

CLIMATE CHANGE COMMISSION
CITY AND COUNTY OF HONOLULU

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KIRK CALDWELL
MAYOR

MAKENA COFFMAN, PH.D., CHAIR
CHARLES FLETCHER, PH.D., VICE CHAIR
ROSIE ALEGADO, PH.D.
VICTORIA KEENER, PH.D.
BETTINA MEHNERT, FAIA, LEED AP O+M

Climate Change Commission
Tuesday, September 18, 2018
Mission Memorial Building, First Floor Hearings Room
550 South King Street
Honolulu, Hawai'i 96813
Meeting Minutes

Members present: Makena Coffman, Charles Fletcher, Bettina Mehnert, and Victoria Keener.

Members Absent: Rosie Alegado.

Public: Executive Director Josh Stanbro, Deputy Director Justin Gruenstein, Uyen Vong (Office of Climate Change, Sustainability and Resiliency); Courtney Sue-Ako (Corporation Counsel); King Burch, Dave Raney, Ken Lowry, Corinne Gallardo-Mata (Councilmember Ron Menor's Office), Stan Sakai, Julius Fischer (Hawai'i Green Growth), Mark Fox (The Natural Conservancy of Hawai'i), Jodi Malinoski (Sierra Club of Hawai'i), Danielle Bass (Office of Planning), Sandy Ma (Office of Planning), Cole Hendrickson, Anu Hittle (Department of Land and Natural Resources), Bob Stanfield, Sherry Pollack, Kathy Mitchell (Board of Water Supply), and Nami Ohtomo (WSP).

Call to order: Chair Makena Coffman called the meeting to order at 3:05 p.m.

Roll Call: Four commissioners were present. Quorum was established.

Approval of the Meeting Minutes of July 17, 2018: The minutes were adopted as amended (**AYE:** Coffman, Fletcher, Keener, Mehnert; **NAY:** None; **ABSTAIN:** None.)

- Page 3, should be... "Fletcher asked if historical models of insurance are becoming outdated".

Fletcher moved Mehnert seconded the motion to move agenda number 9: "Duties and Powers of the Climate Change Commission" to the end of the agenda. The motion was adopted (**AYE:** Coffman, Fletcher, Keener, Mehnert; **NAY:** None; **ABSTAIN:** None.)

Report on the Activities of the Office of Climate Change, Sustainability and Resiliency (CCSR):

Executive Director Josh Stanbro presented the following report:

- CCSR personnel were helping staff the Emergency Operations Center during Hurricane Lane and Tropical Storm Olivia. It was fortunate that both events were not catastrophic. Tropical Storm Olivia delayed Mayor Caldwell's travel to the Global Climate Action Summit that same week.
- CCSR started the process of convening stakeholder working groups. The working groups are in charge of finding and researching policies relating to the Resilience Strategy.
- Two meetings of the Climate Action Plan public meeting series have been scheduled. They are Thursday, September 27 in Salt Lake and Tuesday, October 2 in Aiea.
- The Global Climate Action Summit took place last week in San Francisco, California. California, which has the world's 5th largest economy, passed three laws that Hawaii was the first to adopt. They are:

- Solar hot water panels mandates on roofs
- 100% renewable energy by 2045
- Carbon Neutrality by 2045
- A report from the US Conference of Mayors showed that 95% of cities reported at least one event of climate disturbance within the last five years, 65% of cities have procured renewable energy, and 26% of cities have now embarked on green vehicle procurement for their fleet.
- During the Global Climate Action Summit, Mayor Caldwell made a commitment to the Powering Past Coal Alliance, which is an alliance to phase out the use of unabated coal power generation by 2022. Mayor Caldwell also signed on to Deadline 2020, a commitment for the City and County of Honolulu to have a Climate Action Plan in place by 2020. Mayor Caldwell also committed to fossil-free streets with C40 to make sure there are only zero-emission buses and emission-free zones around Honolulu.

Questions and comments that followed:

- Fletcher asked how Josh feels about Honolulu's progress. Stanbro said there is major progress and also a lot of work that is still up ahead.
- Fletcher asked about the gaps in the city's hurricane preparedness and response. Stanbro commented that the list of staff personnel who were helping with the Emergency Operations Center needs to be updated in a way that could be logistically optimized. Stanbro commented that the public was concerned about debris blockage and flooding from streams, but the City could not easily identify the owner of the stream, whether it is the city, state, or private.
- Coffman asked how cities are addressing energy benchmarks. Stanbro replied that cities, like Salt Lake City, are working with utilities to provide the pertinent information. Stanbro also commented that Honolulu is behind in converting the city fleet to an electric fleet. For example, Los Angeles has put together a group procurement so the price of electric vehicles is lowered if a bought in a group rate.
- Coffman asked Stanbro to describe what an emission-free zone would look like. Stanbro replied that there may be fees for emitting carbon in certain areas, but for Honolulu it would focus along the rail line to create a "carbon-free corridor".
- Mehnert commented that the president of the American Institute of Architect projected that in the next two years, architect work will be 70% related to renovation so that means the focus has to be on existing buildings. Stanbro commented that buildings are a huge element in terms of carbon emissions and resiliency.
- Fletcher asked if there are any discussions regarding standardizing building codes in regards to sea level rise. Stanbro commented that failing to adopt Kyoto Protocol and staying in the Paris Agreement means that all of this is being done at the local government level so there is no national standard.
- Fletcher asked if US Climate Alliance have staff. Stanbro said the US Climate Alliance is made of 17 states and Honolulu is not directly engaged. The US Climate Mayors have a staff of one person. After Hurricane Harvey, Houston was able to recuperate with the help of group procurement for their fleet.
- A member of the public asked about working groups. Stanbro replied that there are four areas of focus in the Resilience Strategy: Climate Adaptation and Mitigation, Affordability, Bouncing Back from Disasters, and Community Cohesion. There are five corresponding working groups to tackle the issues in the four focus areas.
- A member of the public asked if the Climate Action Plan are different from the Resilience Strategy. Stanbro said that the Resilience Strategy is a more comprehensive document that will include components of the Climate Action Plan. Stanbro added that the Resilience Strategy will only include actions that the City and County of Honolulu has jurisdiction over.

Presentation on insurance risk by Jonathan Clark from Guy Carpenter & Company, LLC. Clark presented the following information:

- In developed nations, only 30-35% of economic disasters are alleviated through reinsurance resulting in protection gaps for property, agriculture, cyber, healthcare, pensions and life risks. The federal government plays a large role through FEMA in dealing with natural disasters. The current set up is unsustainable.
- Guy Carpenter is one of four components of the Marsh & McLennan Companies. Half of the company is involved with consulting and the other half is with reinsurance, insurance and risk management.
- The insurance industry is allocating \$400-450 billion in the global property catastrophe limit. 25% of that comes from the capital market, such as in terms of a catastrophe bond.
- 2017 represented the third time in which the industry handled more than \$100 billion in loss in a single year.
- Public entities can mitigate both financial impact and funding lag associated with major catastrophes by engaging in pre-arranged financing as opposed to relying on fiscal measures.
- Case Study #1: FEMA Flood Insurance Risk Study
 - The Flood Insurance Risk Study on the National Flood Insurance Program covered elements of FEMA's deliverables to Congress as required under the Biggert-Waters Flood Reauthorization Act of 2012. Due to Hurricane Katrina, the National Flood Insurance Program owed the Treasury \$24 billion. FEMA bought reinsurance for the first time in 2016-2017. FEMA became the first federal agency to purchase reinsurance: \$1 billion of protection and subsequently purchased \$1.4 billion of reinsurance and \$500 million of insurance securities
- Case Study #2: Following Hurricane Sandy, PennUnion (2015): Amtrak subsidiary Passenger Railroad Insurance, Ltd. (PRIL) announced the issuance of PennUnion Re, to provide three years of protection against earthquakes and storm surge and wind loss. The insurance covered areas from Washington, D.C. to Providence, Rhode Island.
- Case Study #3: The Government of Mexico established the Natural Disaster Fund (FONDEN) to tackle disaster risk financing and is a public private partnership. It aims to cover all federal losses and half of local level losses with the benefit of risk transfer mechanisms. The insurance protects against collapse, seaquake, landslide, tsunami, earthquake, subsidence, hurricane, rainwater flood, river flood, severe rain, severe drought, tropical storm, tornado, and others. In 2017, Mexico suffered a loss from an earthquake and within 67 days of the event, the full proceeds of the bond was paid out.
- In the Insurance Linked Securities (ILS) market, there are four trigger options: Indemnity (triggered by actual loss of sponsor), modeled loss (triggered by modeled results to sponsor portfolio), index (triggered by industry insured loss), and parametric (triggered by event parameters).
- The latest evolution of public-private partnerships is the National Flood Insurance Program, Flood Re, Pool Re, World Bank, Freddie Mac and Fannie Mae, and the Cal Phoenix Re.
- Public-Private-Partnerships (PPPs) can open new opportunities to unlock risk capital and expand risk transfer solutions. New thinking by insurance professionals, capitals providers, policymakers, and regulators is required to create win-win arrangements.

Questions and comments that followed:

- Keener asked how risk is translated for long term impacts. Clark responded that typically reinsurance plans are from three to five years.
- Keener asked about the difference between the indemnity trigger and parametric trigger. Clark explained that the products are the same, but the trigger to release the proceeds is different. Clark cited the National Flood Insurance Program, where their program proceeds is released when the loss is recorded at a certain amount of money. The parameter trigger is based on a specific event, such as a category three hurricane, then the money is released.
- Fletcher asked which type of ILS is cheaper. Clark explained that there is little difference, but it can also depend on the type of capital market transaction and typical reinsurance transaction. Clark added that companies can select two or more types of ILS at the same time.
- Keener asked if the models are reflection of climate change. Clark replied that the risks are not

reflective of the impacts of climate because the catastrophe models are based on storm tracks and simulating events.

- Keener asked about melting of arctic sea ice in regards to shipping routes and Clark replied that these factors are not included in the modeling tools and is not his expertise.
- Fletcher commented that heat wave is not a factor. Clark confirmed and commented that heat wave may be in agriculture. Fletcher commented that since 1980s, heat wave has been responsible for more fatalities any other weather event.
- Mark Fox from The Nature Conservancy of Hawaii asked about risk insurance on natural infrastructure. Clark replied that it is beginning to be in consideration.
- A member of the public asked if the insurance agencies have considered exclusion of climate change risks. Clark commented that there are dynamic pricing and robust modeling for certain products.

Report by Commissioner Gordon Ito from the State Insurance Commission. Commissioner Ito reported the following:

- Risk mitigation includes consistent building codes which needs to be the same statewide. Another component is zoning and planning. For example, there is a huge risk for homes built in lava zones on Hawaii Island.
- Hilo is a good example of risk mitigation. After the last tsunami affect Hilo, the government did not allow rebuilding around Hilo Bay and now is a grassy soccer field which can withstand flooding.
- Homeowners risk is covered up until a Tropical Storm is issued. Anywhere in Hawaii has potential risk of flooding, either from storm surge or rain from an elevated area.

Questions and comments that followed:

- Fletcher asked if the State Insurance Commission could recommend to make residents safer from the effects of climate change. Ito commented that residents can retrofit their home, but is concerned that Waikiki is a prime example of what a catastrophe would look like.

Report from Director Nelson Koyanagi and Risk Manager John Hashimoto of the Department of Budget and Fiscal Services (BFS):

- Hashimoto provided a brief background of the Risk Management Office in BFS: The Risk Management Office is responsible for the city's self-insurance program, administer the city's claims administration program, and consulting services to departmental staff on variety of issues. In extreme weather events, the office would be responsible for coordinating the effort to the city's insurer timely and accurate information to initiate claims process and identify losses. The total value of city real property is more than \$3 billion. Many city facilities may be impacted by sea level rise and extreme weather such as the wastewater treatment plants. The other impact is to buy higher insurance limits in the future, currently \$300 million is purchased in property insurance. The city relies on insurance brokers like Marsh, in which Guy Carpenter is a subsidiary, to advise the city on how much to purchase.
- Director Koyanagi explained that one of the things city does is sell bonds. At this point and time, the rating agencies that the city works with including Moody, did not mention climate change as an issue.
- Director Koyanagi is reliant on departments to look at what they need to do to address climate change impacts to their capital projects. This could potentially mean less projects as more money may have to be spent to make projects more resilient. The City has a reserve of over \$100 million to cover losses as a result of a natural disaster.

Questions and comments that followed:

- Coffman asked if the mayor's directive on sea level rise made an impact on BFS. Hashimoto replied that typically insurance companies only look out 3-5 years, so it has not been affected right

now.

Public Input for Matters Not on the Agenda

- Anu Hittle, coordinator for the Hawaii Climate Change Mitigation and Adaptation Commission reported on the outcomes of the September 5 Hawaii Climate Change Mitigation and Adaptation Commission: the Commission adopted various actions including supporting legislation for disclosure of private property vulnerable to sea level rise, directed new or modified developments away from beach areas, and encourage counties to incorporate 3.2 feet of sea level rise in general or development plans, and encourages government agencies to identify adaptation measures for properties within the 3.2 feet sea level rise exposure area.

Duties and Powers of the Climate Change Commission: The Commission anticipates going into executive session pursuant to HRS section 92-5(a)(4), to consult with the Commission's attorney on questions and issues pertaining to the Commission's powers, duties, immunities, and liabilities.

The Climate Change Commission went into executive session at 5:17 p.m.

The Climate Change Commission ended the executive session at 5:57 p.m.

Adjournment: The meeting adjourned at 5:57pm.