



| Meeting Name | Date of Meeting |
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| Microgrid Services Tariff (MST) Phase 2 Working Group (WG) Meeting #7 | September 28, 2022 |

Agenda

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| Meeting Objective(s) | <ul style="list-style-type: none"> • Understand how California is approaching the 'Value of Resiliency' for microgrids • Review the North Kohala Energy Storage RFP as a case study for a utility-operated Hybrid Microgrid • Discuss the draft outline for the Working Group Final Report and identify any remaining open issues |
| Review of Objectives & Ground Rules | <ul style="list-style-type: none"> • No additional comments or feedback |
| Guest Speakers: Rosanne Ratkiewicz, California Public Utilities Commission | <ul style="list-style-type: none"> • See slides • Q: Is the ReNCAT still in R&D? • A: Yes, but it has been used in Puerto Rico, Texas, Louisiana, and looking to use in California. It can be distributed to state agencies but currently not available for commercial use. • Q: Assuming you have a MG defined area, how would you determine the value of resiliency for that MG? What is the formula? • A: Short answer, that has not been determined yet; long answer, it depends on what and who that MG serves (i.e. how much of the public outside of the MG will be allowed to use the facilities? If not, should ratepayers be used to support? What is the value to ratepayers?) • Q: That raises more issues that may lead to projects not getting completed. How can projects get completed sooner? • A: In California, MGs are being built but when the discussion turns to 'should MG developers get paid to deliver energy to ppl behind the MG,' some communities are able to accept the value/cost and some are not. Also remember that MGs are not the "be all end all" solution and overall we do not want "good enough to be the enemy of [the] perfect [solution]." • Q: Could government agencies use ReNCAT to identify areas for MGs? What is the intent? • A: It can be used to show social impact, which can be used as a layer in other maps. Can contact Sandia National Labs to coordinate. • Q: Regarding compensation, how do you think about compensation methods in relation to value of resilience in planning process? • A: When we inject resiliency metrics into grid planning process, it informs investment into capital improvements (i.e. PG&E proposed large undergrounding project, some believe it wasn't worth it for the cost but if we use the 4 pillars looking at all hazard analysis, there can be a broader cost/benefits analysis perspective). • Q: How would a private MG go through a procurement process? |



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| | <ul style="list-style-type: none"> A: Remember that MGs are DERs (just with superpowers)! So this could be done by coordinating through a DER docket process. |
| Utility Operated Hybrid Microgrid Case Study: North Kohala Microgrid | <ul style="list-style-type: none"> See slides Scope: 2,000 residential HELCO customers in North Kohala Design: see slide 12 Ownership Model: HELCO is microgrid operator/controller; new BESS would be owned by a third-party Revenue Model: Energy Storage Service Agreement (ESSA) based on RFP Expenditures (lifecycle): TBD based on RFP Funding: Ratepayer funds and ESSA based on RFP Q: Is the North Kohala microgrid scope residential or commercial? What is the anticipated duration that the MG would cover? A: Primarily residential (may include some commercial and a hospital); coverage is 8 hours/day (enough for a workday) Q: Will there be diesel generation included? A: No, that was only considered for Option #2; however, Q: What was the sizing of the BESS based on? A: Connected to the 34.5 kV line; typical peak load redundancy for a full day of work Q: Does the design include existing DER plus private wind and solar? A: The design does take existing DER and private wind into account (wind not included because it would then become oversized) with emergency back-up generation; there is a re-design analysis in progress Q: If wind was not included, will that energy be curtailed during an islanding event? A: Yes |
| Draft Working Group Report Outline | <ul style="list-style-type: none"> See slides Noting that the 'Value of Resiliency' areas of consensus will be added onto based on today's discussion No feedback received on opposing views Aiming to provide a draft document in advance of next meeting on Oct 19 |
| HSEO IJJA Webinar Recap | <ul style="list-style-type: none"> See slides No additional comments or feedback |
| Review Work Plan | <ul style="list-style-type: none"> See slides No additional comments or feedback |
| Next Meetings | <ul style="list-style-type: none"> Wednesday October 19, 2022 10AM-12PM (Teams invite already sent) Wednesday November 9, 2022 10AM-12PM (Teams invite already sent) |
| Working Group Chairs: | |
| Christyn Senda, HE | Co-Chair christyn.senda@hawaiianelectric.com |
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| Attendees: | |



Alan Lee, HE
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Andrew Okabe, HPUC
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Bryant Komo, HE
Christin Chang, HE
Eric Kunisaki, HE
Gerald Sumida, Carlsmith Ball (Ulupono)
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Greg Shimokawa, HE
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Kale Nakata, HE
Ken Aramaki, HE
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Kevin Tanigawa, HE
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