Panelist Q&A

1. What is your best guess when energy storage will be affordable to the average citizen in Hawaii?

David Bissell: Depends on how you’re defining energy storage. If you mean to completely disconnect from the grid and to continue to use 600 kilowatt hours per month whenever and however you want to at a price that’s less than the $180 or so a month you’re paying now (and not factoring in any maintenance or lifespan issues related to heavy-duty daily battery cycling) and assume that it rarely rains or is overcast, probably not for a while. If you’re talking about storage that allows you to supply your own power for a few hours during the evening peak or during outages, that’s doable today and will probably be a little cheaper than the grid before long, depending on the tax situation.

2. What is KIUC’s estimated cost per customer to build/buy sufficient generation & storage to go off grid v. generation & utility back-up?

David Bissell: Again, it all depends on what you mean by going off the grid? Live with minimal appliance use or get rid of most of them (TV, AC, refrigerator, water heater, washer-dryer, stove, oven, microwave, etc.) and you can probably do it today – some people are doing it, though I don’t know the cost. If you want to run the average home and use appliances anytime, you’re talking a six-figure system that requires regular maintenance. Customers are spending about $40,000 before tax incentives to “zero out” their utility bill, which essentially amounts to using us as the backup.

3. How does going off-grid affect customers that stay connected to the grid?

David Bissell: If the person goes entirely off the grid and is no longer connected, it has no physical or financial impact on the other customers who remain on the grid. If a whole lot of people go off the grid, then the people who stay connected will have to pick up a larger share of the fixed costs that had previously been spread among a larger group.

4. Is Kauai Island Utility Cooperative (KIUC) perpetuating the vertically-integrated utility model?

David Bissell: No. Our interest is in delivering electricity in the safest, most reliable and most efficient manner possible, not perpetuating a particular business model. Besides, you could argue the vertical integration model is already morphing into something else since we no longer control all aspects of generation – we now have 3,000 independent power producers feeding the grid. At the same time, we shouldn’t be in a rush to tear down 100 years worth of infrastructure that is bought and paid for and still works pretty well and brings the benefits of scale to every customer.

5. Is it believed that “time of use” can be used by all customers? If not, what can be done for those customers that can't take advantage of TOU rates?

David Bissell: TOU can be used by all customers, but not all will derive the maximum benefit because not every business or household uses electricity the same way. TOU is only one kind of rate – smart meters/smart grid enables utilities to offer new and innovative rate choices where customers can pick options that maximize savings depending on how they use electricity.