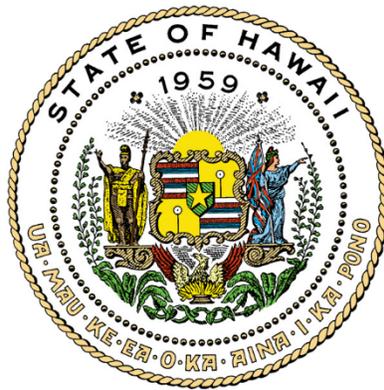


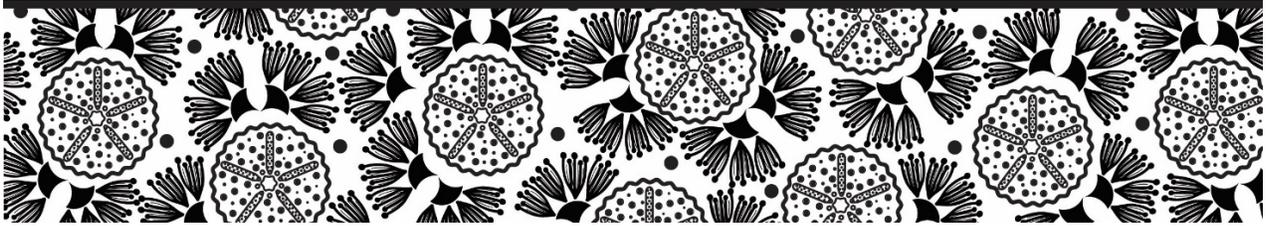
REPORT TO THE THIRTIETH LEGISLATURE  
STATE OF HAWAII  
2019 REGULAR SESSION

HAWAII CLIMATE CHANGE MITIGATION AND ADAPTATION COMMISSION



Prepared by  
Department of Land and Natural Resources  
State of Hawaii  
In response to Section 225P-3(k), Hawaii Revised Statutes

December 2018

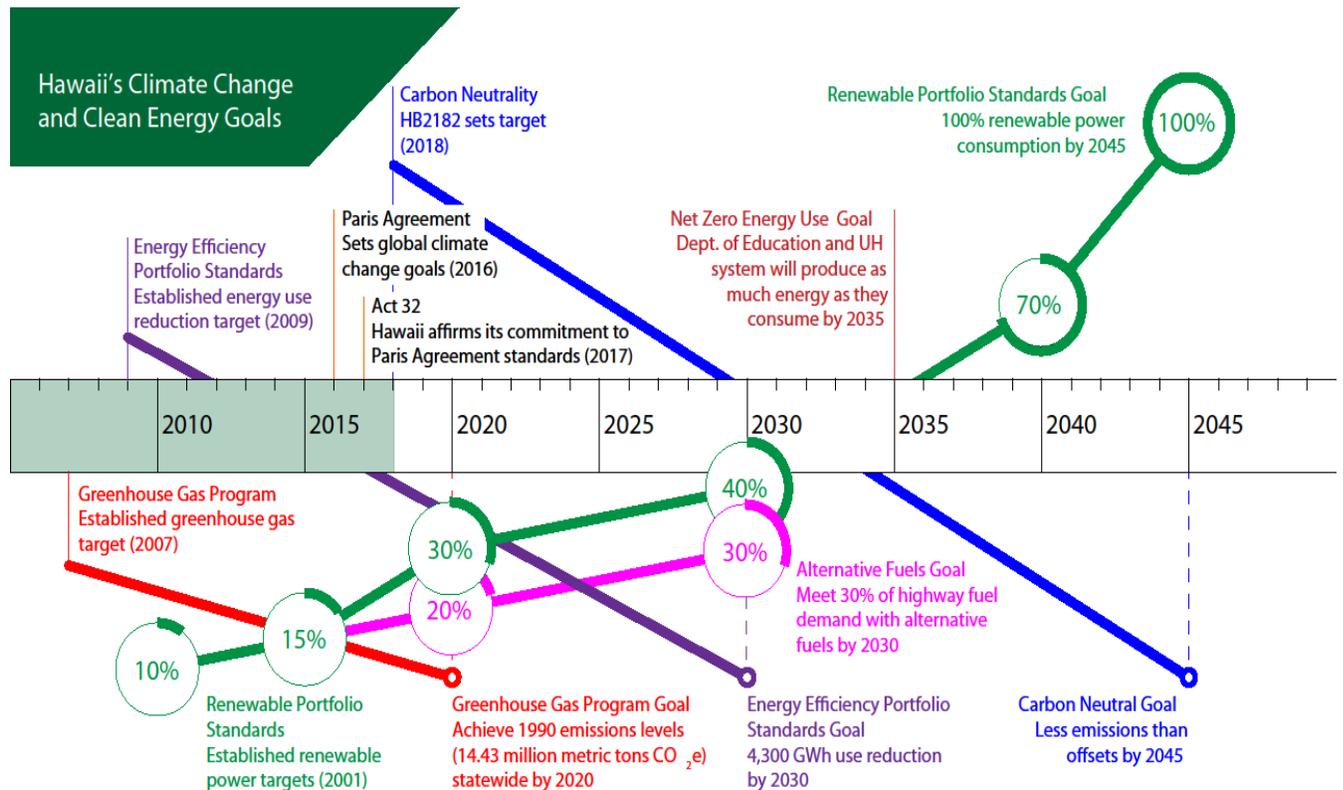


## Hawaii Climate Change Annual Report 2018

The Hawaii Climate Change Mitigation and Adaptation Commission provides intentional and directed coordination.

Hawaii's response to climate change is palpable. In October 2017, by way of Act 32, Session Laws of Hawaii 2017, the Hawaii Climate Change Mitigation and Adaptation Commission was formally established. Act 32 captures Hawaii's commitment to the Paris Agreement to keep warming to under 2 degrees Celsius. Weaving its way through a myriad of goals established by the State (see Figure 1 below), in the short first year of its existence, the Commission has provided intentional and directed coordination, accomplished some significant tasks, laid the groundwork for more, and created avenues for cooperative efforts in Hawaii.

Figure 1: Act 32, and Hawaii's Climate Change and Clean Energy Goals



## Commission Highlights for 2018

- **Adopted cutting edge Sea Level Rise Report.** The Commission adopted the *Hawaii Sea Level Rise Vulnerability and Adaptation Report* (SLR Report) in January 2018. The first statewide assessment of Hawaii's vulnerability to sea level rise uses the latest science to characterize the threat and risks. It also contains general recommendations to reduce exposure and sensitivity to sea level rise. The report uses a scenario of 3.2 feet (one meter) to characterize the results of vulnerability assessment. As the science continues to evolve, this scenario may well change, and the need to incorporate such dynamism into planning for adaptation will prove to be one of the main challenges immediately facing Hawaii.
- **Established two focuses for mitigation and adaptation.** At its February meeting, the Commission established two main focuses for its work this year: ground transportation emissions reduction; and implementation of the SLR Report's recommendations. While the Hawaii Clean Energy Initiative (HCEI), the Renewable Portfolio Standard (PRS), and Energy Efficiency Portfolio Standard (EEPS) have established strong and clear goals for the power sector, transportation needs similar, if not more attention. For this reason, the Commission decided to focus its attention on ground transportation and reduction of emissions from this sector. On the adaptation side, since a detailed technical study has been developed and produced by the State, the Commission agreed that the next steps would be to encourage implementing the recommendations from that report. A coordinator was hired in mid-February 2018 to support the work of the Commission.
- **Identified priorities for adaptation to Sea Level Rise.** The Commission passed five recommendations aimed at State and counties. These are:
  1. Support legislation for disclosure for private property and public offerings located in areas with potential exposure to sea level rise;
  2. Request all new development, redevelopment, and modifications be directed away from beach areas;
  3. Urge counties to incorporate the 3.2 ft. sea level rise exposure area (SLR-XA) into their general and development plan;
  4. Encourage agencies and non-governmental utility providers to identify and prioritize assets within the 3.2 ft SLR-XA, or more, as described in the State's Sea Level Rise report, identify adaptation measures, and to provide a status update on this activity annually to the Climate Commission; and
  5. Support legislation that funds State programs to meet mitigation goals, and to bring resources to assist in planning and implementation for sea level rise and other climate related impacts.
- **Forging a path to ground transportation emissions mitigation.** The Commission's Permitted Interaction Group investigated strategies for ground transportation emissions reduction, such as carbon pricing, transportation and parking studies, and electric vehicle (EV) infrastructure

deployment. The Commission is scheduled to take action in late 2018 to establish priorities that address emissions reduction. Findings by the group included:

1. **Establish a price on carbon to enable transportation solutions.** The Permitted Interaction Group recommended legislation that establishes a price on carbon to enable clean transportation solutions. Such legislation may strengthen existing laws—raise the barrel tax and expand it to apply to coal and all other fossil fuels—or create a program that would encourage clean transportation, and fund clean and equitable projects to increase quality of life in Hawaii.
  2. **Develop a companion Public Service Announcement (PSA) campaign to address climate change, cost of living, and quality of life.** The Permitted Interaction Group recommended State funding of a PSA campaign that would lay the groundwork for carbon pricing programs, and recommended that the co-chairs of the State Climate Commission implement this program, with the help of the State Climate Commission Coordinator.
  3. **Set a more accurate price on parking to achieve State goals.** The Permitted Interaction Group recommended state funding of a study on the effects of different parking pricing and cash-out programs on emissions, Vehicle Miles Travelled (VMT), and congestion reduction to achieve State goals. Such a study will inform further action on this issue, and enhance the ideals laid out in the Complete Streets program which is aimed at safety and mobility for all users.
  4. **Strengthen the policy and regulatory framework for car share programs as transportation solutions.** The Permitted Interaction Group recommended a policy/regulatory framework for City and County of Honolulu, where the bulk of Hawaii's commuters reside, that allows car share programs to thrive. This would provide a viable alternative to single occupancy vehicle commuters, and increase quality of life by decreasing congestion, in addition to reducing emissions from transportation.
  5. **Expand the State's role in developing electric drive infrastructure.** The Permitted Interaction Group recommended a State match of funds from any auto settlements, for development of infrastructure for electric drive vehicles. This would accelerate adoption of clean technology vehicles.
  6. **Close loopholes and provide enforcement of existing laws.** The Permitted Interaction Group recommended amendment and strengthening of existing laws that address clean transportation. In addition, it recommends enforcement by State and County agencies and departments of existing laws that address clean transportation, and to review, by the Commission annually, actions taken towards such enforcement.
- **A mission statement finalized** in September now reflects the Commission's priorities—to promote ambitious, climate-neutral, culturally responsive strategies for climate change adaptation and mitigation in a manner that is clean, equitable and resilient—and is displayed on the web portal.

- HI Climate: establishing an online presence to inform the world about Hawaii’s climate work.** To provide visibility, the HI Climate “brand” was created. This brand threads through all the social media and online accounts. A web portal launched in June helps to tie together all State efforts on Climate Change—adaptation, greenhouse gas sequestration, the greenhouse gas inventory, Hawaii Clean Energy Initiative, and the State Energy Office sites. The portal is housed at [climate.hawaii.gov](http://climate.hawaii.gov), and provides a pathway into the State of Hawaii’s climate response. A social media presence newly established on Facebook and Instagram informs the local and global public of noteworthy events and news relating directly to the Climate Commission and to Hawaii’s climate response. It also serves to provide information nuggets that give the larger public an insight into climate discussions at Commission meetings.
- Projecting a national presence for climate response.** Hawaii works with the 17-Governor US Climate Alliance (USCA) that was formed as a response to the Federal Administration’s withdrawal from the Paris Agreement. Hawaii is involved in various working groups, including for resilience, transportation, natural and working lands, and so on. The Climate Coordinator co-chairs, along with staff from Minnesota and Washington, the transportation working group and brings lessons from other states to Hawaii.



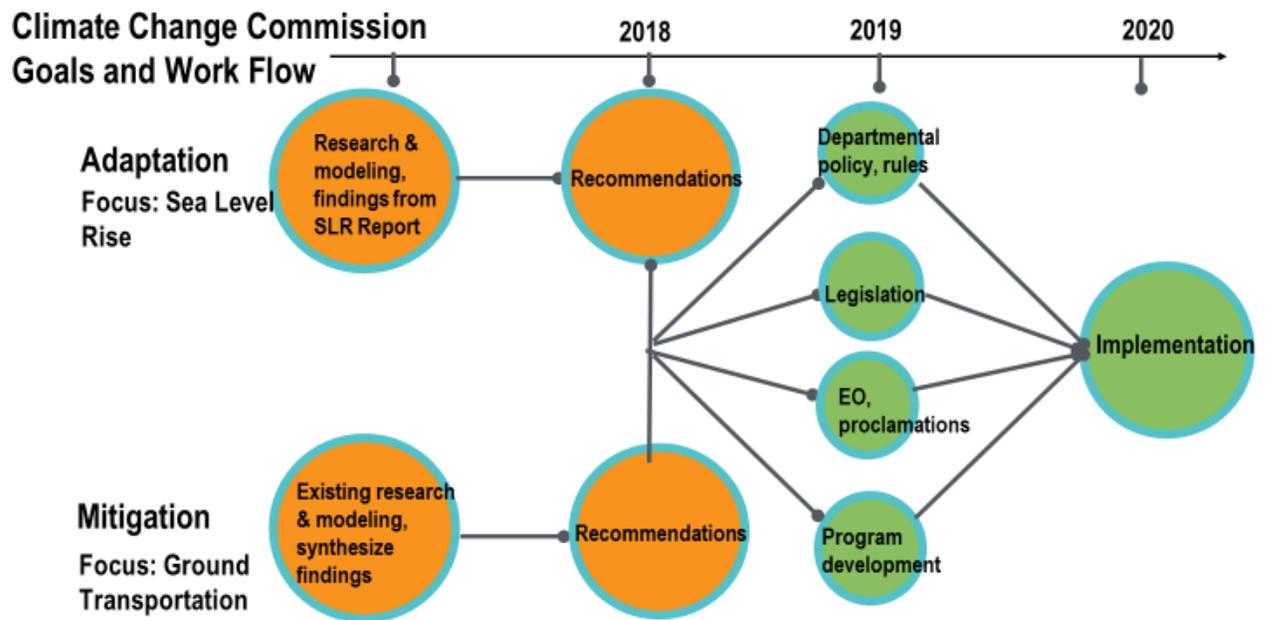
**The Paris Agreement**  
 2016: 197 countries agree to limit global temperature rise below 2°C.

**Hawaii’s Response—Act 32 and Net Zero**  
 2017: Act 32 affirms the State’s commitment to the Paris Agreement goals and establishes the Climate Change Commission.  
 2018: State of Hawaii has ambitious goals—to become Carbon Neutral by 2045.

## Where next?

To deal with ever-increasing threat and vulnerability, and to go above and beyond the commitments made in the Paris Agreement by the US, the Commission intends to ramp up its work on sea level rise adaptation implementation, and ground transportation emissions reduction.

Figure 2



- **Fine-tune priorities for the coming year.** To continue to provide policy direction among the myriad of partners working in climate change response in Hawaii, the Commission's annual conference will highlight multi-partner collaborations and identify priorities for the coming year(s). The conference, Hā O Ke Kai (Breath of the Sea), will take place in January 2019, and set the tone for the Commission's work for the rest of the year. Panelists from Massachusetts, Florida, and other states will work alongside resident subject matter experts to grapple with the challenges facing climate response.
- **Transfer of technical expertise for adaptation to sea level rise.** The State has a crucial support role to play in assisting communities, agencies, and departments' plan and implement projects to adapt to sea level rise impacts. To this end, it is critical to fund a program within the Climate Commission that can provide resources to enable agencies create climate change vulnerability

assessment plans and strategies that will assist them in prioritizing and budgeting to improve their resiliency and adaptation to climate change.

- **Support the transition to clean transportation.** The component parts of this transition may involve:
  - Electric Vehicle infrastructure development and deployment;
  - Workplace EV charging infrastructure;
  - Parking policies for VMT reduction and mode shift;
  - PSA campaign to raise climate change awareness;
  - Fleet conversion for public and private fleets; and
  - Large scale carshare for public and private use.

Each of these components will be developed into an appropriate project, study or program that will inform Hawaii's response to climate change mitigation.

- **Enhance and expand the workings of the Commission and Coordinator.** Funding will be sought in 2019 to maintain the Coordinator position and crucial programs that make up the core of the Commission's work.

**The Commission and its mandates.**

The table below summarizes Act 32's mandates, and a detailed discussion of progress towards each mandate follows.

Act 32 Mandates
1. Provide policy direction, facilitation, coordination, and planning among state and county agencies, federal agencies, and other partners.
2. Establish climate change mitigation and adaptation strategies and goals to help guide planning and implementation statewide using the latest scientific analysis and risk assessment to monitor and forecast climate change related impacts at the regional, state and local level, including any additional information deemed necessary.
3. Identify vulnerable people, communities, industries, ecosystems and potential economic ramifications for climate change related impacts.
4. Identify existing climate mitigation and adaptation efforts at the federal state and local levels and make recommendations for how to meet or exceed Hawaii's state mitigation goals and shall adopt a liberal approach in preparation, so as to minimize future risk to the people and environment of Hawaii.
5. The Commission shall identify the information necessary to track progress in implementing climate change mitigation and adaptation efforts and shall submit an annual report to the governor and legislation no later than 20 days prior to the convening of each regular session

6. The Commission shall maintain a website that includes a mission statement as well as access to climate change related actions, plans, policies and results
7. The Commission shall assess the capacity and availability of existing resources & identify new sources of revenue necessary to address climate change and advise the governor, legislation, & counties on the economic and budgetary ramifications of climate change impacts, mitigation and adaptation.
8. The Commission shall conduct a comprehensive review of the implementation as required by this section and submit a report to the governor, legislation and the counties no later than 20 days etc.
9. The Commission shall, as a first step, focus on and develop sea level rise vulnerability and adaptation reports, which shall be made publicly available no later than December 31, 2017, and the commission shall reevaluate and update the sea level rise vulnerability and adaptation report every five years.

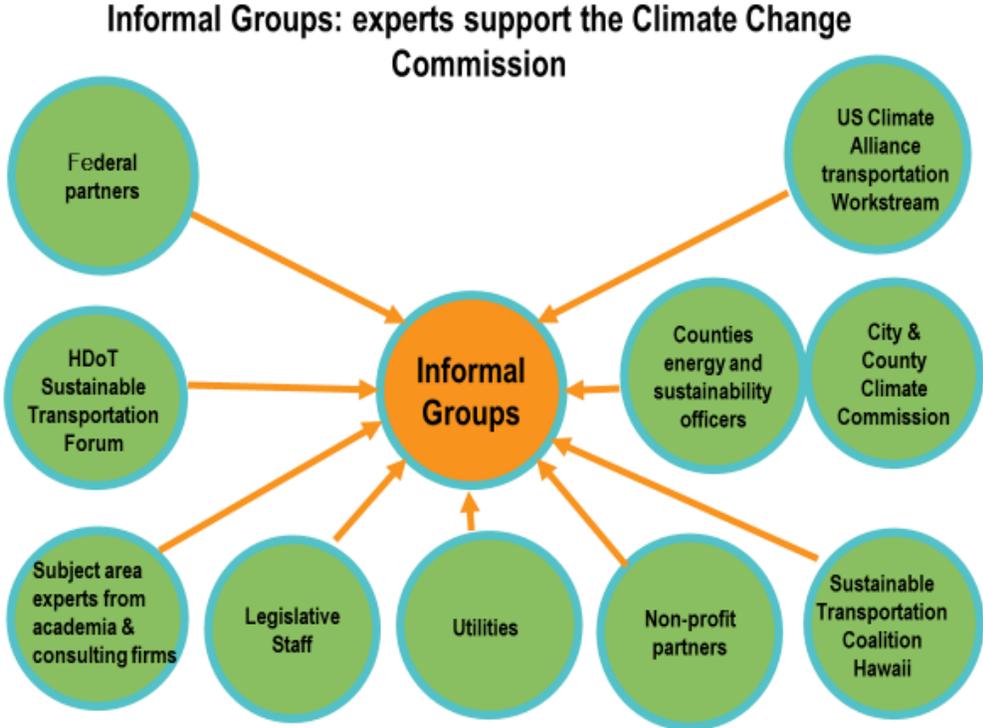
### Detailed discussion of progress towards achieving Act 32 mandates.

Mandates 1-9 are discussed in more detail below.

1. **Provide policy direction, facilitation, coordination, and planning among state and county agencies, federal agencies, and other partners.** The Climate Commission and its coordinator have pulled together various entities from ongoing efforts in Hawaii, to meet (as needed) and support the work of the Commission. To reflect the double-pronged focus of the Commission's work, two such informal groups were formed to take stock of current initiatives and identify statewide gaps that the Commission may address. The two groups consist of participants from state, federal and local government entities, as well as partner groups from the academic, non-profit, and private sectors. These subject matter experts convened several times during the past six months to provide feedback, identify gaps, and coalesce on priorities for the Commission to consider. The formation of these groups enabled some experts from different institutions met face-to-face for the first time where researchers, utilities, state, local, and federal entities participated in these meetings. The results of these meetings were compiled by the coordinator, and presented to the Commission, which informed discussion and decision making. At the national level, Hawaii's climate coordinator is one of three co-chairs for the US Climate Alliance's Transportation Working Group, and is involved in producing a three-year strategy for the Alliance.
2. **Establish climate change mitigation and adaptation strategies and goals to help guide planning and implementation statewide using the latest scientific analysis and risk assessment to monitor and forecast climate change related impacts at the regional, state and local level, including any additional information deemed necessary.** The Commission is in the process of establishing strategies to deal with mitigation and adaptation. State goals have been articulated for energy overall, and through the informal working groups, as well as the Transportation Working Group of the US Climate Alliance (the coordinator is one of three co-

chairs for this group), the Commission will be working towards establishing goals for transportation. The coordinator works closely with subject matter experts and with the City and County Climate Change Commission to take advantage of the latest scientific analysis and brings it to the attention of the State's Climate Commission.

Figure 3



3. **Identify vulnerable people, communities, industries, ecosystems and potential economic ramifications for climate change related impacts.** The Commission has begun this discussion, and issues of equity are reflected in its mission statement. The coordinator, along with commissioner support, is developing panels to initiate this conversation in calendar year 2019, at the annual climate change conference in January.

A discussion of vulnerability assessments began through one of two informal working groups, and led to the Climate Commission issuing a statement addressing this issue:

Encourage agencies and non-governmental utility providers to identify and prioritize assets within the 3.2 ft SLR-XA ,or more, as described in the State's Sea Level Rise report, identify adaptation measures, and to provide a status update on this activity annually to the Climate Commission.

4. **Identify existing climate mitigation and adaptation efforts at the federal state and local levels and make recommendations for how to meet or exceed Hawaii's state mitigation goals and shall adopt a liberal approach in prep, so as to minimize future risk to the people and environment of Hawaii.** Climate Commission and its coordinator work with several existing efforts and networks, at the federal, state and local levels. The climate coordinator co-chairs the Transportation Working Group of the US Climate Alliance, a 17-governor alliance of states and territories that have promised to uphold the Paris Agreement.
5. **The commission shall identify the information necessary to track progress in implementing climate change mitigation and adaptation efforts and shall submit an annual report to the governor and legislation no later than 20 days prior to the convening of each regular session.** The commission's work flow has moved along two main paths this year: Looking at how to implement sea level rise planning on the adaptation side of the climate change issue; and reduction of ground transportation emissions on the mitigation side. Figure 2 above outlines the work flow for Years 1 (2018), 2 (2019), and 3 (2020) with orange circles depicting what has been accomplished thus far. In year 1, on the adaptation side, research and modeling were compiled into the Sea Level Rise report, and submitted to the Legislature in early 2018. For the first three quarters, the Commission and staff worked to prioritize actions that generally needed to be taken, and the Commission issued a statement to that effect. This statement identifies the information that is necessary to track progress in implementing adaptation efforts, such as an inventory of vulnerable assets.

On the mitigation side, using existing reports and studies, and with the help of subject matter experts, the coordinator researched, analyzed, and compiled briefs and summaries of the landscape for commissioners. This allowed commissioners to engage in robust and informed discussion, and form a permitted interaction group that focused on ground transportation issues. The group's findings will be deliberated upon, and a statement may be issued at the November meeting, to establish priorities and identify what information is necessary to track progress in implementing mitigation efforts.

6. **The commission shall maintain a website that includes a mission statement as well as access to climate change related actions, plans, policies, and news.** The Commission's website is the main portal into climate change work in Hawaii. It is housed at [climate.hawaii.gov](http://climate.hawaii.gov). It is the landing point for Hawaii for the US Climate Alliance, and knits together the various state efforts currently in place such as the Greenhouse Gas (GHG) Inventory, GHG Sequestration Task Force, and so on. A branding of the site (HI Climate) carries through into the Commission's Facebook and Instagram accounts. The portal will continually be updated to reflect new content, actions, results of studies, plans, policies and results related to climate change.

The Commission's mission statement is finalized, and reads as follows:

Hawaii's Climate Commission recognizes the urgency of climate threats and the need to act quickly. It promotes ambitious, climate-neutral, culturally responsive strategies for climate change adaptation and mitigation in a manner that is Clean, Equitable & Resilient.

7. **The Commission shall assess the capacity and availability of existing resources & identify new sources of revenue necessary to address climate change and advise the governor, legislation, & counties on the economic and budgetary ramifications of climate change impacts, mitigation and adaption.** This mandate will be addressed in future years.
8. **The Commission shall conduct a comprehensive review of the implementation as required by this section and submit a report to the governor, legislation and the counties no later than 20 days etc.** This Annual Report serves to provide a comprehensive review of the implementation as required, for the calendar year 2018.
9. **The Commission shall, as a first step, focus on and develop sea level rise vulnerability and adaptation reports, which shall be made publicly available no later than December 31, 2017, and the commission shall reevaluate and update the sea level rise vulnerability and adaptation report every five years.** The State issued, and the Commission adopted the *Hawaii Sea Level Rise and Vulnerability and Adaptation* Report which was presented to the Legislature in January 2018. This is the first such report to characterize and model vulnerability for the state of Hawaii, and has served as a framework for sea level rise guidance issued by the City and County of Honolulu, and proclamations issued by the mayor of Maui.

In this way, Hawaii's Climate Change Mitigation and Adaptation Commission aims to be an "effort multiplier" for ongoing work in the state--by providing coordination and innovative solutions to combat climate change impacts.

**"Changes call for innovation, and innovation leads to progress."**

**- Li Kequiang**

