



**Testimony of
Nathaniel Harmon on behalf of
Blockchain Solutions Hawaii LLC**

**Before the State of Hawaii
Department of Land and Natural Resources
Hawai'i Climate Change Mitigation And Adaptation Commission**

**Wednesday, May 13, 2020
1:30pm**

My name is Nathaniel Harmon, I am the region 2 chair of the Democratic Party of Hawaii, a recent UHM Chemical Oceanography graduate, and a small business owner.

I have spent the last two years or so putting together a framework to diversify the economy of our state through a radical expansion of renewable energy. I believe that if we want to break our dependence on tourism and completely divest from fossil fuels, we must look to new industries with growth potential that intersects with our geographical and political strengths. I believe that the nascent blockchain industry is something we should consider.

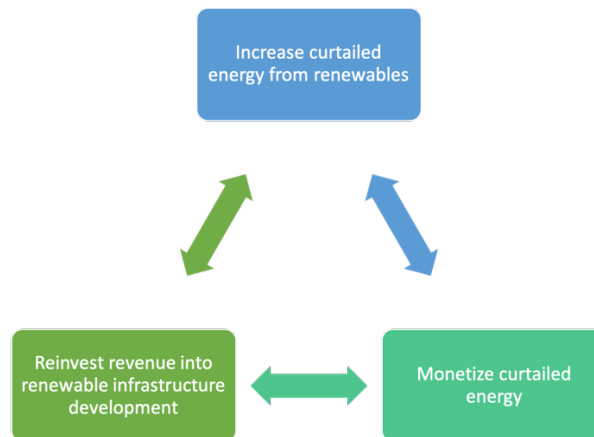
One of the main problems with expanding renewable energy in the state revolves around peak usage hours. During the daytime we generate more energy from renewables than is needed. This energy must be stored until the evening when usage is higher than what can be produced, but storage is expensive and has yet to be built, thereby necessitating fossil fuel generation during peak usage hours. Currently, the excess energy generated during the daytime is curtailed, either by not generating it or discharging it, this imbalance has led to the retardation of renewable energy infrastructure development.

Our framework describes a State-run infrastructure plan to monetize curtailed waste energy produced by our renewable sector. Doing so puts a direct profit motive into the unlimited expansion of renewable energy generation, storage, and reopening grid connections for households.

This framework describes exploiting Hawaii's most abundant resources solar power, wind power, geothermal energy, and ocean thermal energy which we have unlimited supplies of. The environmental footprint for this plan is minimal as the main source of revenue is derived from installing solar on every roof top in the state, with greater returns for more installation. Profitability is derived from the marginal cost of renewable generation not the upfront cost of implementation, as such this strategy cannot be accomplished through fossil fuel burning.

Accomplishing this will require a massive infrastructure project, and this infrastructure project will require and create 100's of new on-island long term unskilled and skilled jobs not tied to tourism. By generating massive amounts of renewable energy, natural market forces will push the end consumer price of energy down. With a low cost of energy new energy intensive industries will flock to Hawaii that were previously infeasible due to the high cost.

Below is a description of the incentive loop this framework creates:



2019 Statistics for this plan using publicly available data for Hawaiian Electric Companies (excluding Kauai):

- Avg. Lost Revenue/day from curtailment: ~\$12,000
- Total Gross Lost Revenue: ~\$4,400,000
- ROI (with start date 1/1/2019): ~11/22/2019
- Net Lost Revenue for 2019: ~\$400,000

The above statistics describe only what was discarded from the system as waste, through actively expanding the waste energy produced revenue would be considerably higher. Profits from this endeavor will have to be socialized as the main stake holders are the households and not shareholders, and the only entity large enough to coordinate it is the State itself.

In conclusion monetizing curtailed energy through blockchain technology creates an incentive loop that will lead to the build out of our renewable infrastructure/transition to 100% renewables, new jobs, lower energy costs, and entire new industries/state revenue sources not tied to tourism.

This is an opportunity that only Hawaii can take advantage of and the window to do so is narrowing. Mahalo for taking the time to read this feel free to contact me for further details.

Mahalo
Nathaniel Harmon, Founder
Blockchain Solutions Hawaii
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I respectfully submit testimony referencing the Rhodium report “Transcending Oil: Hawaii’s Path to a Clean Energy Economy” (April 2018) by adding another element, as an X solution with more specific emphasis to recommendations on “Tackling the “Transportation Demand.”

I very much support the Rhodium report recommendations to;

- 1) Incentivize multimodal mobility and disincentive car ownership.
- 2) Parking management plans should be established, and minimum parking requirements in new developments should be removed.
- 3) Improve mobility options, incentivize land-uses and enhance connectivity via Design and construct public streets for everyone including bicycle pedestrian pathways.

The report echo’s what Smart Growth America’s transportation policy and livability initiatives are which I fully agree and support and hopefully reverse the urban sprawl policies of past.

I have been involved for the past 7 years here on Maui trying to educate and advocate for these exact things via the Maui Bicycling League, and through my business focus of renting and selling e-bikes to the residents and tourists of Maui.

My take away from the conference was there was great emphasis on energy transformation for the Hawaii Islands that is essential for us to create a sustainable future. While there was discussion on the need to include our transportation sector, and the impact was shown as high, I am concerned with the current lack of vision that can result in action within this large component. It is a great detriment to the islands if there continues to be little emphasis on finding a path forward to address the existing and ever-increasing reliance on the automobile. We have a huge challenge for the government to pay for infrastructure needs to support automobile numbers as well as counteract traffic congestion woes.

Professor Collin Buchanan, a civil engineer and town planner in `1963 wrote that Traffic is like lava, welling out of the towns, searing and scorching in long channels, and ever ready to invade new areas.

I truly believe If people truly want to preserve the natural beauty and resources of the Hawaiian Islands it should be mandatory to reduce the number of cars currently imploding the available land of the islands.

A low-cost and quick solution to the ever-increasing dilemma traffic congestion is to lure people away from the perceived social status and convenience of the private car.

I heard little any emphasis on this concept but heard a great emphasis of solution to divest ourselves of ICE vehicles and replacing them with electric vehicles. Without reduction of

numbers of vehicles, of any kind, there is little saving grace in improving traffic congestion stresses.

Beth Osborne pointed out, getting Hawaii as well as the nation to all electric vehicles any time soon is unrealistic suggesting it will take at minimum 15 years for each ICE vehicle in existence on average to expire. This reality is even more compounded for the large Hawaiian ALICE population that depend on the automobile secondary market, composed almost exclusively of cheap ICE vehicles to provide for their transportation needs.

This, is in stark contrast, to the rapid change I heard as necessary, and possible, from the conference.

So, what is the X solution?

What I see as a game changer, that is rapidly gaining in popularity, for people craving a more car-free lifestyle, to carry cargo or kids, avoid parking and traffic woes, be more environmentally minded, and have a more cost-effective form of transportation.

This car killer, is the electric bike or better known as the E-Bike. For the past several years I attended [Interbike International Expo | Cycling Industry Conference](#) which was the largest annual industry bike show in North America.

Since becoming part of the e-bike business I have seen a very rapid increase in affordability, functionality and ability of the varied forms of e-bikes. This past year I was very impressed with a new design cargo bike that really can substitute the automobile as alternative transportation from TERN manufacturing.

This video <https://vimeo.com/ondemand/motherload/182215342> I present as a depiction of the many cargo e-bike options currently available, but as seen in the video, clearly depicts an ability to carry cargo or kids, avoid parking and traffic woes, be more environmentally minded, and be a more cost-effective form of transportation than the automobile.

The United States, and even more so here in Hawaii, is very much an automobile culture with many perceived barriers as seen in this graph resultantly reducing motivations of people to use the bicycle as an alternative transportation solution.

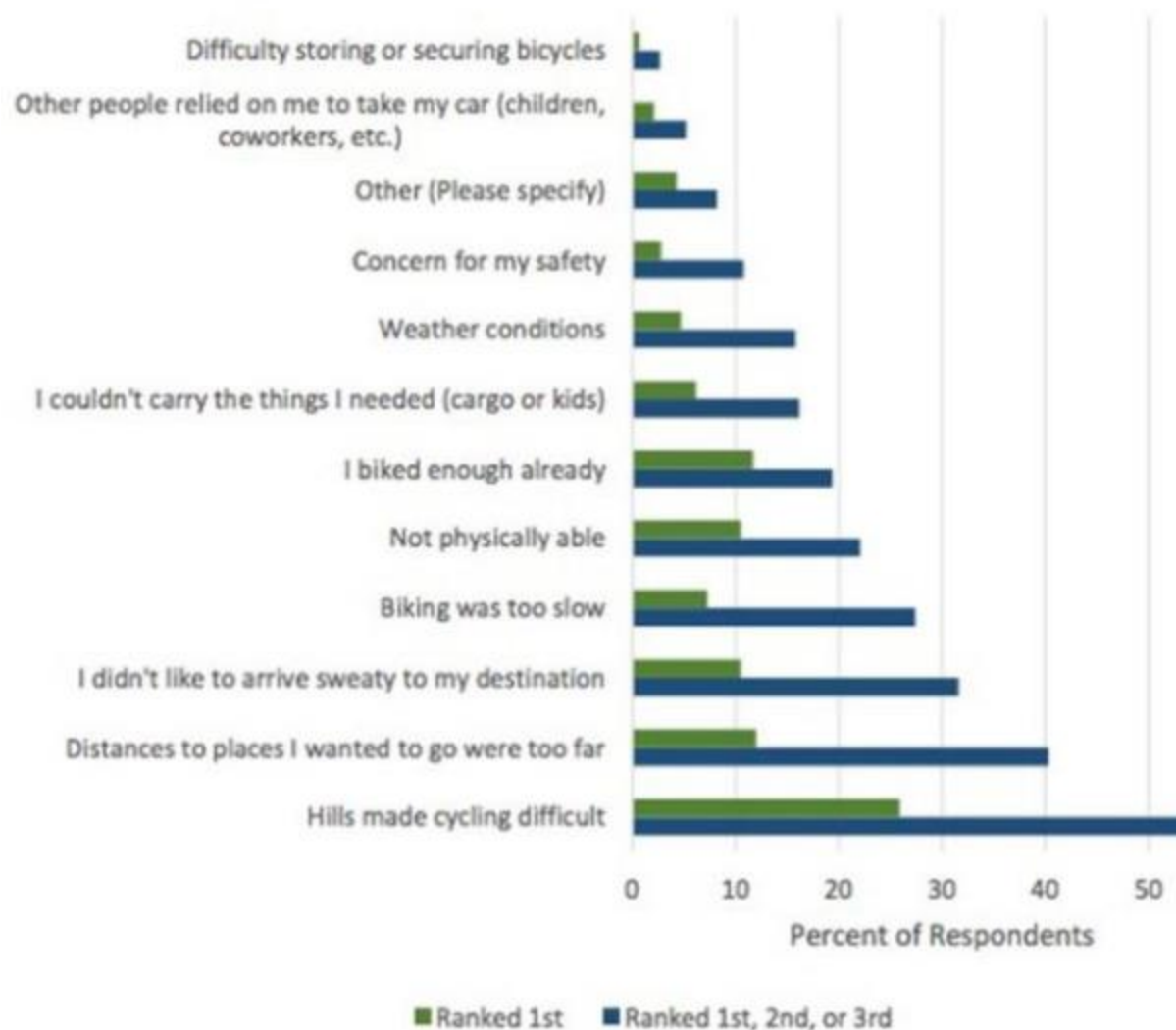


Figure 3.4: Important Barriers to Riding a Standard Bicycle

The reason the Electric bicycles are growing in popularity is because these barriers are nullified.

I suggest the Rhodium report be amended to include the e-bike in equality to the electric car as a solution to transcending oil dependency and providing greater opportunity to mobility.

Furthermore, to make this element a solution I recommend that bike pedestrian infrastructure as exemplified in the Hawaii Bike Plan "hidot.hawaii.gov/highways/bike-plan-hawaii-master-plan" be implemented in difference to exclusive automobile infrastructure. Tax payer dollars can go much further in construction of bikeways vs highways if done effectively and efficiently. However, I have learned firsthand that there is not the will within local government nor the state to implement any plan. There are countless reasons for why you can't do

something if you don't want to take on the responsibility. We consistently see some funds go into the infrastructure that is only seen as something to appease advocates and results in a mile or so here or there, with no thought of the bigger picture.

There are some exceptions, the City and County of Honolulu are moving forward with some infrastructure in some areas of Honolulu but will not do significant work outside of the city, mostly due to lack of resources and funding. Kauai has pushed the islands further with their work. But as I ate lunch at the event, I had a new comer to Kauai ask me how to get bike infrastructure in her neighborhood. Everywhere it is needed and wanted but will not be a reality until there is some change in the way we look at how people move throughout the islands. Often there are portions of a path installed, that don't connect to destinations or to other paths, and often are just reactions to community outrage (e.g. a child was killed riding a bike to school, or years of pressure resulted in a small win). However, there is a lack of funding with our current infrastructure funding set up (only build for cars or use a small pot of Transportation Alternatives fund), or a real agreement that use of anything, but the vehicle will be a real solution to traffic congestion, our carbon footprint, or living more sustainably.

State and local government do not believe in it, do not want to take the risk, and do not implement priority projects, even if there is strong community support. We need to move forward in a different way. Perhaps it is forging a public-private partnership to empower an entity to economically create this new infrastructure? It must be something aside from the way we are currently proceeding. We need to poke at the complicated system in a new way, as we will never get there with the current way we are moving. The report inspires me and my colleagues to envision a new way forward. If the way we have always been advocating is not working, perhaps we need to look at it in a whole new way.

The cost of a five-foot bicycle lane can range from approximately \$5,000 to \$535,000 per mile, with an average cost around \$130,000. A paved, multi-use trail can range in cost from approximately \$65,000 per mile to more than \$4 million per mile. An unpaved path can range from approximately \$30,000 to \$400,000 per mile.

Although this is still expensive, it is a far smaller amount than Hawaii highway construction costs with Hawaii being the third most expensive state nationally to construct highways as exemplified in the recent West Maui Bi-pass cost of \$100 million for 2.6 miles.

There is much data from around the world that states if “you build it, they will come”. If we want to save the Hawaii Islands and respect the Hawaiian culture as was spoken about by Nainoa Thompson, Pono Shim and Andy Karsner, a strong stand should be taken to reduce automobile numbers and include alternative transportation such as the E-bike as an element to the X-factor Moonshot towards the Hawaii Clean Energy Initiative as well as reawakening the Hawaiian traditional perspective for living and being.

HA NA can be more inclusive for everyone on an e-bike versus sitting inside an automobile. If you have suggestions or are interested in helping us to forge a new path, we have a strong

advocate community that we can tap into. We are ready for the challenge, but want our hard work to see positive change, thus looking for that X solution.

Mahalo

Lee Chamberlain

Maui Bicycling League



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Testimony of
Dennis Y. Teranishi on behalf of
Pacific International Center for High Technology Research (PICHTR)

Before the State of Hawaii
Climate Change Mitigation and Adaptation Commission (“Hawaii Climate Commission”)

Wednesday, May 13, 2020
at 1:30 pm

In support of
Briefing Document: “A Better Normal: Post-COVID19 Recovery for a Climate Ready Hawaii”

In the briefing document “A Better Normal: Post-COVID19 Recovery for a Climate Ready Hawaii”, the Hawaii Climate Commission’s three guiding principles of clean, equitable and resilient are offered to help Hawaii’s government put into practice a fast, sustainable recovery. Moreover, the brief discusses specifically how investments in active transportation and solutions using nature can create jobs now, and why righting inequalities are central to a new and better normal for a climate ready Hawaii.

PICHTR is a non-governmental organization founded in 1985 with a history of supporting the adoption and implementation of sustainable practices throughout Hawaii. Its projects have included Energy Excelsior (which spun-off as Elemental Excelsior), the National Disaster Preparedness Training Center (NDPTC), and Hawaii Renewable Energy Development Venture (HREDV), amongst others. PICHTR is launching a new climate change adaptation project to proactively tackle barriers to climate change adaptation by providing capacity building and advocacy to decision-makers and the general public in order to enable forward progress on the most critical climate change adaptation initiatives of our time. We see proactive climate change adaptation as an opportunity for a more resilient and economically strong Hawaii.

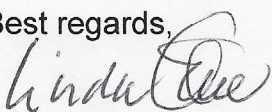
PICHTR is supportive of the Hawaii Climate Commission’s principles of clean, equitable and resilient to guide the fast and sustainable recovery of our state’s economy. We particularly agree with the Hawaii Climate Commission’s briefing document that climate change solutions be used in “rising to the challenge of Post-COVID19 recovery and preparedness” and that “[s]mart investment decisions now can create better jobs, a more prepared Hawaii, and reduce Hawaii’s exposure to climate impacts and natural disasters”.

To this end, PICHTR reinforces the critical need for Hawaii to pursue a parallel path of climate change mitigation measures (e.g. clean energy, active transportation, carbon sequestration, etc.) and adaptation initiatives (e.g. taking actions to identify an

vulnerabilities and risks to present and future climate change impacts, including sea level rise, heat waves, reduced water availability, increased fire events, etc.). It is vitally important to incorporate these mitigation measures and adaptation initiatives as part of Hawaii's short- and long-term post-COVID19 planning and implementation efforts and investment decisions. In the immediate future, we understand that focusing on opportunities that create jobs and support recovery while strengthening our infrastructure and making it more resilient should be a priority. However, we also recommend keeping momentum on longer-term climate adaptation initiatives such as strengthening our policy framework and investing in community resources and funding mechanisms¹ to ensure Hawaii is well positioned to tackle the climate change impacts that are already before us and will only become more pervasive.

Thank you for the opportunity to offer these comments in support of the Hawaii Climate Commission's briefing document "A Better Normal: Post-COVID 19 Recovery for a Climate Ready Hawaii".

Best regards,


for Dennis Y. Teranishi
President and CEO

¹ Reference: "Making Hawai'i Climate Ready: Developing a Playbook for Adaptation and Resilience to Sea Level Rise Impacts". Web: https://climate.hawaii.gov/wp-content/uploads/2020/01/Panel_2_Paper-DRAFT-Jan-10-2020.pdf

From: Angela Huntmer <angelahuntemer@gmail.com>

Sent: Sunday, May 10, 2020 9:20 PM

To: Hittle, Anukriti S <anukriti.s.hittle@hawaii.gov>

Subject: [EXTERNAL] COVID and planning to mitigate climate disruption with a shifted economy

Aloha Kakou,

Now is the time to shift our economy to one which is designed for the future. We must flatten the curve of the virus and also that of climate disruption, which threatens to destroy our lives and the ecological jewel we call home.

It is time to leave behind - rampant tourism, support for fossil fuel businesses and development in unsustainable areas such as close to the ocean or on suitable agricultural land. We need an immediate moratorium on up-zoning.

The natural beauty of our islands with its unique suite of animals and plants must be a priority for the longterm health. Money and effort must be deployed to protect our watersheds and oceans. A new mix in our economy is in order. One which promotes:

Green energy - rooftop solar, micro grids and non-profit utility companies, waste reduction, incentivizing working from home and 4 day workweeks.

Ecosystem protection - Land conservation, elimination of invasive plants and animals, planting of natives only in all public areas, enhancement of law enforcement and education.

Agriculture that is clean and sustainable for local use and hemp and cannabis industries with finished products such as clothing and cannabis for export.

Mahalo,

Angela Huntmer MEd

57-068 Eleku Kuilima Place #136 Kahuku HI 96731



HAWAI'I CLIMATE CHANGE MITIGATION AND ADAPTATION COMMISSION
WEDNESDAY MAY 13, 2020, 1:30-3:00PM
VIDEO CONFERENCE

Aloha Commission,

My name is Alexandra Kahn and I am the founder of Kahana Foundation, a Hawai'i-based nonprofit focusing on environmental awareness through educational media and policy change. As a nonprofit we focus on the theme of efficiency and how that theme translates into a stronger economy, a healthier planet, and a happier community.

I have faith that the county of Honolulu, which comprises the bulk of Hawai'i's population, will come away from the experience of COVID19 with new knowledge and new ideas. We have seen first hand a scarcity and panic of food, mass unemployment across the state, decreased demand and price for seafood, panicked farmers, mass amounts of hungry individuals unable to afford food, and further acknowledgment of our dependence on others for 90% of what we consume as a state.

On the flip side, with tourism almost non existent for over a month, we have seen how quickly coral could regrow, animals could come out to play, and the air and water could feel and look cleaner. The beaches and trails are no longer packed, the energy is calm, the traffic is almost non existent and the people of Oahu have seen what life could be like if tourism wasn't the primary economic driver of our state.

And while our large unemployment numbers are due to our dependency on tourism, and the people want the economy to resume so they can pay their rent and feed their families, there is an overall consensus that we need to diversify our economy so we can have more types of jobs but also so our island can ideally be less crowded. We essentially have no manufacturing in our state and our primary exports are ornamentals and seeds. However, we could manufacture more for our local market, and grow and export more agricultural items to stimulate our economy in new ways.

Situations like this show how important it is for state and county to work together to sort out our economy and how our economic drivers affect our environment. Fortunately, the few farm hubs that exist expanded, local farms added CSA's and the Farm to Car program was started so that local food could go to local people rather than be wasted, while simultaneously providing the financial stability necessary for the farmers to survive through this pandemic. The demand for local food sky rocketed and this might be a trend that sticks. If it can stick, it's a win for local jobs and for the

environment because we could decrease our imports and increase our food security. I think it's necessary that as a county and as a state we look at what small farmers, food hubs, and potential farmers need in order to thrive and we work to provide them with those things. I think also strongly encouraging an increase of local produce stocked in all grocery stores and used in restaurants can increase overall demand and allow for more farming and a stronger local economy.

We have also seen a large increase in hunger because schools couldn't all provide the regular meals to kids and adults could not afford to buy the groceries they need. Organizations like Aloha Harvest were pivotal and rescuing unwanted and unneeded food from restaurants, hotels, grocery stores and farms and donating it to those who need before it goes to waste. Many food vendors that were unfamiliar with food rescue now know it's a possibility at all times and this could lead to a lot less food waste and a lot less hungry people. I believe it's necessary that we support legislation and additional infrastructure to increase food rescue and distribution capabilities far into the future.

An additional way to become more independent as a state is to produce all of our own energy, which is already mandated with a future goal. Additionally, we need to transition to more/all electric cars as our grid becomes entirely renewable. In order to make this transition more feasible we need to add thousands of chargers across the islands and require parking lots of a certain size to have a certain amount of chargers. All rental cars should ultimately transition to electric, as should all buses. Decreasing our dependency on oil is crucial for both economic and environmental purposes.

This specific pandemic was not as bad as it could be. Boats were still operating, and food, oil, coal, and supplies were still coming in. But that doesn't mean it will be the same next time. We need to think of ways we can be more resilient in order to protect our people from an uncertain future and it also will help us to have healthier land, water, and air. We need to focus on Aloha 'Aina and all that it means. We also need to draw attention to the goals set out in the Aloha + Challenge and as a county and state we need to work together to develop a concrete plan to achieve the goals by the intended 2030 date.

Mahalo for your time,

Alexandra Kahn
Kahana Foundation, Founder



Email: communications@ulupono.com

Department of Land and Natural Resources
Hawai'i Climate Change Mitigation and Adaptation Commission
Wednesday, May 13, 2020 — 1:30 p.m.

UluPono Initiative supports item #3, A Better Normal: Post-COVID19 Recovery for a Climate Ready Hawai'i.

Dear Chair Case and Members of the Commission:

My name is Amy Hennessey, and I am the Senior Vice President of Communications & External Affairs at UluPono Initiative. We are a Hawai'i-based impact investment firm that strives to improve our community's quality of life by creating more locally produced food; increasing affordable, clean renewable energy and transportation options; and better managing freshwater and waste resources.

UluPono supports the Commission's efforts to apply lessons learned from the previous recovery efforts and the ongoing COVID-19 experience to become more resilient in the face of climate change. We face challenging times ahead, on top of those already experienced. Just this past week, the Legislature has reconvened, partially to address the need to cut \$1 billion from the \$8 billion state budget.¹ This means there is an opportunity to explore strategic alignments while also evaluating all spending on its merits and ability to deliver co-benefits to our community. It is also important to remember that addressing the challenges of a pancession will require a different mindset and different strategies. Some of the strategies employed during the past recession were problematic in that not all budget cuts (or spending) are created equal, which means we need clear and robust criteria to help guide decision-making.²

Similarly, we need to understand how a pancession recovery is different – thoughtful deliberation using the construction industry demonstrates this. First, some construction crews may be able to practice social distancing or continue to work in small teams, such as those for restriping/maintenance projects or active transportation projects. However, building construction may not be as easy to social distance when all workers are sharing the same physical space. Another consideration is what industries are hurting, and how can those workers best be supported? Construction is not one of our hardest-hit industries, so investing in those projects may not yield significant stimulus impact. We may be better off targeting programs that directly help employ those now unemployed, rather than industries as a whole – or at least understanding which investment decisions do both. In addition, it isn't clear that larger projects are always best. It can take several years for larger procurements to go out the door – is there any reason to believe that this would be different now?

¹ <https://www.civilbeat.org/2020/05/hawaii-lawmakers-will-go-back-to-work-monday-looking-to-cut-1-billion-from-the-budget/>

² <https://hibudget.org/2019/06/furlough-fridays-recession-lessons-hawaii/>

As a result, we support the Commission's intent to help evaluate and support these efforts by developing evaluation criteria and processes for our climate goals. These include:

- Supporting key emissions reductions/climate goals ("clean and resilient") – for example, the current shovel-ready capital improvement plan proposals only dedicate \$35 million of \$700 million in projects clearly identified as active transportation improvements.³ If the full program of improvements was implemented, it would also increase vehicle miles traveled (VMT) by 11 percent or an estimated 630 million more miles across the state, directly counter to county and state VMT-related goals.⁴
- Targeting those community members who need help the most ("equitable") – for example, not thinking about broad-brush industries but rather those who are the most vulnerable and in need. As mentioned above, more construction projects may not be the right strategy and not catalytic. For instance, as we've seen already, bolstering our food security with investment in agricultural infrastructure could help meet the needs of our community and decrease our reliance on intermittent import supplies.
- Ensuring the recommendations are also appropriate to support safe pandemic practices – this can mean those that are easier under appropriate social distancing or can be implemented by small teams (rather than large gatherings of people).
- Maximizing the co-benefits – these may include specifics such as the number of jobs created, but then also criteria such as economic diversification or leveraging current federal funds. For example, the State is set to lose almost \$3 million in bike and pedestrian infrastructure funds at the end of October if not obligated.⁵
- Understanding the State's ability to implement – larger projects are more complex, but it is also true that the federal priorities may also not be the same this time around. There has been much focus on shovel-ready, but to date, Congress has not funded those activities. However, they have funded transit operations – a vital lifeline for our community members.

These are important criteria for our decision-making, but it is also imperative to note that these decisions shouldn't be made behind closed doors sessions. There is a significant opportunity to employ more robust public participation and stakeholder outreach to help determine the path forward. The Legislature and the Executive branch do not have to do this work alone, and the Commission can help clarify these important decisions.

Thank you for this opportunity to testify.

Respectfully,

Amy Hennessey, APR
Senior Vice President, Communications & External Affairs

³ <https://www.capitol.hawaii.gov/committeefiles/special/COV/Document/04-06-20%20Shovel-Ready%20Capital%20Improvement%20Projects.pdf>

⁴ <https://budget.hawaii.gov/wp-content/uploads/2018/12/26-Department-of-Transportation-FB19-21-PFPrev2.pdf>

⁵ <https://www.saferoutespartnership.org/sites/default/files/pdf/tap-state-states-dec-2019.pdf> Note that there is a current call for projects out currently. <https://hidot.hawaii.gov/highways/request-for-ta-project-applications>

From: Teri Skillman <teri@hawaiiartsalliance.org>
Sent: Tuesday, May 12, 2020 12:21 PM
To: Hittle, Anukriti S <anukriti.s.hittle@hawaii.gov>
Subject: [EXTERNAL] testimony: HAWAI'I CLIMATE CHANGE MITIGATION AND ADAPTATION COMMISSION

HAWAI'I CLIMATE CHANGE MITIGATION AND ADAPTATION COMMISSION

DATE: WEDNESDAY, MAY 13, 2020

TIME: 1:30 PM – 3:00 PM

PLACE: VIDEO CONFERENCE

I am writing to ask the Hawai'i Climate Change Commission to expand the definition of Resiliency to include the feminist perspective and the Arts. Our COVID experience has revealed the importance of the ARTS to the mental health and wellbeing of the Hawai'i population. While sheltering in place, EVERYONE has turned to artists and the arts to help us cope, to get a perspective on the situation, and to look forward in a positive way. ARTISTS ARE OUR 2ND RESPONDERS.

Instead of #BetterNormal perhaps #NewReality would be a better hashtag. We don't want to go back to what was "normal" so a shift in term would better support a shift in **paradigm**.

Job creation in all of the framework sectors mentioned in the brief should be expanded to center a feminist perspective, which is more inclusive and equitable, and the arts. Such a resilience program would be somewhat parallel to the WPA that F.D. Roosevelt set up by executive order on May 6, 1935. Using the Americans for the Arts Social Impact Explorer (<https://www.americansforthearts.org/socialimpact>), the Climate Change Committee may like to consider the Environment, Economy, and Infrastructure rings and tabs.



The Arts intersect with each category and artists can be employed on jobs at the intersection of each tab in the wheel. Artists straddle all categories of equity and diversity as indicated in PolicyLink’s report, “Culture, and Equitable Development: A Policy and Practice Primer” (<https://www.policylink.org/resources-tools/arts-culture-equitable-development>).

Please include the ARTS and Culture in the resilience plan!

Mahalo for your time,

Teri Skillman

Teri Skillman
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Citizens' Climate Lobby

Testimony of
Robert Pearsall, JD
Congressional Liaison, Citizens' Climate Lobby

Before the HAWAII CLIMATE CHANGE MITIGATION AND
ADAPTATION COMMISSION

Wednesday, May 13, 2020, at 1:30 PM
Video Conference

In support of THE COMMISSION'S CLIMATE CHANGE STRATEGIES

"Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next." ~Arundhati Roy

Put in less philosophical terms, COVID-19 is a fire drill for climate change. And the pandemic has exposed vulnerabilities we face as the climate crisis persists.

The Honolulu chapter of Citizens' Climate Lobby applauds the Commission's commitment to tackling the unprecedented climate change issues facing our state. CCL's national climate advocacy organization, which has chapters covering every Congressional district in the nation, supports the Commission's operating mission, which recognizes the urgency of climate threats and the need to act quickly. CCL values the Commission's promotion of ambitious, environmentally sound, culturally responsible strategies for climate change adaptation and mitigation in a manner that is accessible, equitable, and resilient.

CCL cannot overstate the need to move swiftly. The climate crisis is at our doorstep, and as the COVID-19 pandemic has demonstrated, we must act with urgency and laser focus.

The catastrophic impact of climate change is already being felt throughout the Islands in the form of rising sea levels, more intense rainfall events, record high air temperatures, coral bleaching, and coastal erosion. The fiscal impact of these

environmental changes and extreme weather events on state emergency resources, infrastructure, local businesses, tourism, and highly vulnerable residents and families throughout the Islands, underscores the need for coordinated swift action by local, state, and federal elected officials.

Policymakers such as the Commission, along with stakeholders, legislators, and grassroots organizations are now presented with an unprecedented opportunity to push our state (and the nation) in the right direction by tackling these consequential issues. We encourage the Commission to look carefully at how to build resiliency into our state's climate response systems. Among other areas, CCL urges the Commission to maintain its focus on the electrification of our transportation systems, expansion of telework and telecommuting designed to reduce vehicle and flight-miles-traveled, efficiency enhancements, and the transition of our energy systems to sustainable, renewable sources. Doing so will help advance and expand our thinking about how best to build resiliency into our state's mitigation and adaptation plans. In its broad policy package, CCL also encourages the Commission to continue its strong support for placing a price on carbon.

Currently, the Hawai'i state legislature is considering Senate Bill 3150, a carbon pricing bill with a strong equity component designed to address financial impacts on low- and medium-income residents. After moving from the Senate to the House in March, the bill is now in legislative limbo due to the prolonged recess though SB 3150 will be heard in 2021 session.

Citizens' Climate Lobby also appreciates that the Commission recognizes how Hawai'i's implementation of bold climate change measures can play a vital role in influencing other states -- who regularly look to Hawai'i for climate action leadership -- to advance similar active measures aimed at protecting our environment and our most vulnerable residents from the pressing impacts of our climate crisis.

To learn more about Citizens' Climate Lobby and the nationwide grassroots support it is providing for the Energy Innovation and Carbon Dividend Act, visit citizensclimatelobby.org.



REGENERATIVE ISLAND ECONOMY

Lala Nuss, Conscious Concepts

Hawai'i's path to a balanced, safe and prosperous recovery must move at the speed of trust, rooted in its ancestral intelligence and contemporary innovation, bravely into (k)new directions. The relationship between COVID-19 and climate change originate from the same root cause, the continued expansion of human-driven extractive economic activity. "Pick any world-shaking event from 20th century history—none has produced a bigger decrease in [heat trapping] emissions" than this year's coronavirus, wrote Laura Millan Lombrana and Haley Warren in a [May 7 article](#) for Bloomberg Green.

Normally, plummeting emissions would be good climate news. But in this case, emissions fell because of a pandemic that has killed a reported 280,000 people ([and counting](#)) and forced economies around the world into lockdown, driving unemployment to heights not seen since the Great Depression.

In the coming weeks and months, Hawai'i will debate how to restore some semblance of normal economic life. The question is whether we will do it without continuing to endanger our natural resources and expanding the wealth gap. We need to make climate-smart, community centered economic leaders out of the status quo, business as usual agendas.

Because of the pandemic shutdown, annual carbon dioxide emissions will fall by about 8 percent in 2020, projects the International Energy Agency. As it happens, 8 percent is roughly how much emissions must fall each year during the next decade to limit global temperature rise to 1.5 degrees Celsius, the aspirational goal of the Paris Agreement.

Prioritizing and repurposing the distribution of resources and attention towards systematic and procedural adaptation that explicitly center solutions around ecological wellbeing and historically marginalized communities should be a primary goal to diversifying economically. The increasingly apparent fault lines in our conventional institutions and infrastructure can be redesigned to embrace organizational agility and cultivate emergence with inclusive processes and social decision-making architecture that will inherently unleash the expansive abilities and genius of our "glocal" community on this journey towards a resilient and prosperous future.

We are uniquely positioned to jump-start alternative industries over the next year that would provide critical services and products while building upon the social cohesion within our local communities. Some of our most promising alternative industries include micro-enterprises, regenerative agriculture, alternative energy and green technology. Our current metrics of success (GDP and profit margins) must expand to include indicators of social, cultural and ecological wellbeing.

Entrepreneurs, community leaders, academics, educators, scientists, engineers and practitioners from across the pae'aina have been contributing to and expanding the inventory of "shovel ready" eco-centered enterprises over the past 40 years with a proven track record and reputation of unwavering commitment that is increasingly receiving global recognition and local relevance. Clear

examples and models are present to guide us towards a process that is ecologically and economically sound by embracing both modern technology and indigenous innovation.

FOOD SECURITY - ECOLOGICAL RESTORATION - GREEN PRODUCTS/SERVICES

An island community's resilience is rooted in an equilibrium of the carrying capacity, relationships and abilities between its citizens and resources. The COVID-19 crisis is revealing the danger of an import dependant society. The greatest critical need presently is food security. Repurposing and adapting budgets, zoning policies and direct investment from private and public sectors to directly support greater access to nutritional locally sourced food, food enterprises, community/backyard gardens, traditional crops, fallow agriculture land, the micro-food infrastructure and manufacturing can be multifunctional and multi-phased. By initially distributing CARES funds directly to immediate-relief needs with an understanding that this is a multi-purposed long term solution, will kick-start the long-term goal of expanding food security, nutritional healthcare and ecological restoration.

Diversifying our economy means becoming less import-dependant through redesigning our procurement processes and standards to prioritize locally-centered food distributions into our local schools, hospitals, cafeterias, food hubs and restaurants. Standardizing a living wage and removing barriers to subsistence living practices will diversify the jobs sector and affordability of place. Go Farm Hawai'i has created a robust platform of micro-enterprises that need direct and immediate investment throughout the state, <https://gofarmhawaii.org/find-your-farmer/>.

Most aina-based, small enterprises need more capacity and staff in the field in order to fill the gaps where the public sector is not able to support. Diversifying our agriculture and food sector even further in alignment with local wellbeing, global market trends, climate change adaptation and mitigation recommendations, investment into enterprises and services that are contributing to Hawai'i's carbon sequestration and neutralization need to be made. Repurposing trade careers, civic positions, training and degree programs within the public and private sector to incorporate green infrastructure, eco-restoration and climate adaptation efforts will expand the job market while diversifying the economy. Creating living wage and career opportunities that are contributing to a greater amount of capital circulating through our local economy directly impacting the resiliency and preparedness for crises to come.

GREEN TECHNOLOGY - COMMUNITY-OWNED ENERGY

We must develop and retrofit our infrastructure prioritizing ecologically restorative models being adapted throughout major cities around the world. Clean energy should be affordable and owned by everyone. Energy is such a basic and important necessity that everyone should affordably access, own, and control it. By now, you have probably seen the alarming headlines warning that we only have 12 years left to turn climate change around. That's not a lot of time!

The problem is that we need energy to make stuff happen, and most energy is generated through polluting sources such as the burning of fossil fuels. Luckily, many groups have already figured out the solution: We need to democratize clean energy. The Law Center's Community Renewable Energy Program is focused on breaking down legal barriers to community-owned renewable energy. A focus

should be incubating a Permanent Community Energy Cooperative -- a legal model and approach for scaling renewable energy development that accelerates an equitable transition to renewables by enabling widespread grassroots crowd-financing of new energy projects designed for long-term community ownership and control.

O'ahu's stormwater infrastructure is aged & outdated, by utilizing green micro-infrastructure investments that mimic natural ecosystems to make the city more permeable & green will support the need to better capture toxic runoff into our oceans and streams.

Global greenhouse gas emissions are on track to drop an unprecedented [8% this year](#), this carbon respite only masks underlying issues. Our collective work to address the structural drivers of climate change remains critical. Last week, we saw a record daily high in human history for carbon dioxide concentration [measured on Mauna Loa](#): 418.12 ppm on May 3, up from 413.27 ppm a year earlier (carbon released from fossil fuels we've already burned can stay in our atmosphere for varying amounts of time, from months to millennia).

And [2020 is on pace](#) to beat 2016 as the hottest year in recorded history. Oahu saw a record peak in renewable energy use in April of 61%. Across the U.S., electricity generated from renewables like solar, wind, and hydro surpassed coal-fired power for a record 40 days straight. Since the beginning of March, electric vehicle (EV) registrations in Hawaii have grown 6% while gasoline-powered car registrations have dropped. And in the last two months, we've seen the largest growth of EV registrations in the history of the islands.

We need to further invest in EV charging stations in public and private infrastructure as well as prioritize clean public transportation by expanding bike lanes, improving bus services and coordinated rail schedules for commuter communities not living in the urban core. Consideration for telework and telehealth should be prioritized and invested into. Those living in rural communities should be prioritized in access to jobs and health services that allow for less transit. Waste to energy and a clear intention to lower our waste output needs to be prioritized.

TRANSFORMING TOURISM - REGENERATIVE TRAVEL

Hawai'i's endemic cultural wisdom and world renowned destination brand is a vessel for expanding a cottage industry and micro-enterprise economy that can offer one-of-a-kind, high quality travel experience to a growing global market demand for products, services and experiences that are sourced from and directly give back to that particular people and place. Tourism has the potential to become an agent of positive transformation that can contribute to a better quality of life for all.

Regenerative tourism defines success as *more net benefit* (after costs have been accounted for, all waste eliminated, and all damage restored), and more personal and institutional capacity to adapt, be resilient, creative, collaborative etc, while providing a greater and richer sense of meaning for guests and hosts. Regenerative tourism is not anti-growth; it simply asks that we grow the things that matter most to us in ways that benefit the entire system and never at the expense of others. There can be no such thing as a sustainable business within an unsustainable system. That's the situation virtually every tourism

business finds itself in today. Regardless of anyone's individual effort to shrink their footprint, the current systemic dependence on volume growth to compensate for diminishing returns, and a failure to acknowledge let alone pay for externalities has generated an operational model that is destined to crash. The only way we can operationalise an alternative measure is to do so on a community-by-community basis. A regenerative approach to tourism starts at home within ourselves, then our workplaces and our communities. It also means that the unique spirit of a place cannot be defined but can only be expressed; it can only be lived and shared by those for whom it is home. It too has the properties of a living system. Its capacity to affect and, ideally, to enchant, enliven and enrich the lives of visitors depends on the capacity of the welcoming hosts, who having become rooted in their place, to feel an intimate, co-creative connection with it that generates a deep abiding affection and desire to care for all life within it. A life affirming regenerative tourism that works with wholes and not parts, with permeable boundaries not hard lines of demarcation, is better able to integrate tourism with those other life support systems expressed in the place — be they hydrological, food-based, socio-cultural, political or economic.

Expanding our agriculture sector to provide bio-fuels, hemp, bio-plastics, bio-char, natural medicines, organic added-value products (oils, herbs, soaps, cleaning products, fiber, beauty products) can all be part of re-branding Hawai'i for the next generation of quality travelers. Hawai'i could be marketed as a learning lab, a place to be restored and to give restoration for cultural and ecological wellness and healing. Ecologically and culturally sensitive commodities would support localized economic and environmental wellbeing. Refocusing Hawai'i's visitor industry to better market and manage micro-enterprises, the industry should focus on bringing a smaller volume of high-spending visitors that are seeking a destination to learn from and give back to. Focus on place-based mission investment, philanthropic travel, high net-worth individuals and anchor institutions. Better support and investment in our communities of practice for place-based mission investing is key to diversifying our economic framework.

Regenerative Tourism depends on caring hosts willing to ensure their destination is healthy and full of life. A regenerative, systems-based approach integrates conventional sustainable practices and doesn't treat them as an extra, a "bolt-on" necessity. By following Nature's principles, each part (be it a plant, animal, ecosystem, person, business or a community) assumes its essential responsibility for ensuring the thriving /health of the whole of which it is a part. When the prosperity of a community is synonymous with the health of all its parts and relationships, then the act of caring or stewarding — ensuring that the conditions for life to thrive do exist, is built into the system. Sustainable, restorative, regenerative practices are integral and include all the steps necessary to reduce our ecological footprint to zero (for there is no waste in nature) and respond courageously and urgently to minimize the negative effects of a warming climate.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HAWAI'I CLIMATE CHANGE MITIGATION AND
ADAPTATION COMMISSION

Public Meeting May 13, 2020, 1330

RE: Agenda Item 3 - Discussion and possible action: Applying lessons learned from the Covid-19 experience to become more resilient in the face of climate change, and requesting the support of the Commission to distribute and promote a briefing document related to post-COVID19 recovery and climate change mitigation as a way to advance the Commission's priorities.

Dear Commissioners,

Thank you for taking time to consider my testimony. I am encouraged by the sheer existence of the Climate Change Commission, and am grateful that you all are committed to meeting despite the challenges the globe is facing in light of COVID-19 related restrictions and restructuring. I am sure that each of you, like me are seeing the many ways in which COVID-19 related stay at home orders are affecting our current environmental landscapes. Cleaner air and waterways, as well as more people having the time and the interest to be in nature (beach walks, back yard gardens, hikes, etc.), are examples that show plainly how humans impact the environment.

I have been additionally encouraged in recent months by the community capacity building that has been taking place here in Hawai'i. In light of this capacity building and the wealth of community knowledge that has long been untapped, I urge the Commission to commit to partnering with community to not only distribute and promote a briefing document related to post-COVID19 recovery, but to first and foremost collaborate with the community to create that document.

In support of my urging you all to collaborate, I share the following resources and organizations as potential starting places as you seek to develop, distribute, and promote a briefing document:

- Building Bridges, Not Walking on Backs: A Feminist Economic Recovery Plan for COVID-19 (<https://humanservices.hawaii.gov/wp-content/uploads/2020/04/4.13.20-Final-Cover-D2-Feminist-Economic-Recovery-D1.pdf>)
- Hawaii Strategy Lab (<https://www.hawaiistrategylab.org/about>)
- Supersistence (<https://supersistence.org/>)
- Hawaii Community Lending (<http://www.hawaiiancommunity.net/products.asp>)

Thank you for the work you have already undertaken, and to which you are committing yourselves to going forward. I appreciate you taking time to consider my testimony and look forward to ways in which we can deepen our collaboration and mutual support as we all strive toward a more just, equitable and resilient future.

Sincerely,

Rachel James, Esq.

