



Hawaiian Electric

Power Partnership Programs

Customer Energy Resources - Demand Response



Hawaiian Electric customers have a growing role in operating the electric grid reliably and efficiently while helping Hawai'i reach our goal of cutting carbon emissions from power generation 70% by 2030. In addition, customers can save money by participating.

Power Partnerships are a way more residential or commercial customers can get financial rewards for signing up with independent companies called "grid-service aggregators" under contract with the utility. These aggregators manage activities often called "demand response," "demand management" or "load management" to support a utility's need to balance electricity supply and demand. As these activities are increasing and becoming more valuable, we are calling them "power partnerships" as part of customer energy resources.

How does it work? Independent companies recruit and sign-up customers with solar roofs, batteries, electric vehicles and other load flexibility devices to combine or "aggregate" their services to support the grid. Customers agree to allow the aggregator to tap their systems, within clear limits, to help meet the utility need for flexible electric use. The utility pays the aggregators to perform this valuable function. And customers are rewarded, generally with credits that reduce their monthly bills.

Why pay customers and aggregators? The utility is responsible to "keep the lights on" for all customers, that is, to provide reliable, quality service. Paying aggregators and rewarding customers to help balance electricity use is less expensive than measures like building peaking plants and other infrastructure to use only to guarantee reliability. And for the utility, working with a few select aggregators is more efficient than working directly with hundreds or thousands of customers to get them to reduce or shift electricity use.

What's happening now? Power partnerships are evolving and will continue to expand offerings. Some are most suitable for residences; some for businesses. They may involve residential home appliances, like water heaters or air conditioners. For businesses, they may involve lighting, elevators or machinery. Most programs use remote communication and energy management systems to seamlessly do their jobs. If a program just doesn't benefit the customer, opting out is always possible.



"Your partnership, along with other customers across the islands we serve, is critical as we work together to

collectively address climate change. These programs are a win for all: Participating customers can reduce electricity use and lower electric bills. Eco-friendly, high-tech companies that are an important part of the new clean energy economy in Hawai'i can partner with us as aggregators. And we'll continue to provide quality power to our customers and community."

— Shelee Kimura, Hawaiian Electric president and CEO





Load flexibility (reducing/shifting electricity use as needed) may involve:

- ◆ Lighting not essential for safety
- ◆ Water heating when it won't be missed
- ◆ Appliances that can be safely turned off or cut back (like slightly lowering fridge or AC temperatures)
- ◆ Space cooling or heating (again, when it can be safely, comfortably turned off or curtailed)
- ◆ Energy storage (including home batteries and electric vehicles)
- ◆ Heating, Ventilation, and Air Conditioning systems (in commercial buildings)
- ◆ Water pumping and irrigation (in agriculture)
- ◆ Industrial equipment (in manufacturing)

Customer Energy Resources:

- ◆ Energy efficiency and conservation
- ◆ Self-generation (rooftop solar)
- ◆ Storage (home batteries)
- ◆ Electric mobility (home & business electric vehicles)
- ◆ Shared solar (coming soon for those who cannot self-generate)
- ◆ Load management (power partnerships discussed here)

Who are the Power Partners?

Hawaiian Electric has contracted with Open Access Technology, Inc.(OATI) and Swell Energy Inc. as customer energy resource aggregators in power partnerships for O'ahu, Maui County and Hawai'i Island. These Power Partners in turn work with other companies to recruit customers, including RevoluSun, Rising Sun and Shifted Energy for different programs on different islands. Hawaiian Electric is seeking more partners.

How to learn more and contact us?

These programs change quickly, so check hawaiianelectric.com/demandresponse for the latest information. If you then have questions, email energyscout@hawaiianelectric.com.

Common myths and misconceptions	
Myth: Participation in demand response DR events means that customers must adjust their loads manually.	Reality: The benefit of enrolling through an aggregator partner is that the entire process can be automated. Once the customer agrees to enroll in the service, programs are automated and the customer gets paid automatically for participating and performing during events.
Myth: Participation in DR events will cause disruptions to business.	Reality: "Events" are typically two to four hours and occur only a few times per year. Disruption to businesses is minimal and offset by compensation. An aggregator partner can help design a strategy that works for your business, for example, excluding temperature critical areas or curtailing only some elevators, lights or other equipment.
Myth: Enrolling requires complex contracts & legal agreements.	Reality: Agreements between utilities and customers are not complex. If the customer chooses to work with a partner, the customer allows the utility would interact with the aggregator on their behalf.
Myth: Customers take on a financial risk by participating in DR programs.	Reality: As with other programs, customers must balance risks with rewards for participation. In many cases, an aggregator partner absorbs much of the financial risk, leaving the customer with significant upside value.