



## Estimated Cost per Watt Methodology

August 8, 2016

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 cost per watt for the residential business 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, 2016.

### **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 change in work in progress - system equipment costs, the cost of revenue - operating leases and incentives and cost of revenue - solar energy system and product sales less associated non-cash expenses (stock-based compensation and depreciation and amortization). This total is then divided by the megawatts installed in the quarter.

### **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. This portion includes costs associated with the C&I business segment as well as non-cash stock-based compensation. These amounts are removed from the total sales & marketing costs. To calculate the total sales & marketing cost per watt, the portion of sales & marketing expense that is capitalized, including work in progress - initial direct costs and customer incentives, is divided by the megawatts installed during the period. The portion that flows through the income statement is divided by the megawatts booked during the quarter. These two components are then summed to reach the total sales & marketing cost per watt.

## Installation Costs per Watt Calculation

	Q2'16	
Installation (in thousands)		
System equipment costs (BS Note)	\$ 98,573	←
Plus: WIP - System equipment costs (Company's books)	1,861	←
Plus: Cost of rev - operating leases and incentives (IS)	38,538	
Plus: Cost of rev - solar energy system and product sale (IS)	3,716	
Less: Stock-based compensation (BS Note)	(637)	←
Less: Depreciation and amortization (BS Note)	(9,650)	←
Less: Fleet performance (Company's books)	(1,457)	
<b>Total installation costs</b>	<b>\$ 130,944</b>	↙
Installation (\$ / W)		
Total installation costs (in millions)	\$ 130.9	←
Divided: MW installed	61.4	
<b>Installation cost per watt</b>	<b>\$ 2.13</b>	

Note 5. Solar Energy Systems (in thousands)	Q2'16	Q1'16	Change
Solar energy systems, net			
System equipment costs	\$ 1,092,752	\$ 994,179	\$ 98,573
Solar energy system inventory	41,973	52,223	(10,250)
Initial direct costs related to solar energy systems	219,650	194,741	24,909
Solar energy systems	1,354,375	1,241,143	113,232
Less: Accumulated depreciation and amortization	(50,471)	(40,821)	(9,650)
Solar energy systems, net	\$ 1,303,904	\$ 1,200,322	\$ 103,582

Note 4. Inventories (in thousands)	Q2'16	Q1'16	Change
Inventories			
Solmetric inventory	\$ 468	\$ 514	\$ (46)
WIP - System equipment costs	2,682	821	1,861
WIP - Initial direct costs	717	195	522
Inventories	\$ 3,867	\$ 1,530	\$ 2,337

Note 13. Equity Compensation Plans	Q2'16
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 637
Sales and marketing	1,613
Research and development	(855)
General and administrative	(553)
Total stock-based compensation	\$ 842

## Sales & Marketing Costs per Watt Calculation

Sales & Marketing (\$ in millions)	<u>Q2'16</u>	
Initial direct costs related to solar energy systems (BS Note)	\$ 24.9	←
Plus: WIP - Initial direct costs (Company's books)	0.5	←
Plus: Customer incentives (Company's books)	0.5	←
	<u>26.0</u>	
Divide: MW installed	61.4	
Initial direct costs per watt	\$ 0.43	←
Sales & Marketing (IS)	\$ 10.8	←
Less: C&I sales & marketing	0.0	←
Less: Stock-based compensation	1.6	←
	<u>9.2</u>	
Divide: MW booked	73.6	
Non-capitalized Sales & Marketing costs per watt	\$ 0.12	←
Initial direct costs per watt	\$ 0.43	←
Plus: Non-capitalized Sales & Marketing cost per watt	0.12	←
<b>Total Sales &amp; Marketing</b>	<b><u>\$ 0.56</u></b>	

Note 5. Solar Energy Systems (in thousands)	<u>Q2'16</u>	<u>Q1'16</u>	<u>Change</u>
Solar energy systems, net			
System equipment costs	\$ 1,092,752	\$ 994,179	\$ 98,573
Solar energy system inventory	41,973	52,223	(10,250)
Initial direct costs related to solar energy systems	<u>219,650</u>	<u>194,741</u>	<u>24,909</u>
Solar energy systems	1,354,375	1,241,143	113,232
Less: Accumulated depreciation and amortization	<u>(50,471)</u>	<u>(40,821)</u>	<u>(9,650)</u>
Solar energy systems, net	<u>\$ 1,303,904</u>	<u>\$ 1,200,322</u>	<u>\$ 103,582</u>

Note 4. Inventories (in thousands)	<u>Q2'16</u>	<u>Q1'16</u>	<u>Change</u>
Inventories			
Solmetric inventory	\$ 468	\$ 514	\$ (46)
WIP - System equipment costs	2,682	821	1,861
WIP - Initial direct costs	<u>717</u>	<u>195</u>	<u>522</u>
Inventories	<u>\$ 3,867</u>	<u>\$ 1,530</u>	<u>\$ 2,337</u>

Note 12. Equity Compensation Plans (in thousands)	<u>Q2'16</u>
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 637
Sales and marketing	1,613
Research and development	(855)
General and administrative	<u>(553)</u>
Total stock-based compensation	<u>\$ 842</u>

Consolidated Balance Sheet (in thousands)	<u>Q2'16</u>	<u>Q1'16</u>	<u>Change</u>
Current assets - Customer incentives	\$ 52	\$ 18	\$ 34
Non-current assets - Customer incentives	<u>1,754</u>	<u>1,258</u>	<u>497</u>
Total customer incentives	<u>\$ 1,806</u>	<u>\$ 1,276</u>	<u>\$ 531</u>

Note 18. Segment Information (in thousands)	<u>C&amp;I</u>
Operating expenses:	
Sales and marketing	22
General and administrative	<u>(887)</u>



## General & Administrative

General & Administrative expense is taken from the income statement. Costs associated with our C&I business segment, non-cash stock-based compensation portion and any one-time items such as expenses related to the terminated SunEdison transaction and severance are removed from the total. The resultant number is divided by the megawatts installed during the quarter to calculate the total general & administrative cost per watt.

	<u>Q2'16</u>
General & Administrative (in thousands)	
General & Administrative (IS)	\$ 18,064
Less: C&I general and administrative	887
Less: Stock-based compensation (BS Note)	553
Less: One-time expenses (MD&A Note)	(4,297)
<b>General &amp; Administrative Costs</b>	<b>\$ 15,207</b>
General & Administrative costs (in millions)	\$ 15.2
Divide: MW installed	61.4
<b>General &amp; Administrative costs per watt</b>	<b>\$ 0.25</b>
	<u>Q2'16</u>
Note 13. Equity Compensation Plans (in thousands)	
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 637
Sales and marketing	1,613
Research and development	(855)
General and administrative	(553)
Total stock-based compensation	<u>\$ 842</u>
	<u>C&amp;I</u>
Note 18. Segment Information (in thousands)	
Operating expenses:	
Sales and marketing	\$ 22
General and administrative	\$ (887)
Management Discussion and Analysis (in thousands)	
Expenses related to proposed SunEdison transaction and severance	\$ 4,297



### 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>Q2'16</u>
Installation	\$ 2.13
Sales & Marketing	0.56
General & Administrative	<u>0.25</u>
<b>Total costs per watt</b>	<b><u>\$ 2.94</u></b>