



**Hawaiian Electric Companies
Integrated Grid Plan Stakeholder Council (IGPSC) Meeting
January 16, 2020**

AGENDA
❖ Welcome
❖ Forecast (FAWG)
Break
❖ Planning Assumptions
❖ Resilience
Break
❖ Interrelationships and Dependencies to Other Dockets
❖ Public Meeting Preview
❖ Technical Advisory Panel (TAP) update
❖ Next Steps and Closing

I. STATUS UPDATE

A. Stakeholder Council: Integrated Grid Plan Stakeholder Council (IGPSC) members, including those present at the meeting, denoted with an asterisk:

Stakeholder	Name	Affiliation
HPUC	Dave Parsons	Chief of Policy & Research
Consumer Advocate	Dean Nishina*	Division of Consumer Advocacy
DBEDT	Scott Glenn	Hawai'i State Energy Office, Energy Administrator
DOD	Keith Yamanaka*	USAG-HI, Directorate of Public Works
Large CI&I Customer	Barry Usagawa	Board of Water Supply
Community Delegate (Hawaii)	Jacqui Hoover*	President of Hawai'i Leeward Planning Conference and Executive Director & COO of Hawai'i Island Economic Development Board (HIEDB)
Community Delegate (Maui)		Founder and Lead Researcher for High Performance Energy Resilient Communities

Community Delegate (Moloka'i)	Barbara Haliniak	Owner, The Business Depot, Inc., and President, Moloka'i Island Foundation
Community Delegate (Lana'i)	Alberta DeJetley	Publisher and Editor of Lana'i Today, Owner, Albert's Farm, member of Lana'i Chamber of Commerce
Community Delegate (O'ahu)	Pono Shim	President & CEO at O'ahu Economic Development Board
Local Gov't (Hawaii)		County of Hawai'i Deputy Director, Dept. of R&D
Local Gov't (Maui)	Alex de Roode	County of Maui Energy Commissioner
Local Gov't (O'ahu)	Robert "Rocky" Mould*	County of Honolulu, Energy Program Manager, Office of Climate Change, Sustainability and Resiliency
Sustainability Advocate (Local)	Murray Clay	Ulupono Initiative
Sustainability Advocate (National)	Merrian Borgeson	Natural Resources Defense Council (NRDC)
Small Solar & Storage	Chris Debone	DERC
Demand Response	Yvette Maskrey	Honeywell
Energy Efficiency	Brian Kealoha*	Hawai'i Energy
Electric Vehicles	Melissa Miyashiro	Blue Planet
Environmental Advocate	Henry Curtis	Life of the Land
IPP (utility-scale resource)	Gerald Sumida*	Carlsmith Ball LLP
Chair of TAP	Rick Rocheleau	Hawai'i Natural Energy Institute (HNEI)

B. Additional Attendees- members of the public and represented entities also involved in the IGP, including those present at the meeting, denoted by asterisk.

Name	Affiliation
John Cole*	Hawai'i Natural Energy Institute (HNEI)
Terry Surles*	Hawai'i Natural Energy Institute (HNEI)
Wren Wescoatt*	Progression HI Offshore Wind/Progression Energy
Kylie Wager Cruz*	Earthjustice
Jeremy Laundergen*	EnerNex

C. November 19, 2019 Meeting Recap:

1. Discussion centered around the challenges that Hawaiian Electric faces and updates provided from IGP Working Groups, including presentations from the:
 - Forecast Assumptions Working Group
 - Distribution Planning Working Group
 - Competitive Procurement Working Group
 - Solution Evaluation and Optimization Working Group
 - Resilience Working Group
2. Prior to this meeting, feedback was solicited and incorporated into agenda topic discussions.

II. Forecasts

A. Forecast- Presentation of sales forecast, including where we've been and what's ahead

1. Presentation: Review of the Forecast Assumptions Working Group (FAWG)
 - Convened in March 2019.
 - Reviewed who our customers are, what we forecast and a high-level overview of how we develop the forecast.
 - Assembled panel of experts, discussed Distributed Energy Resources (DER), Energy Efficiency (EE), Demand Response (DR) and Electrification of Transportation (EoT) from the perspective of customers, program administrators and designers, industry and consultancies perspectives.
 - Discussed methodologies used to develop the forecast and also heard from other utility forecasters who are members of the FAWG.
 - Presented assumptions to use in forecasts.
 - Currently working on refining the assumptions based on the FAWG's feedback and developing forecasts.
 - Will present refined assumptions and preliminary forecast for EE, DER and EoT at the FAWG meeting at the end of January 2020.
 - Provided details on the methodology used for forecasting and assumptions considered for DER, EE and EoT by island in determining load forecast. Will be sharing the forecast at the next Stakeholder Council meeting.
2. Fuel Price Forecast- Developed based on the correlation between the historical fuel prices and Brent forecast from 1983-2018.
3. Resource Cost Sources- Cost data comes from a variety of sources—Department of Energy, NREL, EIA, IHS Markit, and Hawaiian Electric. External sources provide resource costs in mainland dollars. We apply cost adjustments for Hawai'i including applicable federal & state tax incentives as well as interconnection costs developed by Hawaiian Electric.

B. Key discussion points:

1. Forecasting clarification- Although the slide showing the forecast was illustrative, it was based on a previous forecast that shows the relative magnitude between each component of the forecast (underlying, DER, energy efficiency and EoT).
2. Energy Efficiency- A good portion of our energy needs are going to be impacted by efficiency. This is one of the biggest components in the portfolio of resources that ultimately allows us to serve an entire customer base. Concerted efforts to incentivize efficiency should be explored. We know that even though some customers may have PV on their houses, that does not necessarily mean that they are more efficient. The efficiency forecast that will be used in the IGP forecast will be aligned with the preliminary energy efficiency market potential study results developed by Applied Energy Group. Impacts from codes and standards are included.
3. Sensitivities: We are proposing to develop sensitivities around the “layers” to provide a range of forecasts to plan around and meaningful scenarios.
4. In PSIP, we developed sensitivities around the DER forecasts. For energy efficiency we assumed the 2030 target goal was met and the rate of growth in efficiency would keep up with the load growth beyond 2030. Following PSIP we made simple assumptions like meeting the target goal of 30% reduction of sales by 2030 followed by a 40% reduction by 2045.
5. Energy Efficiency Assumptions: Have seen that residential usage has varied. Those with PV may have lower usage at the meter however, their behind the meter use has increased. SC member expressed that customer usage without PV has gone down over the past few years. While the military might be different, as the technology improves (the chiller equipment hasn't improved) many are working on older equipment. Agree with preliminary assumptions that it is achievable (energy efficiency assumptions) but need to be committed to making sure that it happens.
6. Interconnection Costs: Interconnection costs are a developer cost. It would be ideal to include interconnection costs into the project cost projections but generally those costs are on the developer's side.

III. Planning Assumptions

- A.** IGP Planning assumptions- Presentation of other assumptions used in modeling in conjunction with sales forecast planning:

1. System Characteristics and Operational Constraints

- a. System Characteristics- Assumptions used to characterize the renewable and non-renewable resources of the system on each island.

- b. Operational constraints- Dynamic and may change hour to hour. May also constrain resources that we have and how they can operate.
 - (1) Pairing renewable generators with batteries
 - (2) Fuel contracts
 - (3) Regulating reserve requirements
- c. Regulating reserve requirements- Used to maintain energy balance resulting from a sudden change in generation. For example, cloud cover or loss of wind.
 - (1) Proposing in methodology to look at historical data to inform what the requirements should be.
 - (2) Will determine components in four categories
 - DER
 - Load
 - Grid-scale solar
 - Grid-scale wind
 - (3) For each resource and for each minute, the change in generation was calculated over a 1-minute & 30-minute intervals divided by the installed capacity.
 - (4) Group the changes by the time of day for each month, then calculate what the average is, as well as the standard deviation. Process would include looking at three standard deviations out to observe the change. The requirements for DER, load, grid-scale solar and grid-scale wind would then be multiplied by the forecasted resource capacities or peak load and then added together to define the total requirement.

2. Model Objectives

- a. RESOLVE (run every 5 years) & PLEXOS models (run annually)
- b. Renewable energy goals- RPS 30% in 2020, 40% in 2030, 70% in 2040, 100% in 2045
- c. Resource and Ancillary Service Needs- In addition to RPS, there is also a need for grid services to support the renewable portfolio:
 - (1) Energy- Continuous, controllable and predictable supply of energy to serve system load needs in response to an Automatic Generation Control signal.
 - (2) Load Reduce- Capacity that can be provided by a generator, storage or controlled load to reduce system load in the required timeframes and durations in response to a remote dispatch signal.

- (3) Load Build- Capacity that can be provided by storage or controlled load to increase system load in the required timeframes and durations in response to a remote dispatch signal.
- (4) Regulating Reserve- Reserve capacity provided by generating and load resources to allow continuous energy balance over the next 1 minute and 20-30 minutes due to variability in renewable resources and load that can be called upon in response to an Automatic Generation control signal.
- (5) Fast Frequency Response- Autonomous and predictable capacity to limit frequency drop resulting from a frequency disturbance.
- (6) Distribution Capacity- Supply or load provided by DER via the dispatch of power from generators or storage to reduce the load on desired distribution infrastructure.
- (7) Distribution Reliability (back-tie)- Load modifying or supply service capable of improving local distribution reliability under abnormal conditions.

B. Key Discussion Points

1. RPS Goals as Floor: There are some formulaic differences, but objective at endpoint is the same. Hawaiian Electric's interim goals include achieving what is stated in the RPS law at a minimum.
2. Unaccounted for factors/information: Understanding that in trying to forecast these costs Hawaiian Electric is using the best information that is available, but ultimately the pricing will be provided by developers in an RFP. Trying to use its best guess as input into planning model to help define what the resources could look like. Even if the RESOLVE models do not exactly reflect resource costs, the developers will provide real pricing in their proposals. This model allows the market to tell us otherwise, if the forecast does not track. If the forecast for a technology is different than what developer can provide, then the market is there to meet the underlying resource needs. Consideration must be given to the cost of the fuel that the system will be using at least for a period of time and need. No one can predict the cost of a PV system in 2030, that's why we're looking at more than just one outlook. We're not banking on just one resource plan for the next 25 years, but where we do have some certainty that the numbers are going to be correct or close. This is why using near-term numbers and re-forecasting as we go along is important.
3. Land Value: Cost of land or land value is not currently included in forecasts. This is primarily because there is no way to know where a project will be sited and the associated land cost. Although posed to the group, there were no solid recommendations provided on how to account for such costs. It is in the procurement process that developers identify where the project will be.

4. Load Build/Load Reduce Services: Energy service defines very specific time frames, characterized by the months, days and hours, that we need energy. Load reduction/build may be more for economic reasons so we can better match existing resources need to the load. There is some overlap for these services. Load services are based on the charge and discharge of a storage resource. It is more to arbitrage and make use of curtailment. A battery can provide a range of different services, although it can provide one service, it can impact the ability for it to provide another service.
5. Required Regulating Reserve: The amount of regulating reserve needed does not correlate directly with the capacity of the system being developed. For a 50 MW solar plant, it does not mean we're adding 50 MW of regulation on that plant. Instead, the methodology will look at data, on average. The historical variability will carry enough representation for not just the worst-case scenario, but an amount we feel confident about. We are currently in transition in looking at regulating reserve operating practices as well as our long-term planning regulating reserve methodologies. The current practices today are based on study work done by GE. The GE methodology is founded on the historical variability for wind and solar and assumed the worst occurrence that the reserve needed to be covered for. This is what was used, plus a cap that said above a certain level for that island, the regulation won't keep increasing proportionally at some point.

We may need to go back and make some adjustments for discrepancies. There is a difference between current practices and what IGP methodology is being developed. Doesn't presume worst case scenario, instead looking at more historical data based on each different resource type, i.e. solar, wind, looking at them separately and not assuming there is a fixed relationship for the variability between one another.

6. Solar Battery Storage Impact on Reserve Needed: We are making the assumption that for a paired resource, storage can provide the regulation for PV. As we get more comfortable with this methodology, will be able to mitigate itself and other systems. As we get some experience understanding the ability to use real data from these resources, we will see what additional functionality, including regulating functionality, we can get from storage.

IV. Resilience

A. Introduction- The Resilience Working Group (WG) conducted meetings & exercises that included breakout sections.

- The Resilience WG will be developing a report, the only WG to do so, to give a reference guide to the IGP Stakeholder Council (IGPSC).
- Framework for meetings- working on a combined definition for resilience and framework for assessing those resilience needs
- Monthly meetings from July-Dec 2019. (6 total)
- Issued draft report to Resilience WG participants prior to 12/16/19 meeting

- Since IGPSC meeting in November, the outstanding item was the Resilience WG report and getting members to review and provide comments. This action item is still ongoing.

B. Report

- Received written comments, currently working on incorporating comments for final report to be included in IGP process, and to be shared with working group members and the general public
- Received input and information on critical customer projects and limitations on those projects and how they were going to address those limitations
- Report recommendations- received over three dozen recommendations that fell under three general categories: utility under the IGP, customer, and utility outside of IGP

C. Prioritizing Threats to Grid Resilience - The Resilience Working Group (WG)

identified the following threats to be considered:

- Hurricane, wind, flood
- Earthquake/tsunami
- Wildfire
- Physical and cyber security
- Volcano

D. Capabilities of Key Customers- What are their capabilities and needs?

- Prioritizing customers & infrastructure sectors
- Key customer capabilities & needs
- Opportunities for critical customers to improve resilience from loss of power events

E. Opportunities to Improve Grid Resilience- Identify critical facilities and their locations on each island

- Characteristics of power grid on each island- understanding where clusters might exist and how to service multiple customers
- Additional options for improving grid resilience

F. Inputs to Integrated Grid Plan

- Resilience related objectives
- Potential solutions and strategies
- Alternative Scenarios
- Harmonization of Resilience with Other Objectives
- Balanced Scorecard of Objectives
- Potential Actions outside of the IGP
- How RWG Input Can Best Be Used

G. Next Steps

- Comments requested up until 1/10/20
- Hope to have a report complete in February 2020 - still incorporating comments, etc. which will take time

- RWG- finalize report and hold any additional meetings as needed

H. Key Discussion Points

1. Jupiter Intelligence: Pursuant to a recent partnership with Jupiter Intelligence, which does probabilistic forecasting, over 25-30 years we will be looking at impacts of 100-year flood or wind event, compounded with sea-level rise. Maps & information will help to provide insight on the impacts of multiple events layered on top of each other. The advantage of this type of forecasting is that it allows us to consider significant concepts like sea-level rise to help make informed decisions about what we do. It provides the ability to look at sea-level rise and flooding at a specific location 10 years from now, 30 years from now, etc., and get a better idea of risk and timeline. The idea being that if you have only 10 years before some event is going to occur, then your options may be different than if you have 30 years to address the same event.
2. Microgrids: Microgrids could be utilized as part of the resource plans. They are a solution that has both generation and T&D potential benefits; however, they may trigger additional requirements depending on where it is located. A microgrid solution is considered on even footing with traditional T&D or generation solutions. However, it doesn't typically compete very well on an economic basis. Microgrids will be looked at as an option including considering the resilience benefit of a microgrid over a traditional solution.
3. Catastrophic Events Impacts: T&D planning is part of IGP and as recommendations are made for future T&D needs, the option of implementing microgrids may provide an alternative to more traditional transmission or distribution solutions. Hawaiian Electric envisions microgrids to be a potential solution for T&D, enhancing resilience and reliability for some situations such as where the load is located at the end of a circuit. The goal is to provide greater resilience for catastrophic events, and increased reliability for other events.
4. Purpose: The purpose of the Resilience Working Group was to identify vulnerabilities and needs. The report from the Resilience Working Group will become an input into the IGP.

V. Interrelationships and Dependencies to Other Dockets

A. Importance

1. The IGP process does not exist in a vacuum and must maintain awareness of other dockets and how they might impact the IGP and vice versa.
2. The IGP and other dockets will be more successful and productive if we are able to look at all things together, to keep them in mind while navigating these processes.

B. Key Discussion Points

1. Hawaiian Electric's approach: Hawaiian Electric looks at long-term resource planning, not driven by efforts to maximize revenues of the utility. The approach considers the customer's perspective, i.e. what solution or set of solutions together provide the lowest cost solution to our customer, while meeting a range of objectives/requirements. This may include more renewables than required by RPS because of the resulting cost optimization for customers.
2. Planning cycle: The planning cycle is a continuous or rolling process that takes into account previous planning analyses and builds/adjusts based on updated information. For example, 5-year planning may include regular updates such as incorporating the RFP results. The IGP process then impacts how you plan the rest of your system. There is no definitive answer currently, but the need exists to have regular updates. This does not necessarily mean wiping the slate clean and starting over with each 5-year plan. Instead, annual updates will likely be more streamlined and narrowly focused to account for major changes and significant events that have occurred since the last update. In this way, the Company will continue to build off the last approved plan to reset the baseline. Then everyone has the updated basis for which other future projects are contemplated.
3. Length of planning cycle: Unclear whether an action plan for next 5 years is sufficient enough due to changes to generation portfolio, which has previously considered transmission in a 2-3-year time frame. To accommodate a meaningful bigger tranche of renewables (that may take longer than 2-3 years) in the future may take longer than the action plan (5-years) will allow.

Long-term planning has been discussed in the Competitive Procurement Working Group, in terms of new generation/storage projects. There are several other technologies that may take longer to develop, and will require longer-term planning, so this discussion has been occurring already.

4. Increased Communication: Hawaiian Electric may consider what it can do to keep the IGPSC and others informed throughout the state legislative session, for example, as to changes to the law that may impact the utility on various levels that might not be readily ascertainable to everyone. Thought could be given to a manner by which interested parties can be kept informed as to areas of common impact to improve coordination efforts.

VI. Public Meeting Preview

A. Public engagement

1. IGP Messaging- What is the IGP, how does it fit into State's 100% renewable goal.
2. Common Language- Want to use common language, speaking to people in language/manner that they can connect with.

3. Progress Update- Provide update on all of the work that's been done thus far and provide information on what's still to come.
4. Working Groups- Provide update on progress from the Working Groups & IGPSC.
5. Building Relations- Use the opportunity to expand reach beyond discussion over the IGP in order to build relationship with customers.

B. Public Meeting Schedule- The tentative schedule for public meetings

Tentative Date	City	Location
March 3, 2020	Kona	Kealakehe High School Cafeteria
March 5, 2020	Hilo	Hilo High School Cafeteria
March 10, 2020	Honolulu	Hawaii Pacific University
March 12, 2020	Kahului	Maui Electric Auditorium
Molokai	TBD	TBD
Lanai	TBD	TBD

5-6pm- Open House
6-7:30pm- Panel Discussion

C. Open House Stations- The following stations will be available during the Open House

- Integrated Grid Planning
- Grid Modernization
- Renewable Energy Grid Scale
- Renewable Energy Rooftop
- Renewable Energy – CBRE
- Electrification of Transportation
- Resiliency
- Careers at Hawaiian Electric

D. Open House Station Boards (Proposed drafts)

- Examples- information and graphics
- Information on IGP content
- How it helps Hawaii get to the 100% renewable goal
- How it impacts customers
- Timeline
- How to provide input

E. Online Open House- Opportunity for those who can't attend to get information and participate/provide feedback, etc.

F. Interactive Survey- How to get people to participate? Working with WG leads to identify questions to use to verify assumptions, will use survey at meetings, online, and at Open Houses.

G. Survey Questions- Worked with WGs to get questions compiled to ask the public, utilizing different formats and drafts.

H. Public Engagement Notification Channels

- Emails
- Ads
- Website
- Social Media- boosted posts to target communities
- Press Release
- Flyers/Banners

I. Stakeholder Toolkit- Designed to help get information out to constituencies, public, organizations/communities

- Stakeholder toolkit launch date- Feb. 5th @ 10am
- Toolkit to contain brochure (8.5 x 11 single fold), presentation, talking points, FAQs, public meeting notifications (postcards, flyers, email)
- Trying to anticipate what type of information and formats are needed to get others engaged.
- Anyone with other ideas, please submit to IGP@hawaiianelectric.com so they can be vetted and prepped for Feb. 5th launch date.

J. Talking Points

- What are people talking about and what type of questions will they have?
- What is it, why should I care, what does it matter to me?
- Audience is the general public
- Any other core questions that the public might have that need to be addressed with talking points?

K. Key Discussion Points

1. Community Engagement Challenges

- Probably anticipating around 100 people to attend each meeting. The intent is to discuss not only IGP, but to have a broader conversation to draw more attendees.
- Understand the difficulty in getting people to attend meetings on their free time, with the challenges of traffic and other obligations so Hawaiian Electric may want to explore other avenues for engagement, including radio programs (HPR), PBS programming, 'Olelo programming, organizations like the

Chambers of Commerce or others who are seeking speakers in order to maximize the audience reached. Consideration should be given to moving back the starting time of the event to allow for more people, including IGPSC members to attend.

- Should try to focus on a broader audience, often those who attend these events are of a certain mindset and/or constituency. Encourage the engagement campaign to reach people where they are, rather than trying to bring them to where you are as a more effective strategy. Engage employers, resort area employers, and explore opportunities to be more encompassing of different groups.
- Notices for meetings should be clear and specific as to the description of what will be covered. Should try to manage expectations of what is going to occur, otherwise people may ask questions that derail the focus. Want to be transparent but want to be impactful and consider the audience.
- Try to address the challenge of reaching the community. Although siting for projects is not determined by Hawaiian Electric, but instead by developers who proposed the project, but do not themselves engage the community prior to commencement puts Hawaiian Electric in the middle and compromises its reputation. Therefore, must determine how do we talk about siting of new projects where IGP is bigger than that where we need X amount of grid scale to get to 100% renewable. Need to be able to explain what IGP is and what its role is in determining that.
- An ongoing challenge is that it is often easy to get small vocal minority to show up, but silent majority does not participate. How do we get the participation of the silent majority?
- Expressed an understanding that the public meetings are only one facet of a broader engagement strategy that includes the online meeting and outreach with the Stakeholder Toolkit.

2. Stakeholder Council Involvement

- Stakeholders Council members are encouraged to attend and represent the IGPSC, provide informal, anecdotal information and perspective to the public throughout the meetings. This will provide a valuable opportunity for the IGPSC members to hear the conversations that are happening, the questions asked, the discussions taking place, and the responses. IGPSC members are also encouraged to invite others to attend.
- Stakeholder Council involvement is requested in the following ways:
 - ✓ Help shape materials and messages
 - ✓ Use of toolkit (in electronic format)
 - ✓ Share notification materials and online meeting link with others

- ✓ Connect with IGP team for assistance with questions and input
- ✓ Attend and participate in the IGP discussion at engagement events

3. Suggested Action/Changes to Engagement Plan

- The objective of the Stakeholder Toolkit is to provide materials to help IGPSA members and Hawaiian Electric to disseminate useful information to the public. The content is important to provide an understanding of what is being communicated and why. This Toolkit is still being developed but may also include a one-pager with relatively plain language covering the IGP and main talking points in electronic format that can be easily distributed by the IGPSA members.
- Engagement may be more widespread if discussion begins with the State's 100% renewable energy goal, how that will be reached, what it will take, what are customers willing to do to achieve this goal, etc. Care should be given in framing questions to ensure that the wrong message is not relayed, or the conversation is not shifted into a discussion about costs when it should be more focused on what you can do to help achieve the State's goal.
- Inclusion of climate change effects.
- Ensure the language of the questions reference statewide communications so as not to cause division amongst the islands.
- Provide more opportunities for people to submit information rather than asking everyone to show up on currently scheduled events. Consider offering other events/opportunities?
- Include the question as to how does this impact industry and economy and more?

VII. Technical Advisory Panel (TAP) Role Change

A. **TAP Role-** The role of the TAP will be expanding. Initially, the TAP was envisioned as a sounding board for changes within the IGP process. TAP was to serve as group to vet assumptions and methodologies used in planning. While it will continue to serve that function, based on guidance from the Public Utilities Commission, the role will likely expand to including analyzing, evaluating and providing feedback on WG activities and review. Currently working with HNEI to look at TAP membership to ensure it encompasses the necessary expertise to review the IGP deliverables.

B. Discussion Points

1. Evolving role: Hawaiian Electric originally indicated that it felt it could conduct the IGP process without an independent observer. The Commission acknowledged

and approved of this course of action but suggested that the TAP might be able to fulfill that role, as a separate entity apart from the IGPSC.

2. Joint Meeting: A joint meeting of the IGPSC, working groups and the TAP could provide a positive opportunity to allow for a sharing of information and exploring what issues should be pursued, new ones identified, etc. May consider coordinating with the TAP to provide valuable input to this process, give advice to the utility and also participate more on the IGPSC and report at each meeting what has been discussed and covered.

VIII. Next Steps/Action Items

- Reminder that the Stakeholder Toolkit launch date is scheduled for Feb. 5th from 10-11am if anyone is able to attend.
- Tentatively, next meeting will be held in February, will get confirmed dates soon (later dates for 2020, March, May, August)

NOTE: A request was made to avoid scheduling IGPSC meeting on May 15th due to an energy conference that will be taking place and many IGPSC members will likely be participating in.

- Summary notes from today's meeting and information on the next meeting dates will be forthcoming.
- IGPSC members can direct questions and feedback to IGP@hawaiianelectric.com.