



## Estimated Cost per Watt Methodology

November 6, 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 September 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 and any one-time items. This total is then divided by the total megawatts installed in the period.

## Installation Cost per Watt Calculation

	<u>Q3'19</u>	
Installation (in thousands)		
System equipment costs (BS Note)	\$ 73,363	←
Plus: Cost of rev - customer agreements and incentives (IS)	49,077	
Plus: Cost of rev - solar energy system and product sale (IS)	19,444	
Plus: WIP - System equipment costs (BS Note)	723	←
Less: Stock-based compensation (BS Note)	(467)	←
Less: Depreciation and amortization (BS Note)	(14,523)	←
Less: Fleet performance (Company's books)	(11,721)	
<b>Total installation costs</b>	<b>\$ 115,896</b>	←
Installation (\$ / W)		
Total installation costs (in millions)	\$ 115.9	←
Divided: MW installed	65.1	
<b>Installation cost per watt</b>	<b>\$ 1.78</b>	

Note 5. Solar Energy Systems (in thousands)	<u>Q3'19</u>	<u>Q2'19</u>	<u>Change</u>
Solar energy systems, net			
System equipment costs	\$ 1,856,664	\$ 1,783,301	\$ 73,363
Solar energy system inventory	29,689	30,388	(699)
Solar energy systems	1,886,353	1,813,689	72,664
Less: Accumulated depreciation and amortization	(190,307)	(175,784)	(14,523)
Solar energy systems, net	<u>\$ 1,696,046</u>	<u>\$ 1,637,905</u>	<u>\$ 58,141</u>

Note 4. Inventories (in thousands)	<u>Q3'19</u>	<u>Q2'19</u>	<u>Change</u>
Inventories			
Photovoltaic installation products	\$ 802	\$ 869	\$ (67)
Solar energy systems held for sale	12,925	12,202	723
Inventories	<u>\$ 13,727</u>	<u>\$ 13,071</u>	<u>\$ 656</u>

Note 16. Equity Compensation Plans	<u>Q3'19</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue	\$ 467
Sales and marketing	756
Research and development	36
General and administrative	2,891
Total stock-based compensation	<u>\$ 4,150</u>

Note: Amounts may not add due to rounding



## Sales & Marketing Cost per Watt Calculation

Sales & Marketing (in thousands)	<u>Q3'19</u>		
Sales & Marketing (IS)	\$	46,121	
Plus: Costs to obtain contracts (BS Note)		58,523	←
Less: Accumulated amortization of cost to obtain contracts		(6,931)	←
Plus: Residual payments		(9,437)	←
Plus: WIP - Cost to obtain SPA contracts (BS Note - prepaid assets)		2,041	
Plus: Customer incentives (Company's books)		247	←
Less: One-time expense		(809)	
Less: Stock-based compensation		(756)	←
<b>Total sales &amp; marketing costs</b>	<b>\$</b>	<b>88,999</b>	←
Sales & Marketing (\$ / W)			
Total sales & marketing costs (in millions)		89.0	←
Divide: MW installed		65.1	
<b>Total Sales &amp; Marketing</b>	<b>\$</b>	<b>1.37</b>	
Note 7. Other Non-Current Assets	<u>Q3'19</u>	<u>Q2'19</u>	<u>Change</u>
Cost to obtain contracts	\$ 559,492	\$ 500,969	\$ 58,523
Accumulated amortization of cost to obtain contracts	(65,204)	(58,273)	(6,931)
Operating lease right-of-use assets	38,292	39,620	(1,328)
Sales Incentives	10,006	9,963	43
Other non-current assets	25,285	18,258	7,027
<b>Total other non-current assets</b>	<b>\$ 567,871</b>	<b>\$ 510,537</b>	<b>\$ 57,334</b>
Note 19. Commitments and Contingencies	<u>Q3'19</u>	<u>Q2'19</u>	<u>Change</u>
Residual payments (in thousands)	\$ 8,475	\$ 17,912	\$ (9,437)
Note 16. Equity Compensation Plans			<u>Q3'19</u>
Stock-based compensation included in operating expenses (in thousands)			
Cost of revenue - operating leases and incentives			\$ 467
Sales and marketing			756
Research and development			36
General and administrative			2,891
<b>Total stock-based compensation</b>			<b>\$ 4,150</b>
Consolidated Balance Sheet (in thousands)	<u>Q3'19</u>	<u>Q2'19</u>	<u>Change</u>
Current assets - Customer incentives	\$ 553	\$ 487	\$ 66
Non-current assets - Customer incentives	11,047	10,866	181
<b>Total customer incentives</b>	<b>\$ 11,600</b>	<b>\$ 11,353</b>	<b>\$ 247</b>

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 or are considered one-time items 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>Q3'19</u>
General & Administrative (in thousands)	
General & Administrative (IS)	\$ 32,821
Less: Stock-based compensation (BS Note)	(2,891)
Less: One-time expenses (Company's books)	(8,225)
<b>General &amp; Administrative Costs</b>	<b>\$ 21,705</b>
General & Administrative costs (in millions)	\$ 21.7
Divide: MW installed	65.1
<b>General &amp; Administrative costs per watt</b>	<b>\$ 0.33</b>

### Note 16. Equity Compensation Plans

	<u>Q3'19</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 467
Sales and marketing	756
Research and development	36
General and administrative	2,891
Total stock-based compensation	<b>\$ 4,150</b>

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>Q3'19</u>
Installation	\$ 1.78
Sales & Marketing	1.37
General & Administrative	<u>0.33</u>
<b>Total costs per watt</b>	<b><u><u>\$ 3.48</u></u></b>