



**Integrated Grid Planning
Webinar
IGP Working Groups**

January 22, 2019

IGP

INTEGRATED
GRID
PLANNING

A planning process that will

- ✓ appraise the total needs of the system
- ✓ consider all alternatives from customers, independent providers and the utility
- ✓ integrate market-based solutions
- ✓ determine the best resource and grid options for customers
- ✓ be inclusive through stakeholder review and input
- ✓ synchronize and unify resource, transmission, and distribution planning processes
- ✓ streamline process that will optimize energy portfolio



IGP

INTEGRATED
GRID
PLANNING

A mechanism

to build a common understanding of the challenges, opportunities, and tradeoffs involved with enhancing the electric grid to meet customer service expectations and achieve the state's renewable goals.

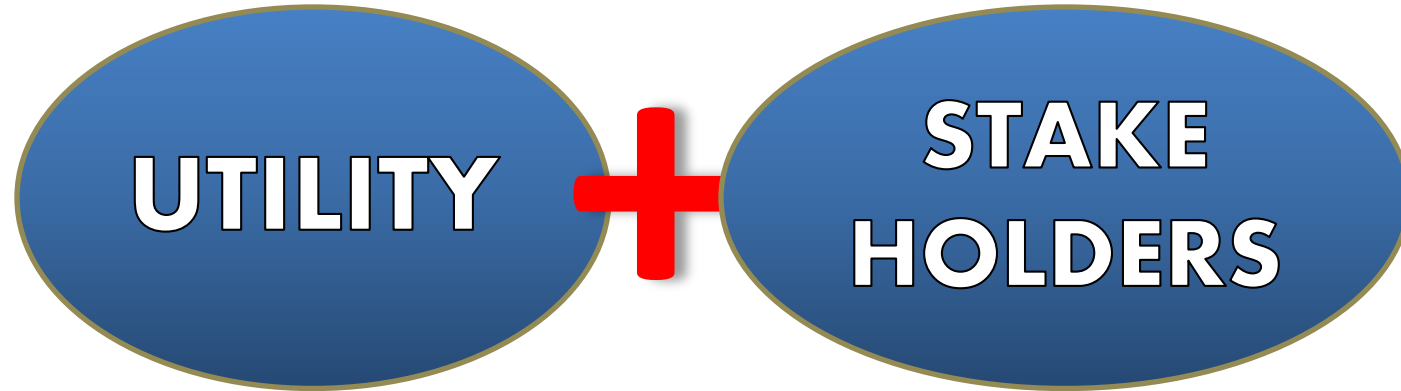
Opportunity

for strategic context to guide discussions that impact planning



**HOW IGP
WILL HELP
RESIDENTS
AND
BUSINESSES**

Through the combined efforts of the utility and stakeholders



customers will benefit from a reliable and resilient grid prepared to meet Hawaii's future needs.



**HOW YOU
AS A
PARTICIPANT
CONTRIBUTE
TO THE
SUCCESS
OF IGP**

Through the lens of our stakeholders and industry partners

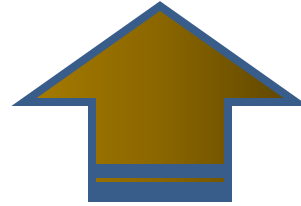
Using your perspective and experience

1. Serve as a sounding board for integrated grid planning process as it integrates market-based solutions, incorporates planning analysis, and demonstrates progress
2. If subject matter expert in a working group: address a specific topic with two-way dialogue and applicable information
3. Connect our IGP team to opportunities in your industry and communities that we can share information about IGP
4. Partner with our company in outreach opportunities you refer to us

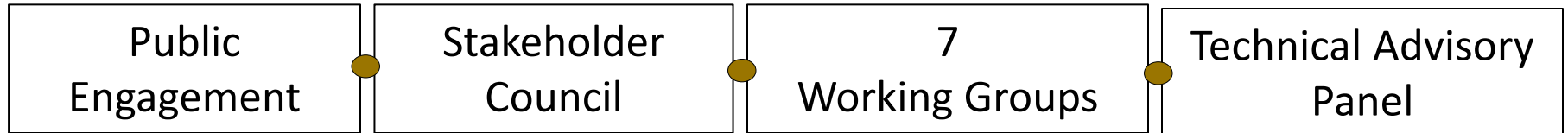
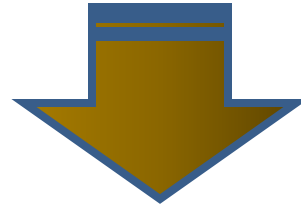


**HOW
WE
WORK
TOGETHER**

Hawaiian Electric Companies
Integrated Grid Planning Process



Input & Feedback
Education & Information



**INCLUSIVE
PLANNING**

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**THE
GROUPS
OF IGP**

Stakeholder Council

- ✓ Provides strategic input and feedback on developing IGP process
- ✓ 4 - 6 meetings throughout year

7 Working Groups

- ✓ Addresses specific topics
 - ✓ Participants are subject matter experts in the working group's scope of work
 - ✓ Meetings could be as frequent as monthly
- Focused on:
- Competitive Procurement
 - Distribution Planning
 - Evaluation & Optimization
 - Forecast Assumptions
 - Grid Services
 - Resilience
 - Standardized Contracts

Technical Advisory Panel

- ✓ Independent peer assessment by industry experts of planning process, methodology, tools, and results



ABOUT THE WORKING GROUPS

Distribution Planning

Technical knowledge of distribution systems, distribution planning, and technologies and capabilities of distributed energy resources to help identify distribution grid needs

Forecast Assumptions

Strategic input on planning assumptions and methodologies used for developing forecasts on consumer energy use

Standardized Contracts

Determine optimal approach for contracting energy, capacity and ancillary services sourced through competitive procurement

Grid Services

Refine current and identify/define additional energy, capacity, ancillary and non-wire transmission and distribution alternative services, and create standard template for defining and quantifying these services

Solution Evaluation & Optimization

Develop transparent evaluation method of assessing technical fit of proposed solutions

Competitive Procurement

Establish a fair, efficient, streamlined procurement process for resources that align with grid plan developed through the IGP process

Resilience

Assess and identify electric system resiliency planning criteria for input into IGP



COMPOSITION OF WORKING GROUPS

- *Distribution Planning*
- *Forecast Assumptions*
- *Standardized Contracts*
- *Grid Services*
- *Evaluation & Optimization*
- *Competitive Procurement*
- *Resilience*

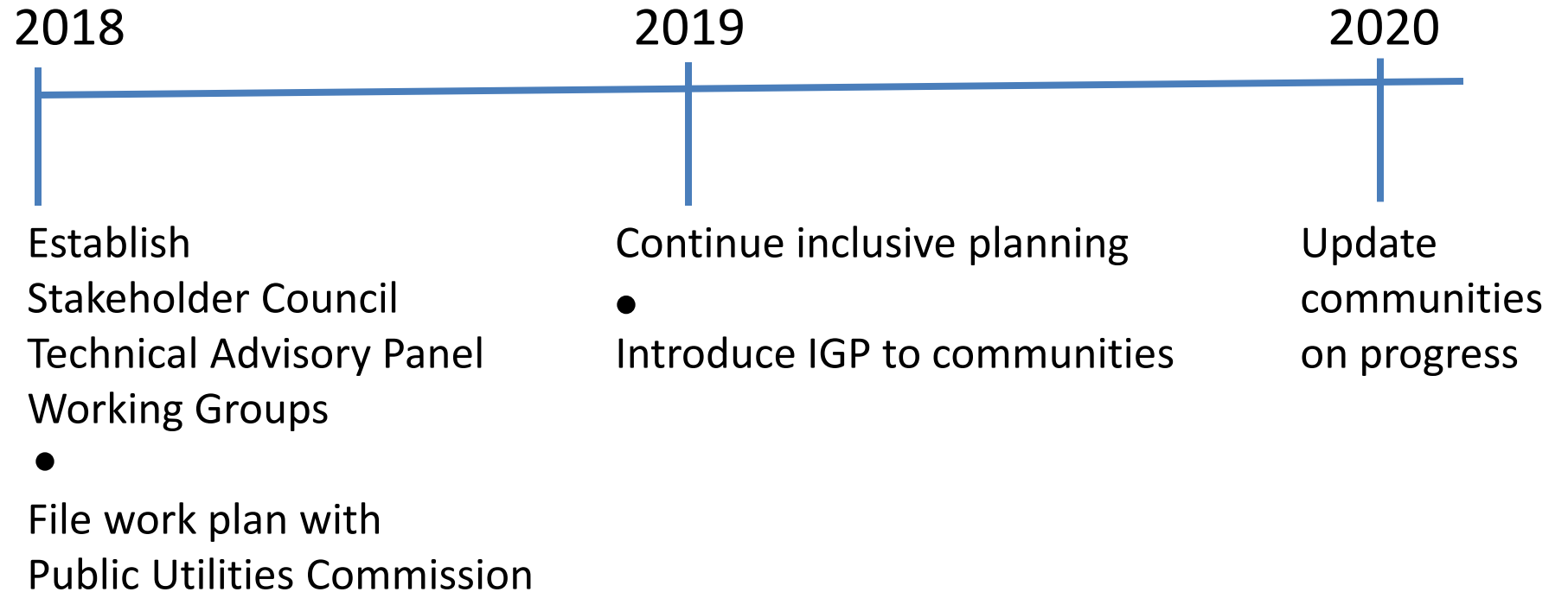
Industry representatives
in the areas of

- Electrification of transportation
- Small solar and solar storage
- Battery storage
- Inverter manufacturing
- Energy policies
- Developer of independent power production

Would you like to refer someone to participate in one of the working groups? ► **Contact: Lisa Giang**



WHERE WE ARE



WHAT'S UP AHEAD FOR IGP

- Complete placement of members in working groups
- Continue inclusive planning process
- Identify opportunities to introduce the integrated grid planning process to interested community groups
- Update Public Utilities Commission on progress



**YOUR
QUESTIONS**

What questions can we help with?



**Hawaiian Electric
Maui Electric
Hawai'i Electric Light**

Mahalo for your time today!

