

Market Analysis and News Branch

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In Cooperation with the United States Department of Agriculture
National Agricultural Statistics Service, Pacific Region

Farms Producing Renewable Energy by Producing Systems and Acres Operated State of Hawai‘i, 2012, 2017, and 2022

Hawai‘i has a diverse range of renewable energy resources, such as solar power, wind, hydro, geothermal, biomass, and bioenergy. Farms can harness these resources to power their operations, thereby significantly reducing the costs associated with energy-intensive processes such as irrigation, transportation, storage, and processing. Additionally, farms may sell excess energy, like electricity, back to the grid for profit.

According to the Census of Agriculture conducted by the USDA NASS, the number of farms in Hawai‘i producing renewable energy nearly doubled (91.6%), from 1,291 in 2012 to 2,474 in 2017, before slightly decreasing to 2,259 in 2022. The majority of these farms utilized solar power to generate renewable energy, accounting for 99.4% of all producing systems in 2022.

Small-scale farms were more likely to adopt renewable energy technologies in Hawai‘i. For example, in 2022, 63% of the farms producing renewable energy operated on less than 10 acres of land, while an additional 28% operated on land ranging from 10 to 49.9 acres. Almost all of these farms primarily produced solar power.

Table 1: Number of Farms Producing Renewable Energy by Producing Systems, Hawai‘i, 2012, 2017, and 2022

	2012	2017	2022
All Renewable Energy Producing Systems	1,291	2,474	2,259
Solar Panels	1,271	2,356	2,247
Wind Turbines	89	90	54
Methane Digesters	4	2	-
Small Hydro	20	24	27
Biodiesel	26	5	-
Ethanol	6	4	-
Geothermal	-	6	2
Other Systems	-	102	n/a
Harvest Biomass for Production	37	58	46
Wind Rights Leased to Others	21	7	20

Source: USDA NASS Agricultural Census Data, 2012, 2017, and 2022.

Table 2 Number of Farms Producing Renewable Energy by Acres Operated, Hawai‘i, 2022

Acres Operated	All Energy Producing Systems	Solar Panels	Wind Turbines	Small Hydro	Geothermal
1.0 - 9.9	1,427	1,426	17	6	2
10.0 - 49.9	642	638	27	16	
50.0 - 69.9	33	33	1	2	

70.0 - 99.9	39	39	1		
100 - 139	22	22			
140 - 179	19	19			
180 - 219	6	6	1		
220 - 259	8	8			
260 - 499	25	23	2		
500 - 999	6	6	1		
1,000 - 1,999	14	13	2		
2,000 or more	18	14	2	3	
Total	2,259	2,247	54	27	2

Source: USDA NASS Agricultural Census Data, 2022

Chart 1: Number of Farms Producing Renewable Energy by Producing Systems, Hawai‘i, 2012, 2017, and 2022

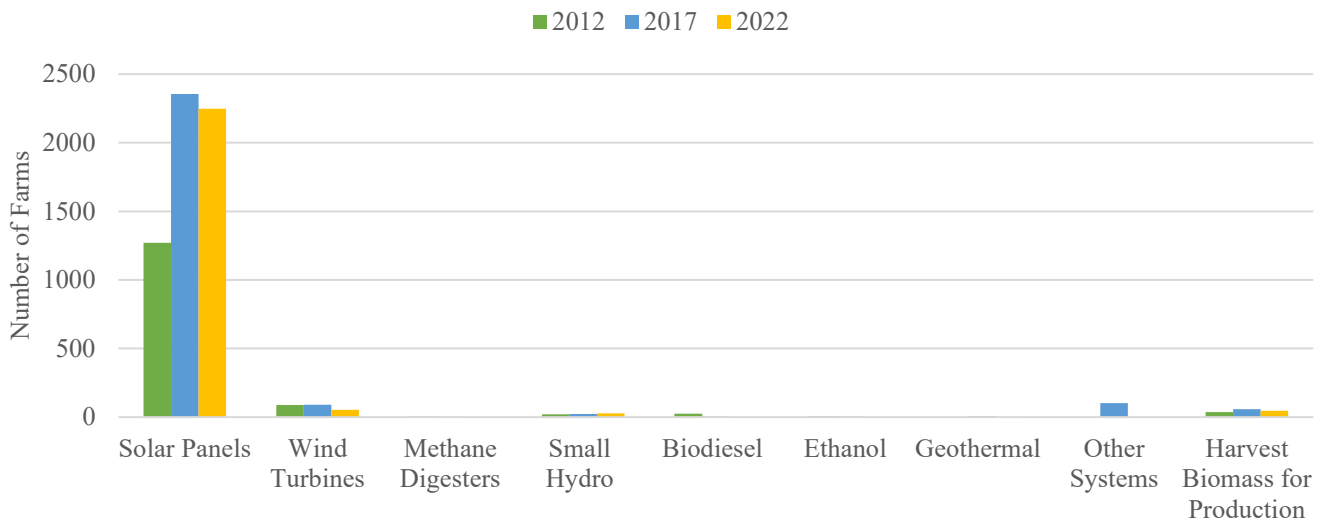
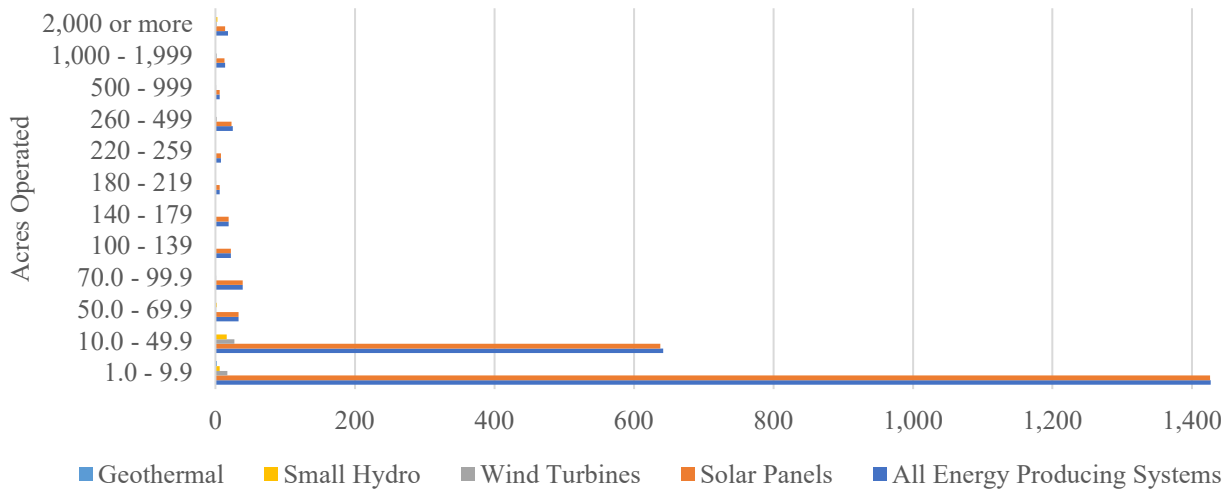


Chart 2: Number of Farms Producing Renewable Energy by Acres Operated, Hawai‘i, 2022



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