



# ICAP

University of Hawai'i Sea Grant College Program  
Center for Island Climate Adaptation and Policy

# Climate Change Law and Policy in Hawai'i

Briefing Sheet, 2012



**LAMA**  
Loli Aniau, Maka'ala Aniau



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UNIVERSITY of HAWAII at MĀNOA  
WILLIAM S. RICHARDSON  
SCHOOL OF LAW



## I. INTRODUCTION

**“(C)limate change poses a serious threat to the economic well-being, public health, natural resources, and the environment in Hawaii.”**

**– Hawaii’s Legislature, Act 234, 2007**

Hawaii is currently experiencing climate change,<sup>1</sup> evidenced by:

- Increases in air temperature, especially at high altitudes;<sup>2</sup>
- Decreased stream base flow;<sup>3</sup>
- Decreases in rainfall<sup>4</sup> and rain intensity,<sup>5</sup> with longer periods of days without rain;<sup>6</sup>
- Rising sea levels;<sup>7</sup>
- Ocean acidification;<sup>8</sup> and
- Increased sea surface temperature,<sup>9</sup> leading to more frequent and severe coral bleaching events.<sup>10</sup>

Hawaii’s legislators, planners, and decision-makers have taken preliminary steps to: (i) **mitigate** climate change, i.e., reduce anthropogenic, or human caused, greenhouse gas (“GHG”) emissions and (ii) **adapt** to climate change, i.e., decrease

### **Mitigation**

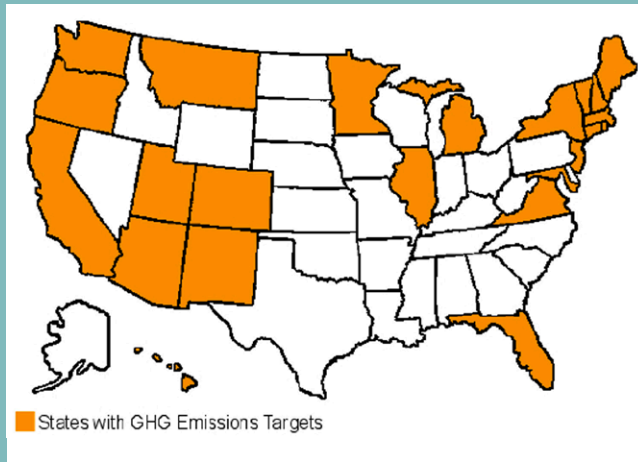
means implementing measures to reduce anthropogenic, or human-caused, GHG emissions. Clean energy, or renewable energy and energy efficiency, can reduce emissions and provide economic and environmental benefits.

### **Adaptation**

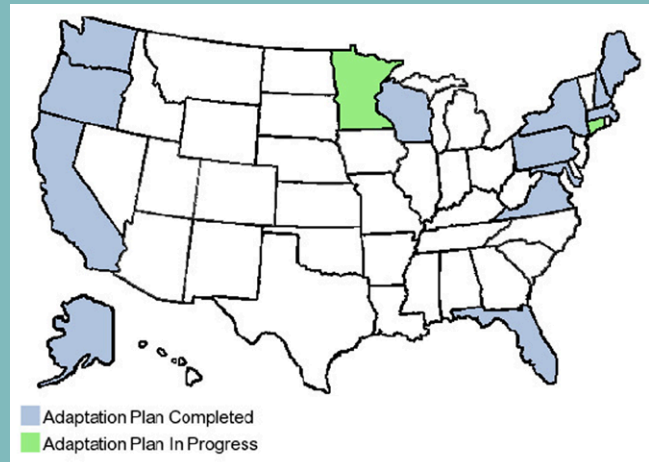
means making adjustments that reduce vulnerability and increase resiliency to climate change effects on natural and human systems. Adaptation can involve both minimizing harm and taking advantage of beneficial opportunities.

vulnerability and increase resiliency to climate change effects—both of which are recommended for lessening climate-related risks.<sup>11</sup> The purpose of this briefing sheet is to provide an overview of climate change related law and policy in Hawaii. The briefing sheet examines mitigation measures, adaptation measures, and concludes with a summary and timeline.

### GREENHOUSE GAS EMISSION TARGETS



### STATE ADAPTATION PLANS



Adapted from maps by the Center for Climate and Energy Solutions, <http://www.c2es.org>. Maps current as of 7/5/2012.

## II. CLIMATE CHANGE MITIGATION

Act 234 and law and policy growing out of the Hawaii Clean Energy Initiative form the foundation of Hawaii climate change law and policy related to mitigation. The state also has facilitated and implemented various incentives for developing and utilizing clean energy.

### **Hawaii Climate Change Law (Act 234, 2007): GHG Emissions Reductions to 1990 Levels by 2020**

**Background and Overview.** In 2007, Hawaii became one of the first states in the nation to enact major climate change

legislation establishing GHG emissions limits.<sup>12</sup> Pursuant to Act 234, Hawaii law now requires statewide emissions reductions to levels at or below 1990 levels by January 1, 2020.<sup>13</sup> The legislature declared, “climate change poses a serious threat to the economic well-being, public health, natural resources, and the environment in Hawaii,” and identified major Hawaii industries such as tourism, agriculture, recreation, commercial fishing, and forestry as vulnerable to impacts.<sup>14</sup>

**Key Elements.** Act 234 included four major components for implementing and achieving the statutory mandate:

- Directed the State of Hawai'i Department of Business, Economic Development & Tourism ("DBEDT") and Department of Health ("DOH") to update the state's inventory of emission sources or categories of sources by December 31, 2008;<sup>15</sup>
- Established a GHG Emissions Reduction Task Force, charged with preparing a work plan and regulatory scheme to be completed by December 1, 2009;<sup>16</sup>
- Directed the DOH director to adopt rules that: (i) establish GHG emission limits applicable to sources or categories of sources, (ii) require reporting and verification of statewide emissions, and (iii) monitor and enforce compliance, by December 31, 2011;<sup>17</sup> and
- Authorized the DOH director to adopt rules for charging fees, to be deposited in the clean air special fund, for sources of GHG emissions.<sup>18</sup>

**Update.** DBEDT and DOH completed the state's GHG inventory update in December 2008.<sup>19</sup> In December 2009, the GHG Emissions Reduction Task Force recommended the Hawai'i Clean Energy Initiative, discussed below, as the preferred work plan for achieving the Act 234 mandate.<sup>20</sup> DOH rules for limiting, reporting, and monitoring GHG emissions and enforcing these rules, however, are crucial to implementing Act 234. As of this publication, the rules were overdue and in draft form.

## Hawai'i Clean Energy Goal (2008): 70% Clean Energy by 2030

**Background and Overview.** On January 28, 2008, the State of Hawai'i and the U.S. Department of Energy signed a memorandum of understanding establishing the Hawai'i Clean Energy Initiative ("HCEI"), "to establish a long-term partnership . . . that will result in a fundamental and sustained transformation in the way in which renewable energy efficiency resources are planned and used in the State," and to "provide a replicable global model for achieving similar results."<sup>21</sup> To implement HCEI, on October 20, 2008, the State of Hawai'i Division of Consumer Advocacy, DBEDT, and the Hawaiian Electric Company, Inc. ("HECO") entered into an Energy Agreement committed to achieving 70 percent clean energy for electricity and transportation by 2030.<sup>22</sup> In 2009, pursuant to Act 155, the Hawai'i Legislature provided "first step[s]" for meeting this goal through energy law and policy.<sup>23</sup> Although economic concerns such as the state's reliance on imported fossil fuels and high electricity costs were driving forces behind HCEI, the Energy Agreement, and Act 155,<sup>24</sup> these measures are consistent with the state's mitigation



Kahuku Wind, O'ahu

### Renewable Energy Portfolio Standard

means the percentage of electrical energy sales from renewable sources (e.g., solar, ocean thermal, wind, wave, geothermal, waste-to-energy, biomass, biofuels, falling water, and hydrogen).

### Energy Efficiency Portfolio Standard

refers to a target for reducing electricity use through conservation and efficiency measures (e.g., energy-efficient appliances and building practices).

goals—whether implicitly or explicitly—by reducing GHG emissions.<sup>25</sup>

**Key Elements.** Act 155 began aligning Hawai'i's energy laws and policies with the state's clean energy goal through various measures, including:

- Increasing the **renewable energy portfolio standard** from 20 percent by 2020 to 40 percent by 2030;<sup>26</sup>
- Charging the Public Utilities Commission ("PUC") with establishing **energy efficiency portfolio standards** to achieve 4,300 gigawatt hours (or 30 percent) of electricity use reductions by 2030;<sup>27</sup>
- Expanding the duties of the energy resources coordinator;<sup>28</sup> who dually serves as DBEDT director;<sup>29</sup> and
- Requiring sellers to provide electricity-cost information in residential real property sales.<sup>30</sup>

**Update.** Several major projects intended to pursue Hawai'i's clean energy goals are on the horizon.<sup>31</sup> Prominent among these projects are:

- *Electric Vehicles.* In 2009, the Hawai'i Legislature established "research and development of non-fossil

fuel and energy efficient modes of transportation” as a state policy goal.<sup>32</sup> The act also included measures promoting and requiring electric vehicle infrastructure development (Act 156, 2009).<sup>33</sup>

- **Biofuels.** In 2011, the Hawai‘i Legislature directed the state energy resources coordinator to conduct a two-year study on conditions and policies necessary to expand biofuel production in the state to “displace a significant amount of petroleum-based liquid fuel” (Act 203, 2011).<sup>34</sup>
- **Inter-island Undersea Electricity Transmission Cable.** On July 14, 2011, PUC directed HECO to issue a Request for Proposals for renewable energy and an inter-island cable (PUC Docket 2009-0327, 2011).<sup>35</sup> In 2012, the Hawai‘i Legislature established a regulatory framework for installing and implementing an inter-island cable (Act 165, 2012).<sup>36</sup>
- **Geothermal Energy.** Also in 2012, the Hawai‘i Legislature adopted a state policy to “[p]romote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii” (Act 193, 2012).<sup>37</sup>

## Selected Incentives for Clean Energy in Hawai‘i

### **Hawaii Energy Efficiency Program.**

In 2006, the Hawai‘i Legislature authorized PUC to charge electric utility ratepayers a public benefits fee to support energy efficiency and demand-side management incentives and programs through a third-party administrator (Act 162, 2006). Hawai‘i Energy currently serves as third-party administrator for HECO and, among other things, incentivizes residential and commercial scale efficiency measures (e.g., solar water heating, compact fluorescent lights, and energy studies).

### **Tax Credits.**

Ethanol production facilities may claim tax credits, subject to conditions, equivalent to 30 percent of their respective capacities (Act 128, 2007). Individuals and businesses may claim tax credits, subject to limitations, for solar and wind energy systems (Act 154, 2009).

### **Feed-In Tariff Program.**

Feed-in tariff programs (“FITs”) establish standardized rates that utilities pay for

each type of renewable energy source based on project size. FITs encourage and accelerate renewable energy generation and use by providing predictability and certainty to renewable energy producers with regard to pricing, terms, and agreements with utility companies. PUC approved FITs to compensate a range of energy producers in 2010 and 2011 (PUC Docket 2008-0273, 2010, 2011).

### **On-Bill Financing.**

On-bill financing programs allow electric utility company customers who are renters or who lack the resources to invest in renewable energy or energy efficiency to purchase or acquire such systems through incremental payments on their monthly utility bills. PUC is investigating an on-bill financing program for Hawai‘i residential and commercial electric utility customers (Act 204, 2011; PUC Docket 2011-0186, 2011).

## III. CLIMATE CHANGE ADAPTATION

*“(C)limate changes will likely impose major, but not fully understood, costs and other impacts on Hawaii’s people and the natural capital we depend upon to support our lives in the middle of the Pacific Ocean. Nowhere is it more obvious than in remote island chains like Hawaii that our lives and the economy are intertwined with the health and function of the natural world around us . . . . Now is the time for bold action to squarely address Hawaii’s energy and food requirements and plan for and address the inevitable effects of climate change.”*

– Hawai‘i Legislature, Act 73, 2010

*“(E)ven if greenhouse gas emissions are reduced to 1990 levels, Hawaii will still be significantly impacted by global climate change well into the future.”*

– Hawai‘i Legislature, Act 286, 2012

Adaptation is “on the radar” for state and local decision-makers, as evidenced by the creation of the Climate Change Task Force, the Hawai‘i barrel tax on petroleum, the state’s watershed restoration plan, the statewide climate change adaptation priority guidelines, and various county and community initiatives.

## Climate Change Task Force (Act 20, First Special Session, 2009)

**Background and Overview.** In July 2009, pursuant to Act 20, the Hawai'i Legislature established the Climate Change Task Force, to be administered under the Hawai'i State Office of Planning ("OP"), to investigate and implement climate change adaptation.<sup>38</sup>

**Key Elements.** Act 20 charged the Climate Change Task Force with scoping current and potential climate change impacts on Hawai'i's people, natural resources, and economy and making recommendations to the legislature and governor on near- and long-term adaptation measures.<sup>39</sup>

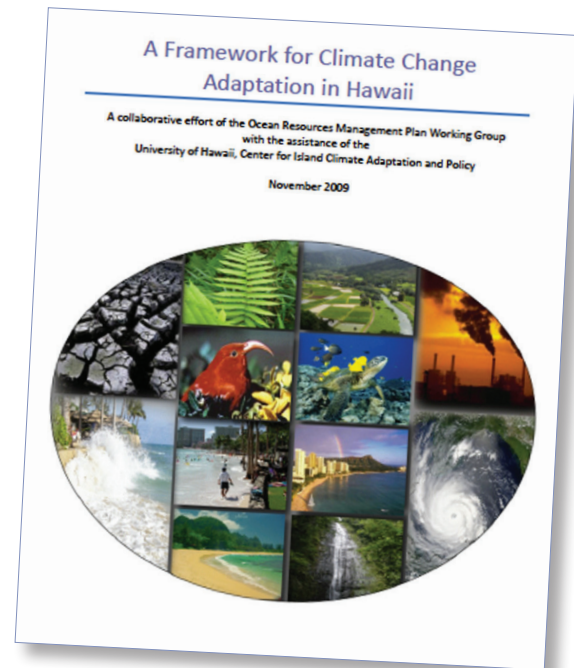
**Update.** The Climate Change Task Force reached its official sunset date on June 20, 2011,<sup>40</sup> without reporting to the legislature due to lack of fund disbursement.<sup>41</sup> The statewide Ocean Resources Management Plan ("ORMP") Working Group, however, partnered with ICAP to develop *A Framework for Climate Change Adaptation in Hawaii* (2009), which proposes a step-by-step process for the state to conduct studies, develop plans, and make informed decisions on climate change adaptation.<sup>42</sup> On February 3, 2010, the ORMP Policy Group endorsed the framework.<sup>43</sup>

## Barrel Tax on Petroleum (Act 73, 2010): Hawai'i First in Nation

**Background and Overview.** In 2010, pursuant to Act 73, Hawai'i adopted the nation's first barrel tax (\$1.05 per barrel) on imported petroleum.<sup>44</sup> The act's six enumerated purposes fall under three general categories: (i) promoting energy self-sufficiency, (ii) promoting food self-sufficiency, and (iii) adapting to climate change, i.e., to "[h]elp Hawai'i's natural resources and population adapt and be resilient to the inevitable challenges brought on by climate change."<sup>45</sup> Because the barrel tax raises revenues for a variety of climate-related funds, Act 73 could function uniquely as both a climate change mitigation and adaptation measure.

### Key Elements.

Act 73 allocates \$0.45 of the \$1.05 per barrel revenues to: the agricultural development and food security special fund (\$0.15 per barrel); the energy systems development special fund (\$0.10 per barrel); the energy security special fund ("ESSF") (\$0.15 per barrel); and the environmental response revolving fund ("ERRF") (\$0.05 per barrel).<sup>46</sup> DBEDT may use ESSF funds to support (i) HCEI, (ii) **the GHG Emissions Reduction Task Force**, and (iii)



**the Climate Change Task Force.**<sup>47</sup> DOH must use ERRF funds for response actions and preparedness<sup>48</sup> and also may use the funds for environmental protection and natural resources protection programs.<sup>49</sup> Given Act 73's purposes mentioned above, it seems that DBEDT and DOH may use barrel tax revenues to support climate change mitigation and adaptation.

**Update.** During the 2011 fiscal year, ESSF and ERRF funds from the barrel tax totaled \$385,960<sup>50</sup> and \$1.4 million,<sup>51</sup> respectively. It appears neither DBEDT<sup>52</sup> nor DOH<sup>53</sup> has appropriated funds specifically for adaptation purposes.

## The Rain Follows the Forest: Watershed Protection

**Background and Overview.** In November 2011, Governor Abercrombie unveiled *The Rain Follows the Forest: A Plan to Replenish Hawaii's Source of Water*, a State of Hawai'i Department of Land and Natural Resources ("DLNR") initiative that addresses climate change impacts on fresh water resources.<sup>54</sup> The plan acknowledges, "[w]hile climate change is a problem on a global scale, simple, local actions can safeguard Hawaii's declining water sources."<sup>55</sup> Protecting watershed forests both mitigates and facilitates adaptation to climate change by absorbing greenhouse gases, reducing erosion and flooding, and preserving biodiversity. The plan aims to double the state's protected forest acreage within the next decade.<sup>56</sup>

**Key Elements.** *The Rain Follows the Forest* identifies priority watersheds and outlines an implementation strategy, which involves:

- Removing invasive hooved animals and weeds from priority areas;
- Monitoring and controlling other forest threats including fires, predators, and plant diseases;
- Restoring and planting native species in priority and buffer areas;
- Establishing benchmarks and monitoring success;
- Educating Hawai'i residents and visitors about the importance of conserving native forests; and
- Promoting consistent and informed land use decision-making that protects watersheds.<sup>57</sup>

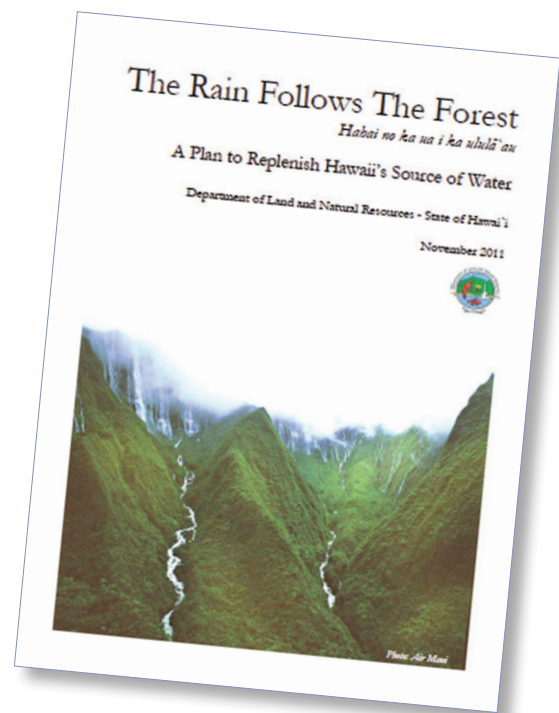
**Update.** To carry out the plan, *The Rain Follows the Forest* calls for \$11 million per year.<sup>58</sup> During the 2012 legislative session, the Hawai'i Legislature allocated \$2.5 million in general obligation bonds to DLNR for capital improvements and \$2.5 million in special funds for public and private partnership watershed projects.<sup>59</sup>

## Climate Change Adaptation Priority Guidelines (Act 286, 2012): Planning for Climate Change

**Background and Overview.** Also during the 2012 legislative session, the Hawai'i Legislature passed Act 286, which adds climate change adaptation priority guidelines to the Hawaii State Planning Act, Hawaii Revised Statutes Chapter 226 ("Chapter 226").<sup>60</sup> The stated purpose of the climate change adaptation priority guidelines is "to encourage collaboration and cooperation among county, state, and federal agencies, policy makers, businesses, and other community partners to plan for the impacts of climate change and avoid, minimize, or mitigate loss of life, land, and property of future generations."<sup>61</sup>

**Key Elements.** The climate change adaptation priority guidelines are intended to prepare the state for climate change impacts on agriculture, conservation lands, coastal and nearshore marine areas, natural and cultural resources, education, energy, higher education, health, historic preservation, water resources, the built environment (e.g., housing, recreation, and transportation), and the economy.<sup>62</sup> The ten priority guidelines are:

- (1) Ensure that Hawai'i's people are **educated, informed, and aware** of the impacts climate change may have on their communities;
- (2) Encourage community stewardship groups and local stakeholders to **participate in planning and implementation** of climate change policies;
- (3) Invest in **continued monitoring and research** of



- Hawai'i's climate and the impacts of climate change on the State;
- (4) Consider **native Hawaiian traditional knowledge and practices** in planning for the impacts of climate change;
  - (5) Encourage the **preservation and restoration** of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;
  - (6) Explore adaptation strategies that **moderate harm or exploit beneficial opportunities** in response to actual or expected climate change impacts to the natural and built environments;
  - (7) Promote **sector resilience** in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;
  - (8) Foster **cross-jurisdictional collaboration** between county, state, and federal agencies and partnerships between government and private entities and other non-governmental entities, including nonprofit entities;
  - (9) Use management and implementation approaches that encourage the **continual collection, evaluation, and integration** of new information and strategies into new and existing practices, policies, and plans; and
  - (10) Encourage planning and management of the **natural and built environments** that effectively integrate climate change policy.<sup>63</sup>

**Update.** Priority guidelines are part of the statewide planning system, which coordinates and guides all major state and county activities and implements Chapter 226.<sup>64</sup> As a priority guideline, climate change adaptation must now be considered in state and county budgetary, land use, and other decision-making processes.<sup>65</sup> In particular, the state Land Use Commission and Board of Land and Natural Resources must consider whether land use entitlements are consistent with the priority guidelines.<sup>66</sup> In addition, land use planning, coastal permitting, and zoning at the county level must be consistent with county general plans,<sup>67</sup> which must be consistent with Chapter 226.<sup>68</sup> Note, however, that state and county actions may, under some circumstances, deviate from priority guidelines “without penalty or sanction.”<sup>69</sup>

## Selected County and Community Adaptation Initiatives

### **Water Availability Policy.**

In 2007, the **Maui County** Council adopted a Water Availability Policy (“WAP”) to protect, preserve, and manage water as a natural and cultural public trust resource. The WAP “requires verification of a long term, reliable supply of water before subdivisions are approved” (Ordinance 3502, 2007).

### **County Shoreline Setback Rules.**

Shoreline setback lines indicate the closest to the shoreline where development may be permitted. In 2007 and 2008, respectively, **Maui** and **Kauaʻi** counties adopted the nation’s first erosion rate-based setback policies, which better protect coastal communities from sea-level rise by taking into account site-specific shoreline changes, rather than establishing a fixed setback distance for all properties. Kauaʻi’s policy also incorporates the average lifespan of structures and can be adjusted by 10 percent to accommodate future accelerations in sea-level rise (Shoreline R. § 12-203-6, 2007; Ordinance 863, 2008).

### **County and Community Planning.**

In 2009, the **City and County of Honolulu** Board of Water Supply released the Koʻolau Loa and Waiʻanae watershed management plans, which address climate change impacts on water resources. The

2010 **Maui County** general plan includes policies to “(r)estrict development in areas prone to natural hazards, disasters, or sea-level rise” and to “(d)iscourage new entitlements for residential, resort, or commercial development along the shoreline” (Ordinance 3732, 2010). The 2010 **Hilo, Hawaiʻi County**, community development plan update includes a strategy for preparing for climate change impacts by, among other actions, incorporating “sea-level rise data in long-term implementation strategies” (Resolution 352 10). Although the 2011 **North Shore, Oʻahu**, sustainable communities plan does not expressly mention climate change adaptation, the plan includes numerous policies and objectives that could build resiliency and reduce vulnerability to climate change impacts (Ordinance 11-3, 2011).



D. Eversole

## IV. CONCLUSIONS AND TIMELINE

During the past several years, Hawai'i has started implementing major policies related to climate change mitigation. State action on climate change adaptation has just begun. Both types of measures are necessary for addressing climate change and likely will continue evolving "on the ground" and through further legislation and planning efforts. Below is a timeline to summarize this briefing sheet and provide a chronology of climate change law and policy in Hawai'i.

Hawai'i authorizes PUC to charge electric utility ratepayers a public benefits fee to support energy efficiency incentives and programs (Act 162)

Maui County adopts Water Availability Policy (Ordinance 3502)

Hawai'i establishes tax credits for ethanol production (Act 128)

Hawai'i authorizes tax credits for solar and wind energy systems (Act 154)

HCEI established (MOU)

DBEDT and DOH update state GHG Inventory (Report to 25<sup>th</sup> Legislature)

Climate Change Task Force created (Act 20, First Special Session), but not funded

GHG Emissions Reduction Task Force recommends HCEI for achieving Act 234 mandate (Report to 25<sup>th</sup> Legislature)

# 2006

# 2007

# 2008

# 2009

Hawai'i becomes one of first states in nation to enact major climate change legislation by establishing GHG emissions limits (Act 234)

Maui County adopts nation's first erosion-rate based shoreline setback policy (Shoreline R. § 12-203-6)

Kaua'i adopts erosion rate-based setback policy that also accounts for the average lifespan of coastal wood structures and future accelerations in sea-level rise (Ordinance 863)

Hawai'i stakeholders commit to achieving 70 percent renewable energy by 2030 (Energy Agreement)

City and County of Honolulu Board of Water Supply releases watershed management plans for Ko'olau Loa and Wai'anae (Watershed Plans)

Hawai'i requires and promotes electric vehicle transportation and infrastructure (Act 156)

Hawai'i codifies key HCEI goals, including 40 percent renewable energy and 30 percent energy efficiency by 2030, into statutory mandate (Act 155)





ORMP Policy Group adopts *A Framework for Climate Change Adaptation in Hawai'i* to initiate statewide climate change adaptation planning (ORMP/ICAP Framework)

PUC approves feed-in tariffs for smaller-scale renewable energy producers (PUC Docket 2008-0273)

PUC approves feed-in tariffs for larger-scale renewable energy producers (PUC Docket 2008-0273)

Hawai'i initiates two-year study on biofuel production in the state (Act 203)

PUC directs HECO to issue a Request for Proposals for renewable energy and an inter-island undersea electricity transmission cable (PUC Docket 2008-0327)

Hawai'i establishes regulatory framework for developing inter-island undersea electricity transmission cable (Act 165)

Hawai'i adopts state policy to promote indigenous geothermal energy (Act 193)

Hawai'i provides partial funding for DLNR's watershed restoration plan (Act 106)

Hawai'i prioritizes climate change adaptation in the Hawai'i state plan (Act 286)

2010

2011

2012

2020

2030

PUC must investigate on-bill financing program (Act 204); investigation begins (PUC Docket 2011-0186)

Hawai'i becomes first state in nation to adopt barrel tax on imported petroleum (Act 73)

Maui addresses sea-level rise and climate change in county general plan (Ordinance 3732)

Governor Abercrombie unveils DLNR's watershed restoration plan (*The Rain Follows the Forest*)

North Shore, O'ahu, indirectly addresses climate change adaptation in sustainable communities plan (Ordinance 11-3)

Hilo, Hawai'i County, addresses climate change impacts in community development plan (Resolution 352 10)

Deadline to reduce GHG emissions to amounts at or below 1990 levels (pursuant to Act 234)



Deadline to achieve 70 percent clean energy (pursuant to HCEI and Energy Agreement)

## CENTER FOR ISLAND CLIMATE ADAPTATION AND POLICY

The Center for Island Climate Adaptation and Policy (“ICAP”) facilitates a sustainable, climate-conscious future for Hawai‘i, the Pacific, and global island communities. ICAP produces innovative, interdisciplinary research and real-world solutions for island decision-makers in the public and private sectors. As a focal point for University of Hawai‘i climate expertise, the Center serves as a two-way conduit between the University and island communities to catalyze climate change adaptation and resilience. ICAP is a University of Hawai‘i Sea Grant Center of Excellence in partnership with the University of Hawai‘i William S. Richardson School of Law, the School of Ocean and Earth Science and Technology (“SOEST”), the Hawai‘i inuiākea School of Hawaiian Knowledge, and the College of Arts and Sciences. Additional information about ICAP is available at <http://www.islandclimate.org>.

For further information, please contact us:  
Center for Island Climate Adaptation and Policy  
University of Hawai‘i Sea Grant College Program  
2525 Correa Road, HIG 212  
Honolulu, HI 96822  
(808) 956-2865  
[ICAP@hawaii.edu](mailto:ICAP@hawaii.edu)  
[www.islandclimate.org](http://www.islandclimate.org)

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Bottom Row (left to right): Maui Solar Project; University of Hawai‘i External Affairs and University Relations; Andrew Short



H. Dudock

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- <sup>3</sup>See PIRCA Report, *supra* note 1.
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- <sup>5</sup>See PIRCA Report, *supra* note 1.
- <sup>6</sup>See *id.*
- <sup>7</sup>See R.S. Nerem et al., *Estimating mean sea level change from the TOPEX and Jason altimeter missions*, 33(S1) *Marine Geodesy* 435-46, doi:10.1080/01490419.2010.491031 (2010); see also *Mean Sea Level Trends for Stations in Hawaii*, Nat'l Oceanic & Atmospheric Admin., [http://tidesandcurrents.noaa.gov/sltrends/sltrends\\_states.shtml?region=hi](http://tidesandcurrents.noaa.gov/sltrends/sltrends_states.shtml?region=hi) (last visited Mar. 7, 2012); see also S. Jevrejeva et al., *Recent global sea level acceleration started over 200 years ago?*, *Geophysical Research Letters*, 35:L08715 (2008).
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- <sup>12</sup>The first was California, when it adopted the Global Warming Solutions Act in 2006. Cal. A.B. 32, 2006 Cal. Stat. ch. 488 (codified at Cal. Health & Safety Code §§ 38500-38599).
- <sup>13</sup>2007 Haw. Sess. Laws, 24th Leg., Act 234, § 8 (codified at Haw. Rev. Stat. ("H.R.S.") § 342B-71).
- <sup>14</sup>2007 Haw. Sess. Laws, 24th Leg., Act 234, § 1(a).
- <sup>15</sup>*Id.* § 3.
- <sup>16</sup>*Id.* §§ 4, 5.
- <sup>17</sup>*Id.* § 8 (codified at H.R.S. § 342B-72).
- <sup>18</sup>2007 Haw. Sess. Laws, 24th Leg., Act 234, § 8 (codified at H.R.S. § 342B-73).
- <sup>19</sup>Dep't of Bus., Econ. Dev. & Tourism, Report to the 25th Leg., State of Haw., *Hawaii Greenhouse Gas Inventory, 1990 and 2007* (2009).
- <sup>20</sup>Greenhouse Gas Emissions Reduction Task Force, Report to the 25th Leg., State of Haw., *Work Plan for Greenhouse Gas Emissions Reductions* (2009). The GHG Emissions Reduction Task force also considered a state-level carbon tax and the proposed federal cap-and-trade program as possible alternative work plans. *Id.*
- <sup>21</sup>Memorandum of Understanding Between the State of Haw. and the U.S. Dep't of Energy 1 (Jan. 28, 2008), available at [http://apps1.eere.energy.gov/news/pdfs/hawaii\\_mou.pdf](http://apps1.eere.energy.gov/news/pdfs/hawaii_mou.pdf).
- <sup>22</sup>Energy Agreement Among the State of Haw., Div. of Consumer Advocacy of the Dep't of Commerce and Consumer Affairs and the Hawaiian Elec. Cos. 18 (Oct. 20, 2008), available at <http://www.heco.com/vcmcontent/StaticFiles/pdf/HCEI.pdf>.
- <sup>23</sup>2009 Haw. Sess. Laws, 25th Leg., Act 155, § 1.
- <sup>24</sup>See, e.g., *id.* ("Hawaii is the state most dependent on petroleum for its energy needs. It pays the highest electricity prices in the United States, and its gasoline costs are among the highest in the country.").
- <sup>25</sup>See Douglas A. Codiga, *Hawaii Clean Energy Law and Policy*, 13 Haw. B.J. 4, 4 ("Clean energy (i.e., renewable energy and energy efficiency) is promoted as a means of reducing greenhouse gas emissions linked to climate change by replacing the use of imported fossil fuels with solar, wind, biomass, geothermal and ocean energy.").
- <sup>26</sup>2009 Haw. Sess. Laws, 25th Leg., Act 155, § 3(a) (codified at H.R.S. § 269-92(a)).
- <sup>27</sup>2009 Haw. Sess. Laws, 25th Leg., Act 155, § 11 (codified at H.R.S. § 269-96).
- <sup>28</sup>2009 Haw. Sess. Laws, 25th Leg., Act 155, § 5 (codified at H.R.S. § 196-4).
- <sup>29</sup>H.R.S. § 196-3.
- <sup>30</sup>2009 Haw. Sess. Laws, 25th Leg., Act 155, § 11 (codified at H.R.S. § 508D-10.5).

- <sup>31</sup>See, e.g., Hawaii Powered, Hawaii Clean Energy Initiative, HCEI Road Map, Introduction and Overview (2011) *available at*, [http://www.hawaiicleanenergyinitiative.org/storage/media/HCEI\\_RoadmapSummary\\_FINAL\\_ID-11909.pdf](http://www.hawaiicleanenergyinitiative.org/storage/media/HCEI_RoadmapSummary_FINAL_ID-11909.pdf).
- <sup>32</sup>2009 Haw. Sess. Laws, 25th Leg., Act 156, § 2 (codified at H.R.S. § 226-10(b)(12)).
- <sup>33</sup>2009 Haw. Sess. Laws, 25th Leg., Act 156, § 1.
- <sup>34</sup>2011 Haw. Sess. Laws, 26th Leg., Act 203.
- <sup>35</sup>Pub. Utils. Comm'n, Order Denying HECO's Request and Directing HECO to Submit a Draft RFP Pursuant to Framework, Docket No. 2009-0327 (filed Jul. 14, 2011).
- <sup>36</sup>2012 Haw. Sess. Laws, 26th Leg., Act 165.
- <sup>37</sup>2012 Haw. Sess. Laws, 26th Leg., Act 193, § 1 (to be codified at H.R.S. § 226-18(c)(11)).
- <sup>38</sup>2009 Haw. Sess. Laws, 25th Leg., 1st Special Sess., Act 20.
- <sup>39</sup>*Id.* § 2.
- <sup>40</sup>*Id.* § 2(e).
- <sup>41</sup>Office of Planning & Dep't of Bus., Econ. Dev. & Tourism, Final Report Relating to Global Warming to the Governor and Legislature 1 (2011).
- <sup>42</sup>State of Haw. Ocean Res. Mgmt. Plan Working Grp. & Univ. of Haw. Ctr. for Island Climate Adaptation & Policy, A Framework for Climate Change Adaptation in Hawaii (2009), *available at* [http://icap.seagrant.soest.hawaii.edu/sites/seagrant.soest.hawaii.edu/files/publications/climate\\_change\\_ddaptation\\_framework\\_2009\\_2.pdf](http://icap.seagrant.soest.hawaii.edu/sites/seagrant.soest.hawaii.edu/files/publications/climate_change_ddaptation_framework_2009_2.pdf).
- <sup>43</sup>Meeting Summary of Hawai'i Ocean Resources Management Plan Policy Group, in Honolulu, Haw. (Feb. 3, 2010).
- <sup>44</sup>2010 Haw. Sess. Laws, 25th Leg., Act 73.
- <sup>45</sup>*Id.* § 1.
- <sup>46</sup>*Id.* § 4 (codified at H.R.S. § 243-5).
- <sup>47</sup>2010 Haw. Sess. Laws, 25th Leg., Act 73 (codified at H.R.S. § 201-12.8).
- <sup>48</sup>H.R.S. § 128D-2(b)).
- <sup>49</sup>*Id.* § 128D-2(b)(2)).
- <sup>50</sup>See Dep't of Bus., Econ. Dev. & Tourism, Status and Progress of Clean Energy Initiatives and Analysis of the Environmental Response Food Security Tax 4 (2012) [hereinafter DBEDT Report].
- <sup>51</sup>See Dep't of Health, Report to the 26th Leg., State Haw., Pursuant to Chapters 128D and 128E, Hawaii Revised Statutes ES-1 (2011) [hereinafter DOH Report].
- <sup>52</sup>See DBEDT Report, *supra* note 50.
- <sup>53</sup>See DOH Report, *supra* note 51.
- <sup>54</sup>*The Rain Follows The Forest*, Office of the Governor, <http://hawaii.gov/gov/newsroom/in-the-news/the-rain-follows-the-forest> (last visited May 14, 2012).
- <sup>55</sup>Dep't of Land & Natural Res., *The Rain Follows the Forest Hahai no ka ua I ka ulula'au: A Plan to Replenish Hawaii's Source of Water 1* (Nov. 2011), *available at* <http://hawaii.gov/dlnr/chair/pio/nr/2011/The-Rain-Follows-the-Forest.pdf>.
- <sup>56</sup>*Id.*
- <sup>57</sup>*Id.*
- <sup>58</sup>*Id.*
- <sup>59</sup>2012 Haw. Sess. Laws, 26th Leg., Act 106.
- <sup>60</sup>2012 Haw. Sess. Laws., 26th Leg., Act 286 (to be codified in H.R.S. ch. 226, pt. III)
- <sup>61</sup>*Id.* § 1.
- <sup>62</sup>*Id.* § 2.
- <sup>63</sup>*Id.*
- <sup>64</sup>See H.R.S. § 226-51.
- <sup>65</sup>See *id.* § 226-52.
- <sup>66</sup>See *id.* § 226-52(a)(5).
- <sup>67</sup>See, e.g., *id.* § 46-4.
- <sup>68</sup>See *id.* § 226-52(a)(5).
- <sup>69</sup>*Id.* § 226-2.

