



Pa'auilo Mauka Kalopa Community Association

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Monthly News & Updates

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October 2020 Newsletter



Living Off the Grid in Pa'auilo

By Ruth Bennett, PMKCA Vice President

I've lived off the grid in upcountry Pa'auilo for ten years now, on a 6-acre parcel created from pastureland that only saw cattle for many decades. A solar panel array and a set of "old technology" batteries are at the heart of my electrical system, a large catchment tank and filter system provide household water, and a set of panels heats the water. All of it works great, most of the time, with the level of attention I'm capable of giving it, given that I'm an elderly, disabled, but pretty determined woman.



My solar panel array, soaking up the sun.

The higher up the mountain our homes and properties are located, the more likely it becomes that we may find off-the-grid living a good alternative – or maybe the ONLY alternative – to dependence on resources supplied by a far-away utility or agency. At least 65 of my neighbors in the Pa’auilo Mauka and Kalopa communities (about 15% of all households here) have made the decision to live without connecting to grid-based utilities, but it still isn’t an easy choice to make.

Off-grid properties become “small towns” in their own right, and their owners assume a small town’s various functional roles: the facilities manager, the power company, the water agency, the sewage authority, the communications provider, and often the road crew. The “buck” stops with us.

Still, many of us who live off-grid have made that decision out of an awareness of the cost that grid-based power and other services demand from our island and its population. A family in Hawai’i pays for electricity at rates that are the highest in the nation. While the cost of the equipment needed to provide reliable off-grid power to a home can be expensive, some compensation comes from the fact that properties without access to grid electricity often cost considerably less to purchase.

Finally, and of importance to many of us, the cost to our island environment and to the world is a major factor in our decision to live off-grid. Our HELCO electricity is typically produced by fuels and methods that are costly to deliver and that damage the environment worldwide and close to home.

HELCO power only works in our homes when the power lines deliver it. During a big storm several years ago, when trees blew down all around Pa’auilo, my community was pretty isolated, but my little farm had power and water. It was several days later that I discovered that some of my neighbors were in dire straits, lacking electricity, running water and communication lines. Five days after the storm, their services were restored... but had I known, I could have helped! It is reassuring to know that, when properly maintained, off-grid systems for power and water can be more reliable and often safer than a grid connection.

Solar technology has been improving so rapidly in recent years that I find it difficult to keep up. I’m not the sharpest knife in the block when it comes to understanding and evaluating off-grid systems, but I do the best I can – and then I find someone I trust. The best advice I’ve heard recently is to look for a reputable and LOCAL company or

installer, someone who won't just deliver your new solar system and then abandon you later, but is willing to take the time to know your system and situation, to advise, trouble-shoot, and upgrade your off-grid world over time. I have my trusted expert and I'll share his information with you if you send an email to me through our association's website, www.pmkca.org, but I recognize that my off-grid friends have others whom they trust. Our island and its unique situation have cultivated a number of reputable providers.

As I write this, an upgrade of my solar array is being installed that will increase my power generation capability by about 40% and reduce the chances that I'll be going outside to start the generator in all weather! My 13-year-old configuration, my site and my personal limitations, require a solar expert who can work within my unique world. My recommendation to you is to find your provider and develop a partnership in off-grid living that will serve you for the long term.

Solar panels have been improving in technology and dropping in price dramatically over the last 20 years. Since solar panels will often do their jobs for 25-30 years, their initial cost might not be the biggest factor when planning for an off-grid installation. Rather, the proven quality of the panels and the likelihood that the manufacturer will be around for a long time become important criteria. I still am amazed that solar panels can do so much without any moving parts, never making a sound and hardly ever requiring any attention except for the occasional cleaning. They are truly miraculous.

Battery technology has far out-paced my "flooded lead acid" workhorses which require regular attention and almost constant concern. As my limited understanding goes, the newest battery technology currently available, lithium-based batteries of several different types, store and dispense reliable power for 10+ years. They are expensive, however – and some folks are waiting to see how their reliability plays out over the long term. I understand that other technologies are on the horizon and may offer us other alternatives.

Battery storage systems are often the most problematic aspect of an off-grid system. There are many choices, each with a different useful life, cost, maintenance requirement and storage capacity. Getting good advice about changes in battery technology and battery choices is another important reason to engage with an experienced solar system installer when planning an off-grid system. Still, I believe that batteries represent the future of off-grid power storage and I'm hoping that, by the time my batteries give up the ghost (in 4-6 years), the new technologies will have won over the skeptics, and I'll be able to afford them!

There are other off-grid power generation technologies that are proven effective in particular residential situations (wind power,

hydroelectric) and I have friends who have taken advantage of them. Still, power from the sun outranks them all for most of us here in the Islands.

There are incentives available from the federal government and the state of Hawai'i that can soften the impact of a new system on our finances. Hawai'i has also made a commitment to move its power grid to 100% renewable energy resources by 2045. We all hope to see that commitment fulfilled, but the devil is in the details. Concerns about the by-products of large-scale power generation (pollution and other environmental damage) have derailed some planned projects such as the Hu-Honua bioenergy plant in Pepe'ekeo. And as the COVID-19 pandemic has shown us, the best intentions to make progress sometimes get waylaid by unforeseen crises. I live in hope, however.

I love living in an old cow pasture without a power pole in sight. I hope to live here, running my "tiny town", until it no longer matters to me where I live. Going out to check my daily solar generation numbers keeps me moving, enjoying the fresh mauka air, pulling a weed here and there, catching the scent of over-ripe guava, watching the wild turkey hen and her chicks. That's my chosen life, and lucky me, to have the opportunity to live it! Mahalo, Hawai'i.

Board and Officer Positions Available

PMKCA is looking for more board members! Jami Sales, our "**Water, Health and Utilities**" committee chair, has resigned from the board after many years of service. Jami has been very active in support of our community in many ways and we will miss her contributions to PMKCA board activities. Thank you, Jami, for all your hard work.

If you have an interest in the utility infrastructure of our communities, we invite you to consider being a bridge between our community and the companies and agencies who provide utilities.

We will also soon be needing fill the board position of **Secretary**. Diana Nui has informed us that she will be resigning at the end of this year. Diana will continue working on PMKCA projects at Kalopa Park, but we will miss her participation and record keeping with the board.

The Secretary takes minutes at membership and board meetings - about six per year, and handles small amounts of correspondence for PMKCA. We would be grateful to someone who gives Diana the break she deserves.

If anyone is interested in volunteering for either position, please contact any of our Board members by phone or email. Contact information can be found at PMKCA.org.

Next Meetings

Thu, Oct 8, 2020, 7PM - PMKCA Board of Directors Meeting
(Zoom Videoconference). All members are welcome. To attend the
online meeting, contact Ruth (rbennett22@earthlink.net) for meeting
instructions.

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