

DAVID Y. IGE
GOVERNOR



TESTIMONY BY:

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

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

February 8, 2019
2:00 p.m.
State Capitol, Room 225



S.B. 653
RELATING TO ELECTRIC VEHICLES.

Senate Committee(s) on Transportation
& Energy, Economic Development and Tourism

The Department of Transportation (DOT) **supports** the intent of this bill to require that the infrastructure of new state or county building construction include an allocation of parking stalls for electric vehicle charging stations.

While the bill does not require the allocation of parking stalls to be dedicated to electric vehicles upon being made electric vehicle charger ready. The DOT supports the electrification of transportation and is compliant to §291-71 in designating parking spaces and charging systems for electric vehicles.

Thank you for the opportunity to provide testimony.



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

DAVID Y. IGE
GOVERNOR

MIKE MCCARTNEY
DIRECTOR

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Statement of
MIKE MCCARTNEY
Director
Department of Business, Economic Development, and Tourism
before the
**SENATE COMMITTEE ON TRANSPORTATION
AND
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT & TOURISM**

Friday, February 8, 2019
2:00 PM
State Capitol, Conference Room #225

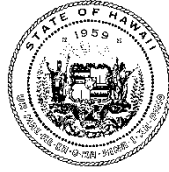
In consideration of
SB 653
RELATING TO ELECTRIC VEHICLES.

Chairs Inouye and Wakai, Vice Chairs Harimoto and Taniguchi, and Members of the Committees. The Department of Business, Economic Development, and Tourism (DBEDT) offers the following **comments** on bill SB 653 that requires certain new state building construction and county building construction projects to have at least twenty parking stalls that are electric vehicle (EV) charger ready and requires that all new state building construction and county building construction have at least two electric vehicle charger ready parking stalls.

DBEDT recognizes that EV charger-ready building codes can support the installation of charging stations. DBEDT understands discussions pertaining to EV charger readiness in state and county construction have been occurring within the State Building Code Council (SBCC) and DBEDT recommends that these SBCC discussions be allowed to continue to develop.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR



CURT T. OTAGURO
Comptroller
AUDREY HIDANO
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

TESTIMONY
OF
CURT T. OTAGURO, COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
TO THE
SENATE COMMITTEES
ON
TRANSPORTATION/ENERGY ECONOMIC DEVELOPMENT AND TOURISM
ON
FEBRUARY 8, 2019, 2:00 P.M.
CONFERENCE ROOM 225, STATE CAPITOL

S.B 653
RELATING TO ELECTRIC VEHICLES

Chairs Inouye and Wakai, Vice Chairs Harimoto and Taniguchi, and Members of the Committees, thank you for the opportunity to submit testimony on S.B. 653.

The Department of Accounting and General Services (DAGS) appreciates the intent of the measure to revise Section 107-25, Hawaii Revised Statutes, to require infrastructure for electrical vehicle (EV) charging stations for new state or county buildings but is concerned with execution of some requirements as stated in the language of the bill.

1. Section 3 (b) requires at least twenty or more EV charger ready parking stalls be provided for new construction or significant reconstruction altering an existing structure such that the overall square footage changes by the lesser of twenty-five percent or seven thousand five hundred square feet, within a new state or county building's parking structure. It further states that in no case shall the number of parking stalls that are EV charger ready at a new state or county building construction project be less than two. The requirement for twenty or more EV charger ready parking stalls but not less than two is contradictory. The minimum number of EV charger ready parking stalls would be better defined by a percentage of the total number of parking stalls in the parking structure similar to current proposed bills for EV charger requirements of new multi-family dwelling and commercial parking areas. Using

percentage for the minimum number of EV charger ready stalls would better align with differing sizes of parking facilities.

2. Section 3 (b) defines “electric vehicle ready” as having sufficient wire, conduit, electrical vehicle charger capable of providing a minimum of 208- or 240- volt branch circuit. The definition should also include sufficient capacity of the electrical service and distribution systems as the bill will affect significant reconstruction and renovation projects of existing facilities.

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

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

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KIRK CALDWELL
MAYOR



ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

February 7, 2019

The Honorable Lorraine R. Inouye, Chair
The Honorable Breene Harimoto, Vice Chair
and Members of the Committee on Transportation

The Honorable Glenn Wakai, Chair
The Honorable Brian T. Taniguchi, Vice Chair
and Members of the Committee on Energy, Economic Development, and Tourism
The Senate
State Capitol, Room 225
415 South Beretania Street
Honolulu, Hawaii 96813

Dear Chairs Inouye and Wakai, Vice Chairs Harimoto and Taniguchi, and Members:

SUBJECT: Senate Bill No. 653
Relating to Electric Vehicles

The Department of Design and Construction (DDC) respectfully provides the following comments on Senate Bill No. 653, the purpose of which is to "...require that the infrastructure of new state or county building construction include an allocation of parking stalls for electric vehicle charging stations."

DDC supports the intent of the bill; however, in its present form there are several statements in the bill that need further clarification and consideration, as follows:

- Section 3 (b) states that the affected buildings shall, "...have at least twenty or more parking stalls that are electric vehicle charger ready within a new state or county building's parking structure; provided that this subsection shall not apply to renovations or retrofits that do not change the overall square footage by less than twenty-five per cent or seven thousand five hundred square feet;..." This statement implies that a new parking structure for at least 20 EVs needs to be built for any new building or renovation meeting the

The Honorable Lorraine R. Inouye, Chair
and Members
The Honorable Glenn Wakai, Chair
and Members
February 7, 2019
Page 2

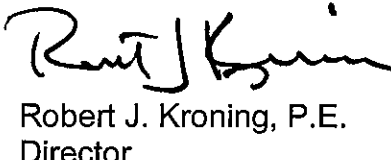
stated criteria, which appear to be overly broad. For example, it appears that a new comfort station or a new storage building, no matter how small, would trigger the requirement.

- Section 3 (b) states that the affected buildings shall, "...have at least twenty or more parking stalls that are electric vehicle charger ready within a new state or county building's parking structure; provided that this subsection shall not apply to renovations or retrofits that do not change the overall square footage by less than twenty-five per cent or seven thousand five hundred square feet;..." and goes on to state that, "In no case shall the number of parking stalls that are electric vehicle charger ready at a new state or county building construction project be less than two." The second statement appears to be incongruous with the first.
- Section 5 states that, "This Act shall take effect upon its approval." This could result in adoption of a building code containing the new requirements shortly after enactment of the bill. Design of new buildings can be a lengthy process, and a design nearing completion for building permit submittal would need to be redesigned to comply with the proposed requirements. This would result in unbudgeted costs and project delays. A more practical approach would be to delay building code implementation of the requirements by several years so the requirements could be incorporated into building projects in the preliminary design phases to avoid project delays and cost overruns.

Based on the above considerations, DDC recommends the bill be amended to address the issues raised in this letter.

Thank you for the opportunity to provide our comments on this bill.

Very truly yours,


Robert J. Kroning, P.E.
Director



ChargePoint, Inc.

254 East Hacienda Avenue | Campbell, CA 95008 USA
+1.408.841.4500 or US toll-free +1.877.370.3802

Before the Senate Committee on Transportation

February 6, 2019

SB 653: Relating to Electric Vehicles

Aloha Chair Inouye, Vice Chair Harimoto, and members of the Committee,

On behalf of ChargePoint, Inc. (ChargePoint), I would like to testify in support for SB 653. The bill would require certain new state and municipal to have a minimum number of "EV-ready" parking stalls capable of supporting the installation of electric vehicle charging equipment.

ChargePoint is the world's largest and most open electric vehicle ("EV") charging network with more than 60,000 Level 2 EV and DC fast charging spots around the country, including over 360 public and private ports in Hawaii. ChargePoint's customers include major employers, municipalities, universities, utilities, real estate developers and parking garage facility owners and operators that provide EV charging and related services to EV drivers. ChargePoint customers in Hawaii include the Aulani Disney Resort, the City and County of Honolulu, the University of Hawaii, Target, BMW of Hawaii, Kapolei Lofts, Maui Ocean Club, Maui Electric, and many more. Every 2 seconds, a driver connects to a ChargePoint station, and drivers on the ChargePoint network have driven over 1.2 billion gas-free miles.

SB 653 takes a critical step in helping to reduce the upfront cost of installing electric vehicle charging equipment by ensuring that parking stalls at these state and municipal facilities can take advantage of the significantly lower cost of deploying the electrical infrastructure necessary for EV charging at the time of construction. This can lead to as much as a 70% cost savings per project when installing EV charging equipment in parking stall that are EV-ready. ChargePoint supports this legislation and respectfully asks for your Aye vote.

Thank you for the opportunity to provide this testimony.

Anthony Harrison
Director of Public Policy
ChargePoint, Inc.

SB-653

Submitted on: 2/7/2019 12:51:02 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Paxton Jerry	Testifying for Tesla	Support	No

Comments:



TESLA'S TESTIMONY REGARDING SB 653

**being heard by the Senate Committees on Transportation and
Energy, Economic Development, and Tourism
on Friday, February 8, 2019 at 2:00 p.m.
Room 225**

Aloha Chairs Inouye and Wakai and Members of the Committees:

Thank you for the opportunity to provide testimony regarding SB 653, which would require certain new state and county buildings to include minimum levels of electric vehicle charging infrastructure. Tesla supports policies that seek to expand access to EV charging infrastructure, recognizing the fundamental role it plays in driving EV adoption. By focusing on the deployment of EV infrastructure during initial construction, this measure recognizes the importance of “future proofing” the built environment to accommodate vehicle electrification, itself an important component of an overarching set of policies that are critical to Hawaii’s efforts to eliminate its reliance on fossil fuels. **Although, Tesla supports the intent of this measure, we believe a number of amendments are needed to improve the bill’s overall effectiveness.**

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 realistically, 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 charging, the charging station itself. As observed in the bill, the costs of deploying this infrastructure is

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



quite modest if pursued as part of initial construction, with a number of studies indicating these costs are de minimus relative to total construction costs.²

As drafted, the bill would require all newly constructed state and county buildings of a certain size to have at least twenty parking stalls that are EV ready. Tesla believes that rather than a set number of stalls, the bill would be more practical if it replaced this with a percentage-of-stalls requirement. This can help ensure that the EV-ready capabilities the bill intends to provide are allocated in a manner that better corresponds with where people are actually parking – larger parking facilities would, under a percentage-based approach, be required to make a greater number of stalls EV-ready relative to smaller parking facilities. This makes sense to the degree that larger facilities will, all else equal, see a greater number of EVs that need to be accommodated. This approach can also help ensure that the requirement does not result in some buildings with relatively small parking facilities facing disproportionately higher costs compared to larger facilities in meeting the requirement. Tesla recommends setting the requirement at twenty percent of stalls while preserving the absolute minimum requirement included in the bill that ensures that “In no case shall the number of parking stalls that are electric vehicle charger ready at a new state or county building construction project be less than two.”

Additionally, Tesla recommends a minor modification to the definition of “EV charger ready,” which from a technical perspective ensures the code has its intended impact. Specifically, the language should be altered to incorporate the following (underlin represents additions, strikethrough represent deletions):

As used in this section, "electric vehicle charger ready" means having sufficient wire, conduit/listed raceway, termination point and electric panel capacity to ~~electric-vehicle charger capable of provide~~ a minimum of 40amp 208- or 240-volt branch circuit per EV space.

More fundamentally, Tesla encourages expanding the scope of the bill to cover all newly constructed buildings rather than focusing exclusively on state and county buildings. Tesla suspects that state and county projects represent only a small percentage of the overall share of newly constructed buildings and associated parking facilities. While encouraging the deployment of EV-ready infrastructure in state and county buildings is laudable and important, it ignores the need to address new construction more generally and would not meaningfully increase the availability of EV charging for the vast majority of Hawaiians who park in facilities that are not associated with state or county government. In particular, the most effective locations to deploy charging infrastructure and where Tesla strongly believes state policy should focus is in residential multi-unit dwellings and workplaces. In order for EV uptake to happen at scale, charging needs to be convenient – this means that it is located where people would park their vehicles anyway, like at home or at work. For these reasons, Tesla strongly encourages expanding the scope of the bill accordingly.

² See, for example, “Electric Vehicle Charging Infrastructure: Multifamily Building Standards” California Air Resources Board, April 13, 2018; p. 22. Available for download at <https://arb.ca.gov/cc/greenbuildings/pdf/tcac2018.pdf>



Tesla appreciates the opportunity to submit this testimony. **Tesla supports this measure but believes that the amendments enumerated above are necessary if the bill is to substantively impact the availability of EV charging and meaningfully support the state's efforts to transition away from fossil fuels.**

**TESTIMONY BEFORE THE SENATE COMMITTEES ON
TRANSPORTATION
AND
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM**

S.B. 653

Relating to Electric Vehicles

Friday, February 8, 2019
2:00 PM, Agenda # 1
State Capitol, Conference Room 225

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

Aloha Chair Inouye and Chair Wakai, Vice Chair Harimoto and Vice Chair Taniguchi and Committee Members,

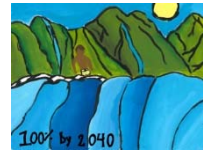
My name is Brennon Morioka and I am testifying on behalf of Hawaiian Electric Company Inc. and its subsidiary utilities Maui Electric Company, Limited and Hawaii Electric Light Company, Inc. (“the Hawaiian Electric Companies”) in support of S.B. 653, Relating to Electric Vehicles. S.B. 653 proposes to require charging infrastructure at new state and county buildings. The bill seeks to support future growth of clean transportation by designating a portion of available parking stalls at new state and county facilities to be electric vehicle (“EV”) charger ready.

S.B. 653 takes the bold step of showing government leadership in supporting efficient and emissions free transportation. By requiring parking stalls to be prepared for future electric vehicle charging demand, the government takes an important step towards supporting and incentivizing the development of one of the crucial components

of a clean transportation future. As a developer of electric vehicle charging infrastructure, the Hawaiian Electric Companies recognize that the robust availability of vehicle charging infrastructure is essential to reducing barriers to adoption of electric vehicles. Studies have shown that the availability of public vehicle charging is a key factor when car buyers consider purchasing a new electric vehicle, even if the customer ultimately intends to charge solely at their residence.

Providing increased access to public EV charging at workplaces and commercial locations are key priorities identified in the Companies' *Electrification of Transportation Strategic Roadmap*. This bill will continue the tremendous progress that the state has made towards a cleaner and more sustainable transportation future.

As one of the leaders in the state's clean transportation efforts, the Hawaiian Electric Companies remain committed to an EV strategy that is sustainable and helps create a bridge to a cleaner future. Thank you for the opportunity to testify in support of S.B. 653.



**SENATE COMMITTEE ON TRANSPORTATION
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM**

February 8, 2019, 2:00 P.M.

Room 225

(Testimony is 2 pages long)

LATE

TESTIMONY IN SUPPORT OF SB 653

Aloha Chair Inouye, Chair Waiki, and members of the Committees:

Blue Planet Foundation supports but offers suggested amendments to Senate Bill (SB) 653, which requires certain new state and county building construction projects to have at least twenty parking stalls that are electric vehicle (EV) charger ready and requires that *all* new state and county building construction have at least two EV ready parking stalls. This bill will effectively decrease the cost of EV charging infrastructure retrofits for city and county agencies in the future by ensuring that all conduit and power capacity is installed upon initial construction and will increase the likelihood that state and county employees would be able to charge their EVs at work.

Since Hawaii's Mayors' set goals for 100% renewable ground transportation by 2045, many community members are looking to their local leadership to turn that commitment into action. This bill would provide some state and county employees with access to EV charging at work and save the state and county money on EV charger installation costs in the future.

Hawaii can expect more residents to choose EVs or gasoline vehicles as prices decrease. 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 2024.¹

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 EVs during the past two years.

Yet, the lack of EV charging infrastructure locally in Hawaii is a significant barrier to EV adoption. Most EV owners primarily charge their vehicle at home, but many of Hawaii's residents reside in multi-unit dwellings (MUDs) where they cannot simply plug in their car in a garage. **This bill would expand charging options for residents that don't have the luxury of charging their EVs at home.**

¹ See Bloomberg New Energy Finance, <https://bnef.turtl.co/story/evo2018?teaser=true>.

Cost to Install EV Charging Infrastructure

The most challenging aspect of EV charger installation is the common lack of electrical capacity and distributed subpanels to support broad deployment of charging infrastructure. By choosing not to install EV charging infrastructure in new construction, the state and county would pay expensive retrofit costs to upgrade power capacity and install them later when their fleets have changed to EVs and their employees are driving EVs. **This bill is about future proofing our new state and county buildings.**

Studies have shown that installing EV infrastructure at the time of construction can be 91% less expensive than post-construction retrofits and per stall installation costs can be reduced through economies of scale, by deploying more stations at time of construction.² While this bill would not require the installation of the actual EV charging infrastructure, it would require that the power capacity and conduit be set up during construction, which would dramatically reduce retrofit costs at the time of installation, creating cost savings for the state and county.

Suggested Amendments

While EV-ready parking stalls in new state and county construction is a step in the right direction, it is wholly insufficient to break down barriers to EV adoption and address the expansive and urgency challenge of reducing greenhouse gas emissions from ground transportation in Hawaii.

To truly break down barriers to EV adoption in the state, this EV-ready law must extend to all new residential multi-family buildings and commercial buildings.

Additionally, the numbers provided in this bill are not high enough to be impactful. As we move to 100% renewable ground transportation, these rates of EV-ready stalls will be insufficient to meet demand. ***The bill should be amended to require 25% of stalls to be EV-ready.***

If these amendments are made, this bill will ensure that the EV charging infrastructure network necessary to support the influx of EVs can be installed more efficiently and cost-effectively. It will provide new EV owners—particularly those that will live in MUDs—with the confidence that they will be able to access charging at home, at the workplace, and in public.

We respectfully request that the committees to pass the bill with these suggested amendments.

Thank you for the opportunity to testify.

² See <http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>.



Email: communications@ulupono.com

SENATE COMMITTEES ON TRANSPORTATION AND ENERGY, ECONOMIC DEVELOPMENT,
& TOURISM

Friday, February 8, 2019 — 2:00 p.m. — Room 225

Ulupono Initiative Supports SB 653 with an Amendment, Relating to Electric Vehicles

Dear Chair Inouye, Vice Chair Harimoto, Chair Wakai, Vice Chair Taniguchi, and Members of the Committees:

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

Ulupono supports SB 653 with an amendment, which requires certain new state building construction and county building construction projects to have at least twenty parking stalls that are electric vehicle charger ready and all new state building construction and county building construction have at least two electric vehicle charger ready parking stalls, 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.

Electric vehicles (EVs) are an important avenue to address Hawai'i's pressing climate issues and align with the State's 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 starting MSRP is \$29,990. After the Federal tax credit is considered, the purchase price is

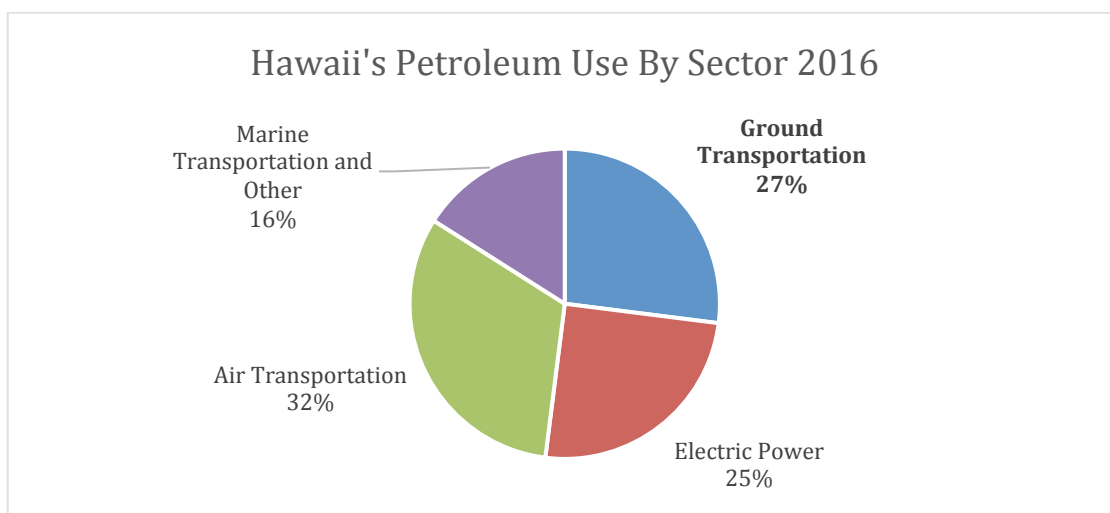
Investing in a Sustainable Hawai'i

\$22,490, which is less than the average 2019 Toyota Camry and 2019 Honda Civic (the two best-selling sedans in the country).

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

EVs Provide Immediate Energy and Environmental Impact

Ground transportation alone utilizes more than a quarter of the state’s imported petroleum. Electrifying ground transportation will reduce our demand for imported fossil fuels, keeping millions of dollars in the state and cutting harmful pollution.



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.

Furthermore, EVs can 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, with the state ranking second in the nation behind California in the number of EVs per capita. As of November 2018, there were over 8,000 passenger EVs registered in Hawai‘i, a 24 percent growth from the previous year. 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 revealed plans to offer electric versions of all their vehicle models. Even Ford announced it will build an all-electric F-150 pickup truck, the #1 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.

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 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 multi-unit 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.

Requiring qualifying facilities to be "EV ready" is smart and essential future proofing. As the bill states, installing EV infrastructure post-construction costs three times more than at the time of new construction, and it represents approximately less than one percent of total new construction project cost. Given that building construction has a ~30 year life, this bill is a fiscally prudent way to prepare the state for 2049 and beyond, when EVs are expected to be abundant and charging will be critical.

Other states and cities recognize the importance of EV infrastructure and already have policies that require public and private parking facilities to be built to support EV charging. Below are examples of leading state and city EV-ready requirements:

- California - 8 percent of parking stalls at nonresidential properties
- Vancouver - 100 percent of parking stalls at multi-unit residential and 10 percent of stalls at commercial properties
- New York City - 20 percent of parking stalls at parking facilities (open lots and garages)
- Atlanta - 20 percent of parking stalls at new commercial and multifamily properties
- San Francisco - 20 percent of new residential, commercial and municipal properties

If the State of Hawai'i is serious about the sustainability and resiliency of our communities, it should encourage EVs and EV infrastructure. The State can set a strong example for the private sector with this bill, as the private industry often looks to the public sector to lead such impactful initiatives. Requiring state and county construction to be EV ready lays the foundation for additional policy to initiate the private sector and generates broad momentum to advance EVs and clean transportation.

Recommended Amendment

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

1. Calculate the number of parking stalls that are required to be EV charger ready as a percentage of the total number of parking spaces. Based on other states and cities, a reasonable range is 15-30 percent of parking stalls be EV ready.

As Hawai'i's energy issues become more complex and challenging, we appreciate these committees' efforts to look at policies that support clean ground transportation. Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner

LATE

SB-653

Submitted on: 2/7/2019 7:09:06 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
David Mulinix	Testifying for Our Revolution Hawaii	Support	No

Comments:

LATE

SB-653

Submitted on: 2/7/2019 9:28:02 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Testifying for 350Hawaii.org	Support	No

Comments:

As the number of ZEVs inevitably grows, the number of designated parking spaces and supply equipment points must grow to accommodate them. 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.

SB-653

Submitted on: 2/7/2019 1:54:09 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

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

Comments:

SB-653

Submitted on: 2/7/2019 10:51:25 AM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Timothy Kim	Individual	Support	No

Comments:

As we strive to meet our goals for clean energy, we need to continue to push forward with promoting electric vehicles as an alternative to gas powered cars. We also need to provide the infrastructure to support the use. I support this bill.

Timothy Kim, MD

SB-653

Submitted on: 2/7/2019 11:41:37 AM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Amit Kamra	Individual	Support	No

Comments:

We are an Eco sensitive family of four that has chosen to go all electric for our transportation since 2017 beginning. We support any and all legislation that encourages progress towards sustainable energy and transportation methods for the environment and our kids.

We are doing our part. Our transportation is electric. Now it is the responsibility of the politicians to deliver.

Having the convenient option to charge at home and/or work will make it possible for many more to purchase and use electric vehicles.

SB-653

Submitted on: 2/7/2019 11:20:07 AM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kenneth Eisner	Individual	Support	No

Comments:

SB-653

Submitted on: 2/7/2019 1:55:27 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Matson	Individual	Support	No

Comments:

Please add an EV parking and charger PERCENTAGE - not just 1 or 2 - for ALL buildings - not solely city and state - especially all towers in Kaka'ako and any potential TOD buildings undertaken by private or P-3 developers..

SB-653

Submitted on: 2/7/2019 1:16:19 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Richard Michaels	Individual	Support	No

Comments:

It took years to get my condo association to install an EV charging station so we could buy EVs. This is critical in moving Hawaii ahead in renewable energy.

SB-653

Submitted on: 2/7/2019 1:09:18 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Sabrina Lobdell	Individual	Support	No

Comments:

I support legislation that encourages the use of electric vehicles for environmental reasons.

SB-653

Submitted on: 2/7/2019 12:58:23 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Amber Wilson	Individual	Support	No

Comments:

New construction should reflect the future. That future is EV!

SB-653

Submitted on: 2/7/2019 12:42:46 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
David Druz	Individual	Support	No

Comments:

I urge you to strongly support this bill. EV use must be incentivized in order to get more EV's on the road. More EV's, less global warming. Our oceans are rising. This is critical!

LATE

SB-653

Submitted on: 2/7/2019 3:34:16 PM

Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Bernard M Moret	Individual	Support	No

Comments:

Dear Senators,

My wife, Carol Fryer, and I, both registered voters on the Big Island, would like to register our strong support for Senate Bill 653. As our civilization transitions from internal combustion engines to electrical motors powered by batteries, infrastructure needs to follow suit, by supporting charging both where people live and where they work. The state (including its counties) needs to lead the way in this matter: if it is to pass laws requiring builders to provide a charging infrastructure in new business and residential construction, it should naturally require the same of any construction of new state or county buildings.

We only regret that this bill, much like SB 1000, sets such high thresholds on the size of parking areas needed to trigger the requirement -- charging is an important function at the workplace regardless of the size of the business.

Respectfully submitted,

Bernard Moret

LATE

SB-653

Submitted on: 2/8/2019 8:53:46 AM
Testimony for TRS on 2/8/2019 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Carlo A Daquanni	Individual	Support	No

Comments: