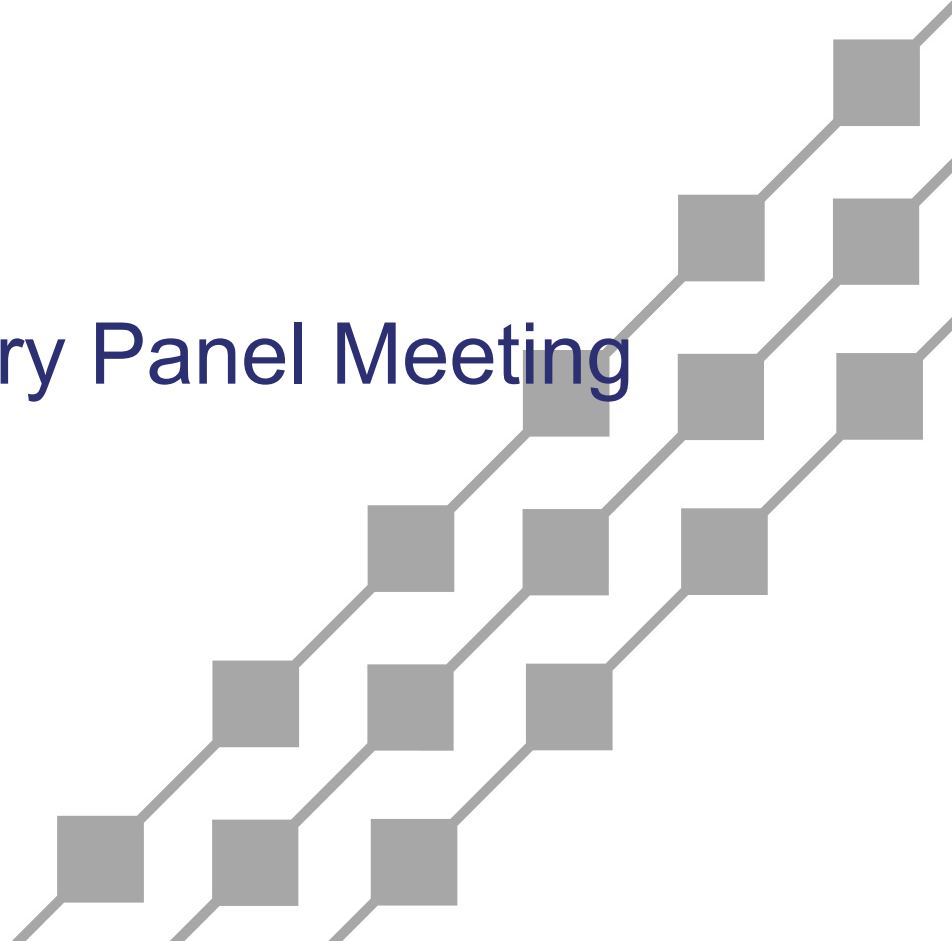




**Hawaiian
Electric**

IGP Technical Advisory Panel Meeting

February 24, 2021



Agenda

Purpose: Position TAP to address commission guidance and concerns regarding IGP and its models while simultaneously advancing other proceedings before the commission

- 1. Recap of Last Meeting**
- 2. Background – Commission Guidance**
- 3. Proposal for Path Forward**
- 4. Key Areas to be Addressed**



Recap of last meeting

- ◆ Suggestions incorporated
 - Grid Service Capability by Technology Table
 - T&D capacity for standalone PV and wind technologies coded as partially capable (orange), paired PV/Wind + BESS technologies coded as capable (green)
- ◆ Questions outstanding
 - How were the hourly dependable capacities for resources developed?



To coordinate multiple proceedings a common model should be used; Commission expressed concerns that the IGP models are not yet well vetted

- ◆ Commission ordered preparation of a Stage 3 RFP for the Big Island:
 - “Consistent with prior guidance, the Commission intends that this will be an “all-source” procurement, based upon an updated assessment of grid needs for the island, and open to a variety of utility-scale and distributed renewable energy technologies.”
- ◆ Commission expressed concern in the CBRE docket:
 - “The Commission is concerned that these grid service needs are underdeveloped and not sufficiently transparent, given their weight in the bid evaluation criteria...Based on the Commission's concerns articulated above, if Hawaiian Electric continues planning to use the RESOLVE modeling the evaluation process, it must provide significantly transparency regarding methods, inputs, and assumptions...The Commission welcomes feedback on the appropriate use of possible models and methods to best determine and compare the value of grid services detailed in the proposals.”
- ◆ Commission ordered the Companies to provide the RESOLVE models to the DER parties for use in developing new DER program proposals

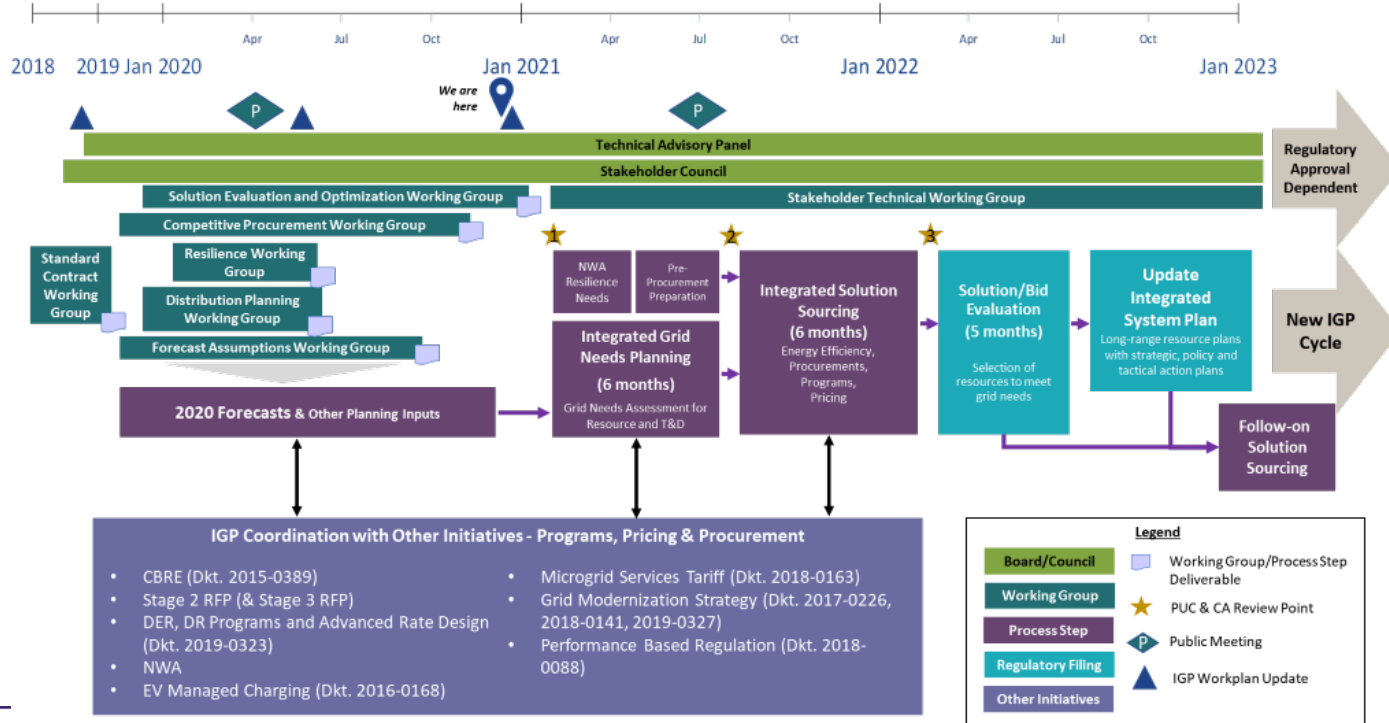


We propose to run 4 semi-parallel tracks

- ◆ Target to get this work done over the next 2-4 months due to commission guidance and other proceedings
- ◆ Run 4 tracks in parallel with TAP members joining the track they feel where they will be best able to contribute
- ◆ TAP members may join multiple tracks
- ◆ Estimate about 2-4 meetings for each track, 2-3 hours duration with additional pre-read material and vetting model outputs and data, if necessary



IGP Schedule



4 Key Topics to Address

- ◆ **Capacity Expansion Modeling and Evaluation Methods (25 year window)**
 - RESOLVE as primary tool for Capacity Expansion
 - Energy Reserve Margin and Hourly Dependable Capacity
- ◆ **Procurement and Operations (10 year window)**
 - Method to quantify/value grid services incl but not limited to Reg Reserve, Load build/reduce)
 - Assessment to determine candidate grid services technologies including DER
 - System Security (Min Inertia, FFR/PFR, SCC, Grid Strength)
 - Reliability - ERM vs other methods (HNEI/TELOS, PRM/ELCC, others);
 - Future RFP including Hawaii Island RFP
- ◆ **Retirement Planning (10 year window)**
 - Reliability
 - System Security
- ◆ **Resilience (25 year window)**

