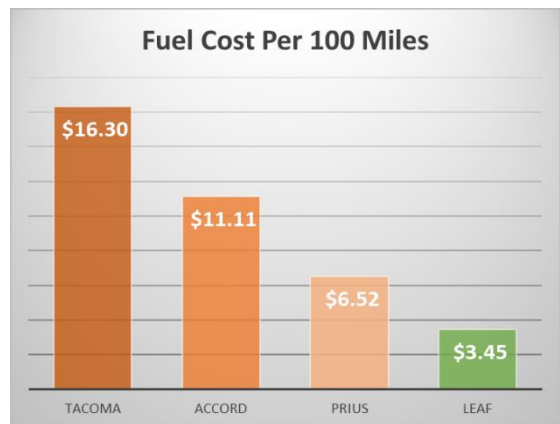
In addition to the environmental benefits, EVs also present a number of economic benefits to Hawaii residents. Due to lower fuel and maintenance costs, EVs tend to be significantly less expensive to operate than conventional vehicles.



Falling Prices and More Models

Battery costs have fallen precipitously over the past several years so that in many cases, the total cost of ownership for EVs is lower than for conventional vehicles.

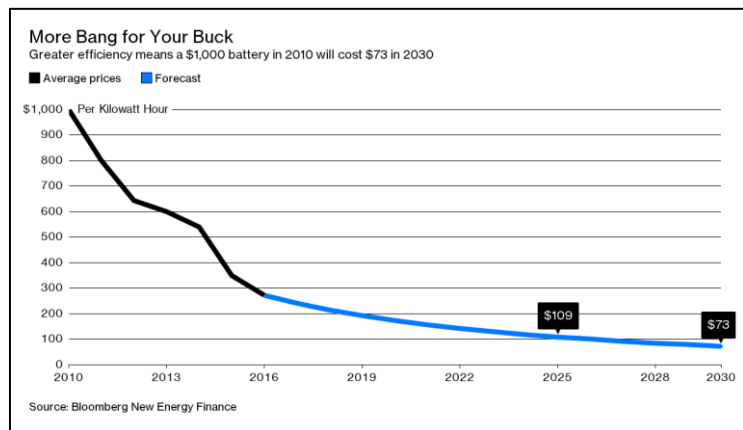
Experts expect battery prices to continue to fall and as automakers increase the number of models and volume of EVs in the next few years, the upfront cost of EVs is expected to reach upfront cost parity with conventional vehicles by 2025.¹



Assumes \$3.00 per gallon gasoline and HECO’s Residential Interim Time of Use Rates and charging during mid-day off peak period (\$0.128/kWh).

In part due to falling costs and increasing consumer demand, and in part due to government policies supporting EVs, **nearly all of the world’s leading automakers have announced aggressive strategies and investments in electric vehicles during the past year.**

Perhaps the biggest single factor contributing to this dramatic strategic shift towards electric is the fact that the world’s largest auto market, China, has announced that it is working on a policy that would ban internal combustion engine vehicles outright as soon as 2030.²



¹ Bloomberg New Energy Finance. <https://about.bnef.com/blog/electric-cars-reach-price-parity-2025/>

² The Economist. “China moves towards banning the internal combustion engine” <https://www.economist.com/news/business/21728980-its-government-developing-plan-phase-out-vehicles-powered-fossil-fuels-china-moves>

Major Automaker Commitments to EVs

Group	Brands	EV Plans/Commitments
Toyota	Toyota, Lexus, Daihatsu, Isuzu	10 all electric models by early 2020s. Investing \$13.3B on R&D for EVs and batteries by 2030.
Volkswagen	VW, Audi, Bentley, Bugatti, Lamborghini, Porsche	To spend up to \$84B to bring 300 EV models to market by 2030, hybrid or electric version of every model car they offer by 2030. 80 new electric vehicle models by 2025. \$40B from 2017-2022 (five years) to develop battery powered vehicles, autonomous-driving features, and ride-hailing systems
Hyundai	Hyundai, Kia	Eight EVs by 2022, dedicated EV platform.
General Motors	Buick, Cadillac, Chevy, GMC	Two new electric crossovers by mid 2019, 20 new electric models by end of 2022, 1 million units by 2026 GM "believes the future is all-electric"
Ford	Ford, Lincoln	\$11B investment, 40 electrified vehicles (16 full BEVs) by 2022.
Nissan	Nissan, Infinity	Partnering with Nissan to launch 12 ZEVs by 2022.
Honda	Honda, Acura	Two-thirds of all vehicles electrified by 2030.
Renault	Renault	Partnering with Nissan to launch 12 ZEVs by 2022.
Groupe PSA	Peugeot, Citroen, Opel	To offer an all-electric vehicle by 2019, four by 2021, and 3 new plug-in hybrids To offer 40 EV models by 2025, and plans to sell vehicles in the US within 10 years
Suzuki	Suzuki	Partnering with Toyota to produce small electric car for India by 2020.
SAIC	MG, Roewe	To invest 20 billion yuan in new energy vehicles, release more than 30 new models, and work to meet a sales target of 600,000 units by 2020.
Daimler	Mercedes-Benz, Smart	Electric versions of all models by 2022, Smart fully electric.
BMW	BMW, Rolls-Royce, Mini	To offer 25 electrified vehicles in its lineup by 2025, 12 of those fully electric—to have useable range of up to 435 miles.

Compliance with State Requirements

Frustration over the lack of information on the current and potential impacts of state charging requirement found in HRS §291-71 led to Blue Planet Foundation undertaking a study to assess compliance with the statute and evaluate the overall policy approach. Here are the basic findings of our study:

Low Compliance

As was expected based on the absence of enforcement mechanisms, our research found that compliance with HRS §291-71 is quite low, with just over 25.1% of the 752 obligated properties statewide complying with the statute.

Compliance with State Charging Requirements

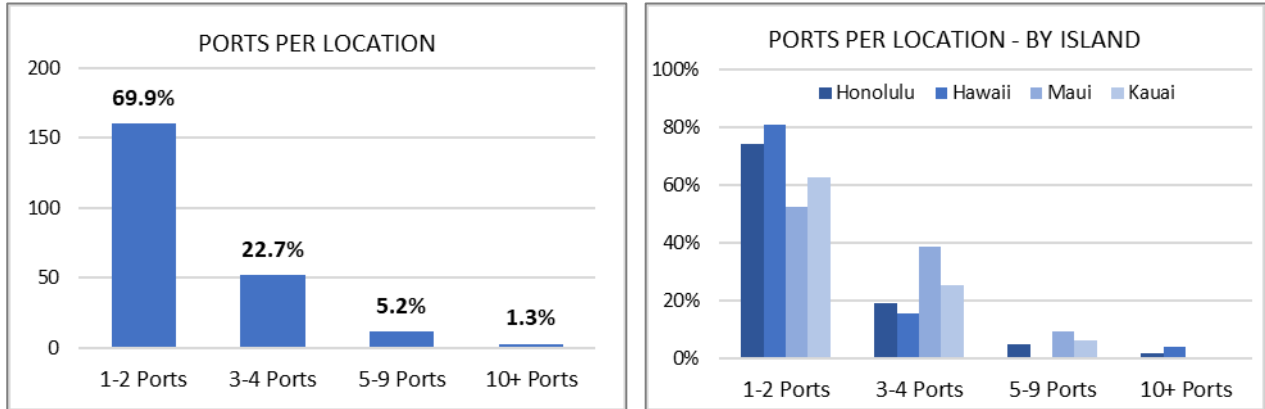
Island/County	Properties Obligated to Install EVSE		
	Obligated	Compliant	Compliance %
Honolulu	466	121	26.0%
Hawai'i	96	20	20.8%
Maui	134	34	25.4%
Kauai	56	14	25.0%
Total	752	189	25.1%

Charging Ports Spread Thin

An additional finding we uncovered during our research is that although the policy has led to the development of a fairly large number of charging ports, the deployment of those ports has been spread

very thinly over a large number of properties. Of the 229 locations identified as having public charging, 69.9% had only one or two ports and only 6.6% had five or more ports.

Charging Locations by No. of Ports - Statewide and by County



This thin deployment of charging ports makes the network less reliable than it would be if the same number of ports were deployed among fewer locations. One of the major weaknesses of the current statute is that it encourages a large number of charging locations with very few ports, and therefore encourages a public charging network that is not as reliable as it could be.

Conclusion

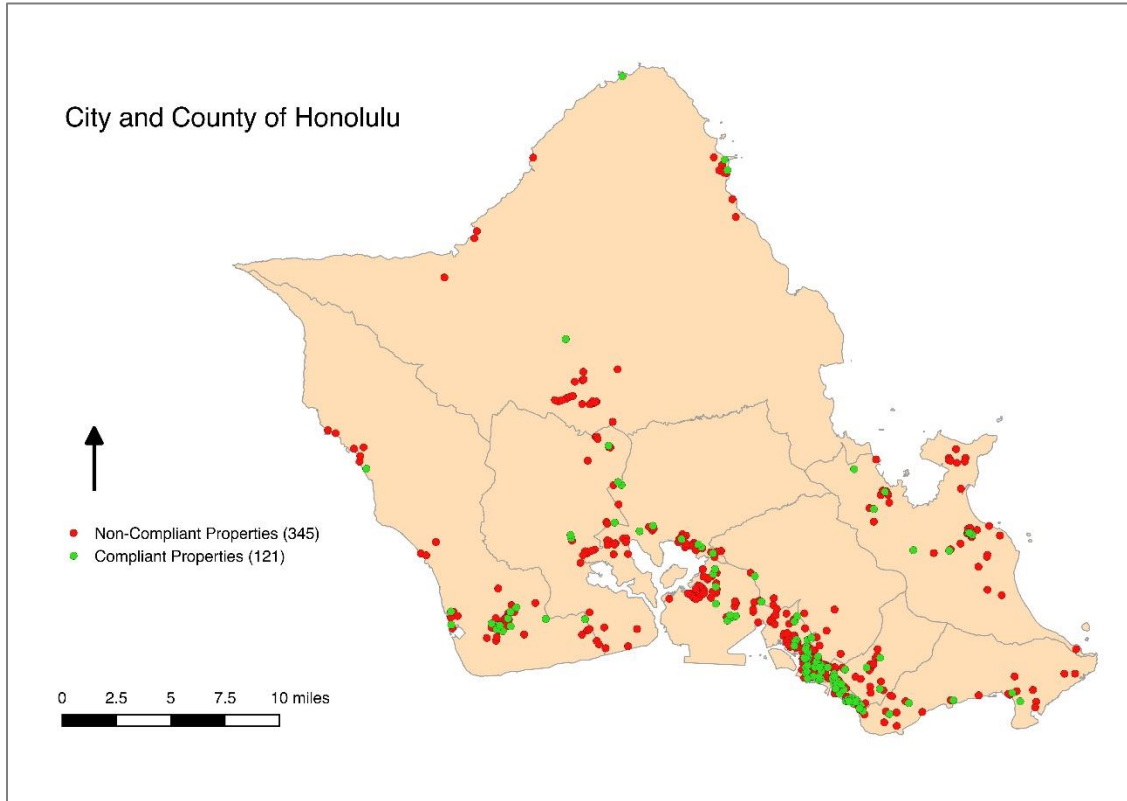
Electric vehicles are better for the environment and the economy, and can help Hawaii’s electric utilities achieve 100% renewable electricity. Hawaii’s public charging network is already under strain in many areas due to the increase in EV registrations. The large influx of new EVs coming onto the market in the next few years with lower prices and longer ranges mean that access to public charging could severely limit the number of Hawaii residents who will be able to take advantage of the environmental benefits and lower ownership costs of those vehicles.

We believe that this bill will help to expand the supply and reliability of public charging facilities and thereby expedite the uptake of EVs, thereby lowering Hawaii’s environmental footprint and household transportation costs.

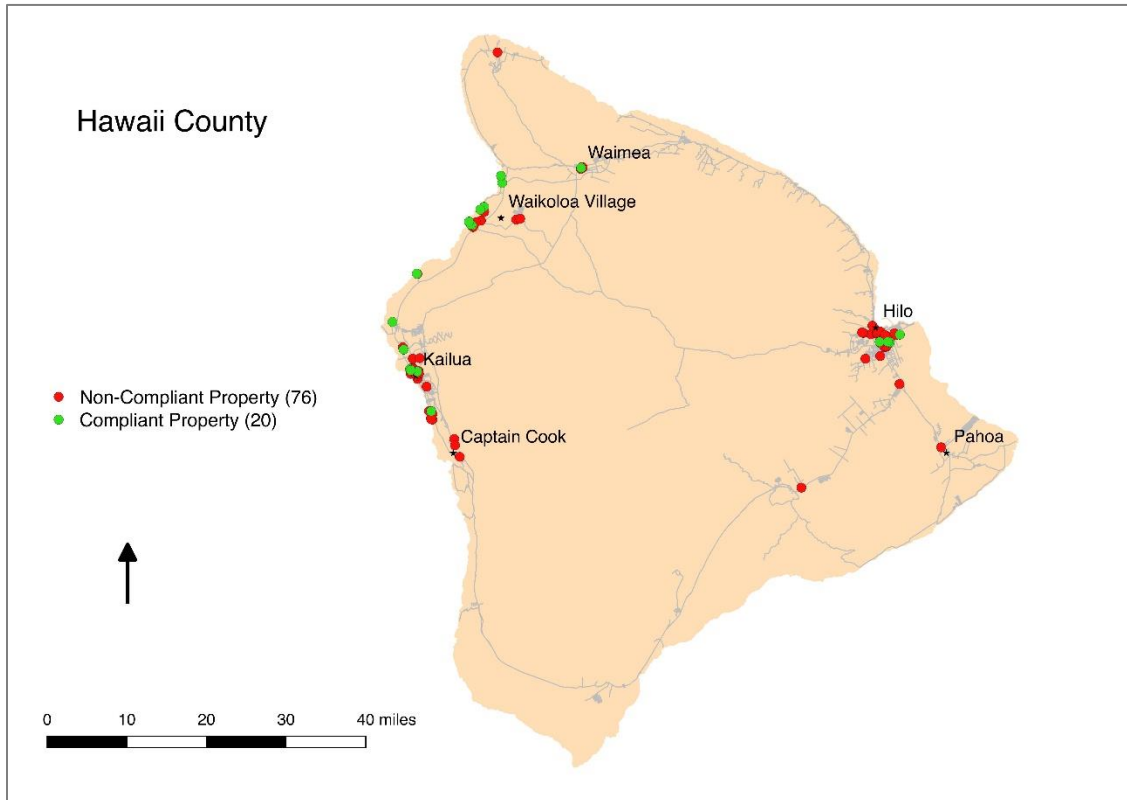
Thank you for the opportunity to testify.

The following two pages include maps showing compliance with state electric vehicle charging requirements on Oahu, the Big Island, Maui, and Kauai.

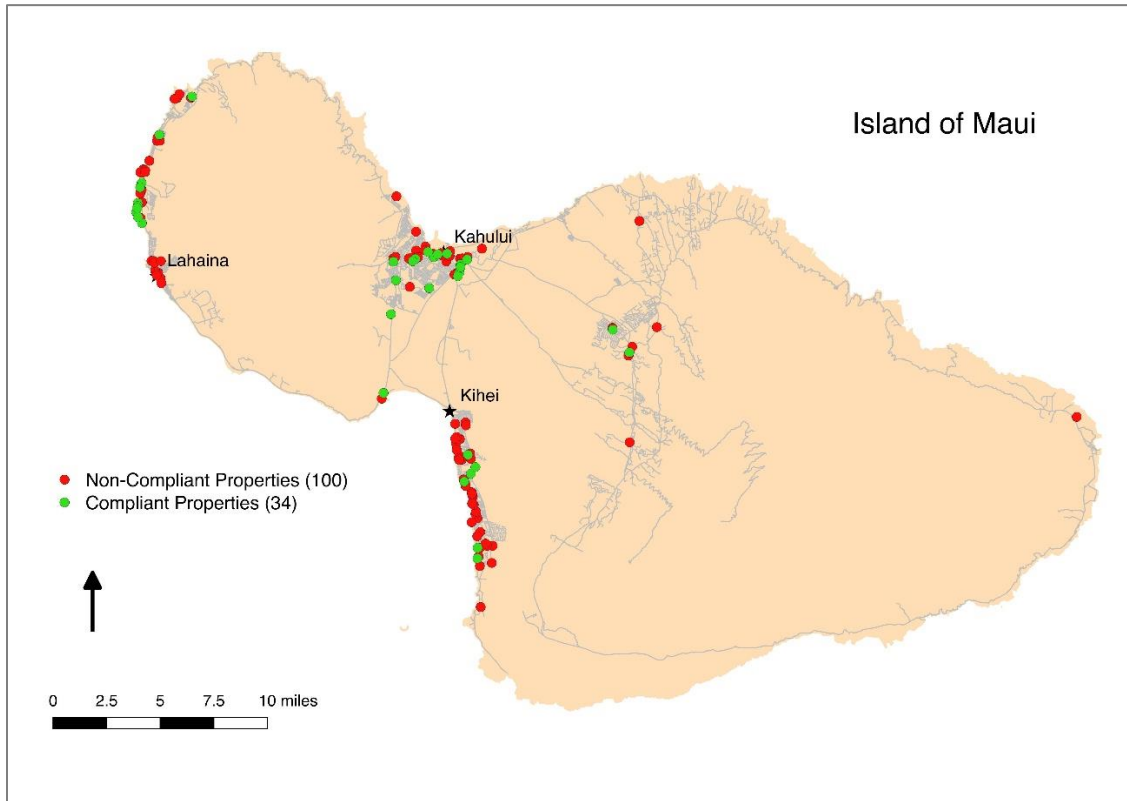
City and County of Honolulu – Charging Requirements Compliance Map



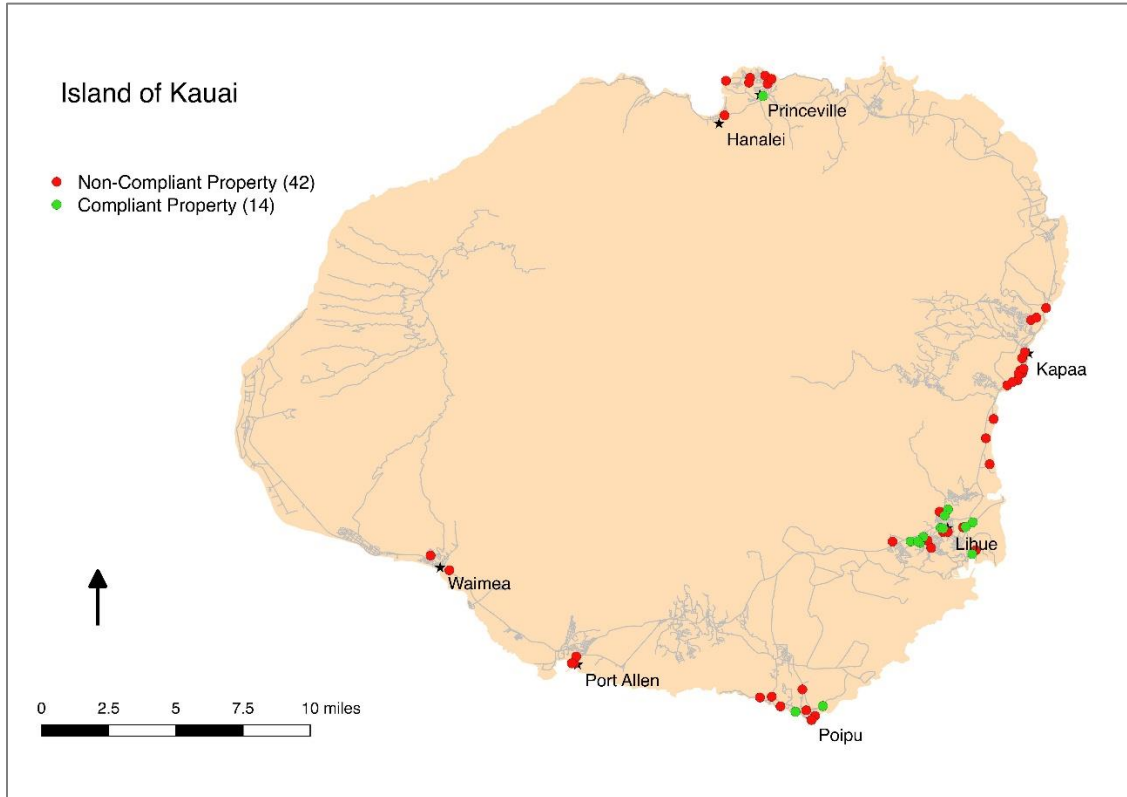
Hawaii County – Charging Requirements Compliance Map



Island of Maui – Charging Requirements Compliance Map



Island of Kauai – Charging Requirements Compliance Map





To: The Senate Committee on Transportation and Energy
From: Sherry Pollack, 350Hawaii.org
Date: Friday, 3/16/18

In strong support of HB 2274 HD1

Dear Chair Inouye, Vice Chair Espero and Committee members,

I am Vice President of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org strongly supports HB 2274 HD1.

As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent [1]. We should be doing everything we can to increase that percentage.

As the number of zero-emissions vehicles (ZEVs) 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.

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

Please support HB 2274 HD1. It will help pave the way for our clean energy goals.

Thank you for the opportunity to testify.

Sherry Pollack
Vice President, 350Hawaii.org

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

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

HB-2274-HD-1

Submitted on: 3/14/2018 10:24:34 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Graham	Testifying for 350.org	Support	No

Comments:

Thank you for allowing public comment. I support this bill. As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent. We should be doing everything we can to increase that percentage.

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

HB-2274-HD-1

Submitted on: 3/15/2018 2:13:58 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for OCC Legislative Priorities Committee, Democratic Party of Hawai'i	Support	No

Comments:

Good afternoon, my name is Melodie Aduja. I serve as Chair of the Oahu County Committee ("OCC") Legislative Priorities Committee of the Democratic Party of Hawaii. Thank you for the opportunity to provide written testimony on **HB2274 HD1** relating to DOT; Parking Facilities; Electric Vehicles; and Charging Infrastructures.

The OCC Legislative Priorities Committee is in favor of **HB2274 HD1** and supports its passage as it incentivizes greater use of electric vehicles by providing parking facilities and charging infrastructures for such vehicles.

HB2274 HD1 is in accord with the Platform of the Democratic Party of Hawai'i ("DPH"), 2016, as it expands the State's existing electric vehicle charging requirements to include public parking lots; creates a ratio to calculate the total number of electric vehicle parking stalls a parking facility with more than 100 stalls must have beginning 7/1/2021; allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements; and establishes a working group to address the installation of electric vehicle supply equipment at apartments, condominiums, cooperative housing corporations, and planned community associations.

The DPH Platform states that the "Democratic Party of Hawai'i believes that the preservation and restoration of our natural environment are essential. We support a sustainable society that utilizes the Earth in such a way that future generations will benefit from the practices of our generation. We support the restoration, preservation, and protection of our native ecosystems on each island. We believe in integrated approaches, practices, and support public policies that create and maintain a sustainable way of life in Hawai'i.

We believe in supporting best management practices in sustaining our environment and in increased citizen involvement. We support programs that encourage sustainable clean, efficient, creative and environmentally-friendly modes of transportation recycling and waste reduction.

The conservation, preservation, and restoration of Hawai'i's natural resources are connected to the health and welfare of our people; therefore, we support the conservation and protection of our natural environment, which includes reducing our carbon footprint for the benefit of current and future generations. (Platform of the DPH, P. 8, Lines 407- 420 (2016)).

We support energy independence, self-sufficiency, affordability and reliability for

Hawai'i through the development of renewable alternative energy sources. Specifically, we need to support policies that foster the development of energy production methods that de-emphasizes carbon-based fuels and promote renewable sources such as wind, solar, wave, geothermal and Ocean Thermal Energy Conversion (OTEC). (Platform of the DPH, P. 9, Lines 452-456 (2016)).

We endorse efforts to promote less reliance on the automobile by employing private and public use of alternative modes of travel. We encourage efforts to provide better vehicle and pedestrian safety. In particular, we support initiatives that will provide our state with more fuel-efficient vehicles, affordable mass transit, and well-identified bike lanes. (Platform of the DPH, P. 9, Lines 473-476 (2016)).

Given that **HB2274 HD1** expands the State's existing electric vehicle charging requirements to include public parking lots; creates a ratio to calculate the total number of electric vehicle parking stalls a parking facility with more than 100 stalls must have beginning 7/1/2021; allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements; and establishes a working group to address the installation of electric vehicle supply equipment at apartments, condominiums, cooperative housing corporations, and planned community associations, it is the position of the OCC Legislative Priorities Committee to support this measure.

Thank you very much for your kind consideration.

Sincerely yours,

/s/ Melodie Aduja

Melodie Aduja, Chair, OCC Legislative Priorities Committee

Email: legislativepriorities@gmail.com, Text/Tel.: (808) 258-8889



**TESTIMONY OF TINA YAMAKI
PRESIDENT
RETAIL MERCHANTS OF HAWAII
March 16, 2018**

Re: HB 2274 HD1 Relating to Electric Vehicle Charging Infrastructure

Good afternoon Chairperson Inouye and members of the Senate Committee on Transportation and Energy. 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.

Retailers continue to be concerned about our aina and have supported many initiatives that preserve and protect our environment. However, The Retail Merchants of Hawaii does not support HB 2274 HD1 Relating to Electric Vehicle Charging Infrastructure. This bill would increase the number of charging stations and parking spaces designated specifically for electric vehicles.

We believe that the market and customers should be the influencers in business trends and operations and not government mandates. Taking away more open public parking stalls and turning them into reserved EV stalls would hurt businesses, especially on weekends when many go to the malls and stores to shop and turn away when they can't find a stall. Retailers and shopping malls already provide these "reserved parking spaces" and some with a FREE charging station for electric vehicles. These stalls for EV will come at a cost to businesses for the installation, upkeep and electricity. It is not that easy sometimes to install when there is electricity that needs to be pulled in.

Many of our members have found EV drivers in the surrounding neighborhood and condominiums come to plug into the retailers charging stations to avoid increasing their electric bill at home or because their complex does not have the ability to charge the EV. Furthermore, these residents leave their cars charging AND are not shopping in the stores while their batteries are being recharged. Thus these residents are taking away the EV stall from customers coming to shop. And the money that is spent in the stores in turn supports our family, friends and neighbors who work in the stores.

We would also like to point out that with the advancement of technology, the newer model Electric Vehicles can travel further distances. There are also other cars being developed that uses alternatives to traditional gas-powered car like that of hydrogen fuel cell. We are concerned that government will begin to mandate "reserved parking stalls" for all of the various types alternative gas powered vehicles and that businesses with large parking lots would just become a reserved parking charging station for the public and not able to offer convenient parking for the customers that actually shop in the stores.

Government mandates like this does drive up the cost of doing business that in turn drives up the cost of living in Hawaii. We urge you not to impose another government mandate on business and ask that you hold this measure.

Mahalo for this opportunity to testify.



**Testimony to the Senate Committee on Transportation & Energy
Friday, March 16, 2018
1:20 pm
State Capitol, Room 225**

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P 808.847.4666
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E INFO@BIAHAWAII.ORG
WWW.BIAHAWAII.ORG

RE: HB 2274 HD2 – Relating to Electric Vehicle Charging Infrastructure

Chair Inouye, Vice-Chair Espero, & 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.

BIA-HAWAII is in strong opposition to H.B. 2274, HD 1, which proposes to expand the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces. Beginning July 1, 2021, a parking facility with more than one hundred total public parking spaces shall be required to achieve **two** electric vehicle supply equipment for every one hundred public parking spaces. Beginning July 1, 2024, a parking facility with more than one hundred total parking spaces shall be required to achieve **three** electric vehicle supply equipment for every one hundred public parking spaces. This bill also allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements.

BIA Hawaii has consistently opposed "unfunded government mandates" such as what is being proposed in this bill. The proposed bill mandates that for all parking lots with 100 stalls or more, the number of stalls required to accommodate electric vehicles will double from the current requirement of one (1) in July of 2021 and triple in July of 2024. The cost to restripe and install the necessary equipment for charging electric vehicles is to be borne by the owner/operator of the parking lot.

Rather than providing incentives for parking lot owners/operators to install more electric vehicle stalls and charging equipment, as is the case in most instances, the Legislature arbitrarily "mandates" compliance.

We are in strong opposition to H.B. 2274, HD 1, and appreciate the opportunity to express our views on this matter.





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Web site: www.hcul.org
Email: info@hcul.org



Testimony to the Senate Committee on Transportation and Energy
Friday, March 16, 2018, 1:20 pm
State Capitol, Room 225

Testimony on Opposition to HB 2274 – Relating to Electric Charging Infrastructure

To: The Honorable Lorraine Inouye Chair
The Honorable Will Espero, Vice-Chair
Members of the Committee

My name is Stefanie Sakamoto, and I am testifying on behalf of the Hawaii Credit Union League, the local trade association for 57 Hawaii credit unions, representing over 800,000 credit union members across the state.

We are in opposition to HB 2274 HD1, Relating to Electric Charging Infrastructure. This bill would the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces. Beginning July 1, 2021, a parking facility with more than one hundred total public parking spaces shall be required to provide **two** electric vehicle supply devices for every one hundred public parking spaces. Beginning July 1, 2024, a parking facility with more than one hundred total parking spaces shall be required to provide **three** electric vehicle supply devices for every one hundred public parking spaces. This bill also allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements.

Current law states that parking lot owners/operators must provide 1 electric vehicle charging device per 100 parking stalls. While we understand the desire to provide more charging stations and dedicated parking stalls for electric vehicles to promote “green” transportation, this cost is completely borne by the business owner. The cost of the device itself, along with painting and re-configuration of parking stalls, and the possible loss of parking stalls for employees, tenants, and customers is completely the responsibility of the owner, with no incentive; only penalty for non-compliance. This bill represents a further increase in the cost of doing business in Hawaii. Further, with the cost of living in Hawaii already being so high, most people cannot afford to switch to an electric vehicle to benefit from this proposed law.

Thank you for the opportunity to testify.





“Advancing the Commercial Property Management Industry through Education, Networking and Advocacy”

Testimony to the
Senate Committee on Transportation and Energy
March 16, 2018
1:20 p.m.
State Capitol - Conference Room 225



RE: HB 2274, HD1, Relating to Electric Vehicle Charging Infrastructure

Aloha Chair Inouye, Vice Chair Espero and members of the committee:

We are testifying on behalf of the Building Owners and Managers Association of Hawaii. BOMA Hawaii supports energy efficient alternatives in transportation but opposes inflexibility in regulations.

We strongly oppose this measure as written.

It has been estimated that more than 100,000 electric vehicles are now on the road in the United States, and this is only expected to grow. As plug-in cars have become more visible on the nation’s highways and local streets, there has also been a corresponding need for electric vehicle charging stations. This emerging need is creating a marketplace demand. Many building owners have installed EV charging stations and have successfully used it as a profit center as well as an amenity to attract new business and/or new tenants. Others are reluctant to take on the cost (installation cost, lost revenue from lost parking spaces, etc.), ongoing maintenance and management responsibilities, and liability. Where building owners are able to balance the benefits and potential draw backs, and where it makes economic sense, property owners will move forward to meet the need, without federal, state or local mandates. We have consistently requested to be a part of the dialogue concerning EV legislation and the impacts of EV parking mandates on the community and economy.

This bill will require three electrical vehicle parking stalls per 100 stalls by 2024. It is impracticable, infeasible and overly burdensome to accomplish within the amount of time provided. The provision to allow for exemption due to costs is inadequate. Please do not advance this measure.

Thank you for the opportunity to testify.

Testimony before the State of Hawaii House of Representatives
Twenty-Ninth State Legislature
RE: H.B. No. 2274
(written statement)

by Arcady Sosinov
Chief Executive Officer
FreeWire Technologies



Honorable Speaker Saiki and Distinguished Members of the House, thank you for the opportunity to provide this testimony on H.B. No. 2274. My name is Arcady Sosinov, and I serve as CEO of FreeWire Technologies, a California-based technology company whose mobile energy storage units deliver electric vehicle charging. I appreciate the House's interest in expanding electric vehicle charging capacity in Hawaii.

Although the proposed requirements in H.B. No. 2274 will support the goal of increasing electric vehicle charging equipment at more facilities, the current language limits the solution scope to fixed charging infrastructure at dedicated parking spaces. I propose that two paths be outlined for the charging needs of Hawaii's electric vehicles. To allow for innovations in technology and service models, H.B. No. 2274 should provide an additional option to meet the legislation's intent: parking facilities can supply a mobile electric vehicle charging service that provides an equivalent level of charging capacity for the site as required per one hundred total parking spaces. Compliance could be measured and verified through a facility service contract that can execute charging services for the same required number of cars per one hundred parking spaces as the current proposed H.B. No. 2274 within a guaranteed three hours.

Allowing for a mobile electric vehicle charging service within the requirements has a range of benefits for the state of Hawaii. Mobile electric vehicle charging services are a more flexible option for facilities to comply with H.B. No. 2274; charging can be sized and adjusted based on demand, without the costs of permitting, constructing and installing new equipment. Mobile electric vehicle charging without dedicated parking spaces also promotes better utilization of existing parking infrastructure and less frustration for drivers and facility managers. Particularly for multi-unit dwellings (MUDs), a service would allow MUDs—like the new buildings rising up in Honolulu—to pool their efforts and offer electric vehicle charging services amongst a group of neighboring MUDS without building fixed infrastructure.

For the Hawaiian grid, mobile electric vehicle charging powered by energy storage is a flexible resource to absorb excess renewable energy when needed (e.g., afternoon solar surges). This compliance path for H.B. No. 2274 would complement Hawaii's clean energy mandate.

Mobile electric vehicle charging services are already being successfully deployed at workplaces, fleets and other facilities in the U.S. To share additional insight on electric vehicle charging infrastructure technology and implementation, I request that a representative from an electric vehicle charging services company serve on the working group for H.B. No. 2274. Thank you again for the opportunity to offer testimony on this important bill.

HB-2274-HD-1

Submitted on: 3/14/2018 2:31:39 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent. We should be doing everything we can to increase that percentage.

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

HB-2274-HD-1

Submitted on: 3/14/2018 4:14:53 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Patricia Blair	Individual	Support	Yes

Comments:

HB-2274-HD-1

Submitted on: 3/14/2018 9:09:43 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Meredith Buck	Individual	Support	No

Comments:

I support bill HB2274 HD1.

As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent. We should be doing everything we can to increase that percentage.

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

HB-2274-HD-1

Submitted on: 3/14/2018 10:00:12 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Fujita	Individual	Support	No

Comments:

HB-2274-HD-1

Submitted on: 3/14/2018 11:18:44 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Josephine	Individual	Support	No

Comments:

HB-2274-HD-1

Submitted on: 3/14/2018 11:33:11 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Craig	Individual	Support	No

Comments:

HB-2274-HD-1

Submitted on: 3/14/2018 2:10:48 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Samuel John	Individual	Support	No

Comments:

I support this initiative to facilitate, ease and promote the use of ZEVs which help to reduce greenhouse gas emissions.

HB-2274-HD-1

Submitted on: 3/14/2018 3:01:54 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Support	No

Comments:

Hi:

The transportation sector uses almost two-thirds of all petroleum consumed in Hawaii. This bill will help reduce Hawaii's greenhouse gas emissions by making parking and charging Zero Emission Vehicles a non-issue. For these reasons, I strongly support HB2274 HD1.

Thanks for your attention

Severine

Hawaii Kai

HB-2274-HD-1

Submitted on: 3/14/2018 3:56:04 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lucia You	Individual	Support	No

Comments:

HB-2274-HD-1

Submitted on: 3/14/2018 5:36:40 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
tia pearson	Individual	Support	No

Comments:

I support expanding existing electric vehicle charging requirements

HB-2274-HD-1

Submitted on: 3/14/2018 7:34:29 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joan Gannon	Individual	Support	No

Comments:

To: TRE and ETT Committees meeting on 3/16/18 at 1:20pm in room 225

Re: HB 2274 please pass this bill. It expands the state's electric vehicle charging requirements. This again holds down the climate change we are experiencing.

Thank you for your consideration

Joan Gannon Democrat, resident Hawaii Island and snorkeler

HB-2274-HD-1

Submitted on: 3/15/2018 10:14:49 AM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sarah Toole	Individual	Support	No

Comments:

My name is Sarah Toole, my address is 1128 Ala Napunani St. 96818, and I am a political science student at UH Manoa.

I support this bill.

HB-2274-HD-1

Submitted on: 3/15/2018 1:35:55 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Taurie Kinoshita	Individual	Support	No

Comments:

As of January 2018 there were 6,748 passenger electric vehicles in the state, out of 1,062,518 total registered passenger vehicles, or an anemic 0.64 percent. We should be doing everything we can to increase that percentage. The transportation sector uses almost two-thirds of all petroleum consumed in Hawaii. This bill will help reduce Hawaii's greenhouse gas emissions by making parking and charging ZEVs a non-issue. Thank you for your consideration.

HB-2274-HD-1

Submitted on: 3/15/2018 4:30:30 PM

Testimony for TRE on 3/16/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Laura Gray	Individual	Support	No

Comments:

We need LOTS of fast charging stations all over the island.



HB-2274-HD-1

Submitted on: 3/15/2018 6:54:36 PM

Testimony for TRE on 3/16/2018 1:20:00 PM



Submitted By	Organization	Testifier Position	Present at Hearing
tlaloc tokuda	Individual	Support	No

Comments:

I belong to 350HI and we try to assist policy makers to create bills that promote renewables, keep fossil fuels in the ground and try to make State Funds join the divestment movement so we support the following:

Technological development and R&D in PV, Wind generation, battery storage and driving prices down so that wind and PV are competitive with coal without all the environmental, social, health, poverty externalities. So we should try and implement the United Nations' Global Goals. 7. Hawaii is well placed to use these and other (OTEC, Geothermal & market mechanisms to transition to a 100% renewable future.

Several European countries have mandated that only electric vehicles will be on their streets in the near future. E-vehicles are on the rise and this legislation provides the stick to make parking lot owners provide charging stations for E-vehicles.

HB2274 HD1 expands the State's existing electric vehicle charging requirements to include parking lots for multi-unit buildings and workplaces. Creates a ratio to calculate the total number of electric vehicle parking stalls a parking facility with more than 200 stalls must have beginning 7/1/2021. Allows the director of transportation to fine properties not in compliance with the electric vehicle parking requirements. Effective 7/1/2020. (HB2274 HD1)