

IGP Stakeholder Council Meeting
Wednesday, June 23, 2021
8:00am - 11:00am
WebEx

Attendees

WebEx

Colton Ching, HE
Marc Asano, HE
Christopher Lau, HE
Alex de Roode, Maui County Energy
Commissioner
Audrey Newman
David Parsons, HPUC
Dean Nishina, DCA
Derek Stenclik, Telos Energy
Gerald Sumida, Carlsmith Ball
Henry Curtis, Life of the Land
Jacqui Hoover, HIEDB
Jeremy Laundergan, EnerNex
Keith Yamanaka, DoD
Kirsten Turner, HSEO
Kylie Cruz, Blue Planet
Matthias Fripp, Ulupono
Murray Clay, Ulupono
Noelani Kalipi, Progression HI Offshore
Wind
Paul De Martini, Newport Consulting

Richard Rocheleau, HNEI
Robin Kaye
Rocky Mould, HSEA
Samantha Ruiz, Ulupono
Terry Surles, HNEI
Wren Wescoatt, Progression HI Offshore
Wind
Christopher Kinoshita, HE
Collin Au, HE
Brian Lam, HE
Ryan Murai, HE
Rebecca Dayhuff Matsushima, HE
Greg Shimokawa, HE
Isaac Kawahara, HE
Yoh Kawanami, HE
Robert Uyeunten, HE
Talin Sokugawa, HE
Kurt Tsue, HE
Mahina Martin, HE
Jennifer Zelko-Schlueter, HE

Agenda

- IGP Workplan and Schedule Update
 - Technical Advisory Panel
- Key Questions and Objectives
- Scenarios and Sensitivities
- Solar and Wind Resource Potential Update
- Discussion and Next Steps

Discussion

- I. IGP Key Questions for Today
 - a. Stakeholder: One of our suggestions was to add another person from the National Labs. Is that still being investigated?
 - i. HE: Yes, we've reached out to a few folks.
 - ii. Stakeholder: I think that is a good idea. My suggestions would be someone from Sandia, Berkeley, Oakridge.
 - b. Stakeholder: The TAP Chair may need to be more than a volunteer position. How do you pay them? How do you ensure their independence/objectivity if they are paid by the utility?
 - i. Stakeholder: A structure is being developed that will help ensure their independence. Contracting someone from the National Labs could be an option. They have a reputation of being independent. They may not have the familiarity with local issues but they would have the appropriate technical knowledge.
 - ii. Stakeholder: The current Chair's network of contacts and experts has been valuable.
 - iii. Stakeholder: Another consideration is the interrelationship between the TAP and Stakeholder Council.
 - c. Stakeholder: How is the TAP's role changing?
 - i. HE: TAP has already vetted some of our work products that lead to improvements.
 - ii. Stakeholder: Information to the TAP needs to be much more focused. Materials need to be organized in a way to ask direct questions to get good feedback.
 1. Stakeholder: Same sentiment with Stakeholder Council. Discussions of big issues evolve into more focused parts.
 - d. Stakeholder: What's the difference between STWG and TAP?
 - i. HE: Working group is more to have industry experts conduct deeper dives on materials. TAP is focused on more technical details.
 - ii. Stakeholder: TAP was originally proposed by HECO. It's a good idea to have that group review technical issues. In the end, we want to have something like the TAP in place. What is the timing on these adjustments and how long will Rick be in the role of Chair?

1. Stakeholder: Agree it's an important group. Want to work on the transition; this won't be a next week or two type of decision. Want to have a smooth transition.

II. Scenarios and Sensitivities

- a. Stakeholder: What is meant by addressable market?
 - i. HE: Meant to be the pool of potential customers that would be adopting DER in each year. Over time, the saturation would increase.
- b. Stakeholder: Are people going off grid considered in the bookend?
 - i. Stakeholder: HECO explored grid defection in the last planning process but it was confidential and not disclosed to the public.
- c. Stakeholder: What is EDR?
 - i. HE: Emergency demand response, to address reliability concerns when the AES coal plant retires on Oahu. May also be implemented on Maui for Kahului power plant.
- d. Stakeholder: Caution that the "worst case" bookend scenario could be self-fulfilling. The bookends are a reasonable concept but need to be appropriately defined.
 - i. TAP: The bookends are meant to facilitate discussion and provide direction rather than set the resource plan. Depending on the results of the bookends, more detailed analysis may or may not be needed.
 - ii. Stakeholder: Another way to look at it is even before we had electric vehicles, distributed PV, etc., the utilities have not done a good job of forecasting base load so when you add these other variables, the range of uncertainty becomes very wide. We push for bookends because we are not sure how certain things will unfold. We want to see the possibilities so that we can try to avoid bad outcomes through policy or other actions. Agree you don't want to just go to the worst case but it's always good to have an eye on what the worst case is.
 - iii. Stakeholder: Having the bookends informs the directions you may or may not want to go.
 - iv. Stakeholder: The bookend concept was to look at the low and high ends and see if they all say the same thing. If they all say to build solar and storage with different timing, then maybe it doesn't matter.
 - v. Stakeholder: Think what we will see when we plan to go to 100% is that we can't do it without maximizing energy efficiency and managed electric vehicle charging.
- e. Stakeholder: Why is the market forecast for DER used in the Slower Customer Technology Adoption and High Load scenarios?
 - i. HE: Market forecast is the original rooftop PV forecast that we proposed in the inputs and assumptions. It was based on feedback received that the current market forecast is the slowest because it assumes that customers would only self-supply. The Base case expectation is that the actual DER adoption rate would be faster. We can clarify that the market forecast is what is assumed to be the low bookend for DER.

- ii. Stakeholder: Is time of use constant or variable? Changing the pricing signal could be a way of creating a bookend.
 - 1. HE: As an example, for high load, we could assume low adoption of time of use so that generally, people are adding to the peak.
 - 2. Stakeholder: Want to put in a plug for dynamic pricing. Eventually we should get to a point where you are buying and selling power at a marginal cost that is live.
 - f. Stakeholder: Is it possible to get to 100% renewable energy without infrastructure upgrades?
 - i. HE: That is the intent of the No Future Transmission Infrastructure sensitivity.
 - ii. Stakeholder: What tools will be used for this sensitivity?
 - 1. HE: We are taking the NREL solar and wind potential that was done and clustered it for different parts of the island. We then use PSSE and run power flows to see what new transmission may be needed to interconnect the renewables zones into the transmission system.
 - g. Stakeholder: The potentials seem extremely high, maybe by a factor of 10. What assumptions were used? Are they near transmission? Slopes? Before we treat it as a hard input that we can rely on, we need to understand what goes into that.
 - i. Stakeholder: These models to assess resource potential are good as screening tools as a first start but then you really need to look at the socio-economic land uses. Have to be careful you don't get carried away with what is possible.
 - h. Stakeholder: Can we see the REZ cluster and have input on that?
 - i. HE: That will be shared in a future meeting. The decision to develop a renewable energy zone will be a much longer process. Want to see if it is in the realm of economically feasible.
- III. Solar and Wind Resource Potential Update
 - a. Stakeholder: Areas around the DoD ranges have buffers that limit development. There are agreements in place with the State.
 - i. Stakeholder: Are those published?
 - 1. Stakeholder: No, that information would come from the DoD.
 - ii. Stakeholder: Is there potential for solar development on defense land to meet defense load?
 - iii. HE: There are Federal rules for how they contract property to get the highest and best value for properties under their control through an RFP process. Each agency has their own interpretation of how they apply the rules.
 - 1. Stakeholder: From a practical solar developer point of view, we don't consider DoD land as viable. I would hesitate to put that into the model.
 - 2. Stakeholder: Against making DOD land available due to the complexity and restrictions. Even if that land can be developed,

the DoD would still need to decide whether that land is available and the “highest and best use” policy could make the cost of that land very high.

- b. Stakeholder: Where are the existing transmission lines in relation to the resource potential?
 - i. HECO: Will add the existing transmission lines to the resource potential map.
- c. Stakeholder: What is the assumption for transmission costs?
 - i. HE: The current assumption is that new transmission would be overhead.
- d. Stakeholder: How does the No Onshore Development sensitivity differ from the No Future Transmission?
 - i. HE: The No Future Transmission would continue to allow grid-scale resources to be built under the existing infrastructure.
- e. Stakeholder: Some of these resources, like offshore wind, could bring state wide community opposition.
 - i. Stakeholder: We have DoD land issues that are still not resolved. A no offshore wind sensitivity may be needed because offshore wind tends to be the “filler” resource. Would be interesting to see what level of renewable we can get to and what would need to be done if we can’t get offshore wind.
 - ii. Stakeholder: By 2045, there could be a big battle for allocating land between agriculture, renewable generation, and renewable fuel.
 - 1. Stakeholder: The State Energy Office is developing a community engagement program. That is one issue the program could consider.
 - iii. Stakeholder: Consider the possibility of a real statewide grid that interconnects all the islands. It would be something broader than the undersea cable proposed in the past. Things have changed since then. There are real, potential benefits now to connecting all the islands, more than just bringing energy to Oahu as proposed in the past.
 - 1. Stakeholder: When HNEI was looking at bringing energy from other islands to Oahu, the topic went away because PV prices plummeted. One caution is that people try to assume certain scenarios but a scenario you choose may not happen.
 - 2. HE: The cost savings of interconnecting the three major islands (Oahu, Maui, and Hawaii Island) was looked at in PSIP. No cable costs were assumed. One of the big findings was that there are significant cost savings, and the value is greatest when the cable is available earlier and renewable projects are deferred until the cable is in place.
 - iv. Stakeholder: Is there a limit to onshore wind?
 - 1. HE: We’ll need to agree on what potential we should use. The plan is to make all resource options available. The real intent is to identify need and let the market dictate solutions.

- a. Stakeholder: That's consistent with my general approach to throw everything in, then see what is least cost and see if that is something we can do from a community perspective.
 - v. Stakeholder: The community can be reasonable if they are involved the entire way. If you wait until they are already upset, then it will be difficult to gain their trust. If you wait and put the plans in front of them later, it is going to be harder.
 - 1. Stakeholder: Do you think the IGP process is doing a good job of that?
 - a. Stakeholder: I think it is opaque. We can't do the entire study then go to the community with it.
- f. Stakeholder: It's vitally important to keep all of the options open. We need a "Yes, And" approach, not a "Yes, but" approach. No question that community will have the largest impact on what ultimately happens – but it behooves the utility to consider all options and to be prepared for all scenarios which is why the sensitivities and modeling is important.
 - i. Stakeholder: Meaningful community engagement needs to start now. Presenting the results to the community after the analysis is done is repeating the same mistakes.
 - 1. HE: Agree that community engagement is important. The planning in IGP is intended to only be one part of that conversation. The procurement and development of resources is another topic.
 - a. Stakeholder: To add to that, one of the State Energy Office's major finding is that the community, and even legislature, doesn't understand that Hawaii is not a planned economy; it is a market economy.
 - ii. Stakeholder: Wasn't there a community engagement part in IGP in the beginning? Incorporate community into the analysis now.
 - iii. Stakeholder: It may not be appropriate for the community to comment or screen the resource plans too early. These plans may not be technically or financially feasible. The process at the end may result in 10 feasible plans; that should be where the community would weigh in.
- g. Stakeholder: Are there still plans to limit biomass and biofuel?
 - i. HE: We can revisit that.
- h. Stakeholder: For the purposes of this analysis, it seems that we intend to be optimistic about resource potential from all technologies and accept high potential numbers to remain resource-agnostic. If that is the case, then we need to be careful not to use the large potential estimate from one resource as data to suggest that we don't need another.

Summary and Next Steps

- Stakeholders may provide feedback on today's discussion to IGP@hawaiianelectric.com