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U.S. Senate Democrats' Special Committee on the Climate Crisis

July 17, 2019
1:00 - 3:00 pm

Aloha and Good Afternoon Chair Schatz and members of the Committee,

A special mahalo to our Hawai'i Senator Brian Schatz for the invitation to engage with this Committee today and for your continued leadership and service nationally and at home.

Thank you for scheduling this hearing and allowing us to speak on the climate crisis, its impacts to our communities, important measures cities are taking, and the opportunities for improved leadership at the federal level. At the end of June Honolulu hosted both the Climate Mayors Summit and US Conference of Mayors, and I can tell you, cities are committed to taking action and leading.

Honolulu is Changing; Our Climate is Changing

I am the Mayor of an island community. We recognize the inherent vulnerabilities of such geographic isolation. Tragically, the climate crisis is amplifying such vulnerabilities and the known hazards that can affect us. Like other coastal communities we have measured rising sea levels over the last century and have the data and science projecting out accelerated sea level rise through this century. We have also measured a decline in the frequency and intensity of our glorious trade winds; an increase in our air temperature; an increase of hot days and hot nights; and a decrease in overall rainfall and stream flows, while also experiencing record-setting rainfall and flooding events. In short, though we look to our past to reinforce our island and community values, historical environmental conditions no longer support our planning and design for the future.

Information from our City Climate Change Commission connects global heating and climate change to increases in the frequency and severity of natural disasters, including hurricanes, heat waves, and both droughts and heavy rainfalls. In April 2018, severe rains resulted in flash flooding and mudslides in East O'ahu, Windward O'ahu and the Island of Kaua'i. This event received a federal disaster declaration. In August 2018 Hurricane Lane, which peaked as a powerful Category 5 hurricane (one of only two ever recorded within 350 miles of the State), became the first major threat to the State since Hurricane Iniki made landfall in September 1992. Lane weakened significantly as it moved towards the State, but it still caused severe mudslides and flash flooding on the Island of Hawai'i, where a maximum of 52

inches of rain was recorded. This event also received a federal disaster declaration. Between May 16, 2019 through June 19, 2019, Honolulu broke or tied 19 temperature records (including record highs on 9 of the first 18 days in June), which was influenced by warmer than normal sea surface temperatures and disruption of trades winds, both of which are recorded and forecasted trends due to climate change. And on June 25, 2019, Honolulu recorded a record daily maximum rainfall of 4.2 inches, easily breaking the previous record of 0.14 inches, set in 1994, by a factor of 30. This one event exceeded the previous entire monthly record of 2.46 inches of total rainfall in June 1971. June 2019 rainfall totaled 22 times the average of 0.26 inches. The June 25, 2019 rainfall event is one of the 25 wettest days on record for Honolulu and the only day in the top 25 to occur outside of the typical wet season (October-April).

For years we have called it Climate Change, but it is much more serious. We are now facing a Climate Crisis. This instability and its impacts hurt our communities, hurt our economies, and severely alter our natural ecosystems and their abilities to support lives and livelihoods, from drinking water to agriculture and fisheries.

But where there is challenge there is also opportunity. Every change we make to address the climate crisis can also build a stronger local economy, reduce long-term costs for residents, and ensure that our communities are resilient and connected to each other; neighbor to neighbor. Even though the federal administration refuses to acknowledge that we need to address the climate crisis immediately, I'm very proud that both our city, our sister counties and the state have joined other jurisdictions across the nation and all over the world, and are making climate and resilience a priority.

Within days of President Trump's irresponsible decision to go back on our word to the global community, and abdicate our leadership responsibility, I engaged in a joint commitment with Hawai'i Governor David Ige and all of Hawai'i's mayors to support the Paris Agreement. Hawai'i is the only state in the US to have every mayor and the governor united to uphold the world's climate agreement even as our federal government walks away and denies science. O'ahu stands in solidarity with 195 other nations on earth.

Just last week, here, at your home away from home, our nation's capital experienced extreme and record rainfall, stranding people on top of their cars and along roadways, and flooding metro stations, the National Archives, and the White House itself. Leadership does not turn a blind eye to the changes outside its windows, either at work or home; leadership acknowledges the powers that have caused an untenable situation, holding them to account for and combating those climate changing forces, and supporting the transformation to green economies and communities to uphold American ideals of health, innovation, and prosperity.

Resilience Strategy and Community

In November 2016, the voters of the City and County of Honolulu overwhelmingly elected to create an Office of Climate Change, Sustainability and Resiliency. After launching in mid-2017, the Resilience Office has since published the City's first Annual Sustainability Report, and just this past May, issued the O'ahu Resilience Strategy. The Resilience Office, assisted by a 21-member Steering Committee, over 80 working group members drawn from the public and private sectors, and with inputs from thousands of community members island-wide detailed 44 actions – specific policies or programs that will substantially improve natural disaster response and recovery and climate resilience for O'ahu.

With contributions by those thousands of residents, hundreds of organizations, and dozens of business and non-profit leaders, this is truly a shared vision for a resilient island future. It is our community roadmap that shows us what we need to do, where we need to go, and how to get there. It is a punch-list for action across four key areas for our island: (1) Remaining Rooted – Reducing the long-term cost of living for our island residents; (2) Bouncing Forward – Preparing for natural disasters and recovering effectively; (3) Climate Security – Directly addressing the climate crisis in ways that make us stronger; and, (4) Community Cohesion – Keeping our neighborhoods and communities strong and connected.

We cannot afford to be complacent. Our policies need to be bold. If we want to save the things we love most about our local community, ironically, we have to change.

Under the 100 Resilience Cities Initiative, nearly two dozen US cities have produced Resilience Strategies, including others speaking at this hearing. Cities are a collective network across the country, sharing ideas and resources to tackle the most pressing issues facing our communities. Though not all of us here today are part of the 100 Resilient Cities Network, all five of the cities testifying before today are part of the Bloomberg Philanthropies American Cities Climate Challenge. Honolulu's supported work will accelerate progress on emission reductions for the two major sources of carbon pollution on our island – energy usage in buildings and ground transportation.

Transforming Buildings and Ground Transportation

Honolulu is leading the way with a true 100% renewable energy mandate with no renewable "credits" by 2045, and a goal of transforming all ground transportation to renewable fuel by 2045 and a renewable city fleet by 2035. We recently switched out all of our 53,000 streetlights with LEDs, and the next time you're on island you may ride in a hybrid electric airplane being tested for local flights or sit in a building downtown being air-conditioned by cold seawater rather than traditional fossil-fuel power. The future is being invented in Honolulu, and we are just at the beginning of a transition to our real goal: a carbon-neutral economy by 2045.

Honolulu is taking critical steps to mitigate the climate crisis through a policy of de-carbonization, resilience, and economic equity. And we leverage our efforts through close collaboration and partnership with the State of Hawai'i and Hawai'i's other counties. We are "leading by example," making tough decisions, and investing significant political and financial capital into transformational projects with high short-term costs and long-term gains, (e.g., rail, Complete Streets, bike lanes, electric buses).

The Hawai'i Clean Energy Initiative recently celebrated a decade of success last year. It set bold yet achievable statewide goals for renewable energy and energy efficiency, and created the fundamental building blocks of the State's de-carbonization policies. This included a commitment to 100% renewable electricity generation and carbon neutrality by 2045; implementation of a tax on imported barrels of crude oil; a 2020 greenhouse gas reduction emissions reduction target; net energy metering to support investment in rooftop solar PV; and a generous and highly effective 35% state-level renewable energy investment tax credit.

Hawai'i has established itself as a test-bed for clean energy innovation in emerging technologies, programs, and policies; and this has had a positive impact on our economy, building independence from volatile global crude oil markets and keeping money in-state to be invested in our own economy. Since these efforts launched, upwards of \$300 million has remained in our islands' local economy every year instead of shipping our dollars offshore to pay for foreign oil. In the electricity sector, the State's and the City's policies have begun to make difference in terms of reducing carbon pollution. As of now, 18% of residences have rooftop solar, which is the highest in the nation (Connecticut is the next closest at 7%). 1 of every 3 single-family homes (over 50,000) have rooftop solar.

And the City is taking a more active role to shape the utility of the future through interventions in Public Utility Commission dockets on performance-based regulation and integrated grid planning. We are actively advocating to include the social cost of carbon pollution and the value of resilience in the cost-benefit analysis and grid modernization investments.

While we've made great progress on the electricity grid, emissions from ground transportation have stayed stubbornly high and actually increased in recent years in lock step with our booming economy. Cars and trucks in Hawai'i consume over 500 million gallons of gasoline and diesel fuel annually, draining nearly \$2 billion annually from our local economy and producing 21% of our island's carbon pollution that leads directly to increased climate change. This reinforces how important our rail project, supported by the Federal Transit Administration, is to the community and climate goals we have established. This project will chart a carbon-free corridor as the backbone of Honolulu's decarbonized future.

Current ground transportation options directly contribute to our high cost of living, and national studies have shown that operating and maintaining an electric vehicle costs about one-third less than operating a comparable fossil-fuel powered vehicles. Car manufacturers predict that full cost parity with fossil fuel powered cars will be achieved in five years or less. Other national governments, cities and companies across the globe have now set targets to phase out fossil fuel-burning cars and trucks and make the switch to renewable fuels, hydrogen, and electric vehicles that result in cleaner air, less noise, energy security, and a reduction of greenhouse gas emissions.

In addition, our ground transportation system needs to adapt with the times and move towards more biking, walking, mass transit, renewable fueled vehicles, and other new mobility options if we are to succeed in meeting our goals. We have to do this together with the State and other stakeholders. I encourage your support of the Complete Streets Act of 2019.

Updating our energy, electrical, and building codes is one the most foundational and important steps to build climate resilience – both adapting to impacts we know are coming and mitigating future consequences. Each action we take today to clean up the atmosphere and reduce risk, saves us dollars and lives down the road. Updated codes will increase long-term affordability, reduce the root causes of climate heating, and help us adapt to the impacts we face as an island community.

Reducing the carbon footprint of our own facilities is a key step for the City as we lead by example and light the path for others. Using streamlined energy services performance contracting, we are planning to implement a public-private partnership to develop energy and water efficiency measures, on-site renewable energy generation plus storage, renewable-fueled fleets, and charging infrastructure across all City facilities. We are looking for the best innovations and ideas from the private market to design, finance, and implement measures across our entire facilities portfolio.

Adapting to Climate Impacts

As I continue to engage with local and national leaders from around the world, two things are consistently clear: (1) if we are to survive and thrive in a world of climate change we must start building resilience right now; and, (2) the current US administration is ignoring climate change at our peril, and giving up leadership and credibility across the Pacific region while also ceding an economic edge to China and others who are racing ahead with renewable energy and future-proofing cities.

As mayor of an island community, I want my residents to know that I am dedicated to making sure we are clear-eyed about the very real challenges the climate crisis presents. We are already twenty years behind in our preparations because in the US certain industries and special

interests helped drive a campaign of doubt around the reality of climate change science. But working together we are going to tackle the climate challenge and thrive – and we will protect lives and city investments with these actions. Business as usual and inaction are not options.

In response to our City Climate Change Commission's "Sea Level Rise Guidance," last summer I issued a directive to all city departments and agencies to take action in order to address, minimize the risks from, and adapt to the impacts of sea level rise.

The overwhelming volume of science proves that climate change is driven by human greenhouse gas emissions, and if we continue with business as usual, Honolulu will experience a rise of at least 3.2 feet of sea level within this century. This will negatively impact our island's communities, habitats, property, infrastructure, economies, and industries.

The Commission's Climate Change Brief, as well as, our local contributions to the 4th National Climate Assessment, provide clear, science-based assessments of the risks to the City's coastal areas and island-wide communities, with recommended actions.

We are all aware that O'ahu has significant critical public and Federal Department of Defense infrastructure near our shoreline – Honolulu Harbor, Daniel K. Inouye International Airport, Joint Base Pearl Harbor-Hickam, Marine Corps Base Hawai'i, most of our industrial areas, and our financial district and prime economic engine, Waikīkī. The success of these areas will also define the success of the state. These areas that we depend on will need to be slowly elevated in order to remain secure.

The single greatest implementation tool the City possesses is our operating and capital budget. It is often said, "show me your budget and I'll tell you what you value." We are learning from other forefront cities on the integration of resilience and our processes for establishing the budget. I am sure I am not the only local leader in the room who has received inquiries from municipal bond rating agencies on our local awareness and actions regarding climate risk. We need to ensure our budget development and review processes truly address today's and tomorrow's challenges, and save us on the back end when impacts arrive.

Our number one concern must be reducing fossil fuel emissions as fast as possible and making sure we are not adding additional negative impacts. Concurrently, we must make sure that we are protecting our communities from the challenges that the coming decades will bring.

Kākou – Working Together at the Local, State, and Federal Levels

The 2019 Climate Mayors Summit program and panels addressed mobility and equitable cities; climate partnerships at the local, state, federal, and international levels; philanthropy and cities; and navigating financial risk due to climate change. That day we Climate Mayors also

announced an update on the Electric Vehicle Purchasing Collaborative, which will bring over 2,000 electric vehicles to 120 cities across the US by 2020. This unprecedented cooperation leverages our collective buying power to accelerate the conversion of public fleets to electric vehicles, sending a powerful signal to the global auto market.

The day after the Climate Mayors Summit, Honolulu kicked off the US Conference of Mayors. Among all the great discussions and exchanges, nearly a dozen resolutions were passed that directly relate to today's hearing, to city actions and leadership, and how actions at the federal level threaten our futures, but also how and where the federal government can turn the tide toward joining us in addressing the climate crisis, including: Resolution 54, "Comprehensive National Response to Climate Change;" Resolution 64, "Supporting a Green New Deal;" and, Resolution 66, "In Support of a National Price on Carbon Emissions," among others.

Warranting special recognition is Resolution 65, "Supporting Cities' Rights and Efforts to Mitigate Climate Change Damages and Protect Taxpayers from Related Adaptation Costs." This resolution opposes any legislation, whether at the Federal or State levels, that attempts to limit or eliminates cities' access to the courts by overriding existing laws or in any way giving fossil fuel companies immunity from lawsuits over climate change-related costs and damages.

Cities across the country and world need leadership and assistance from national governments to make progress. I just returned from the 100 Resilient Cities 2019 Urban Resilience Summit, where 100 cities discussed how to make progress on the climate crisis. And while we are a strong network, such collaboration should be happening at all levels.

You've heard of the good work happening within cities, and across the counties of Hawai'i and with the state. I have not been shy about expressing frustration toward the current administration and its constant barrage on environmental policies and risking our collective future. Yet within that frustration we continue to work well with our Congressional delegation and agencies across the Federal government on important climate security efforts.

First – this is a good time to work on climate adaptation and hazard mitigation projects that prepare our cities for a more violent climate. Our Congressional delegation was able to secure \$345 million for a critical climate resilience project for our city in the Ala Wai Watershed and we are grateful for that. It is also true that the recently passed Disaster Recovery Reform Act of 2018 is radically changing the way federal funds are going to be distributed to our cities. Hazard mitigation projects are getting hundreds of millions of more federal dollars to do more mitigation work to try to reduce FEMA's having to pay out so much on the back end of the increasing climate disasters we are experiencing. Cities should be gearing up now to apply for and take advantage of those increased funds. That's why our Resilience Office has helped include climate change as a specific section in our Hazard Mitigation Plan and we have hired a new program manager to prepare more grant applications.

Second – find the programs that have renamed themselves from “Renewable” to “Resilience” under this administration. For example, we are working with the US Navy and Department of Defense on O‘ahu to explore the potential to create a renewable-powered microgrid to provide steady, clean power to Pearl Harbor and Hickam Air Force Base in the event of an emergency. That extra capacity can potentially help power our new rail line, electric buses, fleet charging, water treatment plants, and other critical City demand near the base. Norfolk, Virginia, San Diego, California – these cities have worked with the Navy on climate resilience projects, including sea level rise coordination and joint land use studies – there might be opportunities with other branches of the service, as well.

Third – I think it is important that we work with our Congressional delegations to preserve the ability of our cities to make polluters pay. I previously mentioned the resolution passed by mayors to protect the rights of cities to sue for damages related to climate change. There is an effort at Congress to grant immunity to the large oil companies who had full knowledge of the damages that would result from their product and they actively undermined the science. We hope our Congressional representatives protect my sister cities’ right to have their fair day in court if they so choose.

Thank you again to the Committee for its efforts the address the climate crisis and for holding this hearing to hear the views of Honolulu and other cities at risk in the nation.

A handwritten signature in black ink, appearing to read "Kirk Caldwell", with a stylized, wavy line extending from the end.

Kirk Caldwell
Mayor
City & County of Honolulu