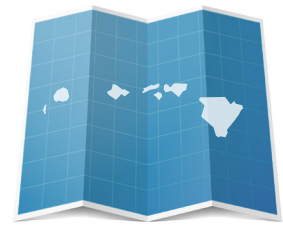


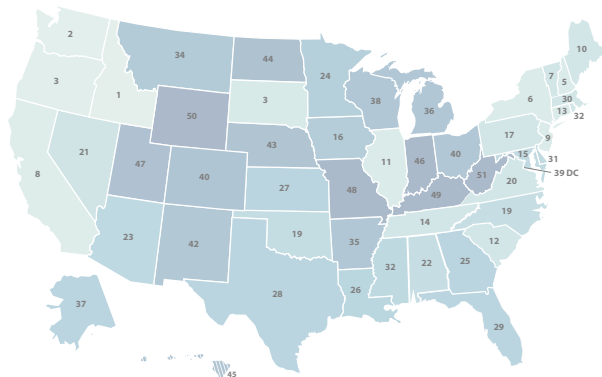
HOW DOES HAWAII STACK UP ON CLEAN ENERGY?



DATA AS OF 2020



LOWEST CO₂ EMISSIONS RATE



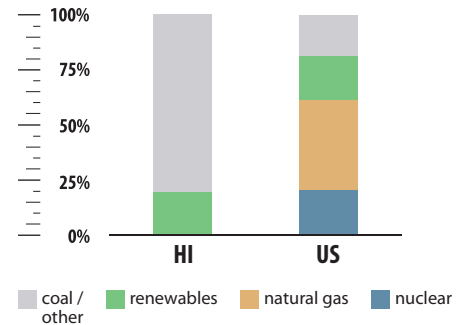
#45

0.69 tCO₂/MWh

CO₂ EMISSIONS RATE
0.1 tCO₂/MWh 0.9 tCO₂/MWh



ELECTRICITY SOURCES



CLEAN ENERGY JOBS

#43

15,336
(2020)



COVID-19 job losses totaled at least 3,289
March-December 2020 (cumulative).



CLEAN ENERGY RANKINGS

#14

ENERGY EFFICIENCY
SCORE = 28



#51

0% GENERATION FROM
NATURAL GAS



#23

20% GENERATION FROM
RENEWABLES



RENEWABLE ELECTRICITY CAPACITY

#39

35 MW
(2020)

NEW BUILD



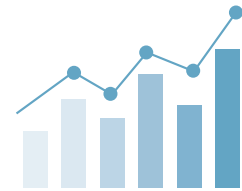
#40

1,512 MW

CUMULATIVE



ENERGY INNOVATION IN A 21ST CENTURY ECONOMY



WHAT ENERGY INNOVATION MEANS FOR HAWAII



\$2.4 MILLION Office of Energy Efficiency and Renewable Energy Grants in FY20

\$7.5 MILLION Office of Science grants in FY20

\$2 MILLION State and Indian energy programs, environmental cleanup, and other routine activities in FY20

\$8.6 MILLION Advanced Research Projects Agency-Energy grants since FY2009

3 GRANTS By ARPA-E since 2009

IMPACTS OF FEDERAL R&D IN ENERGY SECTOR (TOTAL, 2018)

#49 **20** JOBS SUPPORTED

#49 **\$2** MILLION CONTRIBUTED TO GDP

BUSINESS SPOTLIGHT

MAKAI OCEAN ENGINEERING, INC (KAILUA, HI) | www.Makai.com



Makai Ocean Engineering, Inc. is an innovative ocean technology and engineering firm. Makai's core technical areas include submarine cables, ocean energy, marine pipelines, underwater vehicles, buoys, and communications systems. The company has received funding from the Departments of Energy, Commerce, and Defense to support this research.