



Estimated Cost per Watt Methodology

November 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 September 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. The amount of expense related to non-cash stock-based compensation is 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

	Q3'16	
Installation (in thousands)		
System equipment costs (BS Note)	\$ 85,932	←
Plus: WIP - System equipment costs (Company's books)	1,805	←
Plus: Cost of rev - operating leases and incentives (IS)	39,268	
Plus: Cost of rev - solar energy system and product sale (IS)	6,468	
Less: Stock-based compensation (BS Note)	(877)	←
Less: Depreciation and amortization (BS Note)	(11,071)	←
Less: Fleet performance (Company's books)	(3,029)	
Total installation costs	\$ 118,496	←
Installation (\$ / W)		
Total installation costs (in millions)	\$ 118.5	←
Divided: MW installed	58.8	
Installation cost per watt	\$ 2.02	

Note 5. Solar Energy Systems (in thousands)	Q3'16	Q2'16	Change
Solar energy systems, net			
System equipment costs	\$ 1,178,684	\$ 1,092,752	\$ 85,932
Solar energy system inventory	30,584	41,973	(11,389)
Initial direct costs related to solar energy systems	242,220	219,650	22,570
Solar energy systems	1,451,488	1,354,375	97,113
Less: Accumulated depreciation and amortization	(61,542)	(50,471)	(11,071)
Solar energy systems, net	\$ 1,389,946	\$ 1,303,904	\$ 86,042

Note 4. Inventories (in thousands)	Q3'16	Q2'16	Change
Inventories			
Solmetric inventory	\$ 742	\$ 468	\$ 274
WIP - System equipment costs	4,487	2,682	1,805
WIP - Initial direct costs	1,293	717	576
Inventories	\$ 6,522	\$ 3,867	\$ 2,655

Note 14. Equity Compensation Plans	Q3'16
Stock-based compensation included in operating expenses (in thousands)	
Cost of revenue - operating leases and incentives	\$ 877
Sales and marketing	860
Research and development	1
General and administrative	1,940
Total stock-based compensation	\$ 3,678



Sales & Marketing Costs per Watt Calculation

Sales & Marketing (\$ in millions)	Q3'16	
Initial direct costs related to solar energy systems (BS Note)	\$ 22.6	←
Plus: WIP - Initial direct costs (Company's books)	0.6	←
Plus: Customer incentives (Company's books)	0.9	←
	<u>24.1</u>	
Divide: MW installed	58.8	
Initial direct costs per watt	\$ 0.42	←
Sales & Marketing (IS)	\$ 8.6	
Less: Stock-based compensation	0.9	←
	<u>7.8</u>	
Divide: MW booked	59.3	
Non-capitalized Sales & Marketing costs per watt	\$ 0.13	←
Initial direct costs per watt	\$ 0.42	←
Plus: Non-capitalized Sales & Marketing cost per watt	0.13	←
Total Sales & Marketing	<u>\$ 0.55</u>	

Note 5. Solar Energy Systems (in thousands)	Q3'16	Q2'16	Change
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Solar energy system inventory	30,584	41,973	(11,389)
Initial direct costs related to solar energy systems	<u>242,220</u>	<u>219,650</u>	<u>22,570</u>
Solar energy systems	1,451,488	1,354,375	97,113
Less: Accumulated depreciation and amortization	<u>(61,542)</u>	<u>(50,471)</u>	<u>(11,071)</u>
Solar energy systems, net	<u>\$ 1,389,946</u>	<u>\$ 1,303,904</u>	<u>\$ 86,042</u>

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Total stock-based compensation	<u>\$ 3,678</u>

Consolidated Balance Sheet (in thousands)	Q3'16	Q2'16	Change
Current assets - Customer incentives	\$ 84	\$ 52	\$ 32
Non-current assets - Customer incentives	<u>2,653</u>	<u>1,754</u>	<u>899</u>
Total customer incentives	<u>\$ 2,737</u>	<u>\$ 1,806</u>	<u>\$ 931</u>



General & Administrative

General & Administrative expense is taken from the income statement. Expenses that are non-cash such as stock-based compensation and any one-time expenses 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>Q3'16</u>	
General & Administrative (in thousands)		
General & Administrative (IS)	\$ 19,022	
Less: Stock-based compensation (BS Note)	(1,940)	←
Less: One-time expenses (MD&A Note)	(502)	←
General & Administrative Costs	\$ 16,580	←
General & Administrative costs (in millions)	\$ 16.6	←
Divide: MW installed	58.8	
General & Administrative costs per watt	\$ 0.28	
Note 14. Equity Compensation Plans	<u>Q3'16</u>	
Stock-based compensation included in operating expenses (in thousands)		
Cost of revenue - operating leases and incentives	\$ 877	
Sales and marketing	860	
Research and development	1	
General and administrative	1,940	←
Total stock-based compensation	\$ 3,678	
Company's Books (in thousands)		
Expenses related to proposed SunEdison transaction and severance	\$ 502	←



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>Q3'16</u>
Installation	\$ 2.02
Sales & Marketing	0.55
General & Administrative	<u>0.28</u>
Total costs per watt	<u>\$ 2.85</u>