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Testimony COMMENTING on HB 2469, HD1
Relating to Critical Energy Infrastructure

REPRESENTATIVE ROY M. TAKUMI, CHAIR
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Hearing Date: February 14, 2018
Time: 2:00 PM

Room Number: 329

1 **Fiscal Implications:** State agencies whose permits relate to Hawaii's electric grid infrastructure
2 would require additional resources to review and determine proper siting of all applicable
3 projects.

4 **Department Testimony:** The Department of Health (Department) recommends that the state or
5 county programs dedicated to land use planning and siting approvals be designated as the
6 agencies to implement this bill and that an evaluation process be utilized instead of a blanket
7 prohibition.

8 The Department supports the intent of minimizing grid infrastructure disaster risk by
9 establishing a review and approval process to ensure that Hawaii's critical resources are
10 appropriately sited to avoid the impacts of sea level rise. However, appropriate siting of a
11 facility should be evaluated within the designated state or county land use planning agency
12 responsible for regulating development and managing resources at the very beginning of a
13 proposed project. Previous testimony identified additional factors which may be prudent to
14 consider including the uncertainty of the flood maps, expected life span of projects, timing of
15 potential sea level rise, and potential for mitigative actions. These factors suggest that there may
16 be cases that warrant exceptions to the proposed restrictions. This kind of decision requires
17 extensive evaluation and assessment, rather than a determination based solely on whether a
18 project lies within a projected boundary. Siting determinations should not be the responsibility
19 of the Department or other permitting programs whose approval processes do not include siting

1 evaluations and who do not have the applicable knowledge or authority to make these
2 determinations. Siting evaluation should be provided by an agency that is specialized in
3 planning and assessment of development in order to promote consistency, accuracy, and
4 efficiency in making important determinations which affect Hawaii's critical electric grid
5 infrastructure.

6 Thank you for the opportunity to testify on this bill.

**Testimony before the
House Committee on Consumer Protection & Commerce**

H.B. 2469 HD1 – Relating to Critical Energy Infrastructure

Wednesday, February 14, 2018

2:00 pm

Conference Room 329

**By Jack Shriver
Manager, Generation Project Development
Hawaiian Electric Company**

Chair Takumi, Vice-Chair Ichiyama, and Members of the Committee:

My name is Jack Shriver, Manager of Generation Project Development at Hawaiian Electric. I am testifying on behalf of Hawaiian Electric, Maui Electric, and Hawai'i Electric Light (collectively the "Hawaiian Electric Companies").

The Hawaiian Electric Companies oppose H.B. 2469 HD1 as written. The Companies support the intent to increase the long-term viability and energy resiliency and of the island grids, but the bill proposes to do so by limiting potential siting options for new ratepayer funded power generation and storage facilities without any consideration of specific site or facility details. The bill does not take into consideration the potential lifecycle of a facility relative to the potential sea level rise at its location, nor how mitigations might be incorporated into the design to reduce or eliminate the concern. The outright prevention of new utility power generation facilities being built in a sea level rise exposure area may inhibit the future incorporation of offshore or floating power facilities into island grids, such as offshore wind, wave energy, ocean thermal energy conversion (OTEC), or other such future potential contributors to island energy resiliency. Finally, the sea level rise exposure area depictions in

the report which the bill proposes to use as the basis for determining permissibility are not intended for permitting use.

Some power generation and storage facilities, most notably solar PV and battery storage systems, have expected lifecycles of approximately 20-25 years. Given that the Sea Level Rise Vulnerability and Adaptation Report indicates that the 3.2 foot level rise cited is not anticipated to be reached until the year 2060, these and other types of power generation and storage facilities would be unnecessarily limited in siting options in the interim. This limitation of siting options could have the unintended consequence of reducing the amount of renewable energy and storage that is integrated into the grid, or increase the cost of it.

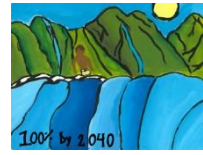
With limited land space available on the islands, there is an increasing chance that offshore energy sources such as floating wind, ocean thermal energy conversion, floating power plants using renewable fuels, or wave energy devices will be viable options in order to reach the State's 100% renewable goal. Since these facilities would be located on the ocean, in order to connect them to the islands' grids these facilities will need to cross the shoreline through the cited sea level rise exposure area. Without access to State and County permits, these facilities cannot be constructed, denying access to an entire sector of potentially resilient and renewable energy resources.

By limiting the applicability of the bill to ratepayer funded facilities, this bill would reduce or eliminate fair competition for the development of all off-shore energy projects described above. In the event that the utility is specifically denied the opportunity to compete for these types of projects, our customers would be denied the benefit of a fully competitive bidding process which is intended to ensure the lowest cost renewable energy projects. The utility has demonstrated that it can offer lower cost energy to our customers than independent power producers (IPPs), and if prevented from

participating in the competitive process for these types of projects, our customers may pay more than necessary for future energy projects.

The report itself, in the Disclaimer on page ii states that the report's "flood maps are in the range of 80% probability," and "as with all remotely sensed data, all features should be verified with a site visit." The uncertainty of the data indicates that some of the locations shown in the vulnerability area may not be at risk, or if they are, could be made viable using long-term, proven mitigations such as filling in low-lying depressions, elevating ground levels underneath critical structures, using berms, or building walls. Finally, the Disclaimer states explicitly that "this report should be used strictly as a planning reference tool and not for permitting, or other legal purposes."

For these reasons, the Companies respectfully request that this measure be held. Thank you for the opportunity to provide testimony.



HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

February 14, 2018, 2:00 P.M.

Room 329

(Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF HB 2469 HD1

Aloha Chair Takumi, Vice Chair Ichiyama, and Committee members:

Blue Planet Foundation **supports** HB 2469 HD1, seeking to strengthen Hawaii's energy systems by prohibiting the development of new large energy infrastructure in the sea level rise vulnerability area. We appreciate that the House Draft 1 of this measure increases the allowable sizes of energy generation and energy storage infrastructure.

Global climate change is increasing the vulnerability of Hawaii's coastal areas to sea level rise, flooding, erosion, and storm surge. The 2017 Sea Level Rise Vulnerability and Adaptation Report—mandated by the legislature—provides a sobering state-wide assessment of Hawaii's exposure to sea level rise. The report found that a 3.2-foot sea level rise—possible as early as 2060—would jeopardize a coastal area approximately 25,800 acres in size. This "sea level rise exposure area" would be exposed to potential chronic flooding and land loss based on modeling passive flooding, annual high wave flooding, and coastal erosion with sea level rise. The report found that over 6,500 structures located in the sea level rise exposure area would be compromised or lost, with an estimated loss of \$19 billion from flooded structures and land.

The report also made recommendations to reduce Hawaii's exposure and sensitivity to sea level rise and increase the state's capacity to adapt. **The report recommends that state and county leaders prioritize redevelopment outside of the sea level rise exposure area and limit exposure within the sea level rise exposure area.** The report further recommends that the state and counties should adopt a review and approval process to ensure that new development and capital improvement projects with an expected life span of 30 years or more are designed and sited to address the impacts of sea level rise utilizing the sea level rise exposure area as a vulnerability zone.

House Bill 2469 HD1 seeks to codify this recommendation for critical energy infrastructure. It makes little sense to site new or expanded energy infrastructure in an area that we know is vulnerable to flooding, erosion, storm surge, and sea level rise. Further, building utility infrastructure in this exposure area risks utility customer "stranded asset" expenses, as the facilities are paid for by ratepayers but may not contribute value to the system.

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Last fall, Puerto Rico was devastated by Hurricane Maria, leaving 90% of the island residents without power one month after the storm hit. They have learned a difficult lesson about the need to build resilient energy infrastructure—before the storm hits.

Hawaii ought to heed the unfortunate example of Puerto Rico and ensure that decisions on critical energy infrastructure reflect the reality of our changing climate and oceans.

We respectfully request that the Committee forward HB 2469 HD1 as drafted.

Thank you for the opportunity to testify.