



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

April 16, 2019
10:10 a.m.
State Capitol, Room 414

H.C.R. 220, HD1
REQUESTING THE ATTORNEY GENERAL TO CONVENE AN AUTONOMOUS
VEHICLE LEGAL PREPARATION TASK FORCE.

House Committee on Judiciary

The Department of Transportation (DOT) **supports** H.C.R. 220.

This resolution requests the Attorney General to convene a task force to prepare Hawaii for the legal and regulatory implications of transitioning to autonomous vehicles and to submit an interim and final report of its findings and recommendations, including any proposed legislation, to the legislature prior to the convening of the 2020 and 2021 regular sessions, respectively.

The DOT agrees with the task force approach. The American Association of Motor Vehicle Administrators (AAMVA) developed Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles (HAVs). The guidelines were developed by AAMVA's Autonomous Vehicle Working Group. The guidelines state that to successfully address the safe integration of HAVs within the transportation system, a collaborative approach should be taken among jurisdictions and stakeholders to gain an understanding of emerging vehicle technologies and their impact on roadway safety, jurisdictional programs, and infrastructure."

Collaboration with various government agencies, stakeholders, and safety advocates will help prepare Hawaii for a safer transition of autonomous vehicles onto our roads.

Thank you for the opportunity to provide testimony.



Email: communications@ulupono.com

SENATE COMMITTEE ON JUDICIARY
Tuesday, April 16, 2019 — 10:10 a.m. — Room 414

Ulupono Initiative Supports HCR 220 HD 1, Requesting the Attorney General to Convene an Autonomous Vehicle Legal Preparation Task Force

Dear Chair Rhoads, Vice Chair Wakai, 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 manage waste and fresh water resources. 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 HCR 220 HD 1, which requests the Attorney General to convene an autonomous vehicle legal preparation task force.

Ulupono has provided \$100,000 in funding to assist a group comprising Department of Transportation Services, Department of Transportation, HART, and University of Hawai'i. The group wants to move forward with an autonomous vehicle pilot and a federal grant application. This Legislature will want a high amount of guidance, discussion, and preparation (legal or otherwise) for a technology that will dramatically change the daily life of all of the citizens of Hawai'i.

Through a supportive legal and policy framework, autonomous vehicles (AVs), shared mobility systems, and electric/zero emission vehicles could reduce energy consumption and related emissions by 60 percent over the next 30 years with other benefits in safety and greater access to opportunity for non-drivers.¹ Conversely, a combination of automated vehicles, zero-occupancy vehicles, increased vehicle miles of travel, access for new user groups, and continued reliance on fossil fuels could increase energy consumption and related emissions by up to 200 percent over this same time period.² This technology is moving very quickly, with the 11 largest automakers planning to have fully-autonomous vehicles on highways between now and 2021, and through 2030 for urban use. Hawai'i

¹ <http://onlinepubs.trb.org/onlinepubs/circulars/ec236.pdf>

² <http://onlinepubs.trb.org/onlinepubs/circulars/ec236.pdf>

needs to define what it wants from this new technology to help our community meet its goals and reduce Hawai'i's dependence on imported fossil fuels.

Recognizing this emergent need with our transportation stakeholders, we've outlined a potential roadmap for Hawai'i's AV future. The first is the articulation of what Hawai'i's AV future could be – automated, accessible, connected, electric, and shared (A²CES). The second includes the five strategies that help achieve A²CES – one of which deals with the legalities and regulatory regime for AVs. This means not only implementing the Governor's Executive Order 17 on AVs, but outlining the larger framework for safe operation. This includes compliance with the state motor vehicle code, licensing, driver requirements, insurance challenges, liability concerns, and legal and safe operation. It is important for Hawaii to not let these changes overwhelm us, but rather envision what a future could be with AVs.

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

Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner



April 16, 2019

**TESTIMONY BEFORE THE SENATE COMMITTEE ON JUDICIARY
ON HCR 220 RELATING TO REQUESTING THE ATTORNEY GENERAL TO
CONVENE AN AUTONOMOUS VEHICLE LEGAL PREPARATION TASK FORCE**

Thank you Chair Rhoads and committee members. I am Gareth Sakakida, Managing Director of the Hawaii Transportation Association (HTA) with over 375 transportation related members throughout the state of Hawaii.

We support this concurrent resolution to convene a legal preparation task force. Such a step is very prudent when addressing a complicated, multi faceted issue is autonomous vehicles.

The prospect of having vehicles running around with no human intervention is quite unsettling. However, the promise of safer roads by eliminating emotional reactions is intriguing and worthy of pursuit.

Each manufacturer has their own methodology and design to autonomous vehicles. Each destination where these vehicles will be deployed has unique features and needs so it is imperative Hawaii does its' own testing to set its' own parameters. And this must be approached in a systematic and logical manner.

Mahalo.



To: The Senate Committee on the Judiciary
From: Brodie Lockard, Hawaii State Climate Lead, Organizing for Action
Date: Tuesday, April 16, 2019, 10:10 am

In strong support of HCR220 HD1, with comments

Dear JUD Chair Rhoads, Vice Chair Wakai, and Committee Members—

Organizing for Action strongly supports HCR 220 HD1.

Autonomous Vehicles (AVs) , vehicles that drive with little or no human intervention, may seem esoteric or experimental, but in a few years they will be a huge factor in our daily lives. Every state will need to figure out how to deal with them.

The 11 largest automakers plan to have AVs on highways in the next two years. Alphabet's Waymo just launched self-driving taxis in four Phoenix suburbs, where it has been testing its technology since 2016. Waymo has logged more than 10 million miles on public roads in and around 25 U.S. cities. Lyft has a similar service with 30 cars in Las Vegas.

General Motors' new motto is "A world with zero crashes, zero emissions and zero congestion," which sums up some benefits of electric vehicles (EVs) and AVs, but there are many more. AVs are a long-term solution to many of the problems of gasoline cars.

AVs offer fewer accidents and related injuries and deaths, stress reduction and savings of money and time to consumers, fewer greenhouse gas emissions, less traffic congestion, independent transportation for those unable to drive, parking space that can be repurposed, and potentially more space for pedestrians and cyclists.

Currently the average car is in use only 4% of the time. Yet its owner pays for insurance, registration, maintenance, repairs and gas. Most automakers are planning for AVs as a car-as-a-service model, because with their plethora of onboard technology, AVs will not be cheap. This model eliminates all the above expenses. Before too many years, most people may not be driving at all, and won't have to buy any kind of vehicle.

Hawaii is ideal for AVs in a number of ways. There are no terrestrial state borders, the crossing of which could cause legal conflicts. Our weather is ideal for AV batteries, and offers very few different conditions that AVs would need to negotiate. Our microclimates and predictable yet varied traffic patterns allow testing in different conditions on short notice.

AV issues include definitions, testing, insurance, licenses, safety standards and performance requirements, DOT recommendations and authority, geo-fencing, highways vs surface roads, hacking, minors, privacy, and loss of jobs.

Because of their complex, widespread implications, AVs should be approached carefully and thoroughly, beginning as soon as possible. A task force to study the issues above is crucial for Hawaii to adopt AVs safely and intelligently.

350Hawaii offers the comment that qualified people from the following areas be included on the task force: UH Engineering, UH Sociology, and the privacy sector, e.g. the ACLU.

Twenty-nine states and Washington D.C. have enacted legislation related to AVs. Governors in 11 states have issued executive orders related to AVs. But those laws are a hodgepodge, slowing AV adoption. Gov. Ige has issued an Executive Order supporting their use, but apparently no Hawaii laws address them. If we support them now, their adoption will be smoother.

And if we start now, we can try to steer AVs into a significant way to reduce greenhouse gas emissions, setting another example for the rest of the country and planet.

350Hawaii supports AVs because they'll very likely all be electric, and so will allow people who can't afford an EV to move about without emitting greenhouse gases.

Car-to-car and car-to-environment communication and coordination should lead to optimal acceleration and braking, meaning higher fuel economy from reducing wasted energy typically associated with inefficient changes to speed.

Automatic choosing of the most efficient routes will mean fewer miles traveled. Multiple passenger per vehicle—a good possibility with scheduled car-as-a-service models—will mean fewer cars on the road at any given time and less energy ("fuel") used.

Please pass HCR 220 HD1 and send Hawaii on its way to an informed and carefully-considered AV future.

Thank you for the opportunity to testify.

Brodie Lockard
Hawaii State Climate Lead, Organizing for Action



SanHi

GOVERNMENT STRATEGIES
A LIMITED LIABILITY LAW PARTNERSHIP

DATE: April 16, 2019

TO: Senator Karl Rhoads
Chair, Committee on Judiciary
Submitted Via Capitol Website

FROM: Tiffany Yajima

RE: **HCR 220 HD 1 – Requesting the Attorney General to Convene an
Autonomous Vehicle Legal Preparation Task Force
Hearing Date: Tuesday, April 16, 2019 at 10:10 a.m.
Conference Room: 414**

LATE

Dear Chair Rhoads and Members of the Committee on Judiciary:

On behalf of the Alliance of Automobile Manufacturers (“Alliance”), we submit these comments on HCR 220, HD 1.

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

HCR 220, HD 1 would request the Attorney General to convene an autonomous vehicle preparation taskforce to prepare for autonomous vehicles by examining existing laws in the U.S. regulating AVs and to report to the legislature on legal and insurance considerations for the regulation of these vehicles in Hawaii.

The Alliance is supportive of the state’s efforts to prepare for autonomous vehicles. The automotive industry has been steadily evolving vehicle technologies toward a future when cars will be self-driving. As technological advancements are continuing, many companies are also developing vehicles with higher levels of driving automation. Because there are many industry approaches to automation, solving the equation of how to integrate autonomous vehicles in Hawaii requires input from more than just a single representative of the industry that makes and sells these vehicles.

The Alliance is very interested in working with the state on autonomous vehicle integration and would be interested in participating as a member of the working group. Thank you for the opportunity to submit this testimony.

HCR-220-HD-1

Submitted on: 4/16/2019 7:10:05 AM

Testimony for JDC on 4/16/2019 10:10:00 AM



Submitted By	Organization	Testifier Position	Present at Hearing
Rita Ryan	Testifying for 350.org Maui Nui	Support	No

Comments:

Aloha Lawmakers,

We are writing in support of HCR220 HD1 because we predict that autonomous vehicles will:

- Reduce fossil fuel usage
- Increase electric car adoption
- Make our roadways safer
- Provide for kapuna and disabled folks who cannot drive themselves, creating greater social justice.
- Reduce emissions overall, by routing traffic optimally and relieving congestion.
- Reduce roadway accidents and traffic incidents, freeing up public safety resources

Thank you for your consideration of our testimony.

Rita Ryan

350.org Maui Nui

HCR-220-HD-1

Submitted on: 4/14/2019 7:24:57 PM

Testimony for JDC on 4/16/2019 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

I support Autonomous Vehicles because they are likely to be electric, and so will allow people who can't afford an EV to move about without emitting greenhouse gases. The transportation sector represents a significant source of Hawaii's greenhouse gas emissions. Scientists have made it clear, we must do everything we can to drastically reduce greenhouse gas emissions without delay.

Thank you for the opportunity to testify.

HCR-220-HD-1

Submitted on: 4/15/2019 1:17:54 AM

Testimony for JDC on 4/16/2019 10:10:00 AM

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

Comments:

Dear JDC Chair Rhoads, Vice Chair Wakai, and Committee Members,

The 11 largest automakers plan to have Autonomous Vehicles (AVs) on highways in the next two years. AVs offer many benefits over traditional cars: fewer accidents, injuries and deaths; less driver stress; savings of money and time to consumers; fewer carbon emissions; less traffic congestion; independent transportation for those unable to drive; and parking space that can be repurposed.

Regardless of the benefits, they're coming, Hawaii needs to prepare for them, and if we start now, we can plan their use to maximize reductions in greenhouse gas emissions, setting another example for the rest of the country and planet.

Most importantly, AVs will almost surely all be electric, so in a car-as-a-service model, they will let people who can't afford electric cars get around without emitting greenhouse gases.

Car-to-car and car-to-environment communication and coordination should lead to optimal acceleration and braking, reducing wasted energy from inefficient changes in speed.

AVs automatically deciding the most efficient routes will reduce miles traveled. Multiple passengers per vehicle—a good possibility with scheduled car-as-a-service models—will reduce the cars on the road and energy ("fuel") used.

Please pass HCR 220 HD1 and prepare Hawaii for the inevitable AV future.

HCR-220-HD-1

Submitted on: 4/14/2019 9:35:14 PM

Testimony for JDC on 4/16/2019 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Eric Micha'el Leventhal	Individual	Support	No

Comments:

Dear JDC Chair Rhoads, Vice Chair Wakai, and Committee Members,

The eleven largest automakers plan to have Autonomous Vehicles (AVs) on highways in the next two years. AVs offer many benefits over traditional cars, including fewer accidents, injuries and deaths; less driver stress; savings of money and time to consumers; fewer carbon emissions; less traffic congestion; independent transportation for those unable to drive; and parking space that can be repurposed.

Hawaii needs to prepare for this arguably inevitable upgrade to our transportation technology. If we start now, we can plan their use to maximize reductions in greenhouse gas emissions and set another positive example for the rest of the country and planet.

Most importantly, AVs will almost surely all be electric, so in a car-as-a-service model, they will let people who can't afford electric cars get around without emitting greenhouse gases.

Car-to-car and car-to-environment communication and coordination should also lead to optimal acceleration and braking, reducing wasted energy from inefficient changes in speed.

AVs automatically deciding the most efficient routes will reduce miles traveled. Multiple passengers per vehicle—a good possibility with scheduled car-as-a-service models—will reduce the cars on the road and energy ("fuel") used.

Please pass HCR 220 HD1 and prepare Hawaii for a sustainable AV future. Mahalo nui loa!

HCR-220-HD-1

Submitted on: 4/15/2019 9:34:22 AM

Testimony for JDC on 4/16/2019 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nanea Lo	Individual	Support	No

Comments:

Hello,

I'm writing in STRONG SUPPORT of this bill. Autonomous Vehicles may seem esoteric or tangential to climate change, but in a few years they will be a huge factor in our daily lives. Every state will need to figure out how to deal with them. If we start now, we can try to steer them into a significant way to reduce emissions, and set another example for the world.

me ke aloha 'Ä• ina,

Nanea Lo

HCR-220-HD-1

Submitted on: 4/15/2019 10:31:30 AM

Testimony for JDC on 4/16/2019 10:10:00 AM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
donald erway	Individual	Support	No

Comments:

HCR-220-HD-1

Submitted on: 4/15/2019 11:59:20 AM

Testimony for JDC on 4/16/2019 10:10:00 AM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

HCR-220-HD-1

Submitted on: 4/15/2019 2:42:47 PM

Testimony for JDC on 4/16/2019 10:10:00 AM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Kanani Kai	Individual	Support	No

Comments:

HCR-220-HD-1

Submitted on: 4/16/2019 6:19:37 AM

Testimony for JDC on 4/16/2019 10:10:00 AM

LATE

Submitted By	Organization	Testifier Position	Present at Hearing
Derek Lindes	Individual	Support	No

Comments: