


Accelerating Hawaii toward  
100% clean energy.

blue  planet  
FOUNDATION

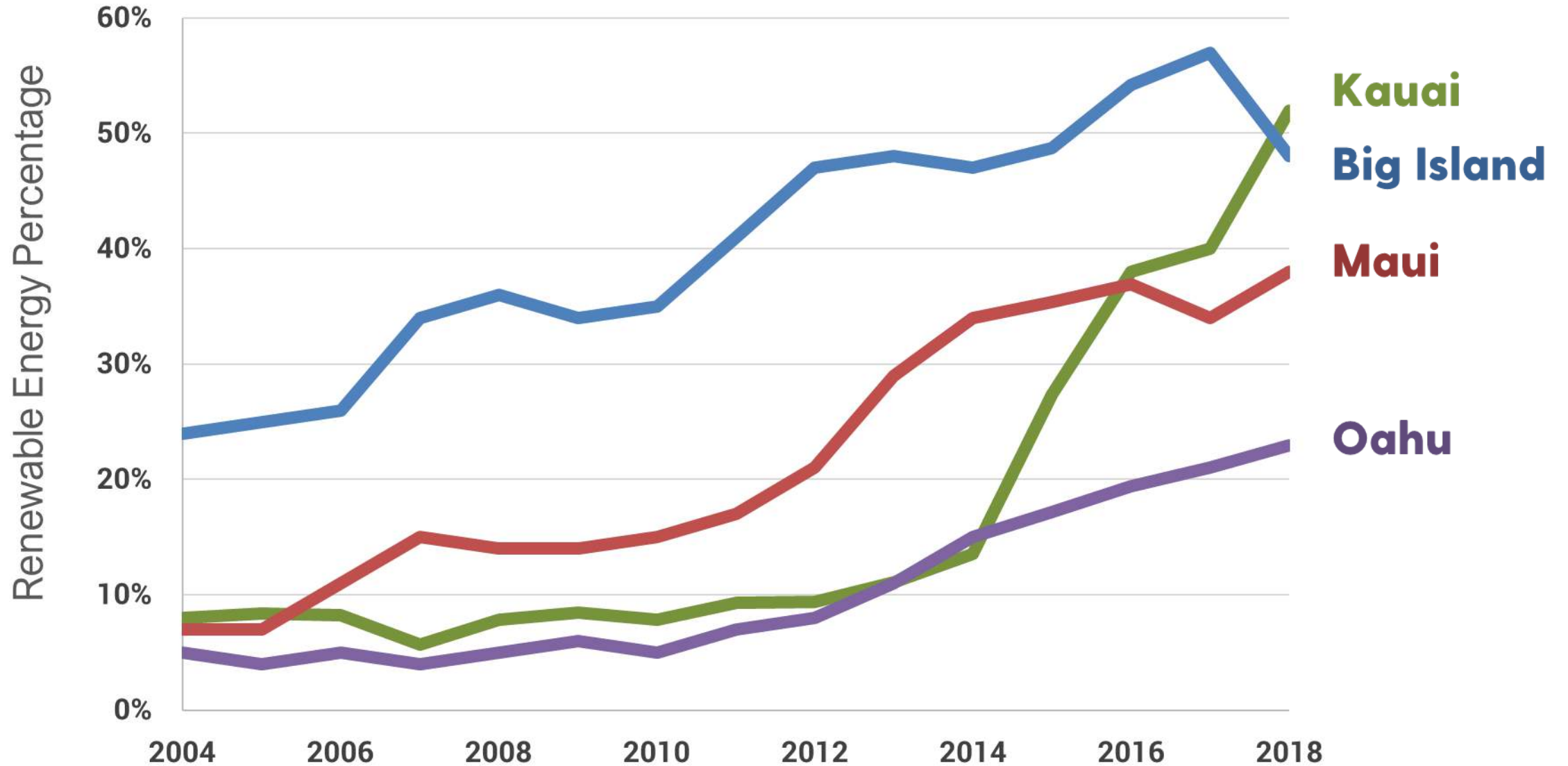
An aerial photograph of a surfer riding a wave in clear turquoise water. The surfer is positioned in the lower center of the frame, riding a white surfboard. The water is a vibrant blue-green color, and the wave is breaking to the left, creating white foam. In the upper center, another person is visible in the water. The overall scene is bright and clear, suggesting a sunny day.

**Hawai'i is where the future  
should happen first.**

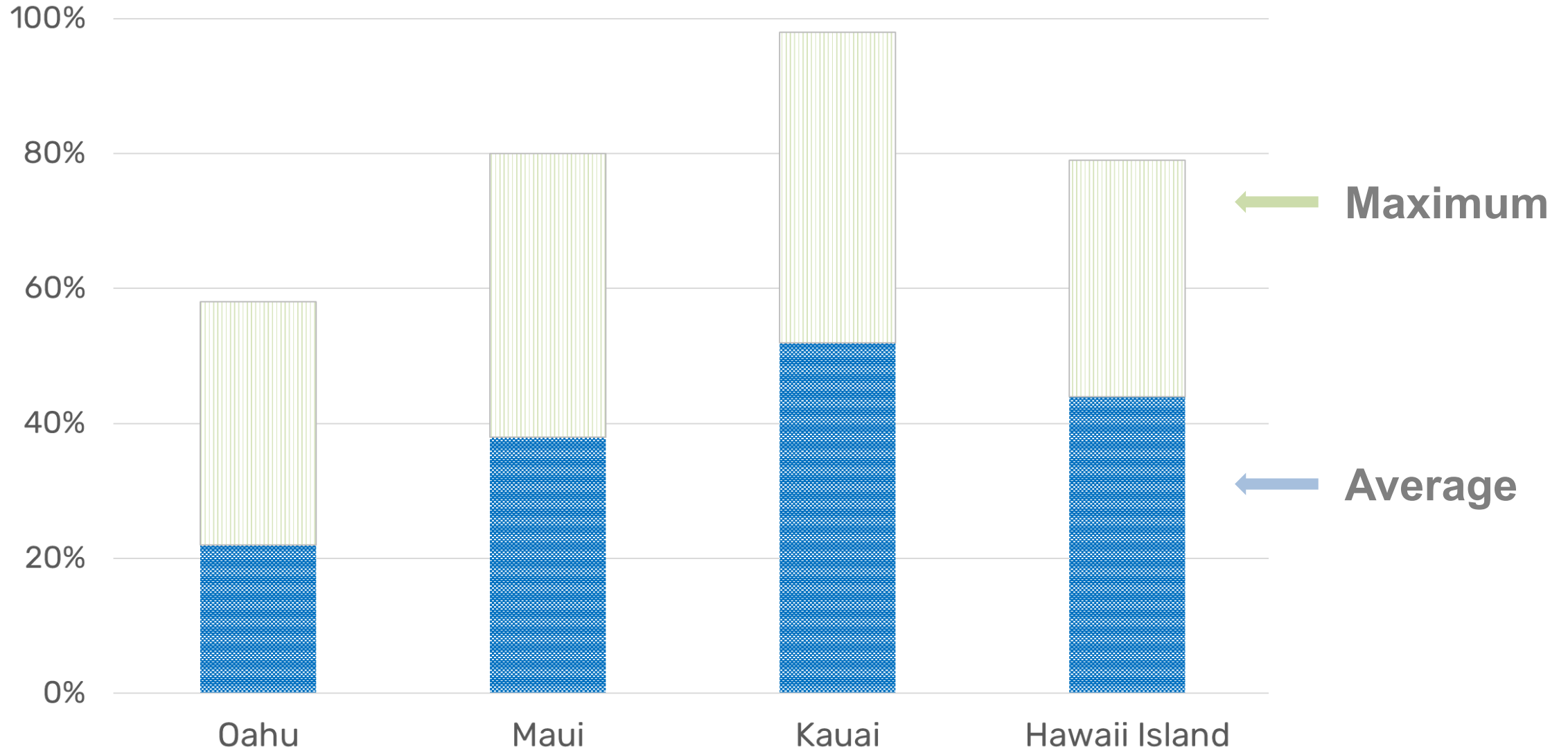


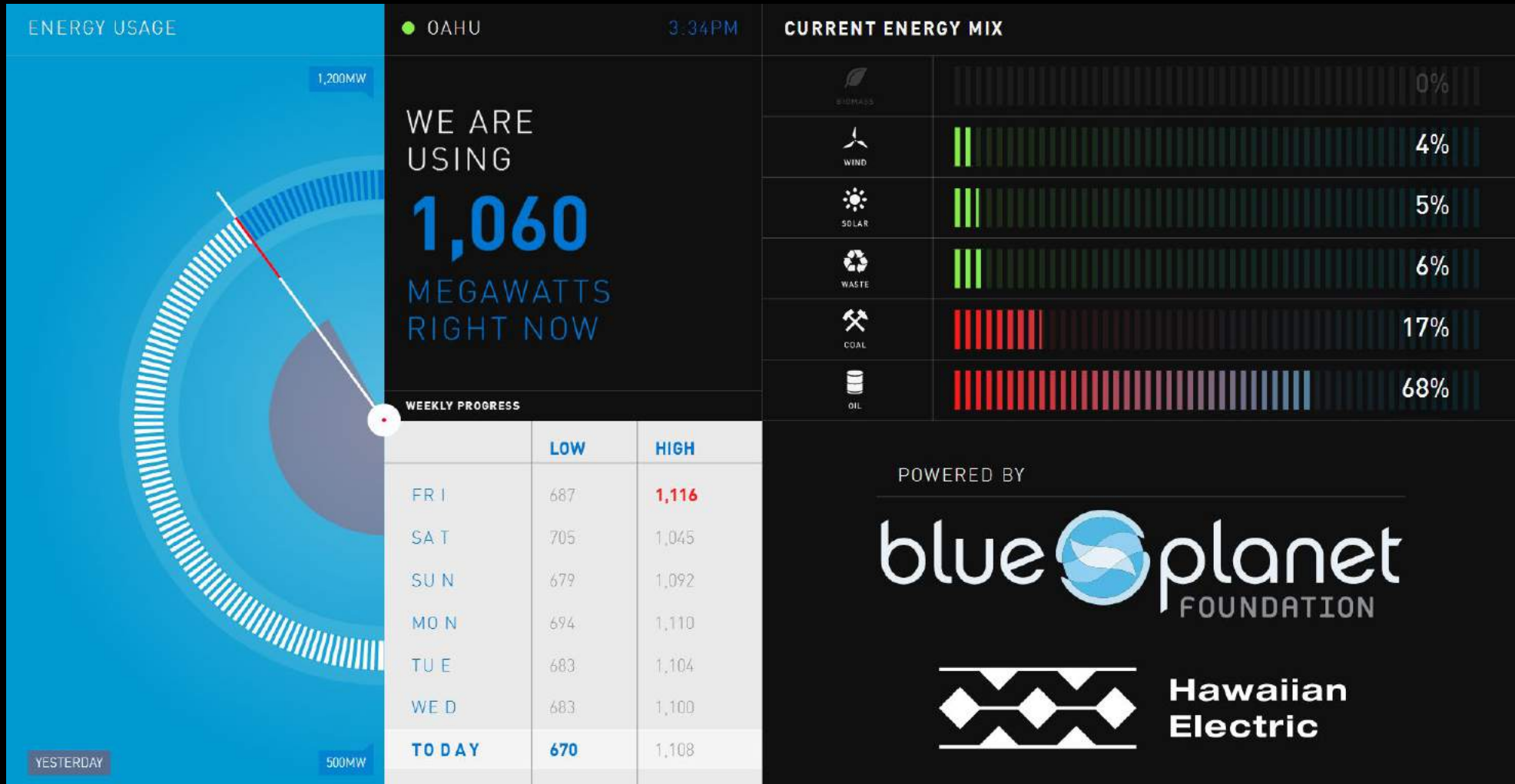


# HAWAII RENEWABLE ENERGY TRENDS



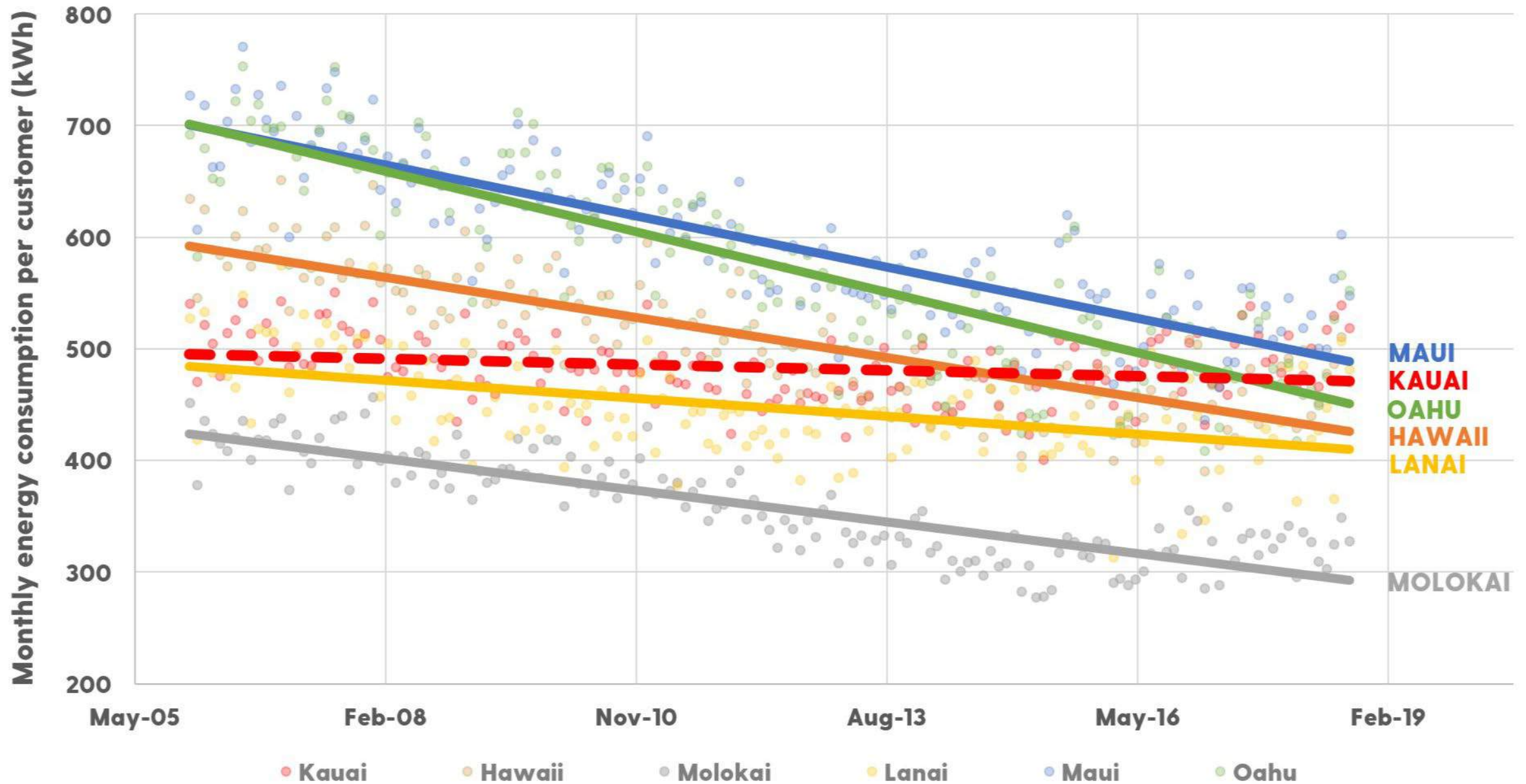
# RENEWABLE ENERGY 2018





islandpulse.org

# RESIDENTIAL ENERGY USE BY ISLAND (2006 – 2018)





HAWAII 2016

# ENERGY REPORT CARD



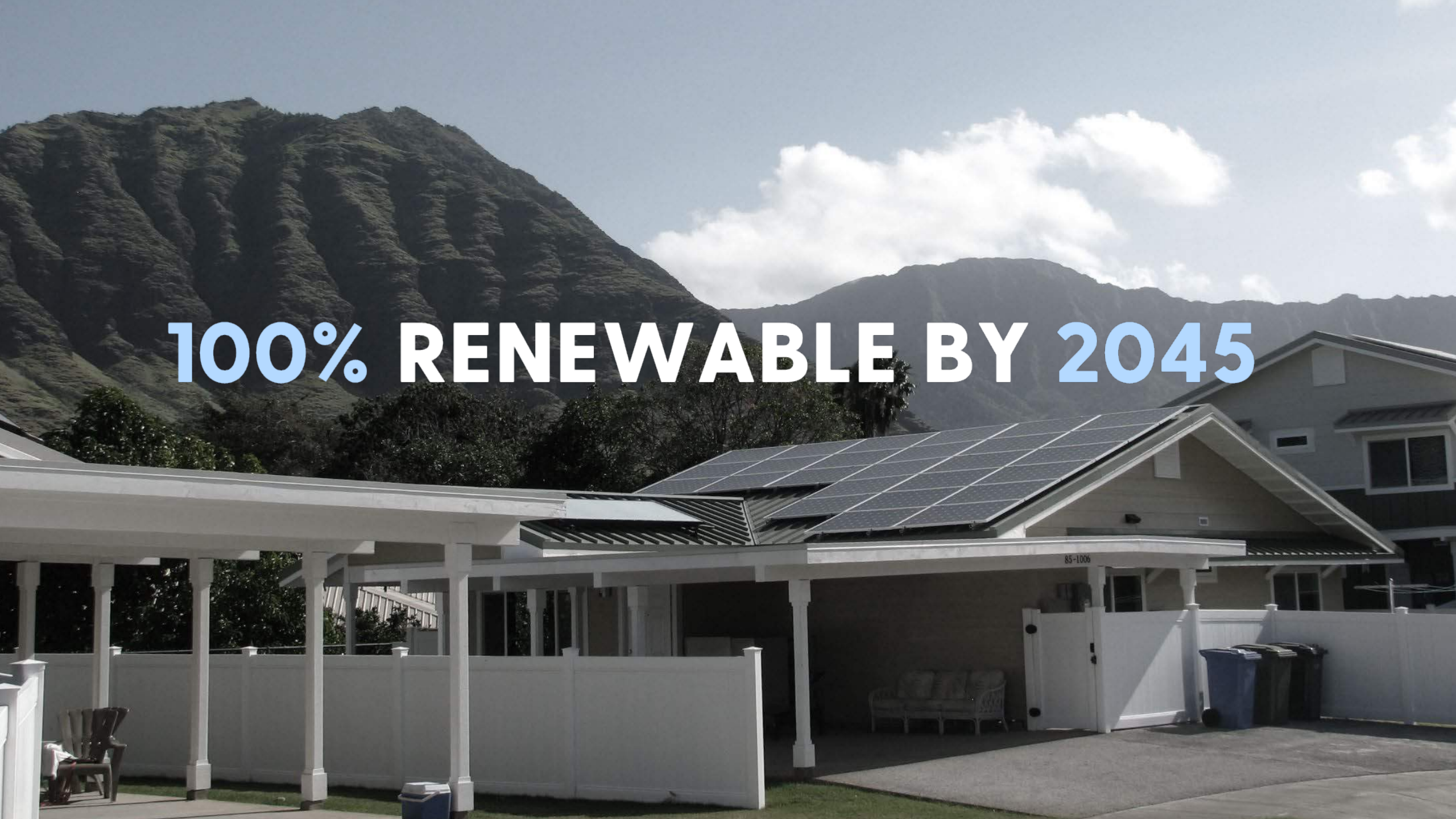
[HawaiiEnergyReportCard.org](http://HawaiiEnergyReportCard.org)



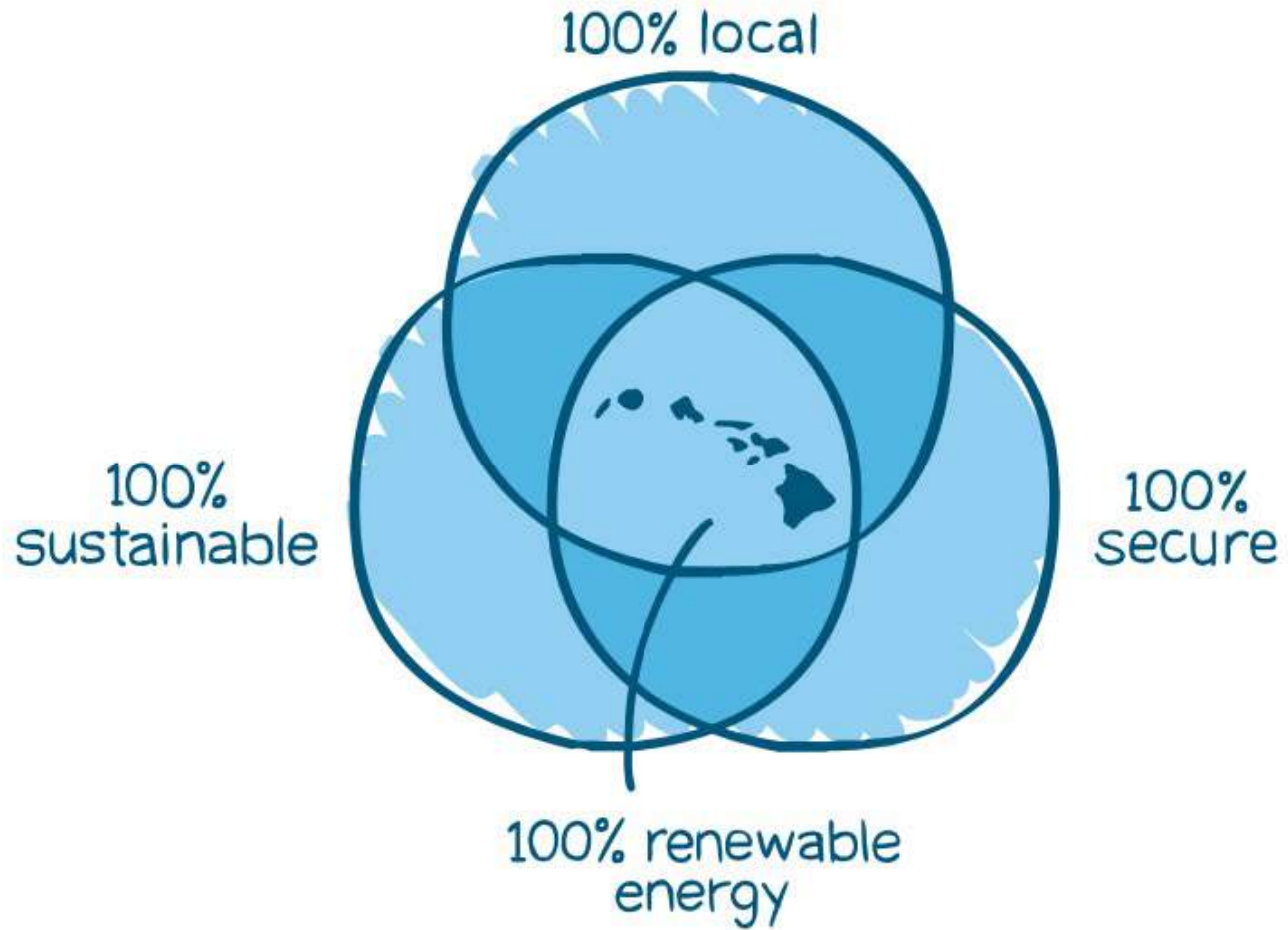
**40 million barrels annually**



**100% RENEWABLE BY 2045**







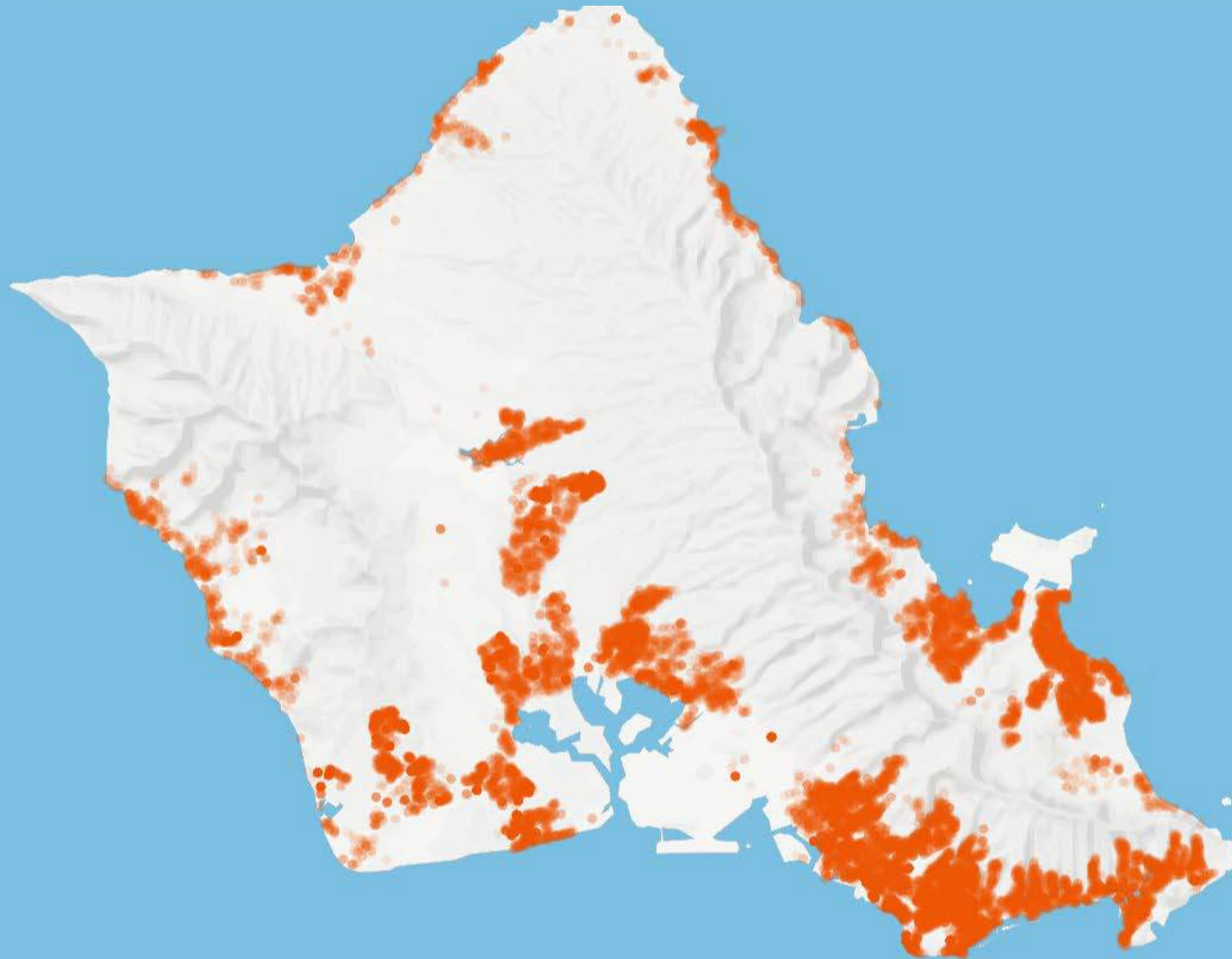
# WE HAVE THE POWER

#nomorefossilfuels #freehawaii #100by2040



# 1 IN 3 HOMES IN HAWAII HAVE ROOFTOP SOLAR

● ROOFTOP SOLAR PANEL INSTALLATION







# VIEWPOINTS

## ISLAND VOICES

### Hawaii's renewable energy goal should be 100%

By Gov. George Ariyoshi,  
Christine Camp  
and Peter Crouch

Under the state's existing renewable energy laws, in 2031 — around the time today's preschoolers will graduate high school — the majority of our energy could still come from fossil fuels. We owe it to the kids grow-

Hawaii and the Hawaiian Electric companies acknowledged and agreed:

"The future of Hawaii requires that we move more decisively and irreversibly away from imported fossil fuel for electricity and transportation and towards indigenously produced renewable energy and an ethic of energy efficiency.



*George Ariyoshi was governor of Hawaii 1974-1986; Christine Camp is managing director of Avalon Development Co., LLC; and Peter Crouch is dean of the College of Engineering at the University of Hawaii-Manoa. They are on the board of directors of Blue Planet Foundation.*

progress in clean energy technology and policies, as well as a rising tide of citizens intent on reversing climate change. With continued action in these areas — building on progress like advanced rooftop solar inverters to accommodate high solar penetration, an 80 percent drop in solar power module



BE THE CHANGE  
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100% CLEAN TRANSPORTATION  
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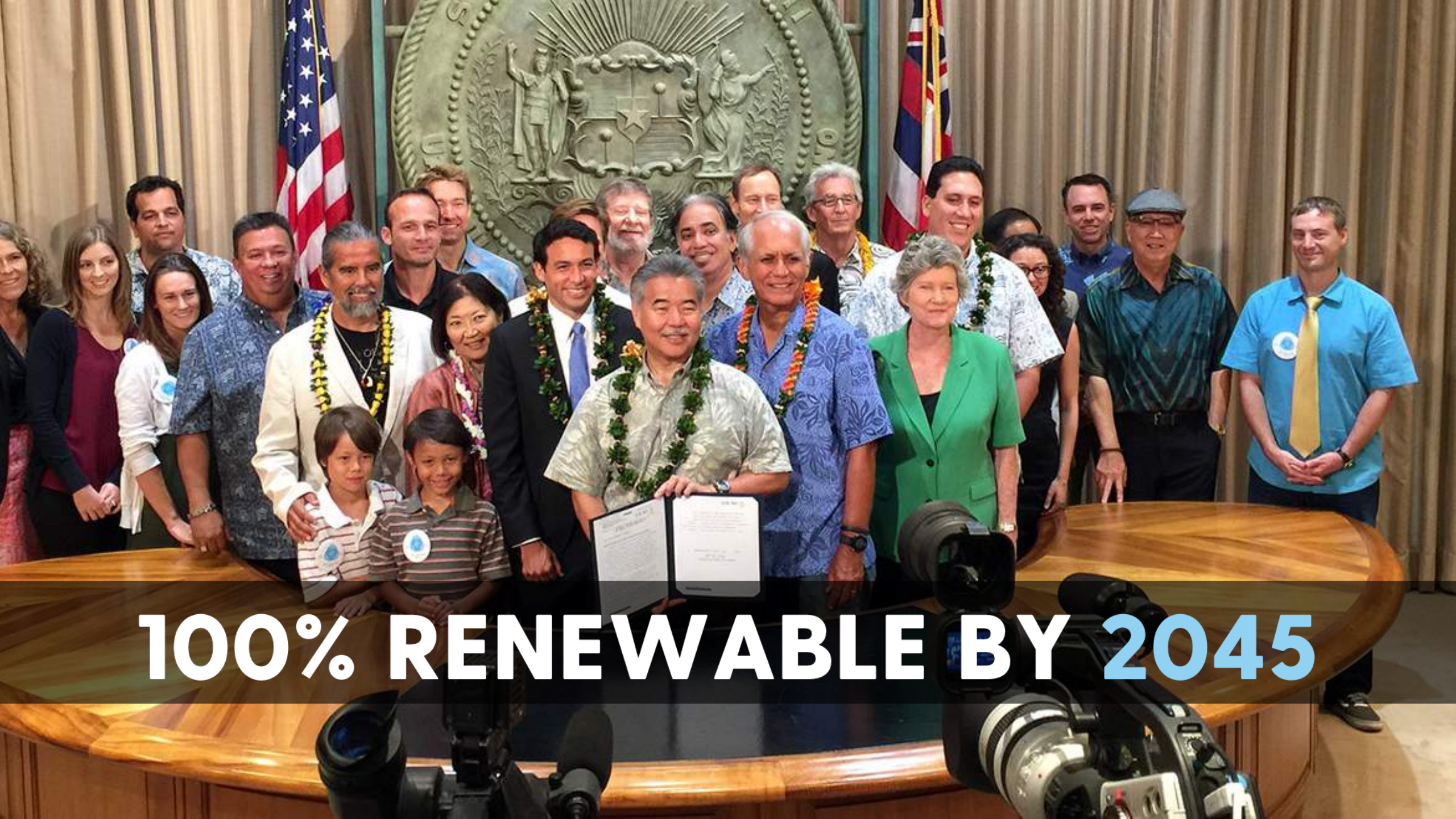


I ❤️  
clean  
energy!

Dear Legislators,  
We are tomorrow's scientists,  
farmers, teachers, dreamers,  
and leaders, asking you to make  
our future brighter by passing  
House Bill 623: 100% clean,  
renewable energy by 2040.

100% renewable energy by 2040





**100% RENEWABLE BY 2045**



**Barack Obama** 

@BarackObama



 Follow

Hawaii just set a goal of generating 100 percent of its electricity from renewable resources: [ofa.bo/r7hi](https://ofa.bo/r7hi) #SwitchToClean

 **Hawaii News Now**

**Gov. Ige signs bill setting 100 percent renewable energy goal for...**

By Hawaii News Now @HawaiiNewsNow

Gov. David Ige on Monday signed into law four energy bills, including one that strengthens Hawaii's commitment to clean energy by directing the state's utilities to generate 100 percent of their el



# **Hawaii Electric aims to hit 100% renewables 5 years early with new power supply plan**

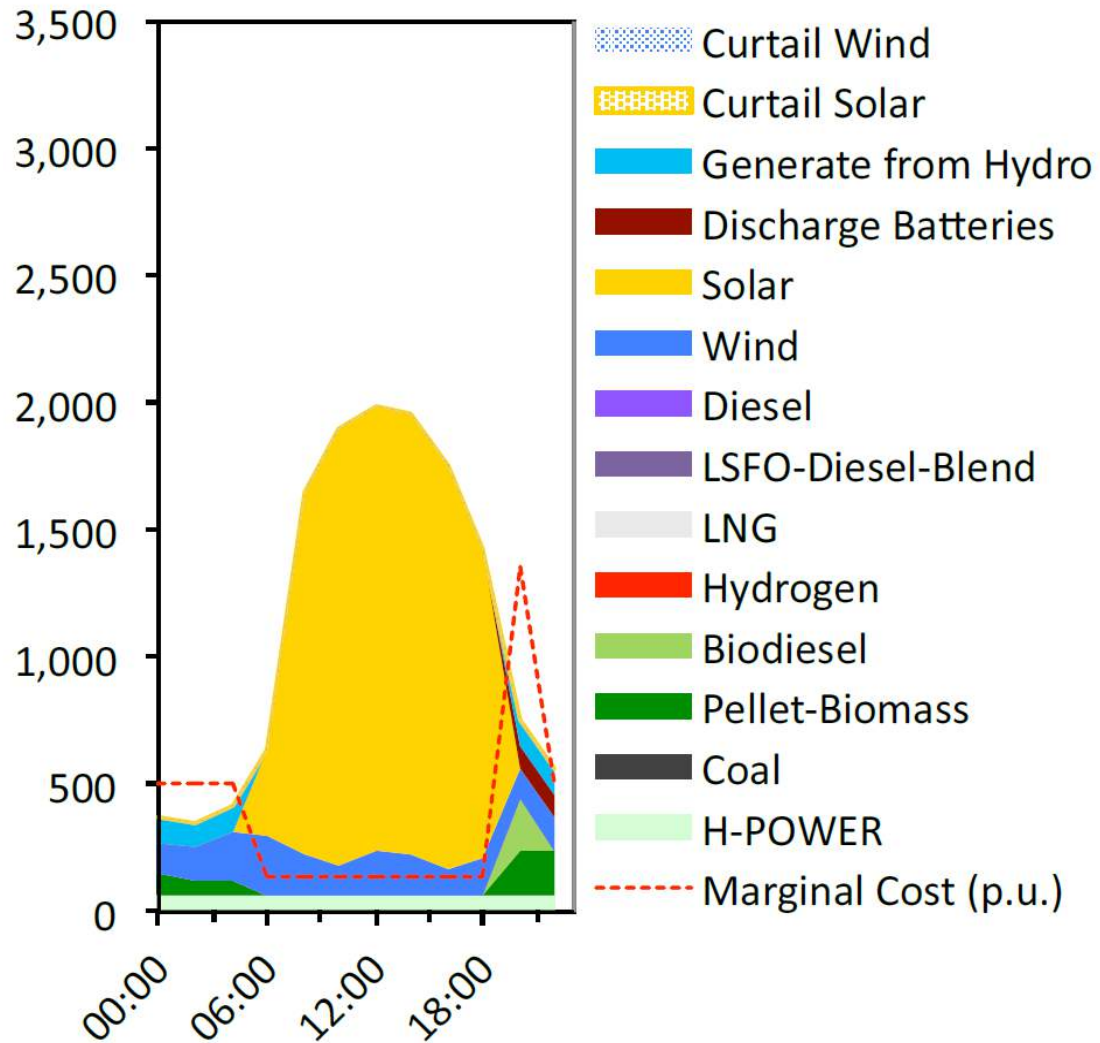
**PACIFIC  
BUSINESS NEWS**

## **HECO aims to hit renewable energy goal early**

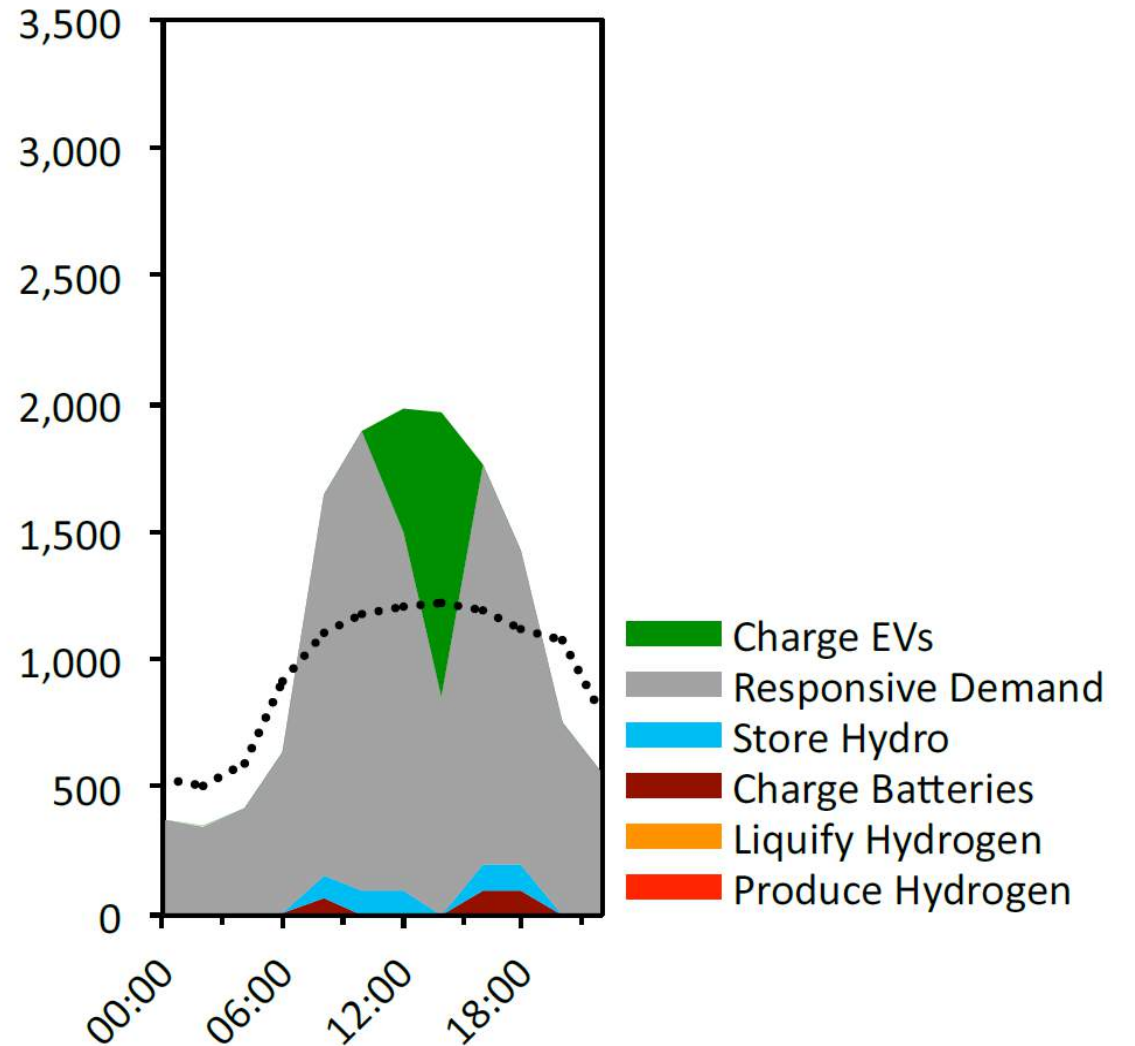


# 100% Renewable, April day in 2045

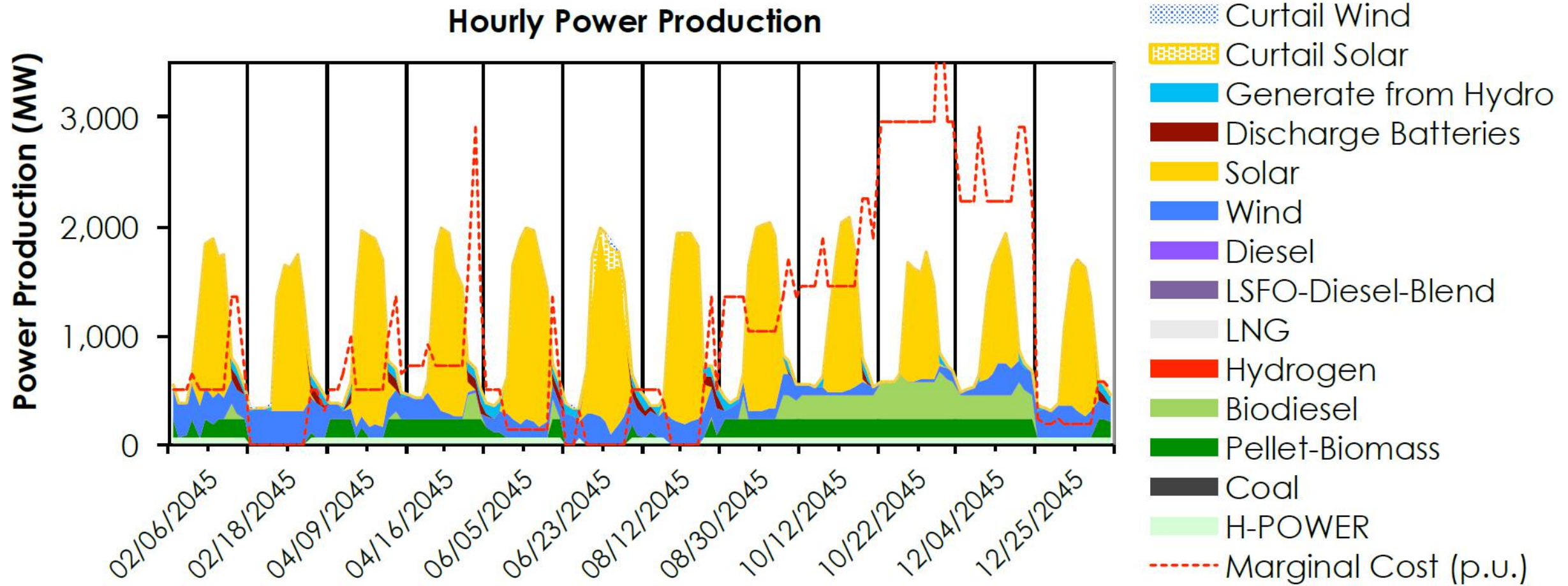
## Hourly Power Production (MW)



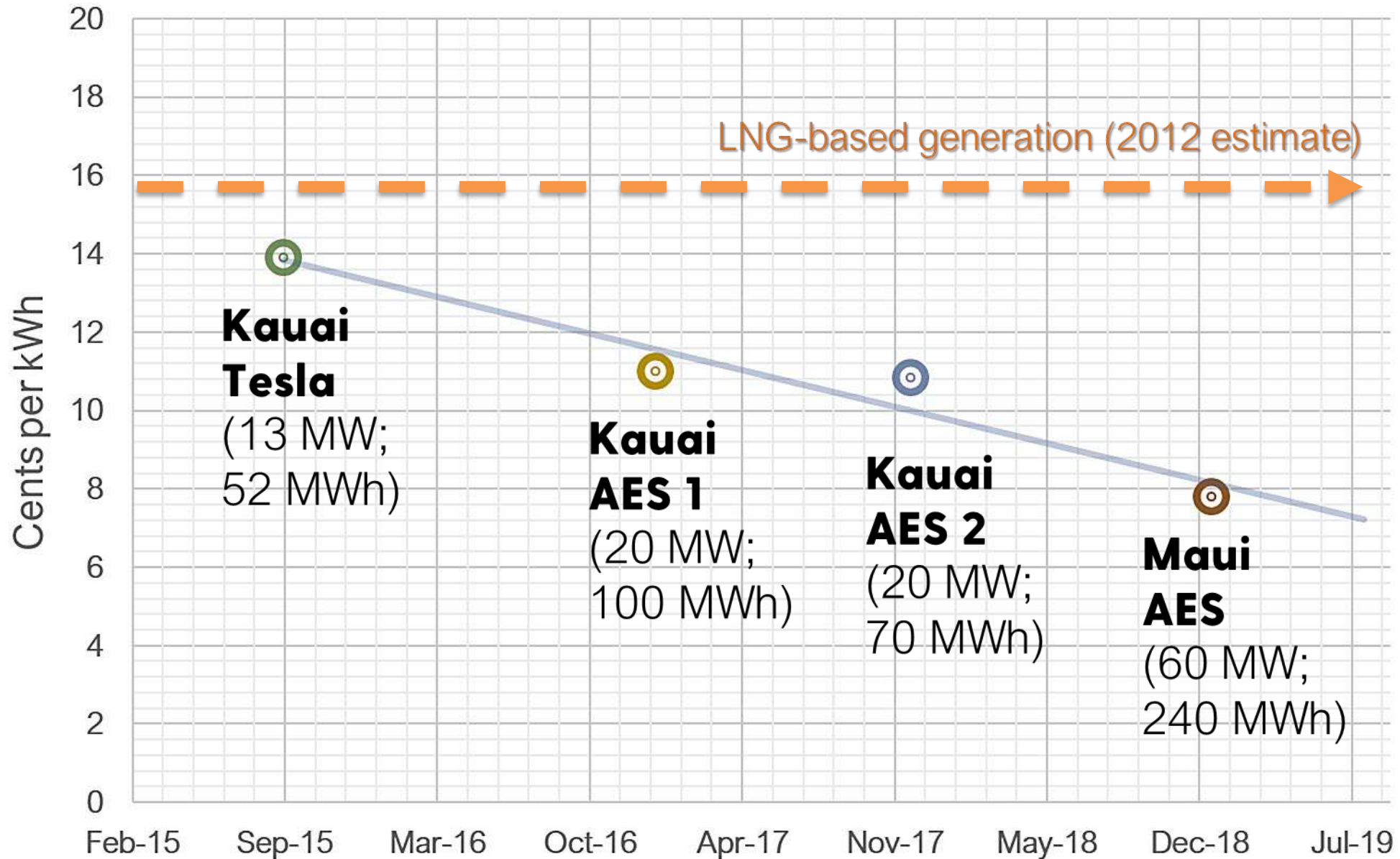
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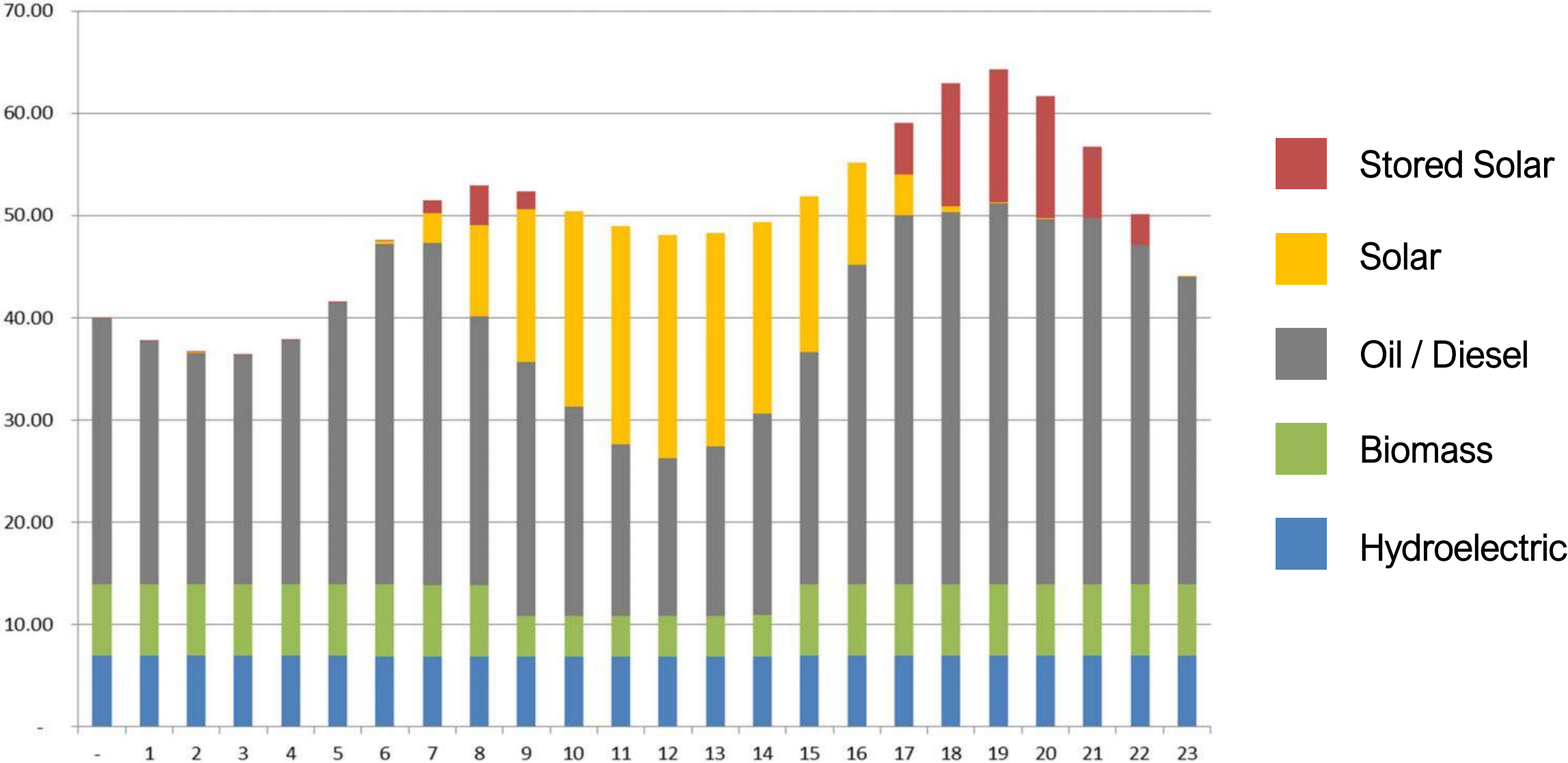
# Seasonal Energy Balance, 100% Renewable



# HAWAII SOLAR+STORAGE COST CURVE



# Kauai's Typical Daily Dispatch 2018





# Three Lessons



**1** Transform by  
**design, not  
default**





## Shifted Energy

Retrofitting 1,000 existing electric water heaters with grid interactive controllers to create about 3 MW of storage.





2

Take a  
**whole systems**  
approach





**First fully electric  
buses (Proterra)  
Launching this  
weekend**



*Perfect moments, always*

3

Set a  
**vision** for  
**100%**

a



**100%  
RENEWABLE  
ELECTRICITY**

**PARIS  
CLIMATE  
COMMITMENT**

**100%  
CLEAN  
ENERGY  
BY 2045**

**CARBON  
NEUTRAL  
TARGET**

**100% RENEWABLE  
GROUND  
TRANSPORTATION**

# Transform Hawai'i Inspire the planet

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A scenic photograph of a tropical beach at sunset. The sky is a warm orange and yellow. In the foreground, three people are kayaking on the water. In the background, a line of palm trees and a few people walking on the beach are silhouetted against the bright sky.

**Let's work together.**



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**Jeff MIKULINA**

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