



Statement Regarding Comparisons Between Sunnova and Sunrun

July 23, 2019

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Over the last couple weeks, we have received questions from investors and analysts eager to make a comparison between Sunrun and Sunnova, which has filed for an IPO. We welcome companies who are eager to bring affordable solar energy to more American households and create jobs. The market penetration is low, and at just 3%, we know there is room for many successful companies.

At the same time, we believe Sunnova has made certain comparisons of its customer economics to Sunrun that may be misleading or inaccurate because the metrics being compared are inconsistent or different. We believe these statements warrant a response to allow interested parties to appropriately make their own comparisons.

Most significantly, while Sunnova's materials imply that their dealer-only model provides lower costs and more favorable unit economics than Sunrun's, we believe their SEC filings show otherwise. Sunnova appears to have higher costs and lower customer margins, and this is the case both before and after general and administrative overhead costs are considered.

Comparing Costs and Unit Economics

As we understand their SEC Filings, Sunnova's costs to create a customer are about 33%, or \$8,700 per customer, higher than Sunrun's.

	Sunnova		Sunrun	
	<u>Q1 2019</u>	<u>2018</u>	<u>Q1 2019</u>	<u>2018</u>
Creation Costs per Customer*	\$35,232	\$29,397	\$26,508	\$25,116

** We have calculated Sunnova's creation costs as General & Administrative expenses from their income statement along with "Purchases of property and equipment" and "Payments for investments and customer notes receivable" from the statement of cash flows (all from SEC filings) divided by new customers in the period.*

Customers added reflects customers added under leases for Sunrun; We have calculated new customers added in the period for Sunnova using the disclosed "Estimated net system value" divided by "Estimated net system value per new customer" (from SEC filings);

Sunrun's Creation Costs per customer are reported by the company.

As to unit margin, in the residential solar sector, these are reported by industry companies as the *customer value* (ie, expected future cash flows) less *creation costs* (ie, the sum of customer acquisition, construction, and G&A expenses).

In their SEC filings, Sunnova reports "estimated net system value per new customer," which is calculated before deducting general & administrative expenses. Sunrun reports "net present value per customer," which is measured after general and administrative expenses. We believe the table below sets forth these numbers on a more comparable basis.

<i>(\$ in millions except per customer amounts)</i>	Sunnova		Sunrun	
	<u>Q1 2019</u>	<u>2018</u>	<u>Q1 2019</u>	<u>2018</u>
General & Administrative expenses (1)	\$ 18.7	\$ 67.4	\$ 29.1	\$ 116.7
<u>New Customers in period (2)</u>	<u>3,273</u>	<u>14,573</u>	<u>9,500</u>	<u>41,500</u>
G&A expenses per new customer	\$ 5,708	\$ 4,627	\$ 3,059	\$ 2,811
Net Customer Value, before deducting G&A (3)	\$ 7,639	\$ 8,509	\$ 10,422	\$ 10,156
<u>Less G&A expenses per new customer (1)</u>	<u>\$ 5,708</u>	<u>\$ 4,627</u>	<u>\$ 3,059</u>	<u>\$ 2,811</u>
Net New Customer Value (3)	\$ 1,931	\$ 3,882	\$ 7,363	\$ 7,345

(1) General & Administrative expenses includes stock based compensation for both companies.

(2) Customers added reflects customers added under leases for Sunrun; We have calculated new customers added in the period for Sunnova using the disclosed "Estimated net system value" divided by "Estimated net system value per new customer" (from SEC filings).

(3) We have calculated Sunnova's net customer value using their disclosure for "Estimated net system value per new customer" (from SEC filings) We have calculated Sunrun's Net Customer Value as the NPV for leased customers, as disclosed by the company, before G&A expenses.

The above comparison uses Sunnova's calculation of customer value for Sunnova's customer value, and Sunrun's calculation for Sunrun's customer value.

Incremental Customer Values and Book Value of Customers are Different Metrics

In its marketing materials, Sunnova includes a comparison of Sunnova's and Sunrun's "contracted net earning assets," which is generally understood to be a measure of fair book value. One may conjecture this comparison is made to assert that Sunnova has better customer values than Sunrun. However, customer value and fair book value are different.

Customer value is a measure of profitability, and *fair book value* is a measure of a company's "run-off value," typically measured after repayment of indebtedness.

- *Customer value* = (Expected discounted gross profit from a typical customer) – (The cost to acquire the customer and build the system)
- *Fair book value* = (Expected remaining cash flows after operating expenses from all customers) – (debt service)

As mentioned earlier, Sunrun reported customer values of \$10,156 for 2018 and \$10,422 for Q1 2019, as compared to Sunnova reported customer values for 2018 and Q1 2019 of \$3,882 and \$1,931, respectively.

Rather than making the above comparison, Sunnova's marketing materials focus instead on a comparison of net contracted fair book value. However, this metric is largely driven by how a company has capitalized itself, rather than by customer economics. Sunnova has largely capitalized itself with equity, having raised (*pro forma* for this offering at its midpoint) approximately \$17,000 per customer. Sunrun has raised only about \$3,000 per customer. As a hypothetical, if Sunrun raised another \$14,000 in common equity per customer (or about \$3.4 billion), using the proceeds in part to retire debt, this new capital would greatly increase Sunrun's fair book value. However, even after such an extreme hypothetical change to our book value, our per-customer economics would remain the same.

Other factors also influence fair book value. For instance, it's well known that many of Sunrun's customers prepaid their leases, as evidenced by the large amount of deferred revenue from customer payments on our balance sheet. Because the prepayments have been collected (and thus are no longer on-the-come), they don't add to the fair book value of our assets, but they are important in any profitability analysis.

Cumulative capital raised as measured using Paid in Capital from the balance sheet, which is increased by stock-based award activity and the acquisition of non-controlling interests (tax equity buy-ins), to be apples-to-apples with the Sunnova

S-1 filing. Customer values presented include stock based compensation expenses in general and administrative costs, but exclude them for other cost components.

In the residential solar industry, we believe EBITDA relates more to fair book value than customer profitability

While EBITDA can be a useful valuation method in many industries, it has two short-comings in the residential solar industry as a measure of customer profitability:

- 1) In any business where most costs are capitalized (and later depreciated), EBITDA doesn't consider the cost to create an asset. It simply reflects periodic customer revenue less periodic operating costs. Growth in EBITDA will likely occur even if cash is deployed at *negative* rates of return. For instance, take a hypothetical company whose business model is to repeatedly spend \$100 on assets that generate \$90, undiscounted, over 10 years. This would make for an unattractive business model. However, for as long as this hypothetical business keeps purchasing assets, it will correctly report increasing EBITDA.
- 2) In the residential solar industry, EBITDA is not comparable across companies because different business models are subject to different accounting methodologies. For a dealer-only model like Sunnova, the vast majority of costs to acquire and build an asset are capitalized and depreciated over time. Only general and administrative expenditures are expensed in-period. This elevates EBITDA compared to peers. For businesses who interact with customers directly, like Sunrun and Vivint Solar, GAAP requires that many costs be expensed in-period. These costs are substantial and include items like salaries of sales personnel, marketing expenses, and all costs arising from potential customers who don't ultimately result in a solar system installation. These costs are expensed each period, depressing near-term EBITDA. As such, based on business model, substantially the same expenditures are reported as capital expenses by some companies and as operating expenses by others. For this reason we believe other metrics are a better way to cross-compare companies in the sector.

Summary

The residential solar sector is 3% penetrated today and is benefiting from the transition to a lower-carbon economy. Cost of solar energy technologies and batteries are expected to keep falling over the long-term, making their offering even more attractive to households in more markets. The cost of financing continues to decline as more investors are attracted to the long-term recurring cash flows. Governments are supporting the transition to lower-carbon energy generation to combat climate change and support economic development in communities. And traditional utilities are increasingly failing to address customer needs of safely providing reliable power.

We hope the comparisons provided above can be useful in evaluating investment opportunities in the residential solar sector.