### Hawai'i's Climate Change and Clean Energy Goals



## Cost of living

- \$50,000,000 to HGIA for solar + storage loans to ALICE communities
- Hawai'i Energy provides rebates for water heating, lighting, appliances, air conditioning, and solar water heater tune-up, among others through Public Benefits Fee.
- KIUC offers several rebates for energy efficient washers, refrigerators, ceiling fans, solar water heaters, heat pump water heaters, and window air conditioning units.

## Cost of living

- Electric Vehicle Charging Stations Rebate Program
- Hawai'i Electric Bike and Moped Rebate
  - \$500 available for the purchase of new electric bicycles and electric mopeds.
- Hawai'i Energy's Energy Smart 4 Homes (ES4H) Program
  - Provides free energy efficient LED lightbulbs, high-efficiency shower heads and faucet aerators & advanced power strips.

## Resilience

- State building energy efficiency and fleet transitions
- Carbon Smart Land Management Assistance Program
  - Incentives to agriculture producers for regenerative practices
- Protecting 21% of priority watersheds
- Climate Resiliency Manager DOT Airports
- Airports implementing SLR mitigation at HNL
- Penalties for unauthorized shoreline structures
- Sea level rise and erosion control disclosures

# Reaching 2045

- Electrify public school bus fleets through a \$4.99 million EPA grant
- Expanding appliance and equipment standards
- Hawai'i State Energy Codes
  - State building construction must comply with the 2018 IECC
- Coal for Electricity Generation Ban
  - Mililani I Solar O'ahu's first utility-scale solar plus storage project operational in 2022, Waiawa Solar completed January 2023.
  - Kapolei Energy Storage operational in 12/2023
- HNL, Kahului, and Lihue Airports installed Ground Power Units and Pre-Conditioned Air units so aircraft can turn off their engines.



#### Summary of Accomplishments

Progress towards meeting the nine recommendations (represented by large circles) and 49 associated recommended actions (represented by small circles underneath) is presented here as measured on a qualitative scale of "no known progress" to "significant progress" as depicted by the following key:



## Equity

#### • Energy Equity Hui

- Map of underserved communities at a higher risk to sea level rise and other coastal erosion hazards
- Climate Social vulnerability Index
- Workforce development
  - <u>Good Jobs Hawai'i</u>, a \$35 Million for no-cost skills training and job placement support for high demand, well paying jobs, including in Clean Energy and Skilled Trades
  - Green Jobs Program \$10 million to provide entry level job opportunities in sustainability, agriculture, environmental technology and other green job fields.

## Health

- Launch of DOH Climate and Health Program
  - Climate and Health Coordinator at DOH
  - Climate Change and Health Working Group
  - Portal about the public health risks of climate change
  - On-going study to understand extent of heatrelated illness in Hawai'i
  - On-going comprehensive statewide vulnerability assessment coming in February
- Banned mercury-containing fluorescent lamps



## Learn More



#### **Economy Wide Emissions Reductions are Necessary to Achieve 2045 Targets**



Source: EPA State Inventory Tool

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Federal Funding Requests DOA Affordable Clean Energy Grant

State and County \$50,000,000

DOT Harbors \$30,000,000

UH SeaGrant \$60,000,000

HGIA \$100,000,000

Hawai'i's Business-As-Usual model trajectory, inclusive of achieving the **Renewable Portfolio** Standard, will not meet the 2030 or 2045 statewide emissions targets, set by Act 238 of 2022, and Act 15 of 2018, respectively.

Hawai'i State Energy Office, Act 238 Report showed different Pathways to meet the target.



Renewable Energy Utility Scale Projects in the Works

2024 -

2027

#### Total of 1.6 Gigawatts of production, enough to power 1.2 million homes and 5.36 Gigawatt-hours of storage are planned statewide.

- Biofuel projects will require substantial cost and lifecycle greenhouse gas analysis and review.
- All projects are required to develop community benefits packages.
- Projects listed do not include various community based renewable energy projects or rooftop/distributed solar projects.

,	Project Stage	Number of Projects	Sum of Capacity (MW)	Sum of Storage (MWh)
	Stage 1 &2 Approved By PUC and In Development	12	393.5	1711
	Hawaiʻi	2	60	240
	Solar + Storage	2	60	240
	Maui	3	115	460
	Solar + Storage	3	115	460
	Oʻahu	7	218.5	1011
L .	Solar + Storage	7	218.5	1011
	Stage 3 – HECO RFP Selected, Require Regulatory Approval	15	1170.9	2144
Γ	Hawaiʻi	4	261	834
	Biofuel	1	60	30
	Solar + Storage	3	201	804
	Maui	4	110	320
1	Solar + Storage	3	80	320
	Wind	1	30	
	Oʻahu	7	799.9	990
	Biofuel	3	494.9	
	Solar + Storage	4	305	990
k	Kaua'i Projects (KIUC) - Pending	1	59	1500
	Kauaʻi	1	59	1500
	WKEP Pumped Storage	1	59	1500
I	Fotal	28	1623.4	5355

Action by 2030

- Increased focus on equity
  - UH Equity Mapping tool
- Continued investment and focus on energy rebates
- 30% of priority watersheds protected
- 100,000,000 trees planted, protected and conserved.
- Ramp up wildfire management and invasive species control actions
- \$1.5 million to address urban heat with expanding urban tree canopy through community grants.
- 100% State fleet transition (LDV)

Action by 2030

- HDOT converting Ground Support Equipment to electric
- Rental car electrification
- Improving community infrastructure to make EV ownership a more feasible
- Pilot programs in schools for to compost food scraps for gardens

## Recommendations

