

R&D RFI #4444 Sustainable Infrastructure:
FACTS AND FIGURES

Overview: The County of Hawaii requested information from the community and innovators on greenhouse gas reduction and climate change solutions. Specifically, this included requests for information on net-zero emission economy solutions and sustainable infrastructure development. The purpose of the RFI is to identify viable climate change mitigation, non-imported sources of energy, and adaptation opportunities. The intention is to then develop RFPs from the responses to support a post carbon economy.

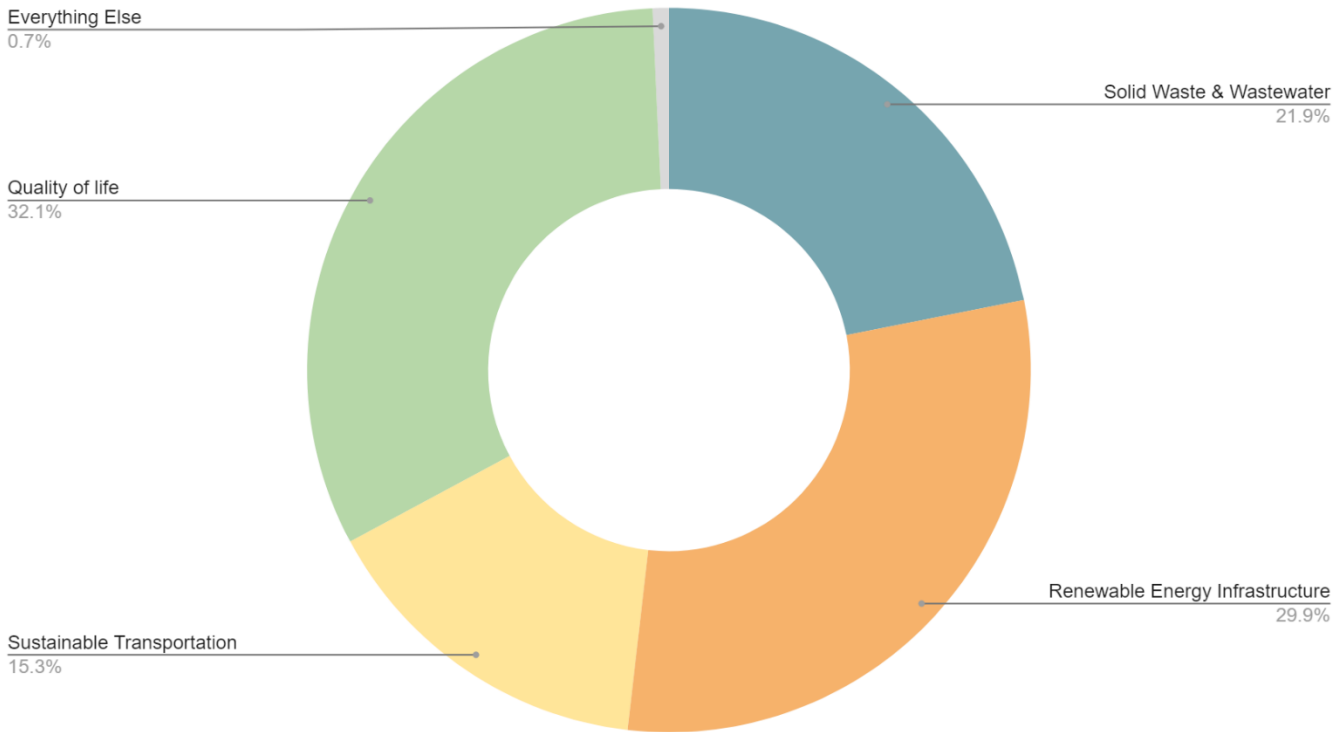
Prioritization and Innovation around the quality of life: A number of invaluable responses were received that provided guidance to potential solutions we can implement and achieve today. These innovative ideas support job creation, workforce development, a reduction in greenhouse gases, and support a resilient island (Refer to Table 1).

<i>Table 1</i>		
Innovative/Low-Hanging Solutions	About	Category
Hydrogen Fuel from Landfill waste	Produce hydrogen from landfill waste and be a continuous fuel source to power a fleet of hydrogen vehicles as well as other infrastructure. Supports a net-zero emissions economy, jobs, and island resiliency.	Renewable Energy Infrastructure + Sustainable Transportation
Waste-to-Energy Process	A means of recovering organics and recyclables--no incineration -- from the municipal waste and provide separation of the various streams within that flow for reuse, greenhouse gas reduction, and generation of renewable natural gas	Sustainable Transportation
Microgrids	Creating a small network of electricity with a local renewable energy source that's able to function independently. This is a resilient solution in case the grid is out and emergency power is needed.	Renewable Energy Infrastructure
Quality of Life	Among 13 different sub-categories, the responses showed priority in Workforce Development, Native and Wildlife Conservation, and Social Equity.	Quality of Life
Education + Outreach	Educate the next generation on climate change	Everything Else

Other notable responses, in which the County and partners are working on: (1) are developing a reliable EV charging station network, (2) installing solar photovoltaic systems, energy storage, and demand management, (3) developing building code that's supportive of a greener future, (4) supporting complete streets with pedestrian and bicyclist infrastructure and less dependence on motor-vehicles.

Statistical Takeaways

Figure 1: RFI Responses by Category



+ The County received a total of **12 Respondents**. **As seen in Figure 1, the following categories are ranked from most to least mentions in the responses.**

1. Quality of Life: 32.1%

- a. Among 13 different sub-categories, the responses showed priority in Workforce Development, Native and Wildlife Conservation, and Social Equity.

2. Renewable Energy Infrastructure: 29.9%

- a. Among 6 different sub-categories, the responses showed equal priority between Utilizing Green Hydrogen, Energy Production Technologies, Reduction of Greenhouse Gas Emissions, and Mitigation of Exposure to Fossil Fuel-based Energy Prices Volatility.

3. Solid Waste and Wastewater: 21.9%

- a. Among 4 different sub-categories, the responses showed priority in Solid/Water Waste Disposal and Management (Figure 4).

4. Sustainable Transportation: 15.3%

- a. Among 5 different sub-categories, the responses showed priority in Green Hydrogen Transportation and Electrification of Transportation.

5. Everything Else: 0.7%

- + There are 28 sub-categories. The **top responses** are from sub-categories:
 1. **Workforce Development**
 2. **Solid/Water Waste Disposal and Management**
 3. **Utilizing Green Hydrogen, Energy Production Technologies, Reduction of Greenhouse Gas Emissions, and Mitigation of Exposure to Fossil Fuel-based Energy Prices Volatility.**

- + **County Assistance Responses:**
 - + County Assistance is defined as what help is needed from the County to grow these opportunities.
 - + **Funding and permitting** were the highest requests by Respondents.

- + **'Everything Else' Category** did not have sub-categories. However, the two biggest takeaways are **Respondents want to see Community Outreach and Education.**

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of Responses: Categories with Sub-categories

