SUNPOWER®

October 7, 2016

VIA EDGAR

United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549 Attention: Mr. Martin James, Senior Assistant Chief Accountant, Office of Electronics and Machinery

Re: SunPower Corporation Form 10-K for the Fiscal Year Ended January 3, 2016 Filed February 19, 2016 Form 10-Q for the Quarterly Period Ended July 3, 2016 Filed August 10, 2016 Form 8-K dated August 5, 2016 Filed August 9, 2016 File No. 001-34166

Dear Mr. James:

This letter responds to the comments of the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") in the letter dated September 23, 2016 (the "Comment Letter") to SunPower Corporation (the "Company") regarding the above-referenced Form 10-K for the fiscal year ended January 3, 2016, Form 10-Q for the quarterly period ended July 3, 2016, and the Form 8-K dated August 5, 2016.

The Staff's comments are copied below in bold typeface in the same order as set forth in the Comment Letter, with each comment followed by the Company's response.

Form 10-K for the Fiscal Year Ended January 3, 2016

Item 8. Financial Statements

Note 18. Segment and Geographic Information, page 135

1. You disclose that your CODM reviews segment revenue and gross margin after adjustments to reflect the substance of some of your revenue generating transactions. In future filings please expand your disclosure about adjustments to revenue and gross margin to separately describe the nature of each individual measurement and accounting policy difference and to quantify the amount of each of those reconciling differences between the amounts reviewed by your CODM and amounts measured according to GAAP. Refer to ASC 280-10-50-29b and 280-10-50-31.

The Company advises the Staff that, in accordance with ASC 280-10-50-29b and 280-10-50-31, in future filings we will expand our disclosure regarding adjustments to revenue and gross margin to separately describe the nature of each individual measurement and accounting policy difference and to further quantify the amount of each of those reconciling differences between the amounts reviewed by our CODM and amounts measured according to GAAP. We expect that this disclosure will be substantially similar to the sample disclosure included in Appendix A: Segment and Geographical Information on Form 10-Q for the Quarterly Period ended July 3, 2016, as amended for the Staff's comments pursuant to the Comment Letter ("Appendix A").

2. In addition, the narrative about the tabular data on page 135 identifies certain other items that are excluded from the segment information reviewed by your CODM, such as interest, other gains and losses, accelerated

depreciation and amortization. However, it is not clear whether or how each of those identified items is included in the reconciliations presented on page 136. In future filings, please clarify your disclosure to separately quantify and describe the nature of each significant reconciling item. Refer to ASC 280-10-50-31.

The Company advises the Staff that, in accordance with ASC 280-10-50-31, in future filings we will clarify our disclosure to separately quantify and describe the nature of each significant reconciling item. We expect that this disclosure will be substantially similar to the sample disclosure included in Appendix A.

Form 10-Q for the Quarterly Period Ended July 3, 2016

Item 1. Financial Statements

Note 15. Segment and Geographic Information, page 40

3. We note your disclosure that you have three reportable segments, namely the Residential Segment, the Commercial Segment and the Power Plant Segment. On page 42 you present a measure of Total EBITDA, including corporate and unallocated. Because of the presentation format, it appears that you have presented a non-GAAP measure of consolidated adjusted EBITDA in the notes to financial statements. In future filings please revise your presentation to reconcile total reportable segment profit or loss, excluding corporate and unallocated, to consolidated pretax income. Refer to ASC 280-10-50-30b and ASC 280-10-55-49.

The Company advises the Staff that, in accordance with ASC 280-10-50-30b and ASC 280-10-55-49, in future filings we will revise this presentation to reconcile total reportable segment adjusted EBITDA, excluding corporate and unallocated, to consolidated income or loss before income taxes and equity in earnings of unconsolidated investees. We expect that this disclosure will be substantially similar to the sample reconciliation included in Appendix A.

4. We note that in addition to presenting a measure of segment gross margin you now also present a measure of segment adjusted EBITDA as a performance measure used by the CODM to assess segment performance. Please explain to us whether there was a change in the segment measures used by your CODM in evaluating segment performance and explain to us your consideration of the disclosure guidance from ASC 280-10-50-28.

The Company advises the Staff that prior to fiscal 2016, the measure of segment performance used by our CODM was gross margin. Subsequently, the CODM used both gross margin and adjusted EBITDA to measure segment performance. We evaluated the relevant disclosure guidance, including ASC 280-10-50-28, and concluded that adjusted EBITDA is the appropriate measure of segment performance to disclose. We determined that adjusted EBITDA is most consistent with the measurement principles in our consolidated financial statements, as it represents a more holistic depiction of segment performance, incorporating items such as operating expenses attributable to each segment. As a result, effective in the Form 10-Q for the three months ended April 3, 2016, we began disclosing adjusted EBITDA as the primary measure of segment performance, and elected to continue to present segment gross margin on a voluntary basis.

Form 8-K dated August 5, 2016

Non-GAAP Adjustments Based on IFRS

5. We note that you adjust your non-GAAP measures to record the revenue and profit of certain transactions utilizing IFRS. Please clarify to us whether these adjustments represent all of the differences between U.S. GAAP and IFRS for both revenues and expenses. If your adjustments only relate to the differences between U.S. GAAP and IFRS for the specific transactions discussed in this section, tell us why this should not be considered an individually tailored recognition method. See Question 100.04 of the updated Non-GAAP Compliance and Disclosure Interpretations issued on May 17, 2016.

The Company advises the Staff that these adjustments represent all of the differences between U.S. GAAP and IFRS for both revenues and expenses which (a) we are currently accounting for through our reporting process under IFRS as part of our status as a consolidated subsidiary of Total S.A., a foreign public registrant which reports under IFRS; and (b) would impact the ending non-GAAP financial metrics. For example, we are aware of a difference between U.S. GAAP and IFRS related to accounting for stock-based compensation, but as stock-based compensation expense is excluded from the

relevant non-GAAP figures, it would not impact the end result. Furthermore, we believe that our use of these adjustments assists in aligning the perspectives of our management and noncontrolling shareholders with those of Total S.A., our controlling shareholder. As a result, we do not believe that our use of these adjustments represents an individually tailored recognition method that would violate Rule 100(b) of Regulation G.

Other Non-GAAP Adjustments

6. We note that you include "other" adjustments which appear to be comprised of several adjustments in one line making it difficult to fully understand the nature and amounts of each of your non-GAAP adjustments. Please revise your disclosure in future earnings releases to present each material adjustment separately in your reconciliation. Alternatively, you may quantify the adjustments in the footnotes.

The Company advises the Staff that in future earnings releases we will revise our disclosure to present each material adjustment separately in our reconciliation, or otherwise quantify the adjustments in the footnotes.

<u>EBITDA</u>

7. Please revise your presentation in future filings to label "EBITDA" as "Adjusted EBITDA." Also, tell us why you only adjust for cash interest expense in your calculation.

The Company advises the Staff that in future filings we will revise our presentation to label "EBITDA" as "Adjusted EBITDA." In our calculation, we only adjust for cash interest expense as a separate line item in the reconciliation because non-cash interest expense is already adjusted under the 'Other' line item. This presentation format is an indirect result of our exclusion of non-cash interest expense from non-GAAP net income while including cash interest expense. In total, all interest expense is excluded from our calculation of Adjusted EBITDA. Consistent with our response to the Staff's sixth question above, in future filings we will revise our disclosure to present non-cash interest expense as a separate adjustment.

As requested by the Staff, the Company hereby acknowledges that:

- the Company is responsible for the adequacy and accuracy of its disclosure in its filings;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the Company's filings; and
- the Company may not assert the Staff's comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

We trust the foregoing is responsive to your request and we thank you for your attention to this matter. Should you have any questions concerning the foregoing, please address them to the undersigned at (408) 457-2333.

Regards,

/s/ CHARLES D. BOYNTON

Charles D. Boynton Executive Vice President and Chief Financial Officer

cc: Ken Mahaffey, Vice President and General Counsel, Global Business Units, SunPower Corporation Scott Whelton, Partner, Ernst & Young LLP

Appendix A: Segment and Geographical Information on Form 10-Q for the Quarterly Period ended July 3, 2016, as amended for the Staff's comments pursuant to the Comment Letter.

Note 15. SEGMENT AND GEOGRAPHICAL INFORMATION

The Company's President and Chief Executive Officer, as the CODM, has organized the Company, manages resource allocations and measures performance of the Company's activities among three end-customer segments: (i) Residential Segment, (ii) Commercial Segment and (iii) Power Plant Segment (see Note 1). The Residential and Commercial Segments combined are referred to as Distributed Generation.

The CODM assesses the performance of the three end-customer segments using information about their revenue, gross margin, and adjusted earnings before interest, taxes, depreciation and amortization ("Adjusted EBITDA") after certain adjustments, described below in further detail. Additionally, for purposes of calculating Adjusted EBITDA, the calculation includes equity in earnings of unconsolidated investees and net loss attributable to noncontrolling interests and redeemable noncontrolling interests and excludes cash interest expense, net of interest income, and depreciation. The CODM does not review asset information by segment.

Adjustments Made for Segment Purposes

8point3 Energy Partners

The Company includes adjustments related to the sales of projects contributed to 8point3 based on the difference between the fair market value of the consideration received and the net carrying value of the projects contributed, of which, a portion is deferred in proportion to the Company's retained equity interest in 8point3. Under U.S. GAAP ("GAAP"), these sales are recognized under either real estate, lease, or consolidation accounting guidance depending upon the nature of the individual asset contributed, with outcomes ranging from no, partial, or full profit recognition.

Utility and power plant projects

The Company includes adjustments related to the revenue recognition of certain utility and power plant projects based on percentage-of-completion accounting and, when relevant, the allocation of segment revenue and margin to the Company's project development efforts at the time of initial project sale. Under GAAP, such projects are accounted for under real estate accounting guidance, under which no separate allocation to the Company's project development efforts occurs and the amount of revenue and margin that is recognized may be limited in circumstances where the Company has certain forms of continuing involvement in the project. Over the life of each project, cumulative revenue and gross margin will eventually be equivalent under both the GAAP and segment treatments; however, revenue and gross margin will generally be recognized earlier under the Company's segment treatment. Within each project, the relationship between the adjustments to revenue and gross margins is generally consistent. However, as the Company may have multiple utility and power plant projects in differing stages of progress at any given time, the relationship in the aggregate will occasionally appear otherwise.

Sale of operating lease assets

The Company includes adjustments related to the revenue recognition on the sale of certain solar assets subject to an operating lease (or of solar assets that are leased by or intended to be leased by the third-party purchaser to another party) based on the net proceeds received from the purchaser. Under GAAP, these sales are accounted for as borrowing transactions in accordance with lease accounting guidance. Under such guidance, revenue and profit recognition is based on rental payments made by the end lessee, and the net proceeds from the purchaser are recorded as a non-recourse borrowing liability, with imputed interest expense recorded on the liability. This treatment continues until the Company has transferred the substantial risks of ownership, as defined by lease accounting guidance, to the purchaser, at which point the sale is recognized.

Sale-leaseback transactions

The Company includes adjustments related to the revenue recognition on certain sale-leaseback transactions based on the net proceeds received from the buyerlessor. Under GAAP, these transactions are accounted for under the financing method in accordance with real estate accounting guidance. Under such guidance, no revenue or profit is recognized at the inception of the transaction, and the net proceeds from the buyer-lessor are recorded as a financing liability. Imputed interest is recorded on the liability equal to the Company's incremental borrowing rate adjusted solely to prevent negative amortization.

Stock-based compensation

The Company incurs stock-based compensation expense related primarily to the Company's equity incentive awards. The Company excludes this expense from its segment results.

Amortization of intangible assets

The Company incurs amortization expense on intangible assets as a result of acquisitions, which includes patents, project assets, purchased technology and trade names. The Company excludes this expense from its segment results.

Non-cash interest expense

The Company incurs non-cash interest expense related to the amortization of items such as original issuance discounts on certain of its convertible debt. The Company excludes this expense from its segment results.

Restructuring expense

The Company incurs restructuring expense related to reorganization plans aimed towards realigning resources consistent with the Company's global strategy and improving its overall operating efficiency and cost structure. The Company excludes this expense from its segment results.

Arbitration ruling

On January 28, 2015, an arbitral tribunal of the International Court of Arbitration of the International Chamber of Commerce declared a binding partial award in the matter of an arbitration between First Philippine Electric Corporation ("FPEC") and First Philippine Solar Corporation ("FPSC") against SunPower Philippines Manufacturing, Ltd. ("SPML"), the Company's wholly-owned subsidiary. The tribunal found SPML in breach of its obligations under its supply agreement with FPSC, and in breach of its joint venture agreement with FPEC. The second partial and final awards dated July 14, 2015 and September 30, 2015, respectively, reduced the estimated amounts to be paid to FPEC, and on July 22, 2016, SPML entered into a settlement with FPEC and FPSC and paid a total of \$50.5 million in settlement of all claims between the parties. As a result, the Company recorded its best estimate of probable loss related to this case at the time of the initial ruling and updated the estimate as circumstances warranted. The Company excludes these amounts from its segment results.

IPO-related costs

The Company incurred costs related to the IPO of 8point3 related to legal, accounting, advisory, valuation, and other expenses, as well as modifications to or terminations of certain existing financing structures in preparation for the sale to 8point3. The Company excludes these costs from its segment results.

Other

The Company combines amounts previously disclosed under separate captions into "Other" when amounts do not have a significant impact on the presented fiscal periods.

Segment and Geographical Information

The following tables present information by end-customer segment including revenue, gross margin, and adjusted EBITDA, each as reviewed by the CODM, as well as information about significant customers and revenue by geography, based on the destination of the shipments.

		Three Mo	nths l	Ended	Six Months Ended					
(In thousands):	Jı	ıly 3, 2016	Ju	ne 28, 2015	Jı	ıly 3, 2016	Ju	ne 28, 2015		
Revenue										
Distributed Generation										
Residential										
Solar power systems, components, and others	\$	113,274	\$	101,737	\$	208,906	\$	217,403		
Residential leasing		64,441		50,468		120,616		90,126		
Commercial		97,846		62,984		150,087		112,047		
Power Plant		144,891		165,831		325,718		402,315		
Total revenue	\$	420,452	\$	381,020	\$	805,327	\$	821,891		
Cost of revenue										
Distributed Generation										
Residential										
Solar power systems, components, and others	\$	90,995	\$	80,988	\$	166,058	\$	173,355		
Residential leasing		47,964		35,991		91,061		66,396		
Commercial		89,523		58,842		134,749		105,722		
Power Plant		150,676		134,318		320,628		314,719		
Total cost of revenue	\$	379,158	\$	310,139	\$	712,496	\$	660,192		
Gross margin										
Distributed Generation										
Residential										
Solar power systems, components, and others	\$	22,279	\$	20,749	\$	42,848	\$	44,048		
Residential leasing		16,477		14,477		29,555		23,730		
Commercial		8,323		4,142		15,338		6,325		
Power Plant		(5,785)		31,513		5,090		87,596		
Total gross margin	\$	41,294	\$	70,881	\$	92,831	\$	161,699		

							Three Montl July 3, 2					
			R	evenue					Gross man	rgin		
Revenue and Gross margin by segment (in thousands, except												
percentages):	R	esidential	Co	mmercial	Po	ower Plant	 Residenti	al	 Commerc	ial	 Power Pla	nt
As reviewed by CODM	\$	186,611	\$	110,492	\$	104,693	\$ 42,249	22.6%	\$ 11,973	10.8%	\$ (1,630)	(1.6)%
8point3 Energy Partners		1,287		—		113	419		(179)		(30)	
Utility and power plant projects				_		40,085	_				(4,128)	
Sale of operating lease assets		(10,183)		_		_	(2,966)				—	
Sale-leaseback transactions		—		(12,646)		_	—		(2,988)			
Stock-based compensation		—		_		_	(1,652)		(745)		(3,067)	
Amortization of intangible assets							(576)		(608)		(347)	
Non-cash interest expense						_	(63)		(52)		(168)	
Arbitration ruling		_				_	1,345		922		3,585	
GAAP	\$	177,715	\$	97,846	\$	144,891	\$ 38,756	21.8%	\$ 8,323	8.5%	\$ (5,785)	(4.0)%

							Three Montl June 28,					
			F	Revenue					Gross marg	gin		
Revenue and Gross margin by segment (in thousands, except percentages):	R	esidential	Со	mmercial	Р	ower Plant	 Residentia	al	Commercia	al	Power Pla	nt
As reviewed by CODM	\$	152,205	\$	62,984	\$	161,518	\$ 35,410	23.3%	\$ 4,016	6.4%	\$ 26,717	16.5%
Utility and power plant projects		_		_		4,313	_		_		4,328	
Stock-based compensation		_		—			(1,212)		(531)		(1,516)	
Non-cash interest expense		—		—		—	(143)		(107)		(292)	
Arbitration ruling		_		_		_	1,212		797		2,361	
Other		—		—			(41)		(33)		(85)	
GAAP	\$	152,205	\$	62,984	\$	165,831	\$ 35,226	23.1%	\$ 4,142	6.6%	\$ 31,513	19.0%

							Six Months July 3, 2					
]	Revenue					Gross mar	gin		
Revenue and Gross margin by segment (in thousands, except percentages):	R	esidential	Co	ommercial	P	ower Plant	 Residenti	al	Commerc	ial	Power Plan	nt
As reviewed by CODM	\$	347,509	\$	162,733	\$	325,196	\$ 5 79,832	23.0%	\$ 20,305	12.5%	\$ 11,477	3.5%
8point3 Energy Partners		2,599				13,975	904		(179)		4,127	
Utility and power plant projects		_		_		(13,453)	_				(7,685)	
Sale of operating lease assets		(20,586)		_		_	(6,078)		_		_	
Sale-leaseback transactions		_		(12,646)			—		(2,988)		_	
Stock-based compensation		_		_		—	(2,479)		(1,397)		(5,713)	
Amortization of intangible assets						_	(987)		(1,234)		(324)	
Non-cash interest expense		—		—		—	(134)		(91)		(377)	
Arbitration ruling		_		_		_	1,345		922		3,585	
GAAP	\$	329,522	\$	150,087	\$	325,718	\$ 5 72,403	22.0%	\$ 15,338	10.2%	\$ 5,090	1.6%

							Six Month June 28					
]	Revenue					Gross mar	gin		
Revenue and Gross margin by segment (in thousands, except percentages):	R	Residential	Сс	ommercial	Рс	ower Plant	 Residenti	al	Commerci	al	Power Pla	nt
As reviewed by CODM	\$	307,529	\$	112,047	\$	387,732	\$ 70,688	23.0%	\$ 7,041	6.3%	\$ 76,575	19.7%
Utility and power plant projects		_		_		14,583	_		_		15,579	
Stock-based compensation		_		_		_	(2,134)		(919)		(2,772)	
Non-cash interest expense		—		_		—	(363)		(162)		(634)	
Arbitration ruling				_			(372)		398		(1,066)	
Other				_			(41)		(33)		(86)	
GAAP	\$	307,529	\$	112,047	\$	402,315	\$ 67,778	22.0%	\$ 6,325	5.6%	\$ 87,596	21.8%

		Three Mo	nths	s Ended	Six Months Ended					
(In thousands):	Ju	ly 3, 2016	Jı	une 28, 2015	Ju	ıly 3, 2016	Ju	ne 28, 2015		
Adjusted EBITDA as reviewed by CODM										
Distributed Generation										
Residential	\$	37,092	\$	75,082	\$	66,670	\$	107,706		
Commercial		244		(2,088)		(2,196)		(8,988)		
Power Plant		(15,922)		20,796		(24,800)		51,973		
Total Segment Adjusted EBITDA as reviewed by CODM	\$	21,414	\$	93,790	\$	39,674	\$	150,691		
Reconciliation to Consolidated Statements of Income Loss)										
8point3 Energy Partners		(18,039)		4,688		(28,758)		4,688		
Utility and power plant projects		(4,128)		4,328		(7,685)		15,579		
Sale of operating lease assets		(2,979)		—		(6,099)				
Sale-leaseback transactions		(2,988)		—		(2,988)				
Stock-based compensation		(16,475)		(14,040)		(32,995)		(27,586		
Amortization of intangible assets		(3,168)		(497)		(11,334)		(996		
Non-cash interest expense		(309)		(571)		(655)		(5,250		
Restructuring expense		(117)		(1,749)		(213)		(5,331		
Arbitration ruling		5,852		4,369		5,852		(1,041		
IPO-related costs		—		(15,230)		—		(25,130		
Other		(23)		(159)		(23)		(160		
Equity in earnings of unconsolidated investees		(8,350)		(1,864)		(7,585)		(4,055		
Net loss attributable to noncontrolling interests and redeemable noncontrolling interests		(22,189)		(29,975)		(38,197)		(49,443)		
Cash interest expense, net of interest income		(13,144)		(8,023)		(25,328)		(19,115)		
Depreciation		(37,730)		(30,820)		(71,556)		(59,424)		
Corporate and unallocated items		8,490		(30,235)		(3,464)		(28,305)		
Loss before taxes and equity in earnings of unconsolidated investees	\$	(93,883)	\$	(25,988)	\$	(191,354)	\$	(54,878)		

		Three Mo	nths Ended	Six Months Ended				
(As a percentage of total revenue):		July 3, 2016	June 28, 2015	July 3, 2016	June 28, 2015			
Significant Customers:	Business Segment							
8point3 Energy Partners	Power Plant	*	*	14%	*			
MidAmerican Energy Holdi Company	ngs Power Plant	*	15%	*	25%			
Customer C	Power Plant	19%	*	10%	*			

	Three Mor	nths Ended	Six Months Ended			
(As a percentage of total revenue):	July 3, 2016	June 28, 2015	July 3, 2016	June 28, 2015		
Revenue by geography:						
United States	79%	62%	78%	66%		
Japan	6%	15%	5%	15%		
Rest of World	15%	23%	17%	19%		
	100%	100%	100%	100%		