

# M POWER MAUI AN ENERGY CONVERSATION

A PROJECT OF THE  
MAUI ECONOMIC DEVELOPMENT BOARD

## A REPORT ON THE RESPONSES OF PARTICIPANTS



Prepared by: Fern Tiger Associates  
May 2015

**MPowerMaui Report on the Responses of Participants | May 2015**

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# **Executive Summary**



# Executive Summary

## The Background

Just over a decade ago, the people of Maui County engaged in a groundbreaking process to define a vision for Maui County. *Focus Maui Nui* — a project of the Maui Economic Development Board (MEDB) — brought together 1,700 participants in robust conversations about the future of Maui County, discussing core values, key challenges facing the islands, and detailed strategies for addressing these challenges. Since then, MEDB has continued to convene the community in different formats to discuss myriad issues ranging from water to education, and most recently, energy.

Energy has become a hot-button issue for Maui County, driven in part by the State of Hawaii's ambitious goals to reduce local reliance on fossil and imported fuels, while simultaneously pushing for the development of clean energy technologies. In recent years, numerous initiatives such as wind farms and an increasing number of residential rooftop photovoltaics (PV) have vastly increased the amount of potential renewable and clean energy sources. But, there is still a long way to go — as of 2013, 75% of Maui's electricity was generated using imported oil, and Maui and the state of Hawaii have, by far, the most expensive electricity prices in the U.S.

MEDB had already been actively engaged in the energy conversation through its role in JUMPSmartMaui, as well as smart meter efforts that enabled consumers to better understand and monitor their electricity usage. In 2014, MEDB partnered with the County of Maui to convene Maui's first Energy Conference — bringing together experts to consider ways for the energy industry to evolve to meet a host of demands and needs, and to address the changing realities springing from local, national, and global imperatives. Although the event successfully brought together nearly 250 people in rich discussion, a crucial voice was missing. The community was only present through elected representatives and some local leaders.

MEDB was determined to include those voices in future energy conversations by engaging community members to develop a more expansive and nuanced understanding of their perceptions and knowledge related to energy options. Thus, in preparation for the 2015 Energy Conference, MEDB sought to develop a process that would educate, engage, and empower residents to discuss their perspectives on Maui's energy future: a project that became known as *MPowerMaui*.

## The Purpose

For MEDB the goal of *MPowerMaui* was simply to ensure that there was a community voice, to know that the perceptions (and even misperceptions) were heard so that decisions going forward would consider those who rarely come to meetings or write letters. More





specifically, the project aimed to provide objective information around energy issues to ensure that residents could participate effectively; engage community in understanding concerns, preferences, and trade-offs; understand the community's perspective; and bring new voices to the 2015 Energy Conference and beyond.



### The Process

Even before *MPowerMaui* officially commenced, intensive work went into getting a “lay of the land” and preparing the groundwork for engagement. More than thirty one-on-one interviews were conducted with a cross section of Maui residents in order to begin identifying key issues and to understand what approaches and techniques would work effectively given a limited budget and a short implementation and analysis period. The project team decided early to take advantage of the already-scheduled October 2014 Maui Fair, using a centrally-placed booth as an efficient forum for surveying fair-goers who represented a wide, and often hard-to-reach, segment of the Maui population. An entertaining “Energy IQ” activity was designed to draw participants to the booth, where they were then also asked to complete a short, informative questionnaire about their motivations to conserve energy, and to “grade” both their own and Maui County’s efforts to achieve sustainable outcomes around energy, conservation, and transportation. In the lively Fair setting, over 1,400 people (99% of whom were Maui residents) passed through the booth, filled out the questionnaire, and engaged in conversation with MEDB.

The questionnaire and interviews, taken together, provided a good sense of Maui’s energy landscape and a rough sketch of the issues began to emerge: a lack of knowledge, confusion and suspicion around objective sources of information, a desire for Maui to be a leader in alternative energy transition, and a desire on the part of the community to be better informed. This information grounded the design for *MPowerMaui* — a series of 43 identical, 90-minute engagement sessions that made up the bulk of the project and the findings.

These 90-minute sessions included a diverse set of activities that provided background and contextual information while supporting participants to discuss their perspectives and concerns. Similar to *Focus Maui Nui*, the sessions consisted of small groups of approximately 12 participants; activities were hands-on and designed to collect both qualitative and quantitative data; and facilitators convened sessions at locations convenient for “hosts” and participants — with many taking place at work sites. Each session was comprised of four discrete participatory activities, plus an informational section:

- **Activity One:** Introductions and Questionnaire (the same questionnaire used at the Maui Fair)
- **“Refresher Course”** — This was a brief 10-minute introduction to energy, intended to ensure all participants had a basic understanding of energy issues in Maui, prior to engaging in activities.
- **Activity Two:** Prioritizing Critical Issues — Participants selected their top four energy issues from a deck of 24 cards (each with a common word or phrase related to energy

issues). Participants would then work in pairs to discuss and cull their combined eight cards to four, and repeat the process with another pair to reach a final set of four issue cards “endorsed” by groups of four.

- **Activity Three: Trade-offs** — In groups of two or three, participants were given five incomplete sentences that they needed to complete. These “prompts” were intended to probe more deeply into the trade-offs participants would be willing to make in regards to energy sources (wind, PV, natural gas), dependence on imported fuel, and priorities the utility company should take into consideration.
- **Activity Four: Messages to Maui, the Government, and the Utility Company** — Groups of four people worked together to compose messages and to provide “advice” to three audiences (Maui, Government, and the Utility company) with the understanding that their messages would be shared with these audiences following the sessions.
- **Session Evaluations:** Lastly, each session concluded with an evaluation that captured feedback and final thoughts as well as lingering questions.

## Demographics

Over the course of 43 community engagement sessions, *MPowerMaui* successfully engaged 435 residents in significant discussions about Maui’s energy future. These participants represented a broad range of constituencies — students, adults, working people, and retirees. The vast majority were Maui residents (98%) and more than half had lived on Maui for greater than 20 years.

## Findings

Many of the findings confirm what is already known — that the high cost of energy is one of the top issues for Maui residents. But other findings are relevant and worth considering.

There is also a clear order of preference for types of energy sources. PV is the most highly preferred clean energy, although it is also the one that residents are most familiar with. Many participants would unconditionally support significant increase in PV, but they simultaneously highlight equity concerns and want to see more balance between the “haves” and the “have-nots.” Participants are concerned about the differential in energy cost between PV owners versus renters and those who either cannot afford PV or who are stymied by the long waits to get adequate permitting for PV.

Participants were less enthusiastic about wind energy than they were about PV, but nevertheless, it is still a highly approved source of energy. Much of the support for building more wind farms is contingent upon there being a safe and reliable storage system in place so that the wind power generated is not curtailed.

Least preferred is the transition to Liquid Natural Gas (LNG). While some accept it as a “bridge” to renewables and energy independence, some rule it out altogether, wary of safety issues, investment into temporary infrastructure, and the possibility of getting hooked on another non-renewable, foreign source. Furthermore, participants were also vocal about their lack of “trusted” knowledge about the implications of switching to LNG.

Regardless of the type of energy source, common themes throughout the sessions included wanting to be more informed and included in decision-making processes, and to have choices. Although there might be criticism and blaming, ultimately, there is also the recognition that these issues require a collaborative effort from Maui residents, the utility, and government.

If conclusions and directives can be drawn from the *MPowerMaui* process, they would fall into three broad categories: communication; energy source preferences; and the desire to be energy independent, appropriate, and innovative. This unprecedented effort in engaging community voices in Maui's energy future has illuminated major opportunities to clear up misconceptions, rebuild trust, and collaborate in moving forward towards a vision of a sustainable Maui.

## Note from Fern Tiger Associates

*MPowerMaui: A Community Energy Conversation* is the result of a unique community process that engaged more than 400 Maui residents in facilitated discussions about Maui's energy options, while also capturing the sentiments of approximately 1,400 residents through a short questionnaire administered over a three-day weekend at the October 2014 Maui Fair. It has been a distinct pleasure to have worked with Maui Economic Development Board (MEDB) to design the process and analyze the results.

As a firm that works with many diverse communities across the nation, we applaud MEDB for its tenacity and desire not just for community input, but for the pursuit of quantifiable data accompanied by strong, effective tools to ensure meaningful and authentic engagement of the largest number of people possible.

Fern Tiger Associates' (FTA) goal in this report, is to present the story of *MPowerMaui* as well as an analysis of the data and findings from the process, in order that current and future Maui residents will know what transpired. Even the name, "*MPowerMaui*," reflects the central importance of bringing local residents to the table to have a voice in decisionmaking processes about future energy options which will have a very real impact on the lives of people who live on the islands of the County of Maui.

In order to inform and design this important community process, FTA gathered in-depth information through confidential, one-on-one interviews with approximately 30 Maui residents, electeds, community members, and utility experts and officials. Additional data and information gathered through media, official public documents, and historical information (along with previous work on JUMPSmartMaui and other projects) contributed to the development of concepts for *MPowerMaui*.

In 43 participatory group sessions, people shared their personal concerns and priorities about energy production, distribution, and use, while also learning about those of their neighbors and co-workers. They considered challenges and innovative ideas as well as the realities of implementing varied energy options in light of a host of environmental, personal, financial, and other considerations. Out of these spirited discussions and exercises several themes emerged — concepts that do not belong to any one person. Rather, they form a composite view — created from a range of community voices — that we believe captures the most critical elements of this conversation.

The spirit with which Maui residents engaged in *MPowerMaui*, and the honesty and concern they brought to the sessions were obvious in their comments. The results reflect pride in community, gratefulness for the opportunity to participate, commitment to ensuring a sustainable future, and most importantly — hope that their opinions will be valued and have impact on decisionmakers.

Thank you for the opportunity to work on this project with you. Like the community, we hope this final report will help guide decisionmaking in meaningful ways.

Fern Tiger Associates [www.ferntiger.com](http://www.ferntiger.com)





An aerial photograph of a large wind farm situated on a series of rolling hills. Numerous white wind turbines are visible, spaced out across the landscape. The terrain is covered in low-lying vegetation, and a dirt road or path winds through the hills. The sky is overcast and hazy. The text "Background and Context" is overlaid in a bold, dark teal font on the right side of the image.

## **Background and Context**



## Background

### *The Landscape into Which MPowerMaui Emerged*

**J**ust over a decade ago, the people of Maui County engaged in a groundbreaking process to define a vision for Maui County. *Focus Maui Nui* brought together more than 1,700 participants in robust conversations about the future of Maui County, revealing core values, examining key challenges facing the islands, and developing goals and strategies for addressing these challenges. Since then, MEDB has continued to play a key role in convening the community around pressing issues, ranging from water to land use to transportation and education.

In recent years, energy issues have begun to percolate through resident conversations, driven in part by the State of Hawaii's ambitious goals to reduce local reliance on fossil and imported fuels, while pushing for the development of clean energy technologies. Maui Island — like the rest of Hawaii — has historically relied heavily on imported fossil fuels. In 2013 75% of Maui's electricity came from oil whereas less than 1% of electricity in the nation is generated using oil. Maui and the state of Hawaii have the most expensive electricity prices in the U.S. — more than double the cost of the next highest state (NY) and triple the average cost per kilowatt in the nation (average is 10 cents per kWh, Hawaii 34 cents). In the past decade, Maui has undertaken numerous initiatives to increase the capacity to utilize renewable energy sources — specifically, the installation of large numbers of residential solar photovoltaic systems and commercial wind farms, which have begun to re-balance the energy scale. Other innovative efforts such as the development of commercial scale batteries and promotion of electric vehicles are positioning Maui to be an exemplary case study for renewable energy development and usage.

MEDB ventured into this complex — and potentially contentious — arena to take a lead in understanding the community's knowledge and perceptions of the current status, options, and potential to meet or exceed state-specified goals. MEDB had already been actively engaged in addressing the need to increase the number of electric vehicles (EV) on Maui through its role in JUMPSmartMaui, as well as smart meter efforts that enabled consumers to better understand and monitor their electricity usage. As MEDB considered approaches to best involve community members in meaningful conversations related to energy, it took note of the lack of public understanding and underlying public confusion spurred by the 2014 Public Utilities Commission (PUC) hearings on the Integrated Resource Plan (IRP), a sense in the community that there was a lack of transparency from the local utility company and a belief that community voices were neither solicited nor acted upon.

In 2014, the County of Maui partnered with MEDB to convene its first Energy Conference, bringing together more than 250 experts and energy leaders from across the state, nation, and beyond. While the event provided rich discussion, sharing of best

practices, and consideration of how utility companies must evolve to meet future needs, MEDB recognized — and was concerned that — a crucial set of voices was missing: the on-the-ground community of residents, consumers, and line workers who can rarely attend day-long conferences, nor pay conference fees. MEDB was determined to seek out ways to engage and analyze community opinion and thought, and to bring new (or confirmation of existing) resident perceptions to the conversation.

It was amid a sea of concern and sometimes silent grumbling — about inequities related to local energy bills, backlogs in approvals for installation of rooftop photovoltaics, construction of wind farms that did not reduce consumer prices, the PUC’s rejection of the local electric company’s plan for the future, and a well-known need to upgrade the existing energy grid and infrastructure — that MEDB and the County began to plan a second Energy Conference with an articulated theme focused on working with consumers in a complex energy landscape.

*“There’s been a desire to be passionate advocates for energy transition and that’s a good thing. The problem is the vast majority of the public, including me, has absolutely no idea where the truth lies.”*

MEDB was well-aware that community engagement work is challenging, time- intensive, labor-intensive, and requires thoughtful research, recruitment, and design. Moreover, energy is a complex topic encompassing myriad opinions, misconceptions, and mistrust about “objective” sources of information. MEDB also understood that for the process to be a success, it must be based on strong and neutral preliminary information (about the content as well as the most appropriate implementation possibilities) — all gathered prior to designing both the outreach and the process.

With a successful track record in facilitating other engagement projects in Maui County, along with the community’s memory of the *Focus Maui Nui* effort that brought more than 1,700 residents into meaningful discussions, MEDB was well-situated to take on this new imperative. MEDB leaders knew this undertaking would require designing a process that could work simultaneously with residents who were well-versed in energy issues as well as residents with minimal information. Instead of a boilerplate framework that might work in other communities, MEDB sought to create a process tailor-made for the unique characteristics, values, and participation styles appropriate for Maui residents. As the key convener and facilitator of the process, MEDB knew from past experience that early data gathering and assessment by an outside organization would contribute to an unbiased, neutral approach to the project. To this end, MEDB engaged Fern Tiger Associates<sup>1</sup> to help gather important background research necessary to conceive the process and to work with MEDB in designing a process that would yield quantitative as well as qualitative data to support future decisionmaking in Maui.

As the vision for what would eventually become *MPowerMaui* began to take shape, MEDB had a singular goal to ensure that community voices — including perceptions and misperceptions — were captured and interpreted in order to inform decisionmaking

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<sup>1</sup> Fern Tiger Associates is a 30-year old organization that works with nonprofit and public sector organizations — developing effective organizational strategies; creating comprehensive communication solutions, designing and facilitating authentic community engagement, and producing creative documentation and evaluation of programs and organizations. FTA has worked on many projects in Maui County over the past two decades.

which would have long-term, county-wide ramifications on energy policy. Such decisions are typically made by professional energy executives and experts who often have limited knowledge about the potential impact on resident end-users and community stakeholders who rarely attend public meetings, write advocacy letters, or otherwise make their viewpoints known. For these community members to contribute informed decisions related to their energy future, it would be essential to have a snapshot of what people know and what they might need to know.

To inform the planning process with current, on-the-ground information gathered from a neutral perspective, FTA conducted a series of 30 one-on-one, confidential interviews with a cross-section of Maui residents. These interviews helped to identify key issues and to understand

what approaches and techniques would work effectively given a limited budget and a short period of time for outreach, implementation, and analysis. The project team conveniently took advantage of the already-scheduled Maui Fair, using a centrally-placed booth, as an efficient forum for reaching fair-goers who represented a wide, and often hard-to-reach, segment of the Maui population. An entertaining “Energy IQ” activity was designed to draw participants to the booth, where they were also asked to complete a short, informative questionnaire about their motivations related to energy conservation and to “grade” both their own and Maui County’s efforts to achieve sustainable outcomes around energy and conservation.

In the lively Fair setting, more than 1,400 people (99% of whom were Maui residents) passed through the booth and filled out the questionnaire. The questionnaire and interviews, taken together, provided a good sense of the energy landscape of Maui County and a rough sketch of the issues was beginning to emerge: a lack of knowledge about energy options; confusion and suspicion around “objective sources” of information; a desire for Maui to be a leader in the alternative energy transition; and a desire to be better informed. Community members wanted unbiased information so that they could make informed decisions and actively participate in shaping Maui’s energy future.

While MEDB contemplated options for project timing and process, challenges from the energy industry continually appeared — all of which needed to be considered as plans for a community process unfolded. During this period, the Hawaiian Electric Company (HECO) and Maui Electric Company (MECO) submitted their mid- and long-term plans to the PUC. These plans included proposed measures to adjust to the changing energy landscape. After review by the PUC, the company’s plan required re-submission and re-thinking to meet the PUC’s requirements. Additionally, a Florida-based company announced its intention to acquire Hawaiian Electric (the parent company of both HECO and MECO); on Maui, permitting for photovoltaic (PV) roof systems was backed up; and the local energy company was in the midst of publicly announcing its ideas for future energy generation and distribution (which many viewed as being developed independent of authentic community input). Maui residents were increasingly exasperated at the growing disparity between electricity bills for homes with and without PV systems — especially when so many were unable to access PV.

These initial impressions and the complex day-to-day reality of the energy landscape formed the basis for the official launch of a community conversation — *MPowerMaui*.

*“You get into the issue of the “haves” and “have-nots”, so there’s got to be equity factored into this.”*







# **Strategy and Design**



## Strategy, Design, Implementation:

### *The Story of a Process*

Since the guiding objective of *MPowerMaui* was to give the community a forum for learning about, discussing, and influencing the energy future of Maui County, it was important to do more than elicit opinions. The 90-minute engagement sessions (described below) were purposefully designed to encourage the generation of new ideas, to recognize diverse perspectives, to understand and acknowledge “trade-offs” that would likely need to be made as the county moved forward to meet its energy goals, and to create a comfortable, non-threatening space for questions and conversation about a topic that had often caused contention. In particular, MEDB sought to engage a broad cross-section of the population to better understand their concerns, preferences, and their willingness to make sacrifices to achieve common goals. Additionally, it was hoped that the effort would provide decisionmakers with an understanding of community perspectives, attitudes, data, and knowledge.

By late December 2014, MEDB staff facilitators were trained, the preliminary phase of the project [Maui Fair Questionnaire] was analyzed, and MEDB was well on its way to recruit participants for the more critical part of the project: the participatory *MPowerMaui* sessions. These sessions included a diverse set of activities that provided background and contextual information while supporting participants in sharing their perspectives and concerns. The background information was reviewed by the utility company for accuracy, but the design and facilitation of all sessions were conducted independently of Maui Electric Company (MECO). Similar to *Focus Maui Nui*, the sessions consisted of small groups of approximately 12 participants; activities were hands-on and designed to collect both qualitative and quantitative data; and facilitators convened sessions at locations convenient for “hosts” and participants. For ease of scheduling, and in order to focus on Maui community members whose livelihoods were on the island, many sessions took place at work sites where a broad range of employers (from hotels to law firms to small retail shops) agreed to give employees time to participate. So long as an employer or work group could host and recruit at least 12 people, a facilitator was “deployed” to run a session. Beyond work groups, MEDB reached out to individuals who agreed to host sessions in their homes or community centers. Participant backgrounds and occupations covered a very broad spectrum from architects to farmers to administrative assistants to housekeepers to landscapers to managers, attorneys, retail clerks, contractors, students, and retirees.

The sessions were comprised of four discrete participatory activities (with each yielding data for analysis) plus an information and evaluation component:

*Activity One:* Introductions and Questionnaire<sup>1</sup>

*Activity Two:* Prioritizing Critical Issues

*Activity Three:* Trade-offs

*Activity Four:* Messages to Maui, the Government, and the Utility Company

Facilitators used a detailed script to ensure that all session information and directions were as close to identical as possible.

### **Activity One: Introductions and Questionnaire**

Sessions began with a short introduction allowing participants to get acquainted and to review the goals and expectations of the session and the project. Participants then completed the same questionnaire that was used at the Maui Fair. To avoid double counting, those who had already completed the questionnaire at the Fair were asked to place a big star at the top of their questionnaire<sup>2</sup>.

The questionnaire posed three main questions:

- What motivates you to save energy at home?
- What grade would you give Maui in five specific energy-related categories (clean energy, conservation, green transportation, energy policy, and keeping residents informed about energy issues)?
- What grade would you give yourself in three specific energy-related categories (clean energy, conservation, and green transportation)?

The questionnaire was intended to provide both an easy entry into the session and a quick snapshot of motivations and judgments related to Maui's progress on clean energy and sustainability.

Completed questionnaires were collected and re-distributed in order to provide anonymity as the group tallied its collective results. The facilitator then shared answers from the Fair cohort and the group discussed similarities and differences between their session cohort and fair-goer perspectives.

### **"Refresher Course"**

Prior to delving into the complex process of ranking energy issues and considering trade-offs (Session Activities Three and Four), it was important to establish a baseline of energy-related knowledge and terminology so that all participants, regardless of their familiarity with the energy landscape, could engage on a similar level. *MPowerMaui* created and disseminated a pamphlet (that participants could take with them) which included a primer on energy in Maui and a short glossary. Additionally, the walls around the room were lined

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1 Participants responded individually to the same questionnaire that more than 1,400 residents responded to at the 2014 Maui Fair in October.

2 Very few session participants had actually filled out the questionnaire at the Maui Fair, so the vast majority of questionnaire responses at the sessions were counted in the final tally.



with a set of over-size posters, each containing one key fact about energy in Maui (See Appendix). The “fact” posters provided information related to:

- State of Hawaii energy goals
- current and target electricity production capacity
- peak demand for electricity on Maui
- cost of electricity
- renewable vs. non-renewable energy production on Maui
- current use and future plans around rooftop photovoltaics (PV), wind, geothermal energy
- smart meters
- energy storage technology
- liquid natural gas (LNG) as an energy source
- potential of biofuels

Participants were encouraged to look at the key terms noted in the brochure, while the facilitator reviewed the visually-designed “fact” posters, which were prominently displayed and served as a reference for participants throughout the session. Participants were encouraged to ask questions, discuss the information presented, and comment on anything they felt was surprising.

### **Activity Two: Prioritizing Critical Issues**

It was critical to understand what residents considered to be the most important issues regarding energy in Maui — not a list, but an intentional prioritization of multiple important issues, built through a consensus among participants. Each participant received a deck of 24 cards (See Appendix) — each with a word or phrase related to energy (words and phrases that were mentioned during interviews with Maui residents prior to the design of the sessions) and two blank cards. Facilitators referred to this deck of cards as the “Power Deck,” taking full advantage of the *double entendre*: power of the participants to be in a decisionmaking role and the topic of the session relating to energy power.

Participants were given five minutes to spread the deck of cards out on the table, read through them, and select the four cards (out of the 24 in the deck) they felt most accurately described the *most* critical issues related to energy on Maui, positive or negative. The blank cards were available for participants who wanted to add new topics. Once the participants selected their four cards, the rest were discarded and collected by the facilitators.

In the second round of this fast-paced activity, participants partnered with the person sitting next to them and were tasked with culling their combined 8 cards down to 4 cards. In some cases, participants had similar cards and the conversations were easy; in other cases, pairs engaged in serious discussion and debate with their partner to come to consensus.

The final round took things one step further with two-person pairs teaming up to form groups of four, who were once again, tasked with narrowing their cards to a final four. As the final sets of four cards were presented to the group and discussed, facilitators prompted participants to discuss:

- whether when put together, these words convey the issues you think policymakers need to take into account when making decisions about energy or if some words are missing
- if these priority issues reflect those you personally feel need to be addressed and whether you lost any important ideas in the process.
- whether you believe this collective view takes into account the whole community's energy interest and whether anyone is “left behind” by focusing on these concerns (e.g. seniors, small businesses, farmers, poor people, etc.).
- if the issues selected appropriately complete the sentence: “When Maui plans for its energy future it must remember to take into account \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_?”

### Activity Three: Trade-offs

Unlike the prioritization activity which revealed the full group's assessment of the most critical energy-related issues facing Maui, the fourth activity was intended to probe more deeply to understand the competing and contrasting trade-offs participants might be willing to make in addressing these issues.

In groups of two or three, participants worked together to discuss and complete five different statements about energy sources, options, and policy for Maui — completing each in their own words. These two- and three-person teams could alternatively agree that they *unilaterally accept* or *unilaterally reject* the phrase — independent of any trade-offs. The five statements were (See Appendix):

- *I would support a new 10MW wind-farm on Maui if \_\_\_\_\_.*
- *I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.*
- *I would support the transition to natural gas on Maui if \_\_\_\_\_.*
- *It is important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.*
- *It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.*

Once the participants completed this activity, they shared their statements with the rest of the group and discussed similarities and differences among the whole group.

### Activity Four: Messages to Maui, the Government, and the Utility Company

Activity Five provided participants with an opportunity to craft short (approximately 30 words or less) “messages” or “advice” for three audiences:

- the greater Maui community
- government (local, state)
- the utility company (MECO or HECO)

Participants worked alone or in pairs for 5-10 minutes crafting one or two sentences to each audience, which they then shared with the rest of the group. The facilitator explained that decisionmakers would be given all participant messages, in hopes that the input of the sessions will influence decisionmaking and policy development.

## **Session Evaluations**

Each session concluded with the completion of a short evaluation form allowing participants to provide individual feedback on the process, also including any other comments they felt important. In addition, lingering questions were noted. The evaluation form asked for demographic information as well as individual assessments of participants' own knowledge and understanding of energy in Maui prior to attending the session. Participants were also asked to reflect on whether they felt they had made a difference by participating.



The background image is a photograph of a utility field, featuring several tall wooden utility poles with multiple cross-arms and insulators. Numerous power lines stretch across the frame from the poles. In the lower-left background, a large electrical substation with complex metal structures is visible. The foreground is filled with tall, green grass. The sky is a pale blue with a few wispy white clouds. The entire image has a light blue semi-transparent overlay.

## **Participant Demographics**





## Participant Demographics

**M**PowerMaui engagement is measured as part of a two-fold process. First, a questionnaire delivered at the October 2014 Maui Fair yielded responses from nearly 1,500 residents. The questionnaire focused on energy knowledge, motivations to save energy, and how respondents rate their own and Maui's energy behaviors. Second, 43 distinct MPowerMaui sessions engaged nearly 450 residents who participated in deep discussions about Maui's energy future.

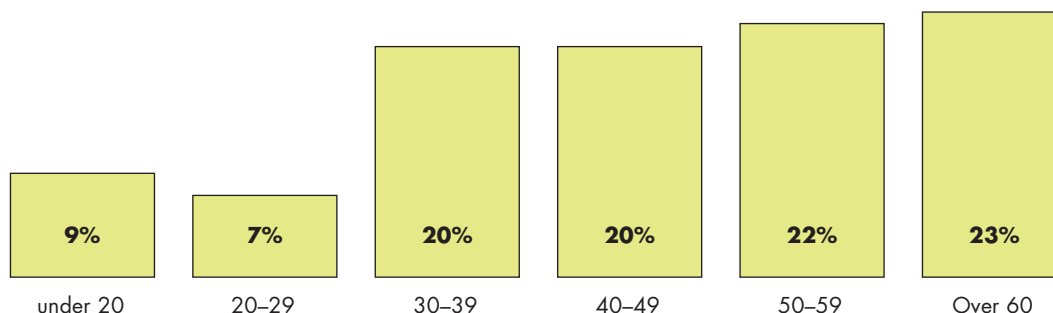
Data collected from the questionnaire at the Maui Fair and from end-of-session evaluations at the sessions indicate participation across a broad cross-section of demographic groups (See Appendix for complete analysis of demographic information).

At MPowerMaui sessions, there were nearly equal numbers of males and females (49% male; 51% female, based on 404 respondents at the sessions) and the majority of participants were homeowners.

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### Age Distribution

401 MPowerMaui Participants

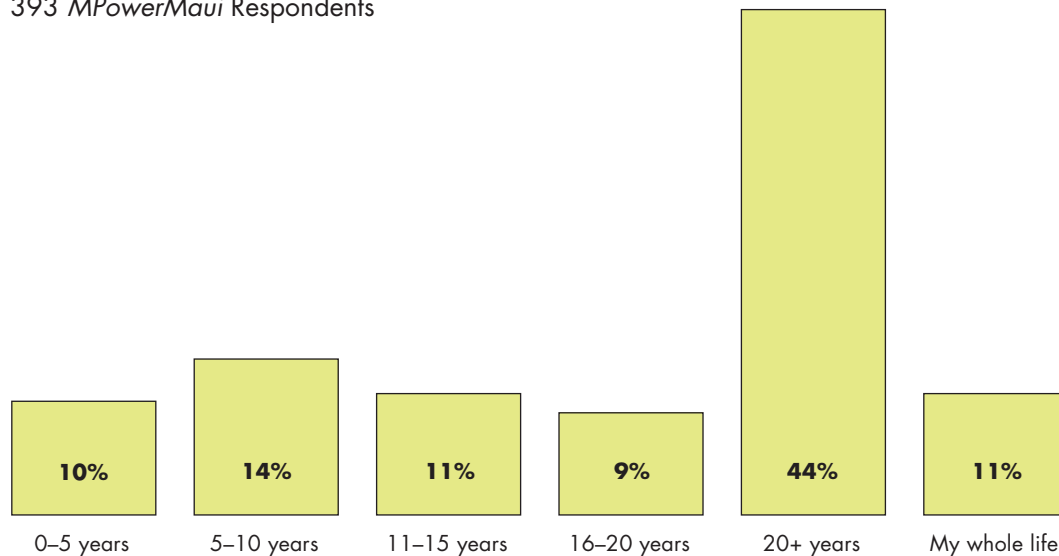


*While MPowerMaui reached out to all age groups, its focus was on the working population and those who would be community decisionmakers. Thus 85% of participants were over the age of 30 and nearly equally distributed between the decades — 30s, 40s, 50s, over 60.*

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### Length of Permanent Residency

393 MPowerMaui Respondents

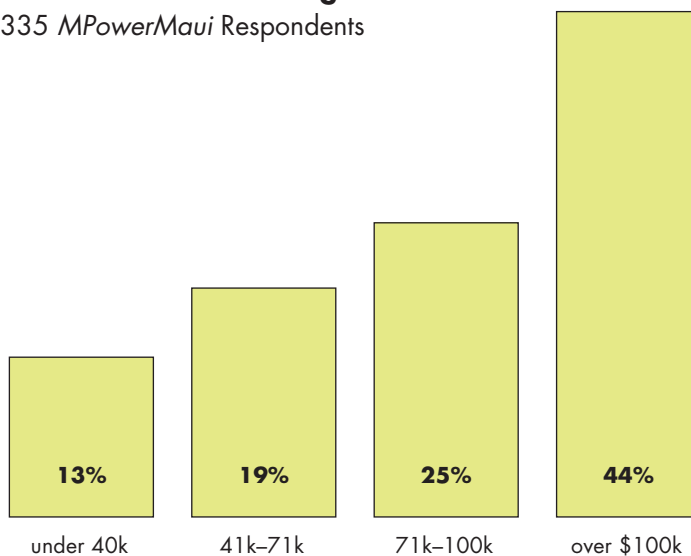


*Roughly 98% of participants were permanent residents of Maui, with more than half living on Maui for more than 20 years.*

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### Household Income Range

335 MPowerMaui Respondents



*Self-reported household incomes of MPowerMaui participants were higher than average: 69% had self-reported household incomes of more than \$70,000. (U.S. Census data for Maui County shows median household income of \$63,512.) This differential could be the result of a predominant number of participants who are currently in the workforce, and the fact that the Census data is countywide, while participation in MPowerMaui was just on Maui island.*

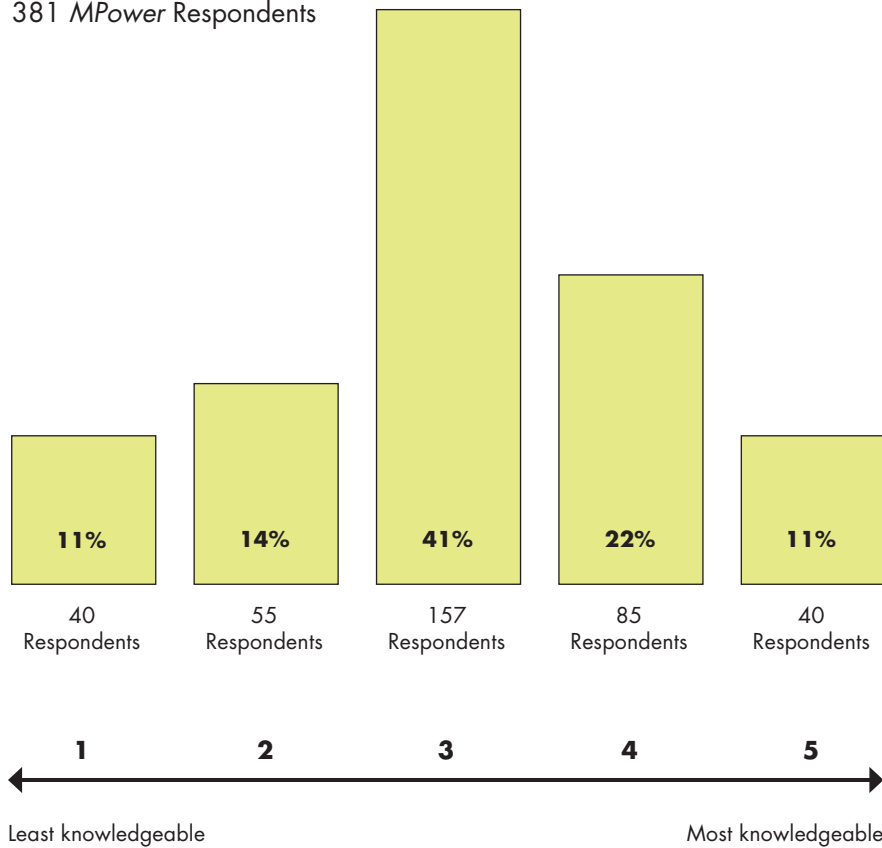
The end-of-session evaluations asked participants to rate themselves on their energy knowledge prior to attending the sessions. More than 65% described their energy knowledge at or below average before *MPowerMaui*, with only 11% rating themselves as highly knowledgeable about energy issues.

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### Energy Knowledge Pre-*MPowerMaui*

[self-ranking from least knowledge (1) to most knowledge (5) of energy issues]

381 *MPower* Respondents







# Findings





## Overarching Findings

**W**hile the “Results” that follow and the extensive Appendices provide much data and information about *MPowerMaui* participant responses and sentiment regarding energy, the following summary attempts to incorporate both the quantitative as well as qualitative responses and comments of the 435 Maui Island residents who engaged in one of the 43 ninety-minute small group sessions conducted by MEDB between late January and early March 2015. These overarching findings also include observations coming from the responses of 1,477 respondents to the real-time questionnaire circulated during one weekend in October 2014 at the Maui Fair.

- Maui residents are eager to be independent of imported energy sources and strongly support methods to achieve clean energy goals through locally-sourced and locally-controlled energy production and distribution.
- Maui residents want MECO to succeed, but fear the company is mired in “old ways” of doing things, beholden to HECO, and unprepared to transform itself for what residents see as necessary alterations to the course.
- Maui residents want to be better informed of energy issues, policies, options, and decisionmaking processes — and provided with *neutral information from trusted sources*, — about energy sources, options, benefits, costs, and alternatives. They want this information in timely, understandable, easy-to-digest formats so that they can participate effectively in discussions and be part of the solution for change.
- Maui residents strongly support increasing residential (as well as public) photovoltaic (PV) systems, but see injustices in the current system that are creating an increasing divide between the “haves” and the “have-nots.” Some households are capable of both affording PV and also navigating the complex bureaucratic system to obtain PV, escaping high energy costs while renters and lower-income households suffer the burden of what are viewed as exorbitant monthly rates.
- Maui residents have questions about wind power, but are essentially supportive of this form of energy for Maui. Overall, PV and wind as energy sources are supported strongly, with wind raising questions about siting, sensitivity to cultural areas, and ownership of wind farms.
- Maui residents are — at best — skeptical of Liquid Natural Gas (LNG) as an option for the county and overwhelmingly opposed to LNG as a long- or even mid-term solution. While some residents are willing to support LNG as a temporary “bridge” solution, most fear that once an infrastructure is established it will become a long-term solution which they do not support. They see LNG as continuing the path of reliance on imported fuels and question whether LNG is either clean or sustainable.

- Maui residents are wary of the information being provided through the utility company regarding all possible options for energy generation and distribution.
- While the announcement of the merger between Hawaiian Electric and NextEra came too late for it to become a topic at the sessions, it did occur while the sessions were in progress, and thus did prompt some conversation at the sessions. Facilitators reported concerns from community members as to the benefits of the merger for Maui residents and skepticism about “outsider goals.”
- The strongest motivating factor for Maui residents to save energy at home is cost. Residents are well aware of how their electricity rates compare to the mainland, and when thinking about potential sources of energy and the future of renewables on Maui, the impact on cost of electricity is almost always the main consideration.
- The majority of Maui residents felt that Maui deserved a “C” or lower when grading its clean energy, conservation, and green transportation efforts. Yet at the same time, residents are overwhelmingly positive, hopeful that Maui can improve on these fronts to be a sustainability leader and example for the world.
- There is some confusion as to the role of government in determining electricity rates and regulating the utility. Ultimately, most Maui residents see it as the government’s responsibility to keep rates affordable, provide incentives, and ensure utility policies are equitable.
- There is little to no understanding (or recognition) of the existence of state public utilities commissions (PUCs), nor knowledge of the specific role, structure, responsibilities of the Hawaii Public Utilities Commission.
- Among residents who generally have greater awareness, and knowledge, of energy issues there is a sense that the utility is not moving fast enough, not forward-thinking, and is run by people getting excessive salaries.
- Despite strong feelings of discontent with the utility company, residents are torn in their feelings about MECO because they have friends, family, neighbors who work at MECO and they also believe MECO has little influence with policy decisions at Hawaiian Electric.
- Participants enjoyed the opportunity to both become more knowledgeable and also to participate at the engagement sessions — some offering that they would pay greater attention to news about energy as a result — but were doubtful their opinions would bring about change and be respected. Indeed, some participants felt decisions contrary to their preferred choices were already being made by the utility company.

An aerial photograph of a volcanic landscape, featuring a prominent central peak and a winding path or riverbed leading towards it. The terrain is rugged and appears to be covered in ash or sand. The word "Results" is overlaid in a bold, dark blue font on the right side of the image.

## Results



# Results

## Activity One: Questionnaire

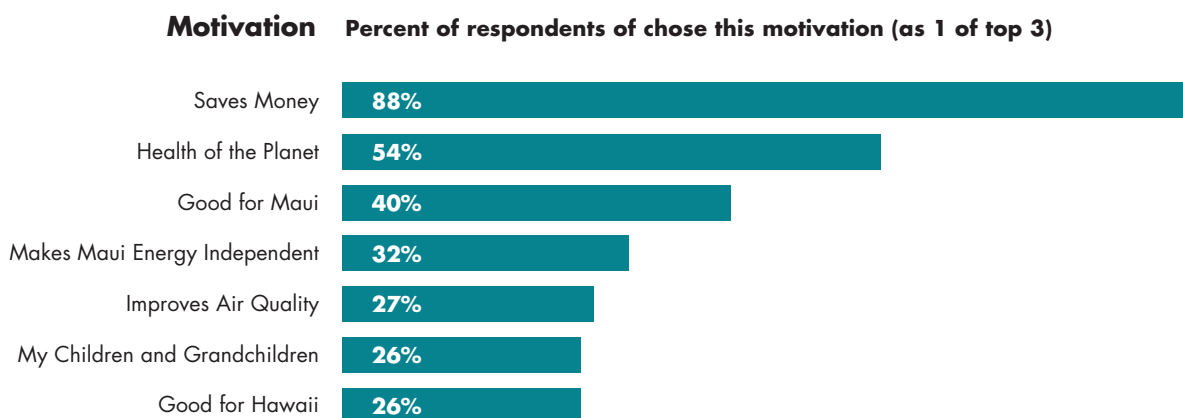
While the questionnaire at the Maui Fair provided a quick snapshot of motivations and perceptions from 1,477 respondents, the participation of 435 residents at the engagement sessions brought a wealth of both qualitative and quantitative information. Though not a “scientific sampling” of the Maui community, the results are notable and informative. Although there are differing opinions on some particular issues and a broad range of visions for Maui’s energy future, it is apparent that participants hope Maui can set the standard for how to create a culturally, socially, and environmentally responsible energy sector. They are ready; they are eager; they are anxious for action — but they are apprehensive about whether genuine, transformative, and equitable change can come from the current system.

### Questionnaire (Activity One and Maui Fair)

In total, there were 1,912 completed questionnaires (435 from the *MPowerMaui* engagement sessions and 1,477 from the Maui Fair).

#### Question One: Motivations

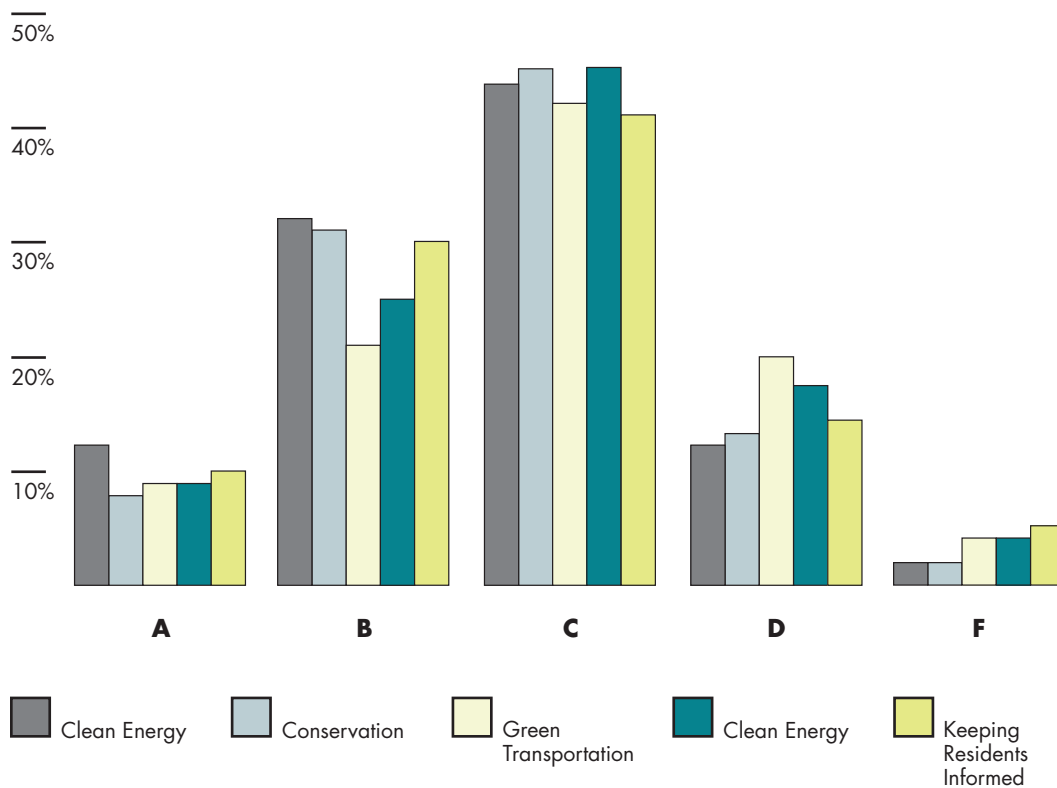
By far, the biggest motivating factor for conserving energy at home was saving money, with 88% respondents selecting this response. But there were other motivators as well. Respondents were concerned about the health of the planet, and more specifically, acting responsibly in ways that would be good for Maui’s future.



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## Question Two: Grading Maui

1,477 questionnaires completed at Fair and 435 completed at MPowerMaui sessions



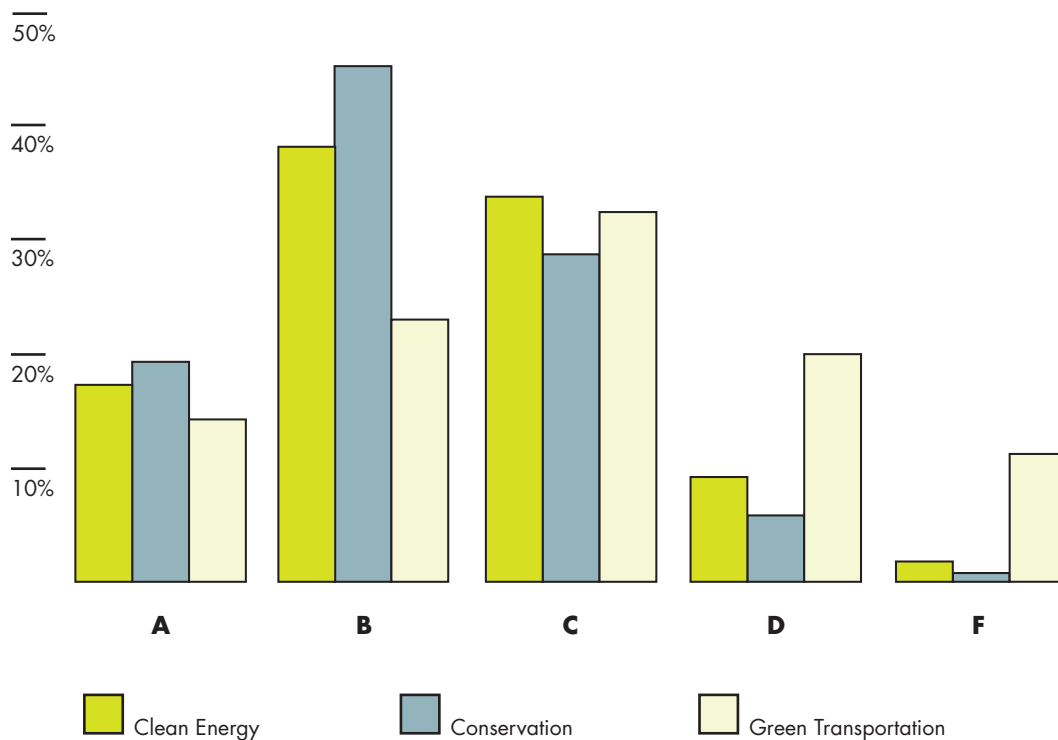
*When it came to grading Maui on issues of clean energy, conservation, energy policy, and keeping residents informed, people were critical of the status of the energy situation, with more than 60% grading Maui with a “C” or lower in all categories. There were some differences between responses at the Fair and responses during the engagement sessions, with participants at the sessions generally being more critical than respondents at the Fair.*



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### Question Three: Grading Yourself

1,477 questionnaires completed at Fair; 435 completed at *MPower*Maui sessions



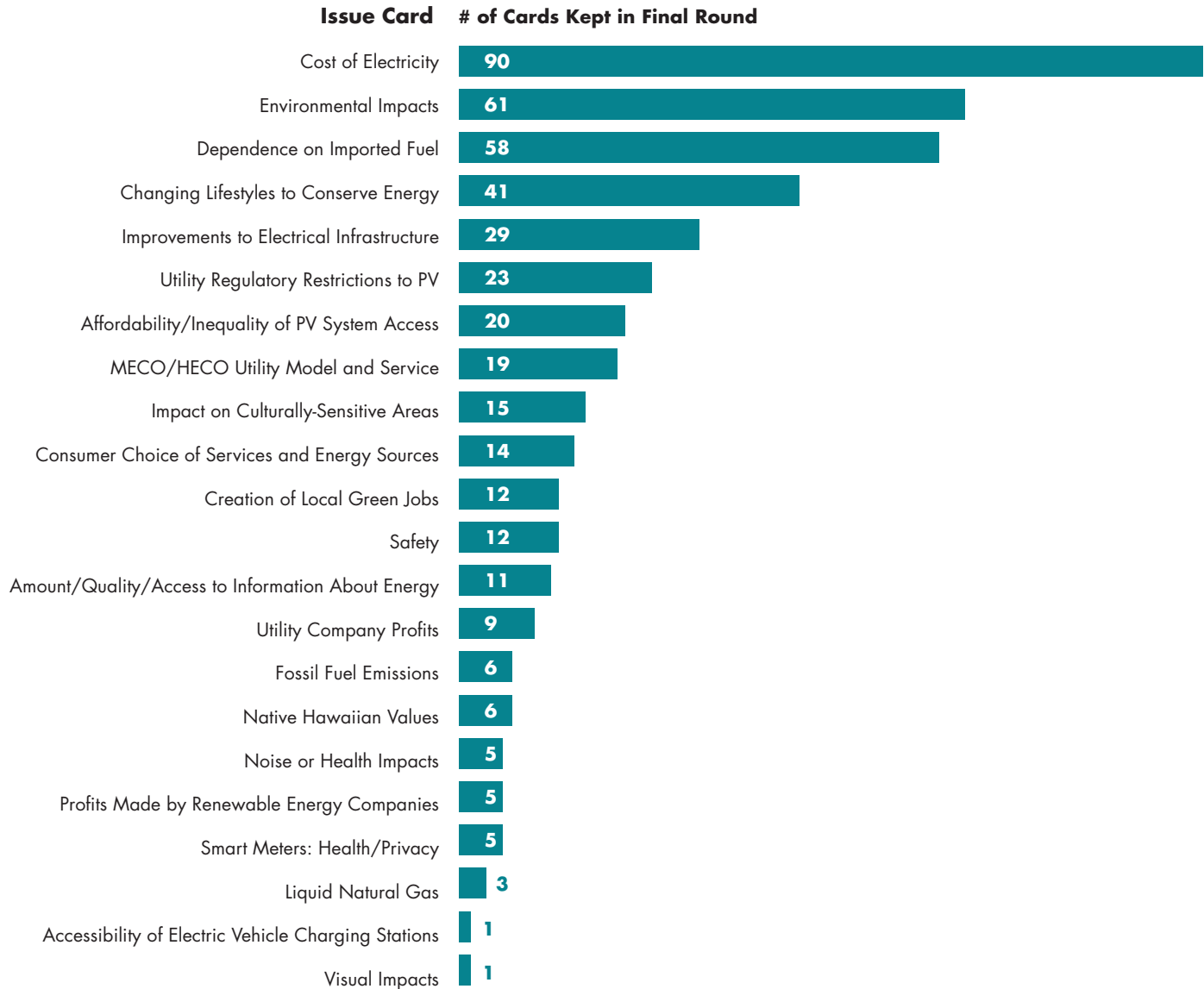
*When it came to grading themselves, unsurprisingly, most people thought they were doing a better job than the average Maui citizen. In general respondents gave themselves higher grades in all areas except for green transportation. On average, only 48% of respondents gave themselves a “C” or lower in all categories.*

There were some differences between the *MPower* sessions’ questionnaire results and the Maui Fair cohort. Without exception, responses at *MPower* sessions were more negative than the Maui Fair cohort. Explanations or hypotheses for the difference could be that the session participants knew more about energy issues and respondents at the Fair were likely impacted by the overall good spirits and jovial nature of the Fair.

The questionnaire results suggest a widespread recognition that there is opportunity for improvement and growth, and that there are many ways for individuals and the community-at-large to do better.

## Activity Two: Prioritization of Issues (See page 19 for description of activity)

*Analysis of the Prioritization Activity focused on the “cards” that were retained throughout the three-step process, as well as the cards that were most often discarded immediately during the first round of the activity.*



*“Cost of Electricity” was the “issue card” most frequently retained (in the first, second, and final rounds) — making it to the final round in 40 out of 43 sessions (93% of sessions). But other issues were also deemed critical enough to also make it to the final rounds in many sessions. “Environmental Impacts,” “Dependence on Imported Fuel,” “Lifestyle Changes,” and the “Need for Improvements to the Electrical Infrastructure” emerged as priorities in well over 50% of the sessions.*

The top five priorities according to 435 participants (in order of rank) are: *Cost of Electricity* (93% of sessions); *Environmental Impacts* (e.g. natural gas extraction, biomass combustion), 84% of sessions; *Dependence on Imported Fuel* (88% of sessions); *Changing Lifestyles to Conserve Energy* (70% of sessions); *Improvements to Electrical Infrastructure* (56% of sessions).

The one card that was discarded 100% of the time involved wind turbines' impact on birds. After this issue, the cards most commonly discarded (more than 50% of the time) in the early rounds of the activity were: *Accessibility of EV* (Electric Vehicle charging stations); *Visual Impacts* (e.g. PV panels, wind turbines, hydro plant); *Profits Made by Renewable Energy Companies*; *Smart Meters: Health/Privacy* — indicating that these were not core issues for participants.

Participants used the blank cards provided in the “power deck” to delineate issues they felt were important, but missing from the options in the deck. The following write-in cards remained through the final round (in those sessions where the card was composed):

- The Social Will to Move Forward Together (Consensus)
- Free Energy Generators (New Tech Innovations)
- Financing Options for Installation of PVs (for renters)
- Future Technologies Available by 2020
- Dumping Power (when not needed by consumers)
- Hydro-power and Batteries and other alternatives need to be considered
- Hydro-power Combined with Wind or Solar
- Energy Storage
- Community-based Values and Relationships (Sustainability)
- Development and Installation of True Smart Meters
- Economic Cost to Community from Utility Company Obstruction

These write-in cards mirror themes that emerged throughout Activities Three and Four.

### Activity Three: Trade-offs

Approximately 200 “trade-off messages” were created by participants for each of five “complete the sentence” statements. These statements were analyzed by “theme.” Some could be easily categorized by only one theme while other statements were complex and fit multiple categories or themes. Each message was “tagged” by the analysts to assess common perspectives, but unique messages that did not fit into any theme or category were analyzed and recorded as well.

**Prompt One:** “I would support a new 10MW wind-farm on Maui if \_\_\_\_\_”

The most common response to this first “prompt” or “complete-the-sentence” exercise emphasized the importance of having energy storage systems in place so that power produced by wind could be stored. The second most common sentence completion response from session participants indicated support for a new wind-farm only if its construction reduced residential energy bills. (See Appendix for complete set of responses for all sessions.)

*“I would support more wind if savings were passed on to consumers... if it was culturally sensitive.”  
“... if storage and battery technology improves so that curtailing is minimized.” “... if it reduces the importation of fossil fuels and reduces electric bills.”*

On the whole, participants were positive about building a new wind farm with four out of 181 messages indicating unconditional opposition. Still, despite strong support for wind energy, many participants mentioned the need for additional information before giving unconditional support. Some statements directly referenced the need for “information” (described as “neutral, unbiased information and data that people could understand”). For example, support was often dependent on knowing “*how big this wind farm would be;*” “*if there would be an environmental assessment, cost analysis, and if clear info would come to the public;*” and “*what a new wind-farm means to consumers.*”

In other statements, support hinged on recognition that cultural sites would not be impacted with the creation and siting of wind farms, and that environmental and safety concerns would be taken into account. Still others queried how such a project would be funded and who would own it.

A subset of messages focused on concerns regarding the relationship to the local economy (projects being locally-owned and having a positive effect on employment and skill building). It was also very important to participants that power produced on Maui stay on Maui and that profits and jobs were Maui-focused as well.

<b>Prompt One:</b> "I would support a new 10MW wind-farm on Maui if _____"	<b># of Messages</b>
Unequivocally YES	17
Under no circumstances NO	4
Energy storage is provided and no energy is curtailed	44
Costs are lowered for customers	39
Environment is taken into account	30
Culture is taken into account	29
Visual impacts are minimized	23
Costs are not raised	13
Energy produced stays on Maui	11
It's not created at the expense of the taxpayer	9
It is safe	7
Profits and jobs stay on Maui	7
It is built at existing wind farm sites	7
More information is provided (re: Cost/Benefit Analysis; size; funding)	6
It is equitable	2
Noise impacts are minimized	2
Energy generated is sold direct to customer	2
Fossil fuel consumption is reduced	2

**Prompt Two:** *"I would support tripling the amount of residential PV on Maui if \_\_\_\_\_."*

*"I would support increases in PV if it was accessible and affordable to all." "... the grid is updated, there is a fair interconnection charge, and if PV cost is affordable to the average layman."*

There was strong support for increasing the amount and availability of residential photovoltaic systems (PV) with 32 unconditional yes statements and no unconditional negative statements. Still there were comments and important concerns and trade-offs with many of the supportive statements. The major condition standing in the way of unconditional support for photovoltaics (PV) focused on affordability: of the 172 responses completing the prompt sentence, 71 (41%) involved stipulation that there be no rise in costs to consumers and that a more equitable implementation plan be created to ensure that those who cannot afford PV and renters who currently get no benefits from PV share in the cost savings. Some participants felt PV should be free to everyone on the island(s). By and large, participants felt it was important that the entire Maui community be in a position to access the cost benefits of PV — through creative programs and subsidies — echoing a sentiment that there be an equitable way to include people who cannot afford to have

PV systems.

<b>Prompt Two:</b> "I would support the tripling of the amount of residential PV on Maui if _____"	# of Messages
Unequivocally YES	32
Under no circumstances NO	0
Consumer costs are reduced	71
It is equitable (and doesn't burden non-PV households with higher costs)	50
Infrastructure (grid) is stable and safe	33
Storage issues are resolved	14
No restrictions from MECO	13
Plans to subsidize and incentivize were developed	11
It is a transparent process and consumer education on PV was provided	9
Grid connectivity is improved	8
Focus for power created is on Maui residents	5
It is environmentally friendly	3

Unlike the questions generated by increasing wind power, residents appear (or believe they are) sufficiently educated on the benefits of solar, and indicate this is a relatively familiar technology on Maui (reaching back historically to the implementation of solar water heaters decades ago). Most comments about solar focused on specific issues participants



experienced or heard about regarding PV, such as: the capacity of the existing MECO infrastructure to handle a large increase in solar; the need to update the electrical grid and invest in better storage and backup systems; and that an equitable cost structure be established so that non-PV households are not “penalized” through increased fees in order to subsidize those who can afford to install PV. There appears to be concern that MECO will need funds to upgrade its infrastructure at the very time it receives lower fees from an increasing number of PV households — potentially burdening non-PV ratepayers with additional costs. Participants commented numerous times throughout the sessions that this issue of “equity” was important on social, personal, and cultural levels and needed to match Maui’s values.

Session participants expressed frustration with MECO’s restrictions on solar power grid connectivity as well as the arduous process of PV permitting and approvals. Several responses focused on the need for increased transparency from MECO; better consumer education on the process of obtaining PV and about maintenance of panels; better and more fair financing options; and lessening restrictions on PV permitting.

**Prompt Three:** *“I would the support the transition to natural gas on Maui if \_\_\_\_.”*

Both written responses and verbal discussion about the potential use of Liquid Natural Gas (LNG) were among the most heated and generally negative (or at best, uncertain) at the *MPowerMaui* sessions. Out of 176 responses, there were 29 unconditional “no’s.” Many of the unconditional rejections of LNG stated reasons why they thought natural gas would not be a good solution for Maui. Statements such as: *“The last thing we need is to become more reliant on things we can’t generate here;”* and *“I would NOT support the transition to natural gas on Maui because of environmental impacts,”* and *“It’s not a good solution — it’s a band aid solution,”* were typical.

For those who are willing to consider natural gas as a potential energy source for Maui, the notion that it would reduce costs was a common motivation. Others would support LNG if they knew it was sage. Of the 176 statements crafted, 54 concerned cost; 31 concerned safety.

Many participants were wary that if Maui transitioned to LNG, it would become the new status quo and hinder progress toward actual renewables and clean energy that pushed Maui to self-sufficiency. Residents want to be guaranteed that if LNG is utilized it will be a very temporary measure that served as a bridge to sustainable fuels and more importantly, energy independence. Support for LNG hinged on the condition that LNG *“doesn’t deter from efforts for clean energy,”* and that LNG *“be a bridge fuel, truly”*.

Participants expressly stated throughout Activity Three the need to be better informed and to receive neutral data they can trust. Most especially they want and need information about the impacts of natural gas. There was also some misunderstanding about whether natural gas is a fossil fuel, and/or renewable.

*“I would not support natural gas ... because the last thing we need is to become more reliant on things we can’t generate here.” “... ‘It’s important to reduce dependence on imported fuel but not at the cost of life style, environmental health, human health, higher prices for power.’”*

<b>Prompt Three:</b> "I would support the transition to natural gas on Maui if _____."	<b># of Messages</b>
Unequivocally YES	7
Under no circumstances NO	29
Cost is reduced	54
It is safe	31
It is a true bridge to renewables and/or energy independence	28
It is environmentally friendly	12
It replaces or lessens use of other fossil fuels	14
More information was provided	11
It it was locally-sourced and provided benefits to Maui economically	9
Only if it is <i>really</i> necessary	9
It is easily incorporated into the existing energy infrastructure	8
It doesn't detract from renewables	7
It comes from the U.S.	5
It is better than what we currently use!	5
No fracking is involved	3
It is renewable	2

**Prompt Four:** *"It is important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_"*

Cost to the consumer was the main concern related to reducing dependence on imported fuel. Of the 169 statements submitted during the sessions, 90 (53%) raised cost as a factor of concern. The second most common concern noted environmental issues related to protection of natural habitats and cultural sites.

A subset of themes focused on preserving the uniqueness and beauty of Maui's land and culture, which some participants felt might be jeopardized in the effort to increase renewables. Participants agreed that energy independence was a high priority, but felt it should not come at the cost of people's livelihoods, environmental protection, cultural sites, and the "Maui way of life," while some stressed that the "Maui way of life" required energy independence and a sustainable future.

<b>Prompt Four:</b> "It is important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of _____"	# of Messages
Unequivocally YES	9
High costs to consumers	90
The environment	58
Stability/Reliability of power	23
Way of life/livelihoods	19
Health	6
Local jobs	6
Less electricity	6
Visual impacts	5
Equity	4
Infrastructure	3
The future	3
Need more education	2
Transportation and mobility	2

**Prompt Five:** "It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_"

The fifth and final prompt was intended to elicit thoughts on priorities for the electric utility (MECO/HECO). Of the 187 statements created that complete the sentence, about one third of the participants (67) felt strongly that it was the company's responsibility to keep costs down, and about one quarter saw embracing renewable clean energy as critical for the utility. Many participants wanted to see the utility take the lead on renewables and invest heavily in future technologies.

A substantial subset of messages had a negative tone and indicated frustration over lack of consumer choice. Participants highlighted the importance of developing a range of energy sources and choice for customers. Statements indicated that it was also important that the utility "...not leverage its monopoly to create a profit that causes an unnecessary hardship on its consumer" and "...not make too much profit".

*"It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company reduce dependency on fossil fuels, reduce consumer costs, and continue leading the way forward with renewable energy sources."*

<b>Prompt Five:</b> "It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company _____"	<b># of Messages</b>
Ensure affordability and pass on the savings	67
Embrace renewables	37
Be environmentally responsible	35
Engage, listen, and keep customers informed	30
Help the community and respect local culture	28
Invest in future technology	16
Give consumers choices	14
Be reliable	13
Improve the electricity infrastructure	11
Change its business model	7
Move to energy independence	6
Be equitable	5
Be profitable	5
Does not limit competition	4
Become customer owned	3
Support residents to generate their own electricity	3

## Activity Four: Messages to Maui, Government, Utility

The final activity of each 90-minute session was an opportunity for groups to write messages they would like delivered to each of three audiences:

- The Greater Maui Community
- The Utility Company
- Government (Local and/or State)

### Messages to the Maui Community

There were a total of 122 messages developed by participants (in groups of four) to send to bring to the attention of the greater Maui community. The messages showed that participants have great pride in the community, with many messages expressing “Maui No Ka Oi” — encouraging Maui to become an example to the world.

The most common theme (50 messages; 41 %) was a call for Maui residents to get involved and take action. Participants urged community members to “wake up!”, “stand up!”, and “speak out!”, and emphasized the need for better education on energy issues; taking initiative in decisions that will affect the island’s future; and conserving electricity at homes to create collective impact. “Get involved! Use your voice to engage and participate in the issues that are important to you and your future generations.” The second most common message focused on the importance of conserving and being efficient with the use of energy. Of the 122 messages crafted by groups of three or four participants working together, 34 (nearly 25%) involved this theme.

*“It’s not about you, the individual (I want, I want I want. Only me, me me). Think about the broader community.”*

Very few messages to the community were overly negative, and many guided the community to work together to address energy issues as well as other issues facing the community-at-large. Indeed, participants wanted people to respect one another: “Stop fighting – solve problems together. Get informed”, The majority of the messages to the community echo the common themes of coming together and taking an active role in choosing (or advocating for) a sustainable, renewable energy future for Maui. (See Appendix for all messages drafted at MPowerMaui sessions).

Common Themes in Messages to the Maui Community	# of Messages
Get involved; take action; pressure government to create good policies	50
Energy conservation and efficiency	34
Educate yourself	23
Care for the environment	21
Embrace renewables	21
Lead the way — Maui No Ka Oi	20
Come together as a community	19
Think of future generations	13
The uniqueness of being an island community	8

Common Themes in Messages to the Maui Community	# of Messages
Costs	8
Compromise	6
Energy independence	6
Negative towards government or utility	6
Air quality — do not burn biomass	3

## Messages to the Government

Messages to Government covered a more diverse range of topics than messages to Maui

*“Establish a nonprofit power utility.” “We have the opportunity to be leaders regarding renewable energy. Invest in the infrastructure to support the growth of renewable energy.” “Lead, follow, or get out of the way.” “Please reduce our dependence on fossil fuel and focus on renewable energy.” “Don’t hold back the momentum renewable energy has developed.”.*

— including several divergent, unique themes. There were also a significantly greater number of negative messages, highlighting lack of transparency, shortsightedness, lack of trust, excessive red-tape, and corporate interests coming before those of the community.

The most common theme was a call for government to provide incentives for renewable energy and green practices “with an emphasis on affordability.” Of the 121 messages crafted, 29 (nearly 25%) of them involved this theme. The second most common theme, expressed by nearly 20% of the messages, was to focus on and listen to the community over politics and corporate interests.

There were also suggestions for how the relationship between government and the utility should be negotiated, asking for both greater government regulation of utilities and also deregulation by government to allow for competition. Still other messages suggested specific ways for the government to support utilities.

Finally, there were messages that went beyond “energy.” The presence of these off-topic messages suggests there are concerns that are more important to some participants than energy and that they use any forum to get these messages out into the public arena.

Common Themes in Messages to Government	# of Messages
Provide incentives and keep energy affordable	29
Focus on people, not politics	23
Support renewable energy	20
Craft sound sustainability policy; become leaders in sustainability	20
Engage, inform, and listen to citizens	12
Regulate utilities	11
Simplify, be transparent, and be trustworthy	9
Support renewables, specifically PV	9
Protect the environment	9
Long-term strategic planning and research is needed	8
Embrace change and innovation	5
Address the need for equity in addressing the energy issue	5
Diversify the energy market/deregulate	5
We need recycling	4
Don't stand in the way; no unnecessary permitting processes	4
Support the utility company	3
PUC reform is needed	3
Energy independence	2

### Messages to the Utility Company

Messages to MECO (and/or HECO/NextEra) were the most negative of the three — ranging from extremely critical and frustrated to more polite suggestions for improvement. There were a handful of appreciative messages and just three messages (less than 4%) that were positive and offered no suggestions for improvement.

The most common theme of messages to MECO was not about cost (although it was the second most common theme) but rather a call for the utility company to support renewable energy and reduce dependence on fossil fuels.

Messages on affordability (about 45%) asked the utility to make PV affordable enough for all residents to share in cost savings, to keep utility company profits low, and worry more about consumers and less about shareholders. Participants also emphasized a need for the utility company to change in ways that involved “real listening” to customers not profits. Several messages criticized the high salaries of MECO/HECO executives and the lack of choice and transparency for consumers.

*“Pay attention to the needs and budgets of the local community. It must be about the greater needs of the whole and responsibility to the planet -- not the profits of the stockholders (I am a stockholder).”*

An important underlying theme urged MECO to innovate and become more future-oriented. There is a sense that MECO is resistant to the change that many residents see either as inevitable or as the clear and appropriate choice. Community members are frustrated by what they see as MECO's resistance to change and want to see the utility take the lead on innovating, planning, and being strategic in how to reach a clean energy future: *"Be bold and progressive"* and *"We rely on your innovation. Don't let us down. Be trend setters, Set the template."*

Though many of the messages to the utility were critical — taken collectively — they highlight a crucial opportunity for the utility to become more transparent, regain trust, and be a leader in the field of clean energy.

Common Themes in Messages to Utility	# of Messages
Support renewables	39
Keep rates down	33
Be helpful, honest, and transparent	26
People, not profits	23
Keep consumers informed	22
Support new innovation and technology	14
PV access and equity	13
Change or get out of the way	12
Storage and grid infrastructure improvements	12
Invest in the future	12
Positive message to MECO	10
We need competition not a monopoly	7
Support conservation efforts	7
Support energy independence	6
Equity	6
Business Model: Energy distribution instead of production	5
Improve more quickly	2



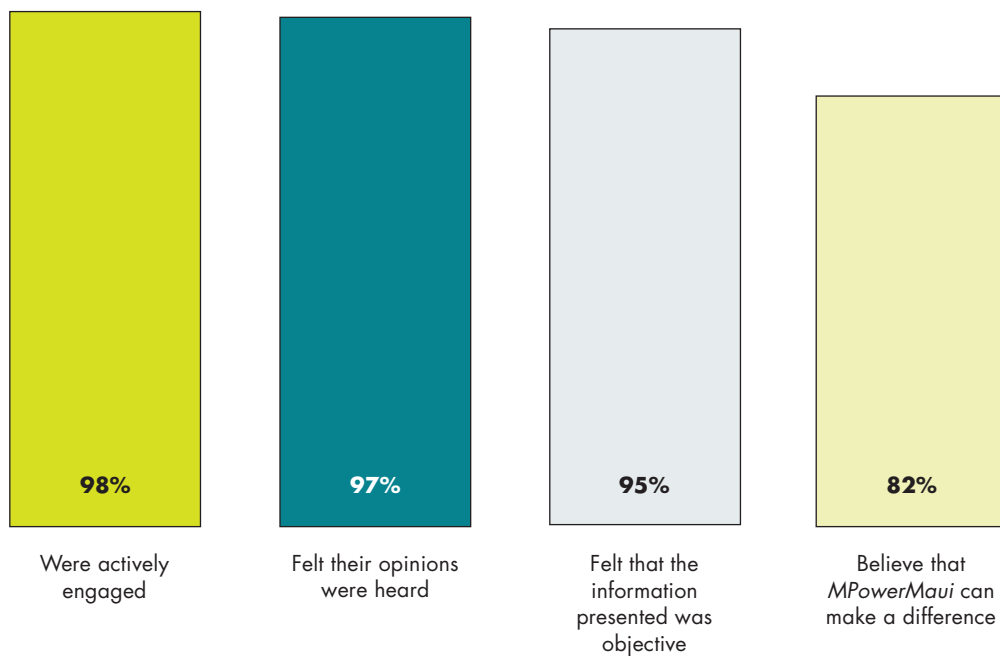
## Session Evaluations

Data from both structured evaluations and informal feedback show that participants were overwhelmingly positive about the *MPower* sessions with 98% who felt they were actively engaged, 97% who felt their opinions were heard; and 95% who felt that the information presented was objective. Ninety percent of participants also felt that they had learned a lot from the session and 82% felt that they had made a difference by participating.

*“Mahalo for the session... I hope that the government and energy companies can listen to what was said.”*

### **MPowerMaui Evaluation**

435 MPowerMaui Participants



As participants reflected on the critical issues and trade-offs that would need to be made, many expressed futility and expressed disbelief that MECO would be interested or value their input. They appreciated the experience of being with others and sharing their common concerns, but were skeptical that there would be any practical outcome. There was a lack of confidence in the institutions charged with guarding the public trust in energy whether it be the utility or government. Participants were unaware of the mechanics by which decisions on such issues as rates and utility infrastructure development occur. There was virtually no knowledge or understanding of the PUC.

Although participants appreciated the experience to learn and share insights and perspectives, they wondered what more they could do to affect the situation and queried skeptically whether their thoughts and opinions would be heard by those with the power to make change.

*“The session was really awesome, highly informational, and very rewarding.” “Considering all the changes being proposed, this is a hot-button item that needs as many of our voices as possible.”*



An aerial photograph of the Golar Mazon, a large liquefied natural gas (LNG) carrier ship, sailing on the ocean. The ship is dark blue with two large, white, dome-shaped storage tanks visible on its deck. The name "GOLAR MAZON" is written in white on the side of the hull. The ship is moving from left to right, leaving a white wake behind it. In the background, several other smaller ships are visible on the horizon under a clear sky.

## Concluding Comments



## Conclusion

**M**any of the *MPowerMaui* findings confirm what one would assume is important to residents: cost, safety, and a sense that an energy supply will be available and sustainable, long-term. Still the engagement process raised several other issues of community importance that are not as commonly discussed: concerns about equity, about the environment, about communication and transparency, about choice, and also definitive priorities on energy sources (with extensive support for solar and wind, and minimal support for, and strong opposition to, natural gas). Most importantly, the community is solidly behind the move towards locally-developed, clean, renewable energy sources that advance the push for energy independence. The community is tired of imported fossil fuels and believes that in order to become the sustainable islands they talk about, it is imperative to reduce reliance on imported energy sources and seriously move towards clean renewable power sources. *They see this as not just a possibility, but as a necessity.*



## ACKNOWLEDGEMENTS

*MPowerMaui: An Energy Conversation* was made possible with funding from *The County of Maui; Hawaii State Department of Business, Economic Development & Tourism; Maui Economic Development Board, Inc.; and University of Hawaii's Hawaii Natural Energy Institute*

*MPowerMaui* and the Maui Economic Development Board (MEDB) thank the numerous hosts who opened their offices, classrooms, halls, and homes to gather our community's voices for *MPowerMaui* sessions. We are grateful to all of these partners for believing in the value of independent, community-based processes.

Appreciation is also extended to the Maui Electric Company for ensuring accurate data about the company's energy operations and plans which was essential to our design.

MEDB's deepest thanks go to Fern Tiger and her team at Fern Tiger Associates. Their creative, comprehensive, and multidisciplinary approach and commitment to authentic dialogue — coupled with unwavering dedication — were invaluable to meeting the vision of *MPowerMaui*. They helped bring hundreds of Maui voices “to the table.” The results provide a lasting resource as critical decisions for our energy future.

.....

For more information about *MPowerMaui*, please contact Maui Economic Development Board, Inc. at 808.875.2300. For more information about process design and analysis, please contact Fern Tiger Associates at [fern@ferntiger.com](mailto:fern@ferntiger.com).





A photograph of a rice field with tall, green rice plants. The plants are densely packed and have long, slender leaves. The background is a bright, hazy sky. The word "Appendix" is written in a bold, black, sans-serif font in the upper right quadrant of the image.

## Appendix



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## Demographic Information



# Demographics of Participants

## Demographics of MPowerMaui Session Participants

*Total Number of Participants at MPowerMaui Engagement Sessions = 435*

### Gender

*Total Respondents = 402. Male - 49% (196 respondents), Female - 51% (206 respondents)*

### Maui Residency

*Total respondents = 402: 98% (393 respondents) permanent residents of Maui; 2% (9 respondents) not permanent residents*

### Home Ownership

*Total Respondents = 381: Own - 69% (264 respondents); Rent - 31% (117 respondents)*

### Voter Registration and Voting

*Total Respondents = 394: 82% of respondents (323) are registered to vote in Maui; 18% (71) are not registered to vote.*

*77% of respondents (304) voted in the 2014 election; 23% (90) did not vote.*

Age	under 20	20-29	30-39	40 -49	50 - 59	over 60
# of participants (401 responding)	35	29	80	78	88	91
% of respondents	9%	7%	20%	20%	22%	23%

Length of residence	Whole life	0-5 years	5 - 10 years	11 - 15 years	16 - 20 years	More than 20 years
# of participants (393 responding)	44	41	56	42	37	173
% of respondents	11%	10%	14%	11%	9%	44%

Approx Household Income (self-reported)	Under \$40,000	\$41,000 - \$71,000	\$71,000 - \$100,000	More than \$100,000
# of participants (335 responding)	42	63	84	146
% of participants	13%	19%	25%	44%

Attended Public Meeting in Past Year	None	1-3 times	More than 4 times
# of participants (381 responding)	164	138	79
% of participants	43%	36%	21%

*Questionnaire Participants at Maui Fair, October 2014 (1,477 Respondents)*

Age	under 20	20-29	30-39	40 -49	50 - 59	over 60
# of participants (1,417 responding)	239	102	208	232	284	352
% of participants	17%	7%	15%	16%	20%	25%

Length of Residence in Maui	1-5 years	6-10 years	11-20 years	21-49 years	over 50 years
# of participants (1,393 responding)	159	160	348	512	214
% of participants	11%	11%	25%	37%	15%

*Total Combined Questionnaire Participants (Maui Fair and Session Participants) = 1,912*

Age	under 20	20-29	30-39	40 -49	50 - 59	over 60
# of participants (1,818 responding)	274	131	288	310	372	443
% of participants	15%	7%	16%	17%	20%	24%





## Activity One: Questionnaire



## Activity One: Questionnaire Results

(from MPowerMaui Engagement Sessions)

*Number of Participants at Sessions = 435*

### Motivation

Participants could select up to three (3) responses to this question; percentages indicate the percent of people who selected each response

- Saves money - 91%
- Health of the planet - 59%
- My children and grandchildren - 28%
- Improves air quality - 21%
- Makes Maui energy independent - 33%
- Good for Maui - 34%
- Good for Hawai'i - 16%

### Participant Responses to “grading Maui” on particular efforts

Grading Maui	A	B	C	D	F
Clean energy	5%	29%	45%	17%	3%
Conservation	2%	26%	52%	16%	4%
Green transportation	1%	15%	42%	36%	6%
Energy policy	3%	17%	49%	24%	7%
Keeping residents informed	2%	23%	48%	21%	6%

### Participant Responses to “grading oneself” on particular efforts

Grading Yourself	A	B	C	D	F
Clean energy	10%	34%	38%	14%	4%
Conservation	13%	43%	34%	7%	3%
Green transportation	8%	17%	30%	30%	16%

## Activity One: Questionnaire Results (cont'd)

(from Maui Fair, October 2014)

*Number of Participants at Maui Fair = 1,447*

### Motivation

Participants could select up to three (3) responses to this question; percentages indicate the percent of people who selected each response

- Saves money - 87%
- Health of the planet - 53%
- My children and grandchildren - 26%
- Improves air quality - 28%
- Makes Maui energy independent - 31%
- Good for Maui - 42%
- Good for Hawai'i - 29%

### Maui Fair Responses to “grading Maui” on particular efforts

Grading Maui	A	B	C	D	F
Clean energy	14%	33%	42%	11%	1%
Conservation	9%	33%	43%	13%	2%
Green transportation	11%	23%	42%	20%	3%
Energy policy	11%	27%	44%	15%	3%
Keeping residents informed	13%	32%	39%	12%	4%

### Maui Fair Responses to “grading oneself” on particular efforts

Grading Yourself	A	B	C	D	F
Clean energy	19%	40%	32%	8%	1%
Conservation	21%	46%	27%	5%	1%
Green transportation	16%	25%	34%	17%	9%

### *Combined Maui Fair and MPowerMaui Results: 1,912 respondents*

#### **Motivation**

Participants could select up to three (3) responses to this question; percentages indicate the percent of people who selected each response

- Saves money - 88%
- Health of the planet - 54%
- My children and grandchildren - 26%
- Improves air quality - 27%
- Makes Maui energy independent - 32%
- Good for Maui - 40%
- Good for Hawai'i - 26%

#### **Maui Fair and Session Participant Responses to “grading Maui”**

Grading Maui	A	B	C	D	F
Clean energy	12%	32%	43%	12%	2%
Conservation	8%	31%	45%	13%	2%
Green transportation	9%	21%	42%	24%	4%
Energy policy	9%	25%	45%	17%	4%
Keeping residents informed	10%	30%	41%	14%	5%

#### **Maui Fair and Session Participant Responses to “grading self”**

Grading Yourself	A	B	C	D	F
Clean energy	17%	38%	34%	9%	2%
Conservation	19%	45%	29%	6%	1%
Green transportation	14%	23%	33%	20%	11%

### *Comparison: Maui Fair and MPowerMaui Results: 1,912 respondents*

Motivation	MPower	Maui Fair	Combined
Saves Money	91%	87%	87.55%
Health of the Planet	59%	53%	54.24%
My Children and Grandchildren	28%	26%	26.15%
Improves Air Quality	21%	28%	26.62%
Makes Maui Energy Independent	33%	31%	31.75%
Good for Maui	34%	42%	40.22%
Good for Hawaii	16%	29%	25.94%

*Comparison between Maui Fair and Session Respondents: Grading Maui and Self*

Grading Maui	MPower Sessions	Maui Fair	Combined
Clean Energy			
A	5%	14%	12%
B	28%	33%	32%
C	45%	42%	43%
D	17%	11%	12%
F	3%	1%	2%
Conservation			
A	2%	9%	8%
B	26%	33%	31%
C	51%	43%	45%
D	16%	13%	14%
F	4%	2%	2%
Green Transportation			
A	1%	11%	9%
B	15%	23%	21%
C	42%	42%	42%
D	36%	20%	24%
F	6%	3%	4%
Energy Policy			
A	3%	11%	9%
B	17%	27%	25%
C	49%	44%	45%
D	24%	15%	17%
F	7%	3%	4%
Keeping Residents Informed			
A	2%	13%	10%
B	23%	32%	30%
C	48%	39%	41%
D	21%	12%	14%
F	6%	4%	5%

An aerial photograph of a wind farm in a valley. Several large white wind turbines are visible in the foreground and middle ground. In the background, there are rolling hills and a range of mountains with some snow-capped peaks under a cloudy sky. The entire image has a light blue tint.

## **Activity Two: Prioritizing Critical Issues**





## Activity Two: Prioritizing Critical Issues

Card Descriptions	Total Round 1 Discards	Total Round 2 Discards	Total Discards	Total Final Kept by Group
Cost of Electricity	175	191	366	90
Environmental Impacts (e.g., natural gas extraction, biomass, combustion)	294	93	387	61
Dependence on Imported Fuel	234	156	390	58
Changing Lifestyles to Conserve Energy	301	105	406	41
Improvements to Electrical Infrastructure	337	80	417	29
Utility Regulatory Restrictions to PV	359	66	425	23
Affordability/Inequality of PV System Access	346	80	426	20
MECO/HECO Utility Model and Service	395	34	429	19
Other	385	32	417	18
Impact on Culturally-sensitive Areas (e.g., wind, solar, hydro, geothermal)	379	52	431	15
Consumer Choice of Services and Energy Sources	360	59	419	14
Creation of Local Green Jobs	377	55	432	12
Safety (e.g., wind, large-scale solar, hydro, geothermal)	401	34	435	12
Amount/Quality/Access to Information about Energy	411	26	437	11
Utility Company Profits	392	46	438	9
Fossil Fuel Emissions	377	64	441	6
Native Hawaiian Values	411	30	441	6
Noise or Health Impacts	409	32	441	5
Profits Made by Renewable Energy Companies	426	16	442	5
Smart Meters: Health/Privacy	419	23	442	5
LNG (Liquid Natural Gas as an Energy Fuel)	420	22	442	3
Accessibility of EV (Electric Vehicle) charging stations	423	23	446	1
Visual Impacts (e.g., PV panels, wind turbines, hydro plant)	431	15	446	1
Impacts on Birds (wind turbines)	432	15	447	0

Write-In Responses: Retained Through Final Round of Card Exercise
Free Energy Generators (New Tech Innovations)
Financing Options for PV Installations (for renters)
Future Technologies Available by 20/20
Dumping power when not needed by consumers (Hydro/Batteries alternatives not considered)
Hydro Power Combined with Wind or Solar
Energy Storage
Community-based Values and Relationships-sustainability
Development and Installation of True Smart Meters
Economic Cost to Community from Utility Obstruction
Other Write-In Responses
Inequality of Access to EVs
Volatility of LNG Commodity Futures
Alternative Energy Storage (e.g. Batteries)
Capital Investment by Government (tax payer)
Condo/Apartment Access to PV System
Creating Community/Cultural Buy-in
End to Net-metering
Making Pumped Storage Affordable and Acceptable
Every one of these cards becomes unnecessary when the ZED/TAZ comes on line
All of the issues dealing w/energy use can be handled by changing OVV energy source to gravity buoyancy
Bicycles as Green Transportation
Reliability of Service
Sustainable Solid Waste Management Policy
Making big box stores deal with their recycling waste
Service Reliability
Noise/Health Impacts FF Emissions
Affordability Inequity of PV System Access/Cost of Electricity
Dependence on Imported Fuel =Fracking=Sink Holes/Bad for Environment
Fed/State Funding to Homeowners to Pay for PV panels
Using Profits from PV/MECO on Solar Energy to Provide Free PV to Seniors w/Set Allowances
Consciousness-raising of the Public to Understand the Value of Renewable Energy
Affordability/Accessibility of Any New Technology
Unintended Consequences of New Technologies
Air Quality
Building Efficiency
Turn HECO & MECO into a Public Trust. Eliminate Million-Dollar Salaries to Electric Company Executives
Community based Values and Relationships-sustainability
Resource Management
Far More Innovative Electrical Storage to Shift Production/Consumption Time Shifting
Small Community Energy Independence
Continuity/Security of Power Supply (Hana Need)
Bring Fiber Optic Internet/TV Cable to Hana via Electric Utility Coupled with Smart Meters

A group of people are seated around a long table in a meeting room. The table is covered with various documents, including charts and graphs, as well as water bottles and plates of food. One person in the foreground is looking at a document, while others are looking at their phones or documents. The text "Activity Three: Trade-offs" is overlaid in the center of the image.

## Activity Three: Trade-offs



**Prompt One:**

**I would support a new 10MW wind-farm  
on Maui if \_\_\_\_\_.**



**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

I would support a new wind farm. (Unconditionally, without any “if ...”) — 13 Totally Supportive Responses

I do not support the idea of a new wind farm at all. — 3 Totally Opposed

We are assured that no energy will be curtailed.

It did not raise prices.

Environmental and conservation concerns are taken into account.

Their placement is environmentally and culturally sensitive.

The increase brings cost reduction in near future for all.

Residents are not expected to pay for it through increases in utility cost.

There wasn't any cost to customers [Suggestion: use Molokai, update storage, keep power and profits on island, utilize Kaho'olawe.]

Costs stay down or cheaper, power stays on island, no safety issues, culturally sensitive, minimize visual impact, and profits stay on Maui.

The flicker effect and noise are avoided, and if profits and jobs are kept in Hawaii.

It saves money.

They could engineer smaller turbines to be more efficient and if a full environmental study is conducted, and if infrastructure development supports Maui County. Also if MECO updated their infrastructure to allow such energy generation. Must be locally owned. Money stays in Maui County.

Saves us consumers money but also done responsibly.

It meets demand capacity and provides adequate energy storage.

It would lower price of electricity.

I knew how big this wind-farm would be.

The company that sells the generated electricity to the grid would sell direct to customers as a second provider.

It benefits everyone with lower costs.

All the power generated stays on Maui, and Maui residents see a reduction in electric costs.

It did not cover any sacred Hawaiian sites.

Environment and cultural impact study shows no effects.

I can get the benefits as an individual and the economic impact. Meaning how much I will get out of it.

Environmental and cultural impacts were nil. Also, need to know the impact vs cost.

A high priority is given to environmental concerns.

**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

There are no major environmental and cultural impacts.

The total wind power is less than or equal to 30% of total average day load or if there was long-term (a week or so) storage capacity.

The farm is located in the same location as the existing one and if the power generated stays in Maui.

There was adequate storage to accommodate excess power. And, not within an environmentally sensitive area.

It will reduce consumer's electric bill.

Equal resources went to solar power.

We get more information on environmental impact.

We save enough energy.

MECO put it up.

It benefits more than just one wind farm and doesn't waste energy.

There is enough money/support to get the project started.

They can store the electricity (that would be generated).

We were able to store the energy and if it were built somewhere that would not be invasive to culture or nature.

It provides jobs and the location doesn't affect cultural sites.

Only if Maui would require it. If the current farm produces enough energy why encroach more land and resources. And if it is environmentally safe for our island.

You give me the key to the private road.

The excess energy is not being dumped.

The wind farm had adequate storage.

There was adequate battery storage and if it doesn't increase the cost of electricity for customers. And if it doesn't impact the beauty of the island.

If we have the infrastructure to store the energy.

Goodfellow builds it, I'm in. And if they are maintained.

Placement is appropriate; benefit Maui residents; storage capacity available.

It is relatively hidden, the storage capacity is increased and GBI builds it.

More suitable storage was available so current capacity isn't wasted. And if it was also located in a low visibility area.

100% of power would stay on Maui; and if it was in a safe place.

It is built with private money.

It doesn't significantly increase rates.



**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

Environmental and cultural impacts are minimized and lowers electrical rates.

It does not impact cultural sites, power stays in Maui County, and does not raise overall electric bill by 7%.

It was coupled with affordable and visible storage to ensure all generation capacity can be used and if it was culturally and environmentally sensitive and appropriate.

It had pumped utility-scale storage.

Existing wind is fully utilized.

It's not most expensive form of energy; power costs to all residents would be reduced; hydro storage is in place.

The power stays on Maui (not Oahu) and transmission lines are underground

"Smart meters" are totally excluded from Maui

All Hawaii residents get some part of energy from it

They don't use my tax dollars.

It reduces the cost of electricity and amount of tax dollars.

It reduced the cost of electricity.

Cost to setup and run minimal compared to output; and not visible to most residents and visitors and if all energy is used and stored-not turned off when can be running.

It reduced visual impact, was safe for people around the windmill and dispatchable.

If it doesn't impact cultural lands

They responsibly built it :-)

It's not affecting cultural and environmental areas

It was in remote areas. Tourist driven economy...out of sight.

The storage technology was improved.

It has storage that can utilize all the energy it makes and visual impacts are addressed.

It would reduce the cost and pollution impact.

It was located near existing wind farms and not at expense of small PV systems.

That is the option left very reluctantly.

They would connect it to the grid under any circumstance.

It did not have a large visual footprint.

Suitable technologies exist and are employed so that all such power generated is used or stored

It's not visible to me.

There were more transparency to consumer on bill - cost per KW

**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

It was culturally sensitive and environmentally responsible.

It's not located near personal property and not at the expense of the taxpayer.

It is put in usable areas not impacting neighbors, beaches and other tourists need.

It does not impact local culture and if there is no impact on beaches and parks.

Depending on location - doesn't negatively affect environmental issues.

It would have storage capacity.

It cuts down on the cost of energy and my monthly bill.

Storage is a part of the project.

The storage of such wind power is in place before the wind farms are built.

Windmills came with a storage capacity.

It was culturally respectful.

No support because of environmental impacts and lack of efficiency.

There was an environmental assessment done, cost analysis, clear info to the public what will mean on a consumer level. How will project be funded?

It lowers costs.

The scale and location are appropriate.

There is little cultural and environmental impact.

It's located in a culturally acceptable area and all the energy stays on Maui.

We could not see it or hear it.

Incidental 'take' program and low public visibility.

Home energy would be cheaper.

It's safe for environment, people; if cost decreases for the consumer.

It would bring down cost of energy and if we got a clear number of how many businesses and houses it would cover.

This measure covers the needs of the population and the energy cost will be reduced ostensibly.

Savings passed along to consumer and storage capacity is back.

It includes storage capacity and is not located in culturally sensitive area.

It includes storage capacity and is not located in culturally-sensitive area.

The impact on the environment is minimal.

It can be operated efficiently and cost effectively.

It has battery storage capacity and minimal environmental impact.

**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

All the power was actually used and reduced the need from other sources.

There was a way to store or use power instead of dumping it and if it was built on area that didn't have a negative impact to close cultural places.

It was not visible, directly benefits Maui consumers, and had minimal environmental impact.

It was added to existing areas of current farms and energy storage with no curtailment.

Put in similar locations as current wind farms.

There is no impact on the environment and lower electricity rates for residents on Maui.

They are located at the current locations and meet all safety and environmental standards.

They keep it in the same location and reduces my electric bill.

It is in the same area and not placed all over island. Area of wind-farm to not be restricted to locals (if they want to access the area for cultural reasons).

It is not too distracting visually.

I would support new wind-farm.

The location is aesthetically acceptable.

There is adequate batteries to store energy.

There is no cultural impacts.

It was consistent in providing power.

There was more education on positive impacts on cost and community were proved.

It were cost effective.

Depending on site (safety, not visually offensive and culturally respectful).

The quality of service goes up and the cost of service goes down.

It was beneficial energy-wise.

It would make electricity cheaper.

Efficient and reliable battery storage systems are installed that would counter the effects of fluctuations in energy supply.

There was a way to utilize all the energy produced.

The price per kilo is passed on to the tax payer penny for penny.

Sacrificing environment consideration.

It's not in my backyard.

Not at the cost of reliable power, safety of employees.

Power created is not shipped to Oahu; they can create their own farm — not in my backyard.

**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

A reliable storage system is in place.

It makes economic sense and provider does not transfer investment costs to customers at all, just the benefits.

It is an improvement to our energy model.

It is guaranteed to reduce my electric costs now or in the immediate future.

It brought down my cost exponentially.

Storage is applied where there is no curtailment.

We could efficiently capture and store the energy and it was located off shore.

There were considerable cost savings to consumer and if utility company supports cost initially instead of a third party contractor that sells MECO the power, hence increasing rates.

They will build it.

Adequate storage was built.

Electricity costs to customers are reduced and the cost to develop the farm comes from multi-million dollar salaries of HECO/MECO senior executives.

It doesn't injure the birds.

Cost is not passed on to consumers.

The excess energy could be stored by batteries during non-peak hours to be used during peak time

It was in a place that wouldn't destroy the attractiveness of the land

Reduction of fossil fuels occurred and energy is cheaper.

It wasn't on culturally significant land, it used tax dollars, it created more local jobs and made energy cheaper

All the consumers permitted it.

It reduces the importation of fossil fuels and our electric bills.

It will not increase rate.

Energy conservation takes place and if it reduces bills.

The benefits (efficiency, lower cost, self sustainability) outweigh the costs

There is attention to cultural sensitivity.

Immediately surrounding community supports it and it doesn't harm any archaeological or historic sites.

Visible impact is minimized. (i.e. more windmills at Auwahi vs. West Maui.

There were ample storage capacity.

**Prompt One: I would support a new 10MW wind-farm on Maui if \_\_\_\_.**

It is made available to Maui residents and not at extra costs.

The location is appropriate, there is adequate storage, and environmental concerns are addressed.

It doesn't effect culturally sensitive areas; safety is not a concern for people/animals, if MECO can utilize this energy source (without sacrificing its ability to provide consistent power).

Storage/battery technology improves so that curtailing is minimized.



**Prompt Two:**

**I would support tripling the amount of residential  
PV on Maui if \_\_\_\_\_.**





**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

**I would support tripling the amount of residential PV. (Unconditionally, without any “if...” — 29 Totally Supportive Responses)**

**I do not support tripling the amount of residential PV on Maui at all. — 1 Totally Opposed**

The grid is completely stable.

There is an equitable way to include people who can't afford or have PV systems and its benefits.

PV cost, programs, incentives and energy cost.

It could be provided at a cost that was reasonably affordable for all economic classes.

It's affordable/ free and beneficial to everyone and update storage.

The grid can handle it, and if coupled with storage, and no increase in cost.

It becomes more affordable to more people.

MECO updated their grid and there was a fair interconnection charge, and if PV cost is affordable to the average layman.

The panels are produced in the USA and are environmentally friendly.

Storage capacity is improved to manage power fluctuations and demand fluctuations.

MECO would allow it.

MECO's infrastructure could handle it and if it were affordable, and as long as it didn't increase costs for people dependent on MECO.

An infrastructure upgrade occurred.

It was affordable and an easy process for the average resident.

The infrastructure can handle it and the majority of the electricity is consumed or stored.

It can be efficiently stored.

The public could get state funding to lessen the cost of the systems and educate the public on how to maintain PV systems (batteries especially).

The regulation and price were distributed evenly.

It was affordable and easily obtainable.

There could be a way to lower the cost of installation and it was made more accessible and available to residents.

It was affordable for everyone.

The costs were reasonable and the savings generated are substantiated.

It was more affordable.

It didn't increase the price for remaining customers.

**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

It doesn't cause grid instability and doesn't create a higher electrical bill for non-PV homes.

The system would stop penalizing rate payers who can't obtain PV.

It was made available and affordable to all residents.

People without money to purchase were given tax breaks and subsidies so that lower income homeowners can afford it and if we create a PV hub to support residents in rural areas who can't do PV themselves, and if storage to be created by private government partnerships.

We can afford it.

People had money to put them on their houses.

It saves more money on bills on energy and helps the people in the community.

They improved the infrastructure of it, so that they could handle more wattage/energy.

They would bring the cost down to install and bring down the cost of electricity.

It were affordable for more people and it were safe.

It is affordable for the majority of the community and it doesn't increase prices for already-installed PV customers.

MECO could guarantee all systems could get on the grid.

It's affordable for me.

Infrastructure is improved.

Cost of electricity would not increase for non-PV customers.

If it didn't impact/increase the cost of residents without PV.

The infrastructure was improved to store the energy and costs aren't increased.

We had more info.

We continue tax incentives.

It doesn't cost us any money out of pocket.

The consumers without PV will not pay for the subsidy.

The system can handle it.

We stop talking and start doing! Get rid of studies.

It is available to residents first, no additional electric bill costs.

It helps decrease electric utility rates.

It was fair to all rate-payers and had tax incentive/rebate that also continue.

**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

It was economically accessible by all, did not compromise grid stability/reliability (coupled with grid infrastructure upgrades).

And only if they stop subsidies and if the grid is improved or changed to local non-centralized modules

The cost was cheaper.

They save me more money.

They can maintain a stable grid.

It reduces the cost of electricity and amount of tax dollars.

They still continue to pay residents for the power they generate and it didn't make the rates go up for those without PV.

There are fair good policies for residents not electric company.

They could assure reliability and cost recovery.

It became more affordable through tax breaks or cost efficiency

They can figure out how to do it. Residents should not be restricted.

The cost will be affordable to Maui Residences

There could be a quick installation process and less paperwork.

Systems have battery backup that can back feed in to the grid.

Dynamic source of sun can be accommodated by the grid.

It is deemed safe.

It can be done safely and infrastructure can support.

Savings generated are actually passed along to consumers, i.e. not restricted by controlling access to grid connectivity.

Independent third party entity agree grid can handle.

The technology (storage) can be developed.

The wait time to be connected to grid is shortened.

We all could benefit.

It is cost affordable.

It is financially feasible.

Safety issues are addressed.

It was less expensive.

It is cost effective.

It is more affordable and accessible to more of the population.

**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

It was equitable for all.

There are subsidies and can sell extra power to main grid.

It was not so expensive.

It is affordable.

Age of housing, lower income residents and upgrades to the grid are considered.

MECO betters their system and increases storage capacity.

It didn't disrupt current electrical supply.

They help low-class people to obtain their own.

The cost will be affordable for majority of households.

It was affordable to most and all the people.

The installation cost will be subsidized by the federal government.

MECO has the infrastructure to support it and if solar residents pay a portion of maintenance to upkeep elec.

Residents pay fair share of grid maintenance.

The grid could support it.

It is affordable and provides higher efficiency with less panels.

MECO would revise and open their availability and restrictions for renewable energy sources.

It was affordable or free.

The cost is based on a percentage of a family's income.

I could afford it and MECO updates their infrastructure.

MECO continues to lift the grid ban and systems become more affordable to own outright as opposed to leasing; and if changing business model for MECO and other business owners.

The cost of transporting electricity for non-PV use was controlled.

Tax incentives remain for consumers and the excess would be managed to distribute to others.

There was an energy storage system.

Everyone benefited from the cost savings.

The impact on the environment is minimal.

It didn't increase electric costs to other consumers.

It doesn't negatively impact the community and MECO.

**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

Electric costs don't increase.

The rates stay the same.

There were no restrictions by Electric Company on PV installations.

The rates don't go up.

MECO reduces their control over the grid system and simplifies the process to install them on a residential home.

APS could install all of it and if MECO wasn't blocking it.

MECO doesn't find a way to change the customers a fee for their lost.

It becomes affordable.

It does not effect the quality of power.

The grid could handle it.

It comes accompanied by a sound financing and benefits plan and commitment to the user.

Everyone pays a fair share of the true cost of electricity.

The costs of having these power sources are not passed on to the users without PV.

The infrastructure is available

The model changes so people without PV power don't have to pay for the capital infrastructure

It doesn't raise the non PV user rates

Infrastructure can support storage and it remains affordable to consumers

You can efficiently store the energy produced.

It does not raise the rates of anyone—especially PV homeowners.

They didn't gouge the consumer — rates, hookup fees, etc.

It's affordable and easily accessible.

MECO can store excess energy created.

It was more cost effective and everyone is able to do it.

They have storage capacity as part of installation

It didn't increase the cost of energy to those who do not have PV.

It lowered costs and carbon emissions.

It is affordable

It was affordable.

**Prompt Two: I would support tripling the amount of residential PV on Maui if \_\_\_\_\_.**

The county/state will subsidize/everybody will qualify

It was affordable.

No conditions but it is highly desirable if it is used to help lower-income families.

The infrastructure remains stable.

Residential homeowners were included and ample residential incentives were provided at forefront.

It can be made affordable and equitable.

The necessary system upgrades are made at reasonable cost and changes are made to MECO's fee structure.

MECO can accept PV into their system; if non-PV folks aren't charged by MECO for their loss of revenue/cost to upgrade system to handle. PV customers; and if PV users aren't unduly taxed.

It is more affordable and available to average income households.

The remainder of consumers (who don't have PV or already have it) don't have financial burden.

**Prompt Three:**  
**I would support the transition to natural gas  
on Maui if \_\_\_\_\_.**





**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

24 Participants would not support the transition to natural gas, no matter what.

4 Participants support the transition to natural gas unconditionally.

I knew more about the subject.

It also supported more renewable energy (Faster spool-up).

I would not support it due to cost of importing; the last thing we need is to become more reliant on things we can't generate here.

It's a bridge fuel and not a permanent solution.

It brings the cost of electricity down.

It brings down the cost of electricity.

It's from the U.S. and only a temporary solution.

The ultimate goal is still to reduce the use of imported resources.

We have variable options (oil) in times of price fluctuations.

I do not support importing natural gas.

It was refined here locally with safe loading and unloading, and if studies were done to determine the effect on our planet.

It was proven to be safe, OK for the environment, and cost effective to the consumer.

Reduces end cost to the consumer and improves environment.

I would not support the transition to natural gas.

It doesn't raise rates.

It complements existing energy infrastructure and it doesn't increase current cost.

Residents see an immediate reduction in electric costs.

It leads to an overall reduction of fossil fuel in the long run.

I would not support natural gas because the increase of emissions would affect Maui's environment and ecosystems negatively.

It came from Maui.

We don't support transition to natural gas. Need to transition to solar/wind.

Research was done to make sure that natural gas will be as safe as other eco-friendly energy making methods and that it won't be something that we will run out of that will then affect the planet negatively. Otherwise no.

Precautions are in place to make it safe.

It reduced cost to consumer, is managed safely.

It does not involve fracking and it lowers cost of power.

**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

The safety hazards were addressed and if it were cost effective.

It is safe and cost effective.

I knew more about it.

You balance it with solar.

I was more knowledgeable about the topic.

Prices are lowered, and saves money for the community

It meant relying less on mainland imports, and using more of the community's resources, and saving more money to help preserve the land of Hawaii.

It would lower bills.

We needed it (and could not get the energy from solar, wind, and water), and if the carbon footprint was not greater than the good it will do for us.

It was renewable.

If it is necessary.

It is lower cost.

It's from the U.S. and only a temporary solution.

The ultimate goal is still to reduce the use of imported resources.

It makes sense after analysis.

Natural gas was used as a secondary form of energy; mainly during hours in which renewable energy was inaccessible for production.

I would not support the transition to natural gas on Maui. Use renewable energy sources we already have.

They found natural gas on Maui.

It's proven environmentally safe and is cost efficient.

Every Canadian visitor brings a 5-gallon tank with them and if it replaces the current diesel generation and decreases the cost per kw.

I prefer domestic.

It was safe.

It keeps the cost low or if the consumers benefit.

Environmental impacts is not worse than current source, and cost does not increase significantly (over coal).

No increased costs and reduce gas omissions.

It will lower our overall electric bill.

**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

It was clearly transitional to end use of diesel.

It is only a transition to actual clean energy and for a short transitory period, doesn't cost us more, and is sourced in an environmentally friendly way.

Only if that's the cleanest alternative and if it reduces the price of energy, and if it's cleaner than the fuel it will replace

They imported the gas.

They can assure the safe delivery to the harbors and into the fuel plants.

The importation of it didn't have negative effects on the environment.

It was cleaner and cheaper.

Safety is a concern; if the cost is lower and if it's local.

Safety-land and store safely. Convert generators to natural gas. Convert propane users to natural gas.

If there were strict restrictions and processes in place in regards to the effect on our economy and environment

It is cost effective and doesn't affect the environment

The price is cheaper (affordable)

Does not apply

It was a bridge source.

It's a bridge fuel, truly.

There is no non-fossil fuel alternative.

It was clearly defined as a temporary bridge to clean renewable energy.

Planned to be temporary.

A proper, safe LNG terminal is built.

There were no other option.

It were safe.

It's not imported.

The cost would go down and if it was safe for Maui county.

It is affordable and safety issues are taken care of.

Don't support – another import is undesirable.

It's proven to be a better alternative than the existing opportunities.

It's safely transported.

It can be cost effective and safe.

**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

They transport and use less oil as the transition is made.

We had more information on the safety to terminal on Maui.

Benefits outweigh ecological impacts associated with importation.

Other fossil fuel energy generation was eliminated and it was a short term plan towards a long term renewable goal.

I knew what this meant.

It keeps cost down.

It is safe, cost effective and renewable.

It's the same cost or less than diesel, lower emissions to a temporary retrofit on the journey to a renewable solution.

Cost to import was equal to or less than diesel supply was cost-consistent.

Cost isn't too high.

It will lower the cost for consumer and is safe for transporting to Hawaii.

We stop depending on oil.

The project meets the environmental regulations and the Hawaiian heritage.

They stop using oil.

It does not impact our/any environment, damage i.e. - fracking.

Alternative energy is not enough (if storage cannot be sufficient to meet needs) prefer clean renewable energy over LPN. Storage is answer.

The utility company manages the costs of plant transforming.

It reduces the cost of electricity and does not increase environmental hazards.

It doesn't deter from the other efforts for clean energy and must be in conjunction with other efforts to reduce and use renewables.

We had more information.

There were no greener options.

It replaced coal at HC&S? And if it was actually beneficial over the long term.

You didn't have to frack to get it.

It was affordable and safe and if supply is available.

Natural gas is more cost effective than other sources.

It's not imported.

They can prevent natural gas leakage and/or accidents that could harm the environment.

The cost for the infrastructure was not put on me and it was cheaper than fossil fuels.

**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

It could be safely transported to the electrical generation point.

Done safely and keeps cost down.

We receive environmental impact information (sea life, harbors)

There was more information about the impact, cost etc.

No other affordable choices were available.

The cost is cheaper.

It replaces burning other fossil fuels.

We work on developing our own islands resources first. Use what we have and perhaps gradually transition to be independent.

MECO is able to utilize natural gas in existing facilities or re-purposing existing infrastructure.

It is safe.

It was produced on island, the revenues stayed on island and if there were no cleaner alternatives.

The money stayed on Maui/Hawaii.

All safety concerns are addressed; but it's still an imported fuel.

It produced jobs on Maui.

Infrastructure improvement costs are known and reasonable.

It is tied to the investment in fast start generation units and proven safe.

There is no added cost.

The cost not passed, natural gas is continuation of fossil fuel dependence, reliability, and dispatchable.

The cost is not too high and set a time for the power company to stop usage and convert to sustainable energy.

It's cost neutral or better.

It is shown to be safely handled and it reduces the costs of electricity.

There is not a significant environmental impact.

It supported transportation uses (community has access to use)

It was on a minimal, supplemental basis and not as a fixed necessity.

It lowered energy cost while minimizing environmental impacts

It allows more renewables to go on the grid

It's cost effective and clearly environmentally responsible.

**Prompt Three: I would support the transition to natural gas on Maui if \_\_\_\_\_.**

It didn't come from garbage.

Cost stayed the same (affordable).

We do not see how this benefits Maui.

This is a short-term solution while Maui develops more solar and wind energy solutions (not long-term dependency)

I knew it was cheaper

We worked on a solution for not always importing 100% of it — like a landfill/solar farm/wind farm

All the consumer use has for cooking instead use electric stove w/o make higher costs of electricity

It was temporary with the intention of moving to 100% sustainable energy.

It would be short term while steps are taken for other forms of energy to replace the gas

It was clearly an interim/transition solution that will lead to future sustainable energy usage.

It is very temporary and if it doesn't take investment away from other sustainable options

It is safe and more economical.

It doesn't cost more.

Annual reductions were made on dependence of fossil fuels and exhausted all solar, wind and renewable energy options on island.

The infrastructure is in place at a reasonable cost to consumer.

It doesn't increase the current cost in electricity' safety and environment concerns are adequately addressed.

It's cheaper and safer than crude oil.

I knew more about it.

**Prompt Four:**

**It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**





**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

It's important for Maui to reduce its dependence on imported fuel, but first we would need to be more educated on the subject.

Economic development and stability of the electrical grid.

Higher cost to the consumer.

Doing business and maintaining the ability to commute.

The residents.

Increasing energy costs.

Higher rates.

Higher rates or no cost.

Higher energy costs.

At doubling of electric cost.

People's livelihoods. Keep a sustainable future.

Higher electric rates, gas rates, consumer goods. Taxes.

Increased prices and international conflict.

Maintaining the infrastructure for delivery.

I would support if it would reduce the cost of electricity.

The consumer.

Energy to the consumer.

Elevated costs.

The environment.

The consumer market.

The general public or the environment (increased emissions).

Being self-sufficient in case of war.

The environment and the consumers.

Impacting local resident's way of life.

Increasing the cost to the residents.

Plant efficiency and kw generation.

Cost increases.

Electricity rates, significant negative impact to environment.

Consumers.

**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

Higher prices and irretrievable impacts to the environment.

Availability of capacity and environmental impacts, and those least able to bear costs.

The consumer.

Becoming dependent on another source when we don't know the economic, political, environmental impacts.

Increasing prices of gas.

Getting rid of it.

Our bills and more payments.

The community and the money that they make.

A dramatic increase in electric bills.

Building on land that is sacred in Hawaiian culture and/or habitats for native wildlife.

Increasing the price of any other source of fuel.

Land, cultural values and agricultural needs.

Affordable electricity.

Health and environmental impacts.

Environment and increased cost.

Increasing the cost of electricity.

Impacts to the environment or health.

Higher rates, or affect the environment.

Environmental impacts. Increased cost to consumers - cost efficiency.

Increased cost.

Stability.

Reliable electricity.

Environment.

The environment.

Rising transportation costs.

Electric bills continuing to rise at a rate of 3% per year.

Transferring the negative impacts of alternatives to Maui.

It's important for Maui to reduce its dependence on imported fuel!

Increased cost or grid reliability.

**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

[This question has no sense ] Life styles!; environmental health, human health, higher price for power.

Resident's health and privacy, i.e. "smart meters"

Developing energy on Maui that's environmentally degrading

Using expensive things that we have to pay.

Making the fuel on this island.

Reliable energy supply at a reasonable price, i.e. no higher price than we are now paying.

More expensive and negative environmental impact of other energy sources.

The consumer.

Higher price to customers it should be lower price to end users.

Assuring reasonable cost of electricity. Compromise the environment.

The future generations and moves to conserve energy in Maui

A price increase

Higher fuel and electricity prices and/or current resources

Consumer and environment

Local environmental impact.

Local environmental impacts, high consumer cost.

The environment.

Grid stability and availability of service.

The local environment.

Reliability.

Loss of Maui's attraction; adequate supply of affordable energy.

Higher rates.

Reliability.

Higher rates and lowered safety.

Destroying the environment.

The environment.

Higher energy cost to consumer.

The environment, personal expense.

The environment and cost.

**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

Higher energy cost, damage to the environment.

The aina.

New infrastructure.

Infrastructure and reliability.

Affordable energy.

Environment and safety to Maui residents.

The environment and cost to residents.

Local jobs.

The health of the planet and severe financial hardship on lower income populations.

The consumer.

Taxpayers.

A significant change to our lifestyle.

Maui people.

The consumer and taxpayer. How about the federal government to subsidize the cost.

The environment and Hawaiian culture.

Environmental safety and irregular electric supply. Lack of electricity-cost to consumers.

Environmental impact.

A lack of electricity nor should residents bear the financial cost.

Any increased environmental hazards or increases in electrical costs.

Our environment.

Higher prices for consumers.

Cultural/environmental impacts or shortage of energy.

It's important for Maui to reduce its dependence on imported fuel.

It's important for Maui to reduce its dependence on imported fuel.

Be less cost from backup or renewable energy availability.

The money coming out of consumer pocket.

The customer.

Being on an island (even though we're a part of the US).

Loss of employment to Maui residents.

The consumer.

**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

The environment.

Native culture

Important to reduce dependence on imported fuel.

Reliability.

Costs don't increase.

It helped reduce the impact on the environment.

Negative environmental impact.

Electricity costs of general consumer.

Higher energy prices.

Important for Maui to reduce its dependence on imported fuel.

Increased cost and decreased quality.

Higher bills/pollution.

Environment, reliable power.

Important for Maui to reduce its dependence on imported fuel.

Sacrificing environment consideration.

Unreasonable energy costs.

The environment.

Reliability, safety, health, cost.

Leaving our children with debt.

Degrading the environment.

Relying on unreliable/unproven technology.

Self-respect (e.g. negative environmental impacts)

Energy rates or other negative impacts (environment, etc).

Low income residence.

Yes, important.

Significantly higher fuel costs.

Our focus on local production and conservation

Cultural and visual impacts

Raising utility rates

Tax payers.

**Prompt Four: It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_.**

More restricted use.

Increased electrical rates.

Choice of affordable alternatives

Families struggling to pay the higher cost

Consumers. [If it's 5 x the rate - who could afford it?]

Consumers

Reliable grid

A lower overall capacity for electricity.

Yes, important to reduce imported fuel.

Increased carbon emissions, increase cost to residents, increased environmental impact

Degradation of culturally significant sites, not be eye sores and not increase the cost through implementation.

Shipment from the consumer; prices of fuel is fluctuating (meaning up and down).

Living expenses, higher energy cost, destabilizing the economy (loss of jobs, lack of goods)

Electricity price.

Stable prices

Safety and natural beauty of the land.

Greatly increasing cost of electricity.

Harming lower-income families.

Important for world to reduce dependence on imported fuel.

Energy reliability and significant environmental impact.

Higher utility cost.

Increase in electric rates, the environment, water habitat, native species, Hawaiians and customary practices and the beauty of Maui.

Public healthy and safety, negative environmental impacts. Done at a reasonable cost to the consumers.

Other options being economical.

The consumer.

Keep the cost down.

Reliability.

Diminishing the lifestyle of the residents.

**Prompt Five:**

**It's important that the electric company produce  
and maintain a safe and reliable supply  
of energy, but it's also important that  
the company \_\_\_\_\_.**





**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Encourage a variety of local energy production methods.

Ensure not to damage or limit fair competition.

Improve the infrastructure.

Pass on savings to the consumers and provide services that give customers choices.

Utilize local companies and keep customers/residents informed.

Provides information and means for feedback/participation from the community.

Would become customer-owned.

Listen to consumers and create a strategy to move away from fossil fuels.

Accelerates its plans for bringing renewable energy storage online.

Have a design and model that allows power choices for consumers.

Be viable.

Make improvements to the current and future technology without passing the cost to the consumer.

Keep it affordable, renewable, passes the savings to the consumer.

Ensure that it's cost effective.

Be environmentally responsible.

Provides affordable energy.

Moves to renewable energy sources.

Considers environmental impacts and keeps costs down.

Reduce dependency on fossil fuels, reduce consumer electric costs, and continue leading the way forward with renewable energy sources.

Does not implement it at the expense of the consumer or environment.

Put the public and environment first and keep costs down (preferably with monetary support from the state).

Be green; use natural renewable energy sources available from Hawaii.

Allow residents to generate their own renewable energy.

Keeps costs down and makes technological advancements available to all.

Provides ethical service with the Maui consumer in mind and benefiting.

Control its operating costs and continue to improve its technical knowledge.

Continue to modernize and improve efficiencies.

Control costs and keep community informed.

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Upgrade and maintain infrastructures so that they can go on responsibly.

Consider the environment on a global level.

Do so in a way that is cost efficient and stable.

Continue to support more renewable energy resources.

Be open to new ways of usage even if it means sharing economic and political power.

Also saves energy for backup power.

Is open to different ways of making energy.

Has safety for us and fair choices for the community.

Remains the same to "helping the community," and not "using the community."

Modernize their transmission.

Doesn't do so at the cost of our land, culture, and values.

Doesn't alienate the rest of its customers by increasing prices.

Continues its efforts to make it affordable for its residents.

Be legit.

Would become customer-owned.

Listens to consumers and creates a strategy to move away from fossil fuels.

Accelerates its plans for bringing renewable energy storage online.

Should be a leader in alternative energy.

Be environmentally sensitive.

Be part of the community.

Gives consumers options.

Be aware of cost to consumers; be aware of environmental concerns.

Keep rates affordable.

Be proactive and respond to needs of residents; and also, keep it affordable.

Provide the most cost-effective and environmentally-friendly options.

Protects the environment.

Develops a better sustainable model.

Modernize the electric grid, don't impact the landscape too much, and continually strive to keep electric bill from rising too fast.

Profitable.

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Modify how profits are shared.

Provides choices for the consumer-utility serves the consumer.

Gets out of being an energy generator that is profit driven (coop model). Also, important to be progressive, transparent, and environmentally-responsible.

Changes its business model to include power generation by customers; if the customers are paying for infrastructure and maintenance

Does not impose health hazards such as smart meters

Gives back to the residents of Hawaii.

Make the electricity cheap.

Produce energy here on Maui and reduce environmental effects locally & globally.

Is profitable to continue operating and consider community input.

Doesn't profit greatly at the consumers expense.

Is big enough to have backup and financially strong enough to be sustainable.

Move into a services role not an extortion role; taking care of lives; changing over to a program that consumers produce their own energy. Electric company will be for storage and connectivity — must lower fees.

Keep the cost down for the consumer

Have a long term plan to reduce our dependence on imported resources

Should communicate or inform the community of any changes

Educates the consumer and does impact cost. Regular inspections.

Continue to improve the grid and support renewable resources.

Hits renewable energy targets, minimizes cost.

Maximize renewable, local, clean energy.

Open door to new business models and competition.

If the company wasn't 100% for profit.

Not be a publicly-traded company.

Be the leader in renewables.

Works with the community to diversify its sources.

Not gouge consumers.

Honor its social and environmental responsibilities.

Do so responsibly.

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Don't rip everyone off.

Have better communication with residents and give back to the community.

The public is truthfully informed of the costs and policy

Keep the cost to consumer affordable.

Make it affordable (less than today's cost), be transparent and preserve the environment.

Is open to new sources of energy that may not be affordable now, but may become so later.

Makes it affordable.

Make it affordable.

Needs to be responsive to its customers concerns.

Transparent with issues involving the above.

Is financially sustainable and environmentally responsible.

Invests in cheap, green, local energy.

Is open to public opinion.

Protect the environment and cultural sites.

Maintain infrastructure to support it.

Do it economically.

Not gouge customers.

Has the least amount of impact, environmentally.

Keep us informed about the meter reading.

Will tap other resources available and improve technology.

Think about the environmental culture of Hawaii.

Reduce cost for the client and comply with rules and regulations especially with the environment.

Provide it at a reasonable price and rate table.

Keep us informed and allow homeowners to generate their own energy.

Remain diligent in seeking clean energy solutions.

Keep energy costs stable.

Has concerns for the community and our island environment.

Listen to their customers & give them energy choices and options.

Modernize; eliminate imported fossil fuels.

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Keep the cost down and continually find ways to reduce cost through renewable energy.

Find solutions to integrate renewable energy into their infrastructure.

Provides affordable energy.

Upgrade their equipment and/or facilities but not at the cost of consumers.

Not hoard their supply of energy and keep costs down so the locals can survive.

Be environmentally compliant with health and welfare for family and future generations.

Reduce its cost to the customer.

Keep a fair transition cost.

Understands and is integrated into community.

Produce and maintain a safe and reliable supply of energy.

Reduce imported fuel.

Pass on the cost savings to the consumer.

Sacrifice to the environment and local lifestyle.

Changing our lifestyles/increased cost to consumers.

Not bankrupt the tax payers.

Not have environmental impacts and not increase in electricity costs.

Not add fees or decrease in availability of services/energy.

Reduce imported fuel.

Monitor and regulate its use.

Try to incorporate more green stuff.

Work to ensure that Maui works toward sustainability independence.

Maintains sufficient amount of energy to avoid blackouts.

Be sensitive to their customers in providing energy that is still cost effective.

Utilizes our local energy sources.

Consider the effects to the environment and culture.

Make a reasonable profit.

Takes into account the concerns of the consumer.

Takes into account the resident's opinion.

Stays cost efficient

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Looks into the future and considers shift in electricity and creates a contingency plan once there. Our energy production is no longer needed in Maui County.

Embrace and allow more renewables; become energy managers not oil burners.

Not deny access or put obstruction for more renewable energy.

Not use that as the sole reason to limit renewables.

Produce and maintain a safe and reliable supply of energy.

Work cooperatively to develop renewable, reliable sources to reduce dependence.

Is aware of our environment.

Immediately work towards a sustainable future.

Produce and maintain a safe and reliable supply of energy.

Has fair market rates

Be innovative and share the benefits with its customers.

Not totally destroy the environment.

Behave responsibly and not engage in graft.

Considers cost of infrastructure.

Incorporate indigenous renewable energy.

Inform the public, consider the consumer.

Respect consumers privacy and consumption discretion.

Not leverage its monopoly to create a profit that causes an unnecessary hardship on its consumer

Have a culture of stewardship, usury. MECO should do things for the community not to the community.

Transition to clean and renewable energy.

Becomes a public trust. Our power is fundamentally a part of our aina. It is not for profiteering.

Adapts to changes in technology and look to the future.

Is efficient.

Not be a monopoly.

Create equality for all & affordable.

Does not overcharge customers

Be a good corporate citizen

**Prompt Five: It's important that the electric company produce and maintain a safe and reliable supply of energy, but it's also important that the company \_\_\_\_\_.**

Strengthens systems structure so as not to waste renewable energy.

Work towards 100% sustainable solutions at reduced cost to the consumer.

Respect cultural values, cost to consumers, environmental impact

Respects the cultural values and not raise energy costs.

Should know how explain to individuals how important it is (energy usage).

Charge affordable rate to consumers; be economically viable (we still need them).

Not make too much profit.

Has the people's interests in mind and is willing to evolve to the needs of the community.

Keeps up with positive changes in development of sustainable energy practices.

Keeps the cost of energy as low as possible.

Look toward the sustainability of the resource and not as much focus on corporate profits.

Reduce cost to the customer and minimize impacts to the environment.

Does not raise the rate and trash the island. Energy generated should be made available to Maui residents first.

Reduce its dependence on fossil fuels, upgrade its current power plants, promotes environmental health and is sensitive to the community's needs and desires.

Not compromise public and environmental health.

Provide a reasonable cost for the energy; look out for the environment; consider alternative energy sources; support transition to alternative energy sources.

Keep prices affordable for Maui residents.

Pursue clean energy and pass the savings on to customers.





A group of people, including a man with glasses and a woman, are working on a project at a table. They are looking at papers and a small object. The table has a grid pattern with dots. There are papers and a pen on the table. The background shows a tent and other people.

## Activity Four: Messages to Maui, the Government, and the Utility Company



## Messages to Maui



## Messages to Maui

This is our opportunity to change if we work together.

Get involved! Use your voice to engage and participate in the issues that are important to you and your future generations.

People of Maui: What can you do personally to improve the way you conserve energy? Educate yourself and be active in decisions that will affect our energy future.

Because we live on a remote island (The islands of Hawai'i are the most isolated islands on earth), we have to be part of the solutions together: community and utility.

Be a part of the energy solution.

MECO employees are people too.

Learn as much as you can about energy issues.

Conserve electricity and hold local government accountable for incentivizing capital investment to improve the grid and power generation.

We, as a community, need to commit to reduce and conserve our energy usage.

Do your part. Conserve more energy.

Educate yourselves. Get involved.

You stay No Ka Oi.

Let's not forget to keep the focus on Maui consumers. Let's educate Maui on energy issues. Get educated!

Inform the public in regards to energy development in open forums.

Let's work together.

Stop fighting – solve problems together. Get informed.

It's not a perfect world; there are tradeoffs.

This island is turning into another Oahu. MECO is developing ways to stop using imported gas, should help with keeping this island, an island.

Wake up: We gotta care, we gotta be informed, we have to do our part; pitch in.

"Please oh please keep the land in peace by saving energy with me"

Be more efficient with electrical usage (e.g. stores at the mall leave doors open with AC on).

Be aware of your usage of computers, TV, phones and how much electricity one person uses.

Begin the process to become customer owned electric company

Think globally, act locally.

Let's all do our part to conserve.

Stand up and speak out!

## Messages to Maui

The Maui community needs to be more involved and vocal about their needs.

Get involved; be part of the community including our youth solution

Find ways to reduce energy consumption both in your businesses and your homes.

Reduce. Reuse. Recycle. Regenerate.

You have a personal responsibility on energy issues. Do an energy audit and use the information to make changes.

Conserve energy. Compromise.

Climate change is real and we can impact it through our choices.

The more opportunities we have amongst/within different stakeholders in the community to have these conversations would be beneficial to inform/engage our island about these issues.

Be more empowered! Participate! Vote! Let's work together and pool our resources to solve our energy issues.

Do not allow the utility to prohibit installing PV on private homes so that they can create their own solar farms. A distributed generation system is preferable to a central system

Our air quality needs HELP: We don't need to burn fuel for energy. We need other crops like HEMP and Bamboo, NOT sugar cane burn. Tap into volcano Ulupalakua area - wind farms

Be involved in the energy conversation! Become educated about energy consumption and conservation. Pursue Careers in Energy.

Get involved and let your voice be heard. Get educated on renewable energy and help the environment.

We should focus on more energy and not rely on oil from other places instead we should be more focused on our own energy.

Be mindful of the environment, be mindful of the cost of living.

Take interest and be aware of what would affect our own lives & future lives. Educate ourselves and participate in renewable energy and conservation. Malama the Aina if not for ourselves then for our future keiki.

Please remember we are a small island community. Please keep your profits in proportion.

Let's keep Maui Alive! Through Culture and Knowledge we can grow to conserve the Aina. To be a vital role in the development and progress we need to move forward. We seem to take two steps forward and three steps back. Inter-island Ferry, environmental study, Really, I'm sure was more impact to the revenues of the rental car agencies and airlines. We need to get green — with more bus times for late shifts, bicycle lanes that are safe, promote walking.

We are concerned about the negative effects of cane burning on our health, environment, and the visitor perspective.

## Messages to Maui

Keep Maui Na ka Oi by continuing to phase out fossil fuels in favor of clean renewable resources.

Goal needs to be 100% energy independent. Same for food. We are an island in the middle of the Pacific Stupid.

Support to get everyone on PV or renewable energy.

Look forward - IMUA!

We have opportunities on Maui to become free from the consequences of depending on fossil fuels. Lets do it.

Demonstrate care, concern. Consciousness, keep it up.

Reconsider the policy of allowing biomass combustion, given health issues

Maui is more environmentally conscious and we should continue to make the environment a priority. Maui should be leading the way for the other islands. We have a natural priority for sustainability.

Live for the future

Continue to believe our actions whether small or big, impact ourselves, the environment, and the future.

Love the beauty of it and I am thankful to be able to enjoy its beauty on a daily basis.

Learn more, educate yourself about clean energy and get involved, let your opinions be known.

Think about energy, learn about energy, and tell your neighbors and government what you think.

Work together better, we all want the same result.

Get on board and start conserving and recycling

Maui is a small place and you need to take care of it by legislating clear concise policies concerning recycling.

Encourage more competition for energy sources/supply.

We live in a unique island environment. We should embrace having an open mind to new ideas for power & energy innovation. At the same time, protection of all that we hold dear is important.

Be involved in the decision making process, be energy conscious and understand the impacts of your decisions. Invest in Green Energy to the extent that you are able.

Plan for long term. Be willing to sacrifice, use holistic planning to encompass all aspects. Be Pono to the Environment.

We all share Maui. Energy Conservation impacts everyone here now and in the future.

## Messages to Maui

Maui you are full of conscientious people that care very much about our planet. We have the opportunity to show the rest of the world how much energy can be generated by renewable sources and prove how possible it is. Embrace and represent well this opportunity.

Continue to lead the world in use of renewable energy sources. Conservation and adjustments to lifestyles must be included in the overall plan.

Educate residents and consumers

We would like to invite you to get informed about clean reliable energy. Most of us want a clean Maui but we are not aware of ways to do it, so my proposal is for you to get involved and get informed of ways to start and help ourselves.

To the people of Maui who want to create a future for our keikis as well as our kupuna: I want to encourage to obtain accurate information about how to choose the proper way into a self reliance in the creation of a safe, cost efficient energy that lead us to a self sufficient community.

Be united and keep it together, working with concerns about energy.

To people of Maui we have an opportunity to be a demonstration project to show folks how renewable energy and conservation policy can be implemented

Let's all work together to make Maui energy self sufficient. Think long term for our children and future generations.

Educate our future generations to change lifestyle and conserve energy.

Keep on truckin'. Keep moving toward clean, green energy despite what our utilities and government tells you. You are already making greener choices on your own.

Energy alternatives can be beautiful.

Don't miss the opportunity to be a model of sustainable energy for the world. Stand up against corporate interest.

We want to thank *MPowerMaui* for allowing us to share our opinion on behalf of Maui County. We should be more involved and voice their opinion on energy conservation.

We as the people must have our voices heard. Lets take control of our utility bills. Be encouraged to participate and have your voices heard regarding energy efficiency matters that will impact each and everyone's lives.

Changing our lifestyle needs to happen now in order to achieve lower energy costs and a better quality of life.

Advocate for energy efficiency, "start at home."

Please take personal interest in helping reduce energy consumption on Maui. Be a part of the solution. Talk to decision makers about working to add more renewable energy sources.

Demand quality information and make informed decisions.

Continue to urge ways to reduce electrical prices and cost to both producers and regulators.



## Messages to Maui

Maintain respect for the aina, life presentation for all living things, and cultural respect while panning for energy needs and culture.

Do not increase fuel tax – cost of living is high enough.

What we do today impacts all of our futures for generations to come.

For the sake of future generations, please be responsible by conserving energy, recycling if possible, and reducing unnecessary energy.

Unplug your chargers (mobile devices)

I'm glad you exist. Otherwise we would all be in the middle of the ocean with no land to live on.

Reduce, reuse, recycle. Keep Maui No ka oi

Everyone on Maui deserves affordable, clean energy. Maui can lead the nation in our efforts to make a difference in the way we live and improve our islands.

Embrace the change to renewable energy.

Please get out and vote, no apathetic votes.

Congratulations: 30 MW roof top solar, 70MW wind represents 50% of DML. Best in nation.

Let your conscience be your guide; think of your grandmother.

Think about the environment and conserve energy.

Let's become a sustainable model for the world.

Continue to live innovative is sustainable energy models that provide greater energy independence, better cost per user less impact on the environment.

Conserve and get educated.

Even though we are customers of MECO, we can demand change through decisions we make, habits we develop, and culture of energy usage that we support. With the changes that we can make, we can have an impact on our costs.

Vote and engage. Arm yourself with information to better understand/demand the appropriate action by the utility and government. Open spectrum of types of energy utilized; (Be open to new ideas) knowledge is power. Vote with your dollars, you determine what happens with how you choose to spend your money.

Conserve, less use = less strain on the economy. Seek out more information and be better informed of the big picture rather than popular trends. No silver bullet answer (look at how all the pieces fit together); understand the true cost (environmental, economic, social, jobs, etc.

We should all conserve and vote and keep our mouth shut if we don't vote. Be tolerant of our difference and support and help each other. Stand for Aloha and do not create a division between the people of Maui.

## Messages to Maui

Please actively reduce electrical use in your home and businesses. If you can afford to do so, install PVs, buy fuel cell electric cars.

Good job. Citizens of Maui. Conscious of alternative energy and environment.

It's not about you, the individual (I want, I want, I want. Only me, me, me). Think about the broader community.

Malama the Aina.

Let's find a way to do something with this ocean resource. We need to recycle more like California and let's stop shipping all of our trash to China. If Ke Akeka is ok with it, looks like Kaho'olawe has plenty of room for renewable energy farm and landfill/recycling plant. Mahalo

Conserve energy for today and future generations

Let's be the example.

You have the potential to being the world's leader in sustainability and social harmony. Malama the Aina, Remember native Hawaiian values.

Malama Ke aina

Keep pushing conservation and development of clean energy.

Be patient with changes that MECO is adapting to.

In your home, get involved.

Please keep Maui beautiful. Explore more green transportation options.

We need a new Mayor

Do your part to conserve electricity

Please continue to strive for energy conservation, clean energy and invest carefully in your future.

Please continue to support alternative energy sources and conserving natural resources; and continue to keep residents well-informed of options, regulations and impacts.

## **Messages to the Government**



## Messages to the Government

Take politics out of the decision-making process and do what's beneficial to the community.

We need better programs to encourage residents to use their voice and get involved.

Do your job and protect consumers.

Utility needs sound policy based on accurate information to meet Maui's needs including lowering bills.

Stop using the utility as the bad guys for political gain and focus on sincere collaboration.

Stop being so hated on HECO! Stop repeating social media facts. Needs to look at regulating IPP's.

Long term strategic plan with appropriate incentives for the desired capital.

Truth, public information.

Please encourage utilities to be more creative and flexible. Please use the best and brightest people to create a sustainable energy system for Maui. Go beyond the MECO system!

We have the opportunity to be leaders in the country regarding renewable energy. You need to invest in the infrastructure to support growth of renewable energy.

Serve people their well-being. Should be your driving concern.

Please budget to support the public by subsidizing PV systems and keep taxes affordable.

Support renewable energy initiatives. Provide incentives so renewable energy is accessible for everyone — not just the “haves.”

Provide economic incentives for individuals to obtain renewable energy sources.

Consider tax break for electric cars.

Simplify rules, reduce penalties, be a partner, stronger regulation on utility, don't micro manage technology, and keep the public better informed.

Get a PUC that understands energy streamline permit process.

You can't trust the government. Because the choices they make or ideas they decide to do, harm people, but they say “They help/protect us.”

We need storage/back up power.

Please figure out a way to make PV cheaper/ more affordable for more people and talk to the electric company to make sure that they can make it safe to have everyone on the grid and store the excess energy.

Support research into new sources of energy

Release federal funds to ensure that all Hawaii residents could acquire either a PV/ Solar system. Hawaii has 365 days of sunshine – we need to take advantage of that.

Offer 0.9% financing for residential PV systems.

Listen to the people.

## Messages to the Government

Hold the utility accountable to renewable goals

Review best practices of other governments.

Need to be more transparent about the problems. Share information openly with the community. Maintain stricter guidelines for gas prices so they don't fluctuate so much.

Continue to position Maui as a leader in alternative/renewable energy by supporting appropriate legislation.

Minimize "red tape". Listen to the people/consumers. Take the lead - move things forward.

Place forward-looking people with industry experience in the PUC.

Incentivize people to make green decisions. Develop new ways of thinking. Let go of the status quo.

Set an example.

Balance short term wants with long term needs.

Step up to your responsibility to support a sustainable environment and choices.

Make informed decisions leveraging community input, experts and advisors. Be more progressive.

Do not allow the utility to prohibit installing PV on private homes so that they can create their own solar farms. A distributed generation system is preferable to a central system

Smart meters produce far more dangerous radiated RF energy than the 5 to 10 micro-watts per square meter at which cellular and ... begins. This installation should be BANNED in Hawaii.

Subsidize Alternative Energy — \$ Partnership Programs.

Listen to the people, think about all stakeholders when reviewing and approving policies and laws.

There must be equity between the citizens of Maui and the utility company. Lowering costs, maintaining reliable energy, and Energy Independence should be our goal. Take the power of the PUC and give it back to the people and not the pockets of the utility.

The government should continue to support consumers who are installing their own production.

Regulate wisely, spend taxes wisely.

Enforce people to be responsible in the cleanliness of our county by putting more signs of "No littering or fine" like in Canada so people are more discipline.

Better regulations on utility cost; monopolization options, and be mindful with your decisions. No rail curbside recycle, hour of dump

Mahalo for supporting renewable energy — keep it up.

Allow a PUD or Coop (Not to be administered by county).

## Messages to the Government

We need recycling and will pay, ask us before you decide. Better communication. Make utilities not publicly traded.

Lead by example and be a leader.

Mayor: better policy; make it easier to innovate.

Support economically sound policy while giving precedence to the public

We expect you to promote every possible avenue to making Maui a model of freedom from ultimately destructive methods of power generation (and over-use)

Continue to support sustainability, locally grown and renewables. It's the only way to save the planet.

Always listen and plan for future needs.

Keep the environment and the people at the forefront of your decisions and policy.

Stay focused on the long term goals and creating a better planet.

Be more proactive in resolving energy issues, take personal responsibility/investment and do not defer to more studies.

Listen to what the people you serve have to say about the production and use of energy in the state of Hawaii.

Make it easier for people to participate in eco-environmental programs.

Give more tax breaks and incentives to go green.

Increase our social security, improve the school system

Work to enforce the will of the people. Listen first.

Make energy renewability and conservation issues the highest priority at the county, state, and federal level.

Government can help us facilitate energy growth, by not bogging down the process with unnecessary permits and the like.

Listen to people (not money). More emphasis on every day recycling. Consider environmental and cultural impacts.

You have the capacity to make policy change. Please make a change for all residents.

Listen to your constituents. Consider environmental and cultural impacts of your decisions. Approach energy solutions with a holistic and well rounded perspective.

Clean energy, healthier environment, local green jobs, energy security: What if climate change is a big hoax and we create a better world for nothing? To Maui County: Get the with program and set an example for our community, put our houses on biodiesel. Be the leaders we elected you to be.

Realize that climate change is a serious problem. Eliminate tax breaks and subsidies for non renewable energy companies.

## Messages to the Government

De-subsidize fossil fuels and subsidize renewable energy industry.

More tax credits for consumers.

Stronger regulatory agencies.

We need funding, support, and resources of energy that can supply our daily life at home.

We request transparency of PUC, lack trust clarifications of the two rules in regards to PV. Incentive for home owners to install PV on rental units.

PUC: Keep electricity rates low and preserve consumer choice to solar energy.

Maintain Hawaii's environment and energy costs for future generations.

Don't be influenced by corporations. Stand up for what is truly best for the community.

Enforce state law to expedite and advocate for green energy development.

Seek to find solutions for the betterment of all. The future is now.

Think of the people, not your pocket, because the people are the ones that fill your pockets.

Please explain to the common person why we are paying .39 cents per kWh here in Hawaii compared to the US mainland at about .10 cents per kWh.

We need your help to move forward in renewable energy and lowering the cost of living.

Protect and support consumers with policies that encourage reduction of fossil fuels.

Encourage citizens using incentives and information to be more energy efficient.

Be responsible and make educated decisions.

Urge that a uniform and effective energy policy be created and enforced.

Please consider all socio economical levels when making decisions regarding energy, keep it accessible and affordable.

Please increase tax credits for renewable efforts. Do not increase fuel tax. Be cognizant of the greater population, don't be swayed by the vocal minority.

We need more help in becoming more sustainable and energy efficient, more bike paths, accessibility i.e. mandatory recycling, sorting trash at the dump, tax break for recycling.

Encourage people to individually conserve energy, and reward companies and people who conserve energy. Give more tax credits to those who conserve energy. Increase taxes to families with more cars.

Make PV a priority

There is nothing I want to tell you.

Listen to the people, be good servant leaders.

Back off and let supply and demand work.

Support agriculture (biofuel needs), create jobs.



## Messages to the Government

Commit to tax incentives for renewable resources and energy independence.

All branches of government should work together to conserve energy.

Your responsibility is to the people; diversify the energy market.

Re-establish a true free market that doesn't rely on subsidies, and encouraging competition in to new diversified energy market with alternative technologies.

Deregulate to allow competition. Listen to constituents; act. Establish a nonprofit power utility.

Do not be short-sighted.

We would appreciate cooperation between different political parties and also local politicians that are voted into office, to listen to the public who got them to their position in government.

Don't ever make garbage bricks. Keep the anaerobic digestion technology and full-on recycling.

Regulate the electric company more.

You need to support the alternative energy industry.

You need to start planning for future generations.

I truly believe that PV should be installed on all schools in order to cut energy cost and open up more job possibilities for school teachers, better school lunches, books, sports, and the possibilities are endless.

Subsidize and support energy programs without additional burden to taxpayers

Government should help to reduce the cost of installing PV system.

We want sustainability, affordability, without lots of regulations attached, no red tape.

Ensure statewide broadband access to all parts of the islands (especially east Maui from Kanae to Kaupo.)

Where is the leadership?

Continue to provide subsidies for clean energy development.

Continue to push utility to adapt to changing technologies.

Reduce the amount of time for action to take place and accountability of the PUC and their decisions.

Energy produced on the neighbor islands should remain on each island. We are not to be used to feed Oahu's Energy demands.

Encourage utility to incorporate clean energy into their system

Please continue to be a strong bridge between your constituents and our electrical companies.

Get messages/regulations/etc. out to public in timely manner and in layman's language.



## **Messages to the Utility Company**



## Messages to the Utility Company

How committed are you to changing your business model to support renewables. Lead, follow, or get out of the way.

There should be accountability when it comes to damage caused in homes by poor grid infrastructure (power surges).

Be part of the solution and not part of the problem.

Good job MECO!

Help customers find solutions and be open and forthcoming with information.

Inform public better on energy policies.

Keep rates down.

Fairly price monthly interconnection charge for PV systems so rate payers don't subsidize PV. Don't increase PV cost so more people will build PV systems.

Separate the business of transmitting (distributing) power from the costs of producing power. That will permit different energy sources to compete on merits.

We need more access to information.

The generation of electricity needs to be less reliant on fossil fuels. Lower cost to consumers. Give us a choice.

Focus on storage and therefore, infrastructure.

Please invest in the future. A future of renewable energy that is "green" and affordable for the public.

Keep it clean and green. Keep the Maui consumer in mind. Keep it ethical and provide quality service.

Lower my electric bill!

Stop focusing on short-term profits and instead focus on Maui's long-term prosperity.

Communicate better with general public, embrace new technology, embrace innovation in technology, and what is the plan?

Keep looking for ways to improve and get off fossil fuels. They can be deregulated and should stop acting like a monopoly.

I think you guys should develop ways to employ people who need jobs, and don't have the same Bachelor degrees as most people, and give them a chance.

Help community to bring cost down.

Please reduce our dependence on fossil fuel and focus on renewable energy.

Make electricity more affordable and get a cooler name.

Proper meter reading. Honest communication with the public.

## Messages to the Utility Company

Please continue to help Maui residents be able to afford electricity. Continue conservation efforts.

Reduce costs.

Keep energy produced on Maui.

Update grid to utilize 2030 goals.

Don't focus solely on profits.

Move faster toward renewable energy goals.

Keep rates down.

Be more concerned about impact of high bills on the consumers than the bottom line for stockholders.

Appreciate Maui as a place and its community. Support a better plan for renewable energy.

Focus on being efficient and cost effective. (Contain cost, be responsive to residents and be efficient)

Your continued relevance depends on your ability to move into new technologies.

Keep public/community informed. Accept and consider feedback from consumers. Work on increasing trust of the community.

Better management of renewable resources to be incorporated into reliable power grid.

Modernize and keep rates from rising beyond inflation. Look ahead toward alternatives.

Thank you for keeping the lights on! (Most of the time). Mahalo for making the necessary changes towards renewable energies and efficiencies. Be bold and progressive. Lower Connie Lau's salary.

Thank you for keeping the lights on.

Do not try and end Net Energy Metering.

Do not allow the utility to prohibit installing PV on private homes so that they can create their own solar farms. A distributed generation system is preferable to a central system

Stop the Burn. We have wind, water, solar and volcano power — Photo Voltaic.

Allow Residential PV, work out pricing with solar companies, not putting the cost on the residents. Collaborate

You need to look at your internal costs to learn to be efficient and lower costs to the consumer. Electricity in Maui is 4 times more expensive than on the mainland. Imported fuel is only 25% more in Maui, Why?

The electric company should switch over to a system where consumers who are creating energy are paid fully.

Make more electricity, at reasonable prices, with reliable resources.

## Messages to the Utility Company

If the company restricts the use of PV in a certain area, the cost of electricity should be less for those who doesn't have.

Please remember we are a small island community. Please keep your profits in proportion.

Get more people on the PV grid. Cost Center, Man Power Increase

Upgrade infrastructure to allow solar pv expansion. Back up plan for outage and disruption to service. Will there be any major changes with new company taking over? Keep it the grid add more.

Retire your old generators, work on effective storage for non-dispatchable sources.

Answer to the public not your shareholders

Keep the grid open and accessible for rooftop solar

Open your minds up

Do everything possible to support safe reliable energy at significantly lower costs than presently delivered.

Allow and promote more PV to grid hookups without hindrance. Do not explore geothermal development on Maui — instead pursue the other alternatives: PV, wind, biomass

Update the grid

Pay attention to the needs and budgets of the local community. It must be about the greater needs of the whole and responsibility to the planet – not the profits of the stockholders (and I am a stockholder)

Embrace innovation

Work for the people, the future and the environment. Your profits have consequences.

Come up with an economic plan that benefits everyone so that all parties can willingly participate.

We ask for independent assessments of the grid limitation figures MECO gives.

If you don't listen to the people's concerns you will ultimately pay the price.

Keep us better informed of future plans.

Stop charging us so much and make pv more affordable for all to participate.

Protect the residents and eco-environment.

Continue to search for greater efficiency and transparent operations.

Utilize Maui's natural, renewable resources before thinking of importing. Be more innovative and be open to new sources. We need more transparency about cost and infrastructure.

## Messages to the Utility Company

We feel that you should work diligently to find new sources of energy that work for our environment and reduce cost. These reductions could be passed on to the consumer.

Invest more/give back more to the community. Consider your customers. Maintain the grid and invest in green energy.

Focus on environmental impacts. Balance-short term revenue and long term planning. No fossils fuels and build in capacity for low income.

We rely on your innovation. Don't let us down. Be trend setters, Set the template.

I understand that this is hard, but it really is time to modernize and accept the inevitable. As long as the utility is primarily beholden to shareholders, it will never serve the first and best interest of the public (rate payers).

We appreciate the improved reliability of the power provided. We encourage MECO to continue to move forward in increasing renewables while maintaining grid stability.

Petition government to bring their grid into the 21st century. Subsidies should be passed on to consumers, and not kept for profit.

Lower pricing, utility costs keep rising. Good job — keep it up and drop our prices and work on efficiency.

Find a way to improve your service and lower your cost to the consumer.

Please upgrade your computer management to increase sustainable supply for consumers and businesses.

Reduce your profit margin, and stop giving large executive bonuses.

In all that you do, think of the consumer first and improve your communication to the Maui Community.

Utility Death Spiral. Incentivize homeowner staging on the grid. Do not prohibit renewable options as potential to the grid.

You need to modernize and run off of 100% clean energy.

Be a world example for energy sustainability.

Keep Maui Energy on Maui.

You need to work with renewable energy companies to provide better energy resources and also to keep cost down for all residents.

We ask for more transparency, and transition to a Management company that supports various technologies.

Be more open; educate and communicate. Encourage development of alternative energy sources.

Provide reliable information please.

Consider the possibilities of becoming an energy transport company and source energy from various generating and competitive sources.



## Messages to the Utility Company

Be sensitive to the population of Hawaii to focus on affordability, keeping in mind that everyone is dependent on energy.

Please reduce the amount of transported fossil fuels. Please change your business model to incorporate more PV systems.

We aren't personally seeing the results of the renewable resources regarding reduced cost.

Be more receptive to proposals from individuals/entrepreneurs who have great ideas on reducing our dependence on fossil fuels.

Consider your future market of becoming a distributor and not a generator and be prepared for it.

Make PV more available.

Our main concern is cost and reliability of energy infrastructure and community outreach and public involvement.

Work in partnership with the consumer. Be honest.

As you merge with NextEra what will really be offered to customers? What is their renewable plan?

Stop restricting the conversion to renewable energy.

Get out of the way — renewables are inevitable.

Look to the future, prepare now to change.

Be an energy distributor, not a producer.

Embrace the innovation and change that consumers are making to create sustainable & energy efficient model.

Change your model to be equitable to all.

Understand that competition will be demanded by the consumer if they continue to feel mistreated. Ensure that your projections are realistic, accurate, and conservative. Don't hold back the momentum renewable energy has developed and gotten to embrace it.

Continue researching and investing in clean and renewable energy.

Please think ahead do a better job of planning for Maui's electrical needs.

Find ways to be more efficient.

Keep up with technology.

Credits should be available for customers with required medical devices. Perhaps this could be accomplished with a partnership with private industry.

We are really tired of high rates and the long wait to be switched to pv compatible digital meters. Communication on these matters often seem non existent. Please strengthen your systems so that you are not wasting renewable energy.

## Messages to the Utility Company

Please know that we support the movement to 100% sustainable sources of energy as long as there are no detrimental effects on the environment or culturally sensitive areas of concern. At the same time we are all cost sensitive and know that while there is a cost to running a business and providing service, the sun rises and wind blows for free.

Improve your services. Keep your rates affordable. Improve your infrastructure.

Should lower the cost of electricity.

Be the example. Be the example to the whole US, leading the way in sustainability. Be fair making sustainable energy accessible to all.

Bring in Fiber optic cable with smart grids to Hana to improve Internet access and reliability. Provide Hana with reliable consistent backup generator capacity for when there are interruptions in electrical transmission.

Hana needs a coordinated approach to the reliable supply of energy and broadband. MECO should be involved in this project.

Thank you for keeping the grid intact and well maintained.

Evaluate ways to streamline approvals of independent power providers commercial and residential.

We don't trust you. You should be doing more to promote renewable and affordable energy. You are responsible for the health of the environment. Restart brush abatement program.

Please consider the impact of visual clutter created by wind and solar farms when placing these facilities. Do not treat the neighbor islands as power sources for Oahu.

Be able to use generated energy from PV when electricity is out. More grids available to everyone.

Please allow more PV users onto your system. Look into incorporating natural gas into your system.

Keep the far future of Maui in mind when making energy decisions (choice of fuel, types of power plants, etc.)

Make electricity more affordable! Be more supportive of alternative energy sources.



## Session Evaluations



## Session Evaluations

*404 Total Evaluations from MPowerMaui participants*

(Demographic information from these evaluations is detailed on pages 23-26)

Knowledge/Understanding of Energy in Maui, prior to attending MPower session	1 - lowest	2	3	4	5 - highest
# of respondents (381 responding)	40	55	157	85	40
% of respondents	11%	14%	41%	22%	11%

*I was actively engaged in the session.*

Yes - 98 %

No - 2%

*I felt my opinions were heard.*

Yes - 97%

No - 3%

*I learned a lot from the session.*

Yes - 90%

No - 9%

Comments noted by individual respondents: “Some;” “Unsure;” “No — I am way ahead of this”

*The information presented was objective.*

Yes - 95%

No - 5%

Comments noted by individual respondents: “Mixed;” “Yes – but possibly needs more research, i.e. don’t use HECO/MECO marketing lies;” “No – mis-statement on bioenergy”

*I enjoyed the session.*

Yes - 99%

No - 1%

Comment noted by individual respondent: “Somewhat”

*Materials were professionally developed.*

Yes - 99%

No - 1%

Comments noted by individual respondents: “Mixed;” “Unsure;” “Beautiful printouts;” “Good job Team!” “A lot of the material was pointless;” “Except for the biofuels questions”

*The session was more interesting than I expected it to be.*

Yes - 89%

No - 10%

As expected - 1%

Comments noted by individual respondents: “!!!”; “I expected it to be interesting;” “I knew it would be good if the model was Focus Maui Nui;” “I knew it would be good – you didn’t let us down.”

*Did you feel you made a difference by participating?*

Yes - 82%

No - 13%

Unsure - 4%

Comments noted by individual respondents: “Yes – but I really feel that government in Hawaii will bog things down;” “No – but I sure learned a lot!” “A difference in what??” “No – but I hope so”

*General Comments (indicated on evaluation sheets):*

*“Mahalo! I learned how little I know! And I’m sure I will pay more attention now. You piqued my interest”*

*“Mahalo for the session, and bringing the session to us. I hope that the government and energy companies can listen to what was said and implement them for our communities to thrive and prosper”*

*“I would like to learn more!”*

*“Mahalo! Great info just very hard to be able to participate in such a quick session especially with such already knowledgeable people in it.”*

A man and a woman are seated at a table, looking at several informational cards. The man is on the left, wearing a light-colored button-down shirt, and the woman is on the right, wearing a dark top and a pearl necklace. They are both looking down at the cards on the table. The cards are white with black text and some have small images. One card prominently features a list of bullet points about natural gas. In the background, there are more posters or cards leaning against a wall. A white cup is on the table to the left, and a glass of water is on the right. The overall scene suggests a workshop or a meeting where they are discussing energy-related topics.

## Tools and Materials

### Natural gas:

- Imported (it goes off island)
- Non-renewable
- Lower emissions
- Enables modernisation of grid
- Potential reduction in utility bills

\*Source: Merit Investment Group Canada





## Maui Fair Energy IQ Handout

### What's Your Energy IQ?

- 1. You can make biofuels from:**
  - a. landfill
  - b. French fry oil
  - c. corn
  - d. all of the above
- 2. Most of the electricity made in the U.S. comes from:**
  - a. wind power
  - b. nuclear power plants
  - c. fossil fuels
  - d. solar power
- 3. The greatest amount of electricity in Maui comes from:**
  - a. wind power
  - b. nuclear power plants
  - c. fossil fuels
  - d. solar power
- 4. The renewable energy source used most throughout the world for electricity is:**
  - a. wind
  - b. solar
  - c. water
- 5. Which of these energy sources will be the last to run out?**
  - a. coal from inside the Earth
  - b. oil from inside the Earth
  - c. heat from inside the Earth
  - d. gas from inside the Earth
- 6. Which of these can NOT generate power?**
  - a. waterfalls
  - b. ocean waves
  - c. swimming pools
  - d. tides
- 7. Which country developed the first windmill?**
  - a. Nigeria
  - b. China
  - c. Japan
  - d. The Netherlands
- 8. Which has the most energy?**
  - a. a hurricane
  - b. a nuclear bomb
  - c. all the ocean's waves
- 9. Where does most energy on Earth come from?**
  - a. the planet Mars
  - b. the sun
  - c. the center of the Earth
- 10. What uses more energy: six hours of laptop use or making coffee?**
  - a. laptop uses more energy
  - b. coffee uses more energy
  - c. they are about the same



(Compiled from: PBS Kids/Meet the Greens; sciencemuseum.org.uk; Climate Literacy and Awareness Network; and The Guardian)



## Activity One: Questionnaire



A MAUI ENERGY  
CONVERSATION

*Help us kick off the Maui Energy  
Conversation by filling out this  
questionnaire!*

**What motivates you to save energy at home** (check top 3)

- ☐ saves money
- ☐ health of the planet
- ☐ my children and grandchildren
- ☐ improves air quality
- ☐ makes Maui energy independent
- ☐ good for Maui
- ☐ good for Hawai'i

**What grade would you give Maui for...** (circle one for each)

- |                            |   |   |   |   |   |
|----------------------------|---|---|---|---|---|
| "clean energy"?            | A | B | C | D | F |
| conservation?              | A | B | C | D | F |
| "green" transportation?    | A | B | C | D | F |
| energy policy?             | A | B | C | D | F |
| keeping residents informed |   |   |   |   |   |
| about energy issues?       | A | B | C | D | F |

**What grade would you give yourself for...** (circle one for each)

- |                         |   |   |   |   |   |
|-------------------------|---|---|---|---|---|
| "clean energy"?         | A | B | C | D | F |
| conservation?           | A | B | C | D | F |
| "green" transportation? | A | B | C | D | F |

How long have you lived in Maui? \_\_\_\_\_

Where in Maui do you live? \_\_\_\_\_

Your age? \_\_\_\_\_

Contact information: \_\_\_\_\_





# MA POWER MAUI AN ENERGY CONVERSATION

**Has much changed since HCEI was created?**

When HCEI initially set its goals, it appeared wind power would play a more important role than solar power. But beginning in 2009, the rate at which Maui Electric's customers were asking to add their own PV systems began to accelerate much more rapidly than expected: by the end of 2013, about 10% of MECO customers had installed 4,500 PV systems. So while significant progress has been made in reaching energy goals, it has been accompanied by some contention and a lack of clarity involving many key issues.

**Why have a conversation about energy in Maui?**

The energy landscape is complicated and changing rapidly. It is hoped that a community conversation about energy will capture Maui's core values and priorities, while providing valuable insights for decisionmakers in the months to come.

**M-Power Maui** is a project of the Maui Economic Development Board (MEDB). Watch for opportunities to participate in the Maui Energy Conversation!

MEDB is a 501(c)(3) nonprofit organization established in 1982 by community, business, and elected leaders. MEDB is dedicated to creating and sustaining a balanced economy and diverse employment options for residents. MEDB's mission involves taking innovative actions that strengthen existing industry as well as diversifying through new opportunities.

For more info: [www.medb.org](http://www.medb.org)

**Does Hawaii have "clean energy" goals?**

Yes. The Hawaii Clean Energy Initiative (HCEI) was created in 2008 as a partnership between the state of Hawaii and the U.S. Department of Energy (DOE). It set a goal for 2030: to meet 70% of the state's energy needs through efficiency (with a 30% reduction in use) and renewable energy (by generating at least 40% of energy locally).

**Does Maui have its own energy goals?**

Like the state, Maui is working to reduce overall energy consumption and increase the amount of renewable energy it uses, moving toward the goals established by HCEI. Indeed, Maui County is moving even more quickly than the state as a whole. Currently, Maui generates more than 30% of its electricity from renewable sources. And the Maui community has also ramped up its conservation efforts, including things like solar water heating, energy efficient light bulbs, and lifestyle changes that result in using less energy.

## Energy Terms

**Biomass** includes plants, farming and forestry waste, and other organic waste. Biomass can be “direct burned” to create electricity or it may be converted into liquid **biofuels** (such as biodiesel) or biogas that can be used interchangeably with petroleum based fuels.

**Distributed Generation (DG)** refers to small-scale power generation technology that provides electric power at a site closer to customers than central station generation. A distributed power unit can be connected directly to the consumer or to a utility’s transmission or distribution system. Residential solar PV systems and privately owned wind farms connected to the public utility’s electrical grid system are examples of DG.

**Dispatchable Energy** refers to energy from sources that can be turned off or on by a system operator, according to electricity demand.

**Non-Dispatchable Energy** refers to energy from sources that can’t be expected to provide continuous output to furnish power, as production can’t be matched reliably with the amount of electricity needed at any given time. Solar and wind are considered non-dispatchable; they can be made dispatchable if configured with an energy storage system.



**Electric Vehicles** are powered by electricity rather than gasoline, charged at home or at charging stations. **Hybrid Electric Vehicles** combine conventional internal combustion engine propulsion with electric propulsion systems.

**Energy Storage Systems** — including batteries (conventional and advanced), among other technologies — are in various stages of development to store electrical energy so it can be available to meet demand whenever needed and to reduce fluctuations in electricity output.

**Geothermal Energy** comes from below the surface of the Earth in underground reservoirs of water heated by volcanic activity, which are tapped for steam to generate electricity.

**Hydroelectric Power** is generated by hydraulic turbines that capture the motion of flowing water.

**Natural Gas** is a fossil fuel formed when layers of buried plants and animals are exposed to intense heat and pressure over thousands of years. It is a nonrenewable resource because it cannot be replenished in a human time frame,



but it is cleaner than coal or oil, as it produces fewer emissions and pollutants. **Hydraulic Fracturing** (or “fracking”) is a new technology that makes it easier to extract gas from previously inaccessible sites. **Liquefied Natural Gas (LNG)** is natural gas in its liquid form, produced by taking natural gas from a production field, removing impurities, and liquefying it.

**Ocean Thermal Energy** conversion takes advantage of the difference between cold, deep seawater and surface seawater, warmed by the sun. In addition, the cold, deep seawater can be used to replace electricity for air conditioning.

**Ocean Wave Energy** is created by the motion of waves, currents, and tides generating mechanical energy. The challenge is to convert this abundant source of energy into useable power for electricity and transportation.

**Renewable Energy** refers to energy generated or produced from: wind; the sun; flowing water; biogas (including landfill and sewage-based digester gas); geothermal; ocean water, currents, and waves (including ocean thermal energy conversion); biomass (including biomass crops, agricultural and animal residues and wastes,



municipal solid waste, and other solid waste); biofuels; and hydrogen produced from renewable energy sources.

**Renewable Portfolio Standard (RPS)** is a state regulation that requires electrical supply companies to produce a certain fraction of their electricity with renewable sources. The State of Hawaii’s RPS is set at 40% by 2030.

**Smart Grid** refers to an electricity distribution system that is supported by advanced communications and computerized controls to manage the transmission of electricity between its points of generation and power consumers.

**Smart Meter** refers to a device to monitor energy use and allow for communication between the meter (where the electricity is being delivered) and the central utility (for example, Maui Electric).

**Solar Photovoltaic (PV)** systems use cells made from semi-conducting silicon material to turn sunlight directly into electricity.

**Wind Energy** is generated by wind turbines that capture and convert the motion of the wind to electricity.

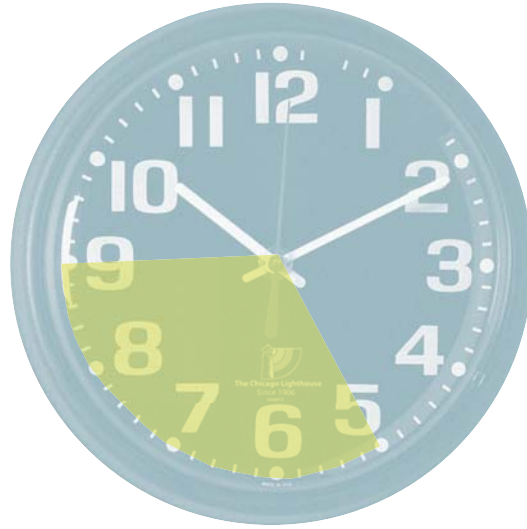


**Empowering Maui residents to be a part of a community conversation about energy**

## **Refresher Course Fact Sheets**







**Maui Week-Day  
Peak Electricity  
Demand (typical):  
Approx. 200 MW  
between 5:00 and  
9:00 p.m.**





Reduce by 30%, thru  
*efficiency\** + Generate  
40% *local renewables\**  
= 70% of State Needs

\* Both efforts well underway in Maui



2

**Maui Today:  
375 MW capacity**

**2030 Target:  
458 MW capacity**



3

Capacity *beyond “peak demand”* needed because:

- not all sources can be turned on/off as needed (‘dispatchable energy’)
- equipment needs to be maintained
- unexpected events happen



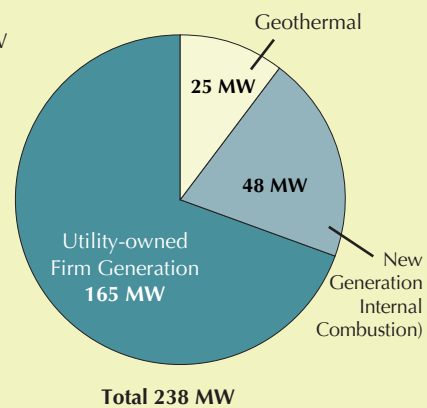
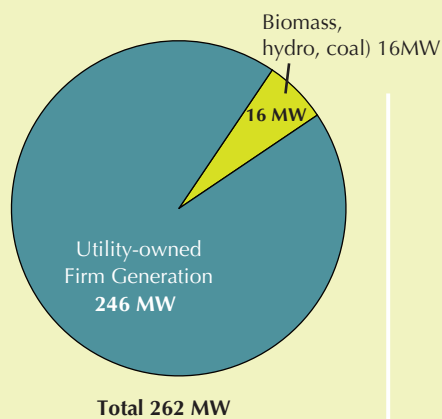
4

# Maui-generated MECO Power

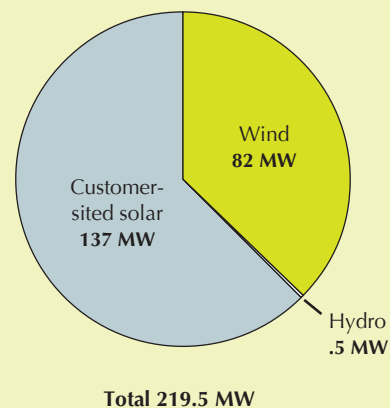
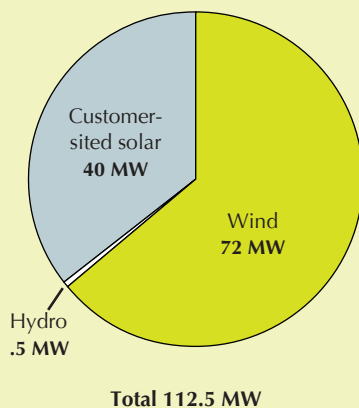
2013

2030 Target

## "Dispatchable Firm" Generation



## "As Available" Generation



5

Approx. 30% of Maui  
energy use is from  
*renewable sources\**

- \* • Wind: 72 MW
- MECO Customer-sited PV:  
40 MW;
- Hydro + Biomass: 12 MW



MECO plans to retire a number of existing generating units that currently burn fuel oil; the remaining units will be modified to be able to burn natural gas.





- Significant increase in PV systems throughout Maui in recent years.
- MECO estimates the number of PV systems tied into power grid could triple by 2030.





# MECO Assumption: New 10 MW wind farm by 2019



9



Upcountry geothermal  
plant could deliver  
25 MW by 2024\*.

\* MECO Report to PUC



10

MECO Plans:  
to enable communication  
between meter and utility  
company beginning in 2016;  
will enable more renewables  
to be on the grid.



11

Energy from renewables is extremely helpful in reducing use of fossil fuels:

- although, not always created when needed, but with appropriate storage, this energy could be available for later use
- but, currently MECO has only 22 MW of utility scale storage; the plan is to increase to 62 MW by 2030



12



## Natural gas:

- Imported (\$ goes off island)\*
- Non-renewable
- Lower emissions
- Enables modernization of grid
- Potential reduction to utility bills

\* Most likely transported from Canada



13

Infrastructure upgrades  
(e.g. new utility poles,  
new transmission  
lines, undergrounding  
utilities) impact cost of  
electricity.



14

Current Plan\*:  
Develop plant where  
feedstock is grown to  
create biogas

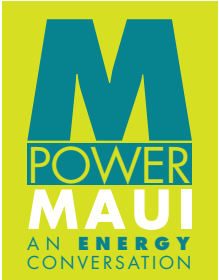
\* No current plan for wave  
energy tests on Maui







## Activity Two: Power Deck (24 Energy Issue Cards)

<b>Cost of electricity</b>	<b>Dependence on imported fuel</b>	<b>Fossil fuel emissions</b>	<b>Impacts on birds</b> (wind turbines)	<b>Visual impacts</b> (e.g., PV panels, wind turbines, hydro plant)	<b>Improvements to Electrical infrastructure</b>
<b>Noise or health impacts</b>	<b>Native Hawaiian values</b>	<b>Affordability/ Inequity of PV system access</b>	<b>Utility/ Regulatory Restrictions to PV</b>	<b>Creation of local, green jobs</b>	<b>MECO/HECO utility model and service</b>
<b>Environmental impacts</b> (e.g., natural gas extraction, biomass combustion)	<b>LNG (Liquid Natural Gas) as an energy fuel</b>	<b>Accessibility of EV (Electric Vehicle) charging stations</b>	<b>Impact on culturally-sensitive areas</b> (e.g., wind, solar, hydro, geothermal)	<b>Safety</b> (e.g., wind, large-scale solar, hydro, geothermal)	<b>Smart meters: health / privacy</b>
<b>Amount/ Quality/ Access to information about energy</b>	<b>Changing lifestyles to conserve energy</b>	<b>Utility company profits</b>	<b>Profits made by renewable energy companies</b>	<b>Consumer choice of services and energy sources</b>	



### Activity Three: Trade-off Prompts One to Five



I would support a new 10 MW windfarm on Maui if \_\_\_\_\_

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I would support tripling the amount of residential PV on Maui if \_\_\_\_\_

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I would support the transition to natural gas on Maui if \_\_\_\_\_

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It's important for Maui to reduce its dependence on imported fuel, but that should not come at the cost of \_\_\_\_\_

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It's important that the electric company produce and maintain a reliable supply of energy, but it's also important that the company support the local economy and local customers by being sure to \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_.



**Activity Four: Messages to Maui, the Government, and the Utility Company**



A Message to Maui:



A Message to Government:



## A Message to the Electric Company:



## MPowerMaui Session Evaluation Form 1 of 2 pages



**Mahalo for participating in M-Power.  
Please fill out this form and return it to the facilitator.**

About you:

1. Residence: Town \_\_\_\_\_
2. Age: Please circle : Under 20    20 - 29    30-39    40-49    50-59    Over 60
3. Gender: Male / Female
4. Are you a permanent resident of Maui?    Yes    No  
(If you are a part -time resident please go to Question # 7.)
5. If you are a permanent resident of Maui, how long have you lived in the County?  
(Please circle)  
My whole life    0-5 yrs    5-10 yrs    11-15 yrs    16-20 yrs    More than 20 yrs
6. If you were not born in Maui County, where, where were you born? \_\_\_\_\_
7. Do you own or rent your residence?    Own    Rent
8. Approximate Household Income:  
Under \$40,000    \$41,000 to \$70,000    \$71,000 to \$100,000    More than \$100,000
7. How did you hear about M-Power (e.g., friend, work; please specify)?  
\_\_\_\_\_

We would like to know about how our participants are involved in the community.

8. What organizations/clubs do you belong to (e.g., Rotary, church, etc.)?  
\_\_\_\_\_
9. Are you a registered voter?    Yes / No
10. Did you vote in the 2014 election?    Yes / No

## MPowerMaui Session Evaluation Form 2 of 2 pages

11. In the past year how many times have you attended a public meeting (e.g. county council, commission meeting, etc.)?

Please circle:          None          1-3 times          More than 4 times

About this session:

12. On a scale of One (1) to Five (5) how would you rate yourself on your knowledge and understanding of energy in Maui, **PRIOR** to attending this M-Power session?

1	2	3	4	5
Not Very Knowledgeable		Somewhat Knowledgeable		Very Knowledgeable

13. Please answer the following statements (Yes/No)

☐ I was actively engaged in the session  
☐ I felt my opinions were heard  
☐ I learned a lot from the session  
☐ The information presented was objective  
☐ I enjoyed the session  
☐ The materials were professionally developed  
☐ This M-Power session was more interesting than I expected it to be

14. Do you feel you made a difference by participating?          Yes          No

Please list any other groups or individuals that you think might be interested in participating or hosting an M-Power session: (If you have their contact information, please note it here.)

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**THANK YOU FOR PARTICIPATING IN M-Power!**

If you have additional questions or comments, feel free to contact [info@medb.org](mailto:info@medb.org).