

TO: The Collection
FROM: Energy Storage Hawaii LLC
DATE: 5-22-20, 6-3-20

RE: Solar Project
Board Questions and Answers

Q1: Earlier a \$60,000 savings was given and now it is about \$24,000, why the difference?

The previous version depended on production estimates given by 4 contractors. After one contractor was selected, a shading study was conducted.

Shading can easily be seen when you look out at the parking deck at various times of the day.

Shade losses greater than 25% were shown. Hand held and computer software based shading analyses were done. Until this shading analysis took place, it was not possible to give accurate production numbers. Two site visits for shading analyses alone and I think over 10 designs gave us the current production estimate. Contractors are not ordinarily liable for their production estimates and are instead motivated by selling the largest system. Contrast the investor and customer who need to know the facts.

In conclusion there will be savings with an expectation of more than the \$24,000. This amount will increase after year 5 and continue for the life of The Collection. At no time are you not saving money. The larger savings will take place after loan assumption.

Q2: What equipment is specified for the project and what are their warranties? Also, spreadsheet continues until year 30. Is this the life expectancy for the panels?

1. Solaredge optimizers: 25 years
2. Solaredge inverters: standard warranty 12 years, extended warranty 20 years. The extended warranty option is selected.
3. Structural Solar's carport material: One year
4. REC solar panels: 25 years

A sub-issue is how long do solar panels last. There is a broad range of answers here and a personal online search will be of help. I can say the useful life will be longer than the warranty. Know that panel efficiency and pricing are headed in the right direction. There will come a day when it will make sense to replace the panels due to more production gain relative to cost.

Q3: Can you show the layout of the PV array?

The preliminary electrical and structural plans have been provided. See attached.

Q4: What will the loan payment be for the Association for consideration of the loan assumption? What are the expected loan terms?

The monthly loan payment in year 6 now projected at \$4,257.60. When the monthly loan payment of \$4,257.60 is divided by the average monthly production of kWh it comes out to 13 cents a kWh.

Expected Loan Terms:

1. 20 year amortization
2. 10 year term
3. No prepayment penalty after year 2. In year 6 the plan is loan assumption by customer
4. Assumable by association, assuming credit passes
5. Interest rate 4.5%.
6. Right now the loan amount is \$1,001,000 to make a 1.2 debt service coverage ratio.
7. Borrower is Energy Storage Hawaii LLC. Kendall Hee, Jeffrey Yeoh and Wendell Choy are the principals.

Q5: Provide spreadsheet annual savings under AOOU loan assumption. With the spreadsheet provided, cost continued to be at 16 cents past year 5. Concerns about the savings analysis and negative balance continuing until year 16.

See attached revised spreadsheet. Starting in year 6 the loan payment divided by the average monthly production equals 13 cents per kWh. Please note that the re-labeled "Utility with Solar" column includes both HECO and PPA payment charges. There is a net savings of \$20,759 the first year. There is never a point where the Association will be paying more than they are currently paying HECO currently under this agreement. Cumulative savings is \$2.8M after 30 years.

Q6: What are the total construction costs, breaking down major components?

The construction cost is likely \$1,065,000 with a tax basis of \$1,365,000. The carport and racking is about \$380,000. The electrical engineering \$22,000. The PV contractor is about \$660,000 with an extended warranty perhaps another \$20,000 for the inverters.

Q7: What is the fair market value of the system at the time of loan assumption eligibility?

This is a net present value calculation. The term of the PPA is 20 years. There will be 15 years left. The estimated income is reduced by the operating expenses and system degradation. One could total that up and apply a rate such as 5-8% to get NET PRESENT VALUE.

Investors have represented this will be a nominal number quickly negotiated. Please understand the investors reap the tax incentive benefits as the primary goal. There is little free cash flow. The risk of the loan guaranty heavily outweighs the free cash flow benefit.

Q8: Why does Phase II make sense?

Phase 2 maximizes what can fit on the parking deck. Your demand is extremely high. The pv system will not export anything to HECO. In short you can use all the production possible. In other words, if you are saving money, saving more money is better.

Due to shading, there were sections PV would not normally be placed. This was mostly along the wall nearest the tower. Aesthetically you would have ended up with gaps dictated by solar utilization. Instead and after much consideration, it was decided to do it all. We can all thank Photonworks, Paul Orem, for reducing pricing for this additional work. This is when it made sense.