



Estimated Cost per Watt Methodology

May 9, 2019

Cost per watt (CPW) is an important metric in understanding Vivint Solar's residential business. The CPW calculation includes costs associated with systems subject to power purchase agreements, leases, and those sold directly to customers. This memo shows how Vivint Solar's CPW can be estimated using the company's reported GAAP financial statements, other reported operating metrics, and information extracted from the company's books and records. All data and calculations shown in this memo are as of March 31, 2019. Note that with the adoption of ASC 842, lease accounting rules, there have been a number of financial statement line item changes in our 2019 financial statements. For purposes of this memo, we are using proforma 2018 financial statements that align with these changes.

Installation

Vivint Solar only capitalizes a portion of its installation expense. Equipment expense as well as a portion of other installation expense including direct labor is capitalized on the balance sheet. The portion of installation expense that is not capitalized is expensed through the Income Statement in the period it is incurred. To calculate total installation expense, add the change in system equipment costs, the cost of revenue – customer agreements and incentives, the cost of revenue – solar energy system and product sales, and the change in work in progress - system equipment costs, less associated non-cash expenses (stock-based compensation, depreciation and amortization), and fleet performance. This total is then divided by the total megawatts installed in the period.

Sales & Marketing

Much like installation expenses, only a portion of sales & marketing expense is capitalized. The remaining portion is expensed through the Income Statement in the period it is incurred or is reported as a future commitment in our filings. To calculate the total sales & marketing expense, add the portion that flows through the income statement, the portion of sales & marketing expense that is capitalized, including work in progress – costs to obtain SPA contracts and customer incentives, and the expense reported as Residual Payments in Note 19 Commitments and Contingencies to our condensed consolidated Financial Statements in our Form 10-Q filed with the SEC, less the amount of expense



related to non-cash stock-based compensation. This total is then divided by the total megawatts installed in the period.

Installation Costs per Watt Calculation

	<u>Q1'19</u>	
Installation (in thousands)		
System equipment costs (BS Note)	\$ 50,960	←
Plus: Cost of rev - operating leases and incentives (IS)	40,191	
Plus: Cost of rev - solar energy system and product sale (IS)	17,263	
Plus: WIP - System equipment costs (Company's books)	(1,756)	←
Less: Stock-based compensation (BS Note)	(332)	←
Less: Depreciation and amortization (BS Note)	(13,111)	←
Less: Fleet performance (Company's books)	(8,945)	
Total installation costs	\$ 84,270	←
Installation (\$ / W)		
Total installation costs (in millions)	\$ 84.3	←
Divided: MW installed	45.6	
Installation cost per watt	\$ 1.85	

Note 5. Solar Energy Systems (in thousands)	<u>Q1'19</u>	<u>Q4'18</u>	<u>Change</u>
Solar energy systems, net			
System equipment costs	\$ 1,718,400	\$ 1,667,440	\$ 50,960
Solar energy system inventory	34,492	32,240	2,252
Solar energy systems	1,752,892	1,699,680	53,212
Less: Accumulated depreciation and amortization	(162,004)	(148,893)	(13,111)
Solar energy systems, net	<u>\$ 1,590,888</u>	<u>\$ 1,550,787</u>	<u>\$ 40,101</u>

Note 4. Inventories (in thousands)	<u>Q1'19</u>	<u>Q4'18</u>	<u>Change</u>
Inventories			
Photovoltaic installation products	\$ 967	\$ 936	\$ 31
Solar energy systems held for sale	10,565	12,321	(1,756)
Inventories	<u>\$ 11,532</u>	<u>\$ 13,257</u>	<u>\$ (1,725)</u>

Note 16. Equity Compensation Plans	<u>Q1'19</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue	\$ 332
Sales and marketing	735
Research and development	28
General and administrative	2,584
Total stock-based compensation	<u>\$ 3,679</u>



Sales & Marketing Costs per Watt Calculation

Sales & Marketing (in thousands)	<u>Q1'19</u>		
Sales & Marketing (IS)	\$ 29,634		
Plus: Costs to obtain contracts (BS Note)	27,411		
Less: Accumulated amortization of cost to obtain contracts	(3,931)		
Plus: Residual payments	666		
Plus: WIP - Cost to obtain SPA contracts (BS Note - prepaid assets)	(637)		
Plus: Customer incentives (Company's books)	862		
Less: Stock-based compensation	(735)		
Total sales & marketing costs	\$ 53,270		
Sales & Marketing (\$ / W)			
Total sales & marketing costs (in millions)	53.3		
Divide: MW installed	45.6		
Total Sales & Marketing	\$ 1.16		
Note 7. Other Non-Current Assets	<u>Q1'19</u>	<u>Q4'18</u>	<u>Change</u>
Cost to obtain contracts	\$ 462,495	\$ 435,084	\$ 27,411
Accumulated amortization of cost to obtain contracts	(50,928)	(46,997)	(3,931)
Operating lease right-of-use assets	39,697	-	39,697
Sales Incentives	9,292	8,588	704
Other non-current assets	17,457	19,502	(2,045)
Total other non-current assets	\$ 478,013	\$ 416,177	\$ 61,836
Note 19. Commitments and Contingencies	<u>Q1'19</u>	<u>Q4'18</u>	<u>Change</u>
Residual payments (in thousands)	\$ 16,207	\$ 15,541	\$ 666
Note 16. Equity Compensation Plans			<u>Q1'19</u>
Stock-based compensation included in operating expenses (in thousands)			
Cost of revenue - operating leases and incentives			\$ 332
Sales and marketing			735
Research and development			28
General and administrative			2,584
Total stock-based compensation			\$ 3,679
Consolidated Balance Sheet (in thousands)	<u>Q1'19</u>	<u>Q4'18</u>	<u>Change</u>
Current assets - Customer incentives	\$ 442	\$ 398	\$ 44
Non-current assets - Customer incentives	10,071	9,253	818
Total customer incentives	\$ 10,513	\$ 9,651	\$ 862

Note: Amounts may not add due to rounding



General & Administrative

General & Administrative expense is taken from the income statement. Expenses that are non-cash such as stock-based compensation are removed from the total. The resultant number is divided by the total megawatts installed during the quarter to calculate the total general & administrative cost per watt.

	<u>Q1'19</u>
General & Administrative (in thousands)	
General & Administrative (IS)	\$ 23,049
Less: Stock-based compensation (BS Note)	(2,584)
Less: One-time expenses (Company's books)	-
General & Administrative Costs	\$ 20,465
General & Administrative costs (in millions)	\$ 20.5
Divide: MW installed	45.6
General & Administrative costs per watt	\$ 0.45

Note 16. Equity Compensation Plans

	<u>Q1'19</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 332
Sales and marketing	735
Research and development	28
General and administrative	2,584
Total stock-based compensation	\$ 3,679



Total Estimated Cost per Watt

The sum of installation cost per watt, sales & marketing cost per watt, and general & administrative cost per watt results in the total estimated cost per watt for the period.

	<u>Q1'19</u>
Installation	\$ 1.85
Sales & Marketing	1.16
General & Administrative	<u>0.45</u>
Total costs per watt	<u><u>\$ 3.46</u></u>