

# Hawaii Clean Energy Initiative

## Energy Efficiency Charrette Summary

### Introduction

On September 26 and 27, 2017, the Hawaii Clean Energy Initiative (HCEI) and the Hawaii State Energy Office (HSEO) hosted a second charrette of a series on energy efficiency. This followed on the first charrette which occurred on May 8 and 9, 2017. Information about both charrettes can be found at the HCEI website ([www.hawaiiicleanenergyinitiative.org/efficiency-charrette](http://www.hawaiiicleanenergyinitiative.org/efficiency-charrette)).

The second charrette drew over 40 energy efficiency stakeholders to follow up on matters discussed at the first charrette. A list of organizations that attended the charrette as well as the number of representatives from each organization is attached to this report as Appendix 1. As with the first charrette, a priority for the second charrette was to highlight matters important to energy efficiency implementation, especially ones that may limit results for this important resource.

The Regulatory Assistance Project (RAP) worked with HSEO staff to organize these charrettes and prepared this summary.

### The Agenda

The agenda is attached as Appendix 2. Featured topics, drawn from priorities discussed last time, included:

- Planning for Energy Efficiency for the Modern Grid and the Modern Customer
- Innovations in Energy Efficiency
- Exploring Energy Efficiency Opportunities, especially concerning Hawaii Energy and the PUC
- Paying for Energy Efficiency
- Discussion among the assembled stakeholders and government officials about the future of Energy Efficiency in Hawaii

The charrette was facilitated by Rich Sedano of The Regulatory Assistance Project and remained in plenary with no breakout groups so everyone could hear all remarks.

### Findings and Insights

In this section, key words in each paragraph are bolded to focus attention on the key point.

Some important matters are under the **jurisdiction** of the state while others are under the jurisdiction of counties. Counties welcome insights from statewide conversations to help them implement their parts in consistent ways across the state.

The state of **building technology** continues to change and to challenge energy efficiency planning. Pivotal, the use of storage in residential and commercial buildings is growing, following the growth of on-site photovoltaic (PV) generation. These trends are likely to influence the time of day when energy efficiency is most valuable, and influence program design. Yet, distribution planning remains a largely opaque process, not integrated into energy efficiency planning. The Hawaiian Electric Companies (HECO) reports that it is taking steps to open the distribution planning process to better account for temporal and locational values, creating opportunity to work better with Hawaii Energy to provide improved input for program design. Continuing to improve lines of communication between HECO and Hawaii Energy was an important takeaway.

There was agreement that there is potential for **innovation** in energy efficiency and a recognition that Hawaii Energy is making progress with program innovation. Sources of innovation come not only from technology but also from the ways programs can be designed to be more appealing and useful to customers. One example is in a category of programs called Strategic Energy Management. Strategic Energy Management focuses on larger customers and their continuing needs over time.

**Consumer perspectives** on clean energy were an important part of the discussion. Statewide energy goals flow from a long-term view for the benefit for the state. Challenges in engaging with consumers on energy efficiency include convincing them of the stream of benefits to come following the immediate investment, and assuring advocates of the many segments of consumers that energy and cost saving opportunities are available to all. Consumers are also concerned that technology may enable customers with means to exit the grid to the disadvantage of other customers. This issue goes well beyond energy efficiency in its implications, and there are many reasons for customers to remain grid-connected.

The **PUC** has oversight over many docket issues in which energy efficiency is important. Some of these recur, while others will emerge in 2018. These include: rate case (including how the utility earns net income), public benefit fee, Hawaii Energy programs, HECO capital improvement, power supply improvement, Grid Modernization, Distributed Energy Resources (DER) (including distribution planning), and Wheeling. There is a lot going on! Participants in the charrette would like to see the PUC manage its work in a coordinated way designed to address matters under its control that were discussed during these two charrettes.

One direct connection made during the charrette was to connect with the Public Benefits Fee Administrator (**PBFA**) management team. The PBFA team operates under a contract with the PUC and its public meeting practices and obligations present on-going opportunities for the public to engage on energy efficiency. These charrettes were conceived out of a sense that there has been inadequate public discussion about energy efficiency. If the PBFA team takes on a mission of engaging with stakeholders, this structural solution may serve on-going purposes addressed by these charrettes. This charrette was scheduled to enable participants to also attend the Energy Efficiency Portfolio Standards (EEPS) Technical Working Group meeting immediately following the charrette.

More generally, participants wanted to talk about how institutions (government and its contractors), the utility, private sector innovators, and other stakeholders could better communicate and engage in **outreach**. Recognizing the role of institutions and utilities to convene, and also recognizing that Hawaii is a relatively small state with geographic challenges associated with being a series of islands, participants had many ideas. For any public engagement commitment to have significance, leaders in these organizations would follow up on these ideas. Among these ideas, which could be seen as stand-alone or grouped:

- Social media messages and other modern public relations tactics
- Using communication as part of a resource strategy to draw out efficiency
- Use existing HECO outreach groups
- Use the language of everyday people, not of a regulated industry
- Pop-up community engagement
- Pilots and demonstrations oriented around community
- County specific activities
- Embrace the 100% renewable energy goal and drive home the importance of energy efficiency to accomplish the goal in the cheapest way
- Celebrate and imitate what works

### Areas of Progress

Hawaii associates **economic development** with energy efficiency.

Hawaii has adopted a modern **building energy code** that will contribute to a higher quality building stock and raise the standard of efficiency.

The **EEPS Technical Working Group** has been reset with new staff, and appears to be working with Hawaii Energy to bring more innovation to programming. HECO is also involved in this work.

### Areas Needing More Attention

As an overarching observation, the items noted here have Hawaii-specific aspects, but are on the to-do list of all states interested in clean energy technologies - and a customer-oriented future. Addressing these issues is more of an acute issue in Hawaii because of the state's energy and environment goals.

**Planning** was an important topic for this session. Planning occurs in many organizations, and some suggested that energy efficiency may be more effectively deployed if planning is more coordinated by those doing it.

The second charrette addressed ways to follow up on the discussion about **data** that was so important in the first charrette. This charrette was clear that more data exchange between HECO and Hawaii Energy would likely be beneficial and that some data feedback to customers would be helpful in promoting responsiveness. Some suggested a "warehouse" approach used in another economic sector as a model for organization and access of building and system data

that could better support energy efficiency though funding for such an approach is uncertain. A more definitive resolution on data may require more knowledgeable and committed people on the topic than were able to participate this time. Future sessions may be able to develop this issue further by assuring the right people are in the room.

On a different plane of **communication**, some participants expressed dissatisfaction with the way the public hears messages about energy efficiency.

While participants at this charrette discussed **electrification**, especially of transportation, as an aspect of energy efficiency program innovation, there was neither the time nor the right people participating to dig into this topic successfully.

During the May 2017 charrette, missed opportunities to **integrate energy efficiency and demand response services** were identified. During the September 2017 charrette, no further progress occurred.

Integration of energy efficiency and demand response represents one of many opportunities to **demonstrate** new approaches to energy efficiency. Participants expressed an appetite for more demonstrations, characterized by more ambition and a higher tolerance for the risk of failure as long as learning and progress result.

The discussion about paying for energy efficiency addressed the connections between energy efficiency and **finance**. This is a ripe-yet-challenging subject that Hawaii Energy and the HSEO will be working on together with other partners to provide new funds from the financial community. This may have implications for program evaluation, measurement and verification of savings (EM&V) if EM&V results will have a use in providing confidence to sources of finance capital.

Even as there is opportunity for innovative financing of energy efficiency, significant funds for energy efficiency as a system resource, as with other system resources, comes from utility customers through their bills. A question which the charrette could not answer was whether it is possible for the energy efficiency goals and ambitions of Hawaii to be satisfied with the **Public Benefit Fees** from customers through utility bills. Some suggest the answer is “no.” If that is true, energy efficiency is the only system resource with a distinct constraint on raising funds for public interest purposes.

In addressing how to motivate more money to flow toward energy efficiency, the charrette addressed emerging ideas, including performance regulation and other market-oriented approaches. These ideas will require significant soul searching at the PUC before being implemented. Participants also discussed new ways to think about benefit/cost analysis, but this would only matter if there were no practical limit on public benefit funds. With a limit, a new benefit/cost regime would only change the programs, not add to them.

Utility **rate design** was acknowledged to be incompatible to promoting all cost-effective energy efficiency. The charrette did not address the challenging nature of changing rate design and the risk that some customers may become worse off with the new design. Technology, notably

storage technology, may be a new way to ameliorate this challenge by offering all customers a reliable opportunity to benefit from a different rate design.

The question of the **role of government** in stimulating innovation came up frequently. Participants would like to see the PUC and the HSEO do all they can to promote innovation in energy efficiency programs. The charrette did discuss ways the PUC can use its authority to manage its dockets and signal to stakeholders its interest in proposals from HECO and Hawaii Energy and others that will tend to promote innovation along with the public interest.

## Conclusions and Closing Observations

This September charrette picked up on important matters raised in May. Attendance was lower by more than one-third, which is concerning, but critical stakeholders were present, including environmental organizations, private sector energy service companies, and consumer advocates who invested significant time to advance understanding.

Public engagements of this kind are valuable to raise awareness, but the issues must translate to decision-making forums at the PUC or the State Legislature to turn good ideas into action and to engage stakeholders interested in truly advancing the dialogue. The central and most effective next step, then, is to turn the excellent ideas and opinions surfaced in these two charrettes into action-oriented investigations or proposals in the applicable venue.

## Acknowledgements

This charrette was driven by the Hawaii State Energy Office (HSEO) with the continuing support of the Department of Business, Economic Development, and Tourism. The HSEO staff handled many of the details of the sessions with grace. The staff of the PUC including the Hawaii Energy contract administrator were vitally helpful in creating this agenda and contributing to the charrette. The participants were informed and passionate about energy efficiency and were generous in their contributions.

## Appendix 1



### **Energy Efficiency in Hawaii: Exploring Improvements through a Community Charrette September 26-27, 2017 Attendee List**

\*The number in parentheses () represents the number of employees who attended the charrette.

2050 Partners, Inc. (1)  
Ameresco, Inc. (2)  
Blue Planet Foundation (1)  
CAD Consulting (1)  
Department of Commerce and Consumer Affairs - Division of Consumer Advocacy (2)  
Elemental Excelerator (1)  
Hawaii Automobile Dealers Association (1)  
Hawaii Center for Advanced Transportation Technologies (HCATT) (1)  
Hawaii Energy (1)  
Hawaii Green Infrastructure Authority (2)  
Hawaii Island Economic Development Board (1)  
Hawaii Public Policy Advocates (1)  
Hawaii State Energy Office (9)  
Hawaiian Electric (2)  
Jeanne Unemori Skog, LLC (1)  
Maui Economic Development Board, Inc. (2)  
MK Architects (1)  
NORESO (1)  
Oahu Economic Development Board (1)  
Oceanit (1)  
Office of the Governor (1)  
Public Utilities Commission (3)  
Renewable Energy Action Coalition of Hawaii (REACH) (1)  
Sustainable You (1)  
TFC Utilities (1)  
The Regulatory Assistance Project (1)

## Appendix 2



### **Agenda** **Energy Efficiency in Hawaii: Exploring Improvements through a** **Community Charrette** **September 26 and 27, 2017**

At the Energy Efficiency Charrette on May 8 and 9, 2017, a community of stakeholders identified several ways to improve outcomes in Hawaii. At this charrette, the community will have the opportunity to make specific commitments and plans, building on the discussion last time, to more fully realize the potential of energy efficiency.

#### **Day One, September 26**

- 9:00 – 9:30 a.m.      **Arrivals, Welcomes, Review Agenda, Introductions**  
Hosted by **Carilyn Shon**, DBEDT and **Rich Sedano**, Regulatory Assistance Project  
During this period, in addition to brief introductions, we will start the process of noting the priorities of participants, using the report from the May charrette as a reference.
- 9:30 – 10:00 a.m.      **A Review and Reflections from May Charrette**  
Participants will dig deeper into the account of the May charrette for guidance on opportunities to improve energy efficiency outcomes and process in Hawaii.
- 10:00 – 10:15 a.m.      **Break**
- 10:15 - 11:15 a.m.      **Planning for Energy Efficiency for the Modern Grid and the Modern Customer**  
A discussion of fully valuing energy efficiency in the power system and integrating new technologies and techniques into energy efficiency program design, including improved use of customer and system data to inform decision-makers, applying upgraded building energy codes and integrating energy efficiency into utility resource planning and investment.
- 11:15 – 11:45 a.m.      **Lunch at the sandwich bar**
- 11:45 a.m. – 12:45 p.m.      **Innovations in Energy Efficiency**  
**Rich Sedano** will moderate a discussion about energy efficiency program innovations.

## Day One, September 26, continued

12:45 – 1:00 p.m.

**Break**

1:00 – 2:00 p.m.

### **Exploring Energy Efficiency Opportunities**

The PUC is a vital forum and sets the standard for achievement for the Hawaii power sector. This includes HECO and Hawaii Energy and how they work together to use funds collected from Hawaii utility customers to invest in the utility system, buildings and processes. We will discuss the various PUC processes that affect energy efficiency and consider how these can be updated to reflect new opportunities to serve the public interest.

2:00 – 3:00 p.m.

### **Paying for Energy Efficiency**

A brief discussion about how the system benefits charge is working to support a reliable flow of funds for the energy efficiency resource as compared with other resources.

Adjourn at 3:00 p.m.

## Day Two, September 27

9:00 – 9:15 a.m.

**Welcome, check in with participants**

9:15 – 9:30 a.m.

### **Recap of Day 1 and Results of Contributions from Participants**

**Rich Sedano** will report.

9:30 – 10:30 a.m.

### **Looking to the Future of Energy Efficiency in Hawaii: Discussion of Key Ideas**

**Rich Sedano** will lead a discussion of results of day 1.

10:30 – 10:45 a.m.

**Break**

10:45 a.m. – 12:00 p.m.

### **Discussion Resumes, Focuses on Next Steps**

**Rich Sedano** will continue the discussion with an emphasis on what this community wants next and whether and if so how another session would be useful.

Adjourn at 12:00 p.m.