



Estimated Cost per Watt Methodology

August 8, 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 June 30, 2019.

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 Cost per Watt Calculation

	<u>Q2'19</u>	
Installation (in thousands)		
System equipment costs (BS Note)	\$ 64,901	←
Plus: Cost of rev - customer agreements and incentives (IS)	43,074	
Plus: Cost of rev - solar energy system and product sale (IS)	15,791	
Plus: WIP - System equipment costs (Company's books)	1,637	←
Less: Stock-based compensation (BS Note)	(404)	←
Less: Depreciation and amortization (BS Note)	(13,780)	←
Less: Fleet performance (Company's books)	(10,671)	
Total installation costs	\$ 100,548	←
Installation (\$ / W)		
Total installation costs (in millions)	\$ 100.5	←
Divided: MW installed	56.0	
Installation cost per watt	\$ 1.79	

Note 5. Solar Energy Systems (in thousands)	<u>Q2'19</u>	<u>Q1'19</u>	<u>Change</u>
Solar energy systems, net			
System equipment costs	\$ 1,783,301	\$ 1,718,400	\$ 64,901
Solar energy system inventory	30,388	34,492	(4,104)
Solar energy systems	1,813,689	1,752,892	60,797
Less: Accumulated depreciation and amortization	(175,784)	(162,004)	(13,780)
Solar energy systems, net	<u>\$ 1,637,905</u>	<u>\$ 1,590,888</u>	<u>\$ 47,017</u>

Note 4. Inventories (in thousands)	<u>Q2'19</u>	<u>Q1'19</u>	<u>Change</u>
Inventories			
Photovoltaic installation products	\$ 869	\$ 967	\$ (98)
Solar energy systems held for sale	12,202	10,565	1,637
Inventories	<u>\$ 13,071</u>	<u>\$ 11,532</u>	<u>\$ 1,539</u>

Note 16. Equity Compensation Plans	<u>Q2'19</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue	\$ 404
Sales and marketing	806
Research and development	31
General and administrative	2,915
Total stock-based compensation	<u>\$ 4,156</u>

Note: Amounts may not add due to rounding



Sales & Marketing Cost per Watt Calculation

Sales & Marketing (in thousands)	<u>Q2'19</u>		
Sales & Marketing (IS)	\$	37,037	
Plus: Costs to obtain contracts (BS Note)		38,474	←
Less: Accumulated amortization of cost to obtain contracts		(7,345)	←
Plus: Residual payments		1,705	←
Plus: WIP - Cost to obtain SPA contracts (BS Note - prepaid assets)		1,320	←
Plus: Customer incentives (Company's books)		840	←
Less: Stock-based compensation		(806)	←
Total sales & marketing costs	\$	71,225	←
Sales & Marketing (\$ / W)			
Total sales & marketing costs (in millions)		71.2	←
Divide: MW installed		56.0	
Total Sales & Marketing	\$	1.27	
Note 7. Other Non-Current Assets	<u>Q2'19</u>	<u>Q1'19</u>	<u>Change</u>
Cost to obtain contracts	\$ 500,969	\$ 462,495	\$ 38,474
Accumulated amortization of cost to obtain contracts	(58,273)	(50,928)	(7,345)
Operating lease right-of-use assets	39,620	39,697	(77)
Sales Incentives	9,963	9,292	671
Other non-current assets	18,258	17,457	801
Total other non-current assets	\$ 510,537	\$ 478,013	\$ 32,524
Note 19. Commitments and Contingencies	<u>Q2'19</u>	<u>Q1'19</u>	<u>Change</u>
Residual payments (in thousands)	\$ 17,912	\$ 16,207	\$ 1,705
Note 16. Equity Compensation Plans	<u>Q2'19</u>		
Stock-based compensation included in operating expenses (in thousands)			
Cost of revenue - operating leases and incentives			\$ 404
Sales and marketing			806
Research and development			31
General and administrative			2,915
Total stock-based compensation			\$ 4,156
Consolidated Balance Sheet (in thousands)	<u>Q2'19</u>	<u>Q1'19</u>	<u>Change</u>
Current assets - Customer incentives	\$ 487	\$ 442	\$ 45
Non-current assets - Customer incentives	10,866	10,071	795
Total customer incentives	\$ 11,353	\$ 10,513	\$ 840

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>Q2'19</u>
General & Administrative (in thousands)	
General & Administrative (IS)	\$ 31,205
Less: Stock-based compensation (BS Note)	(2,915)
Less: One-time expenses (Company's books)	-
General & Administrative Costs	\$ 28,290
General & Administrative costs (in millions)	\$ 28.3
Divide: MW installed	56.0
General & Administrative costs per watt	\$ 0.50

	<u>Q2'19</u>
Note 16. Equity Compensation Plans	
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 404
Sales and marketing	806
Research and development	31
General and administrative	2,915
Total stock-based compensation	\$ 4,156

Note: Amounts may not add due to rounding



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>Q2'19</u>
Installation	\$ 1.79
Sales & Marketing	1.27
General & Administrative	<u>0.50</u>
Total costs per watt	<u><u>\$ 3.56</u></u>