Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

SunPower is dedicated to changing the way our world is powered. For 30 years, SunPower has led the way with record-setting technologies and innovative solar solutions, and our cutting-edge approach to sustainability is renowned for its positive impact on the environment and our communities. We were originally incorporated in California in 1985 under the symbol "SPWR and in fiscal 2011, we became a majority owned subsidiary of Total Energies Nouvelles Activités USA, formerly known as Total Gas & Power USA, SAS ("Total"), a subsidiary of Total S.A. ("Total S.A.").

SunPower innovates relentlessly to deliver industry-leading solar technology to residential, commercial and utility customers worldwide, while ensuring we maintain a light footprint and give back to communities globally. Our business is comprised of four key components including:
• Cutting-edge solar module technology and solar power systems that are designed to generate electricity over a system life typically exceeding 25 years;
• Integrated Smart Energy software solutions that enable customers to effectively manage and optimize their Customer Cost of Electricity (CCOE) measurement;
• Installation, construction, and ongoing maintenance and monitoring services; and
• Financing solutions that provide customers a variety of options for purchasing or leasing high efficiency solar products at competitive energy rates.

We empower our customers to generate their own clean, affordable, emissions-free electricity and we value our role as a sustainability advisor. We believe that solar is positioned to make the single biggest contribution of any industry to carbon reduction goals – more than wind, more than energy efficiency, more than any other clean technology on the horizon. Our solar solutions and services help our customers achieve meaningful cost, energy and carbon reduction goals, and we are making a point to learn with our customers through direct collaboration and the data that is collectively derived from solar installations.

We are a trusted partner to strong well-known brands including six of the top ten solar corporate users and eight of the top ten home builders. About 500,000 residential consumers and hundreds of commercial customers utilize SunPower systems every day and we sell our products to the Americas, Europe, Middle East, Africa and Asia Pacific. In 2015, we completed Solar Star, the world’s largest solar power plant project, which is now owned and operated by BHE Renewables.

We see this as just the beginning. 2015 was an incredible transformational year demonstrating the importance of solar as a mainstream energy source. The momentum gained last year will ensure that solar power has a dominant place in the world’s future energy mix. As a leading solar provider, we are squarely focused on meeting this unprecedented customer demand with unique and innovative high quality products. We look forward to creating the world’s most innovative and

sustainable energy company.

CC0.2

Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Thu 01 Jan 2015 - Thu 31 Dec 2015

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
France
Malaysia
Mexico

Select country
Morocco
Philippines
South Africa
United States of America
Australia

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD($)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

Tom Werner is the President and Chief Executive Officer (CEO) of SunPower and he is the person with the highest level of direct responsibility for climate change at SunPower. Tom Werner oversees the operations of SunPower and communicates about these activities, including climate change, to the Corporate Executive Board of which he is also a member.

At SunPower, members of the Corporate Social Responsibility (CSR) Council, are responsible for SunPower's corporate sustainability and climate change policy and programs. Specific responsibilities include setting the mission, vision and annual strategic plan for the company with respect to sustainability and, specifically, to climate change.

The Council is chaired by the Executive Vice President of Administration, who reports directly to the President and CEO of SunPower on the progress and performance of climate change initiatives as well as on other sustainability initiatives. The Council is made up of four SunPower executives with voting authority plus four non-voting members including executives and CSR experts who are all appointed by the Chair. In addition to the Council, Sustainability Project Teams are established and consist of cross-functional area representatives within SunPower that work within a specific business unit on key sustainability initiatives.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
All employees	Monetary reward	Emissions reduction target	All employees are asked to support initiatives to achieve corporate sustainability goals, including the carbon reduction goal. The carbon reduction goal will be met through energy (electricity and fuel) reduction projects to achieve a targeted 5% reduction in year-over-year greenhouse gas emissions. If employees help SunPower achieve these goals, they are recognized with a monetary bonus as a component of their total compensation.
Corporate executive team	Monetary reward	Emissions reduction target	The corporate executive team is asked to develop and implement Carbon Reduction Action Plans to support the annual 5% carbon reduction goal. If the corporate executive team helps SunPower achieve this goal, they are recognized with a bonus, which is a component of their total compensation.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	We look at SunPower's operations worldwide. Our headquarters and research and development operations are located in California, and our manufacturing facilities are located in the Philippines, France, South Africa, and Mexico. The facilities of our joint venture for manufacturing are located in Malaysia. In addition, we have offices located around the world.	> 6 years	At the company level, SunPower assesses risks and opportunities to our worldwide operations from climate change with the help of a new dedicated risk manager. Risks are reviewed on a monthly basis by the executive management team and where important, brought to the CEO, who is a member of the Board. The risks that SunPower reviews are evaluated for impacts six or more years in the future.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

At the company level, SunPower assesses climate change with the help of a dedicated risk manager who is focused on identifying and mitigating risks and systematizing our internal processes. During 2015, the first year we had this position, we identified and classified different risks. As part of this, climate change risks were considered from the standpoint of future potential financial impacts for all facilities worldwide.

Existing risks that have been identified are reviewed on a monthly basis by the executive management team and where important, brought to the CEO. This year, awareness of how to identify risks grew as the focus has shifted from reducing insurance costs to broadly considering risk. We are transitioning to more holistically consider risks and to more fully integrate the precautionary principle into our business.

At the asset level, we focus on risks and opportunities from climate change at the buildings we operate. On the mitigation side, we conduct a GHG inventory annually to help us measure and monitor our performance. To continually improve, we develop Carbon Reduction Action Plans which are used to identify opportunities for GHG reductions. We proactively reduce our carbon footprint by the use of our own solar products as well as implementing other energy efficiency measures for our buildings, reducing the amount of energy required to produce SunPower products.

With the help of FM Global, a global property insurance company, SunPower goes through an annual process to assess specific risks to sites and then, to safeguard against loss, develops loss prevention strategies to exceed local protection standards. Through this process, potential issues are identified upfront, thereby reducing exposure to business interruption. For example, in 2015, SunPower worked with FM Global to install sprinklers, move equipment, and strengthen infrastructure at the Mexicali facility to ensure that it received highly protected status.

CC2.1c

How do you prioritize the risks and opportunities identified?

We broadly evaluate risks and opportunities including but not limited to physical and operational risks based on qualitative information (e.g., as presented in FM Global risk reports) and quantitative information (identified potential foreseeable loss, etc.). SunPower evaluates risks and prioritizes opportunities based on the magnitude of the impact, how easy it is to mitigate, the cost, and other qualitative information that might be available.

In addition, we also look at low-probability, high-impact events especially when we select new sites for expansion. Our local operations and Facilities groups work closely with FM Global, to assess specific risks of potential facility sites, and then, to safeguard against loss, develops loss prevention strategies and facility development plans that exceed local protection standards. At our new facility which is under construction, FM Global regularly reviews construction documents and visits the site once a quarter to embed mitigation measures in the design itself. As a result, SunPower has identified and mitigated potential issues upfront, thereby reducing exposure to business interruption and reduced our insurance costs.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

Internal processes for collection/reporting information: climate change mitigation is at the core of our business strategy. We aim to change the way that the world is powered as our panels replace fossil-based energy such as electricity produced from coal-fired power plants. By replacing coal, our panels significantly reduce GHG emissions and move us towards a low carbon economy. Every megawatt (MW) of solar cell capacity that SunPower deploys is a MW, which is replacing or offsetting other carbon intensive sources.

Aspects of climate change that influence the strategy: SunPower's business strategy is influenced by applicable climate change-related regulations and its commitment to environmental stewardship and social responsibility. As part of SunPower's risk management process, the Company monitors proposed and approved climate change regulations, such as the renewable portfolio standards and the Clean Power Plan because these regulatory changes influence SunPower's market.

Short and long-term strategies: We contribute to global climate change efforts through the continued growth and evolution of our company, which helps our customers reduce their carbon footprints, and by making our panels more efficiently. We are proactively working to reduce our carbon footprint by incorporating our solar products into the design of our manufacturing facilities. We have identified the economic and technical feasibility of maximizing the number of solar panels we could install at our manufacturing sites by 2020. We currently generate 3.9 MW of solar energy and under our plan, by 2020 will generate 15 MW which is about 17% of our electricity usage. If we reach Max PV, we expect to reduce our energy costs by 8% and further reduce our exposure to carbon taxes or energy price volatility.

We have also set a global goal to have 10 gigawatts (GW) of SunPower solar systems deployed by 2015, which equates to reducing approximately 18 million metric tons of CO2e. To do this, we currently sell our products to customers ranging from consumer homeowners to large commercial and governmental entities. Our clients installing large solar systems range from Macy's to Verizon to Stanford. The use of our sold products quickly dwarfs the emissions associated with the production of solar panels. Our recent LCA suggests that the carbon payback period occurs within just 9 months of operation.

Strategic advantage: SunPower competes with conventional fossil fuels and renewable energy such as wind, hydro, biomass, solar thermal, and emerging distributed generation technologies. In the long-term, compared to fossil fuel generation, we benefit from changing consumer behavior based on increased public awareness of climate change, environmental concerns, and regulatory requirements since our product mitigates GHG emissions. These factors drive demand for SunPower's solar panels.

Within the solar panel market, our reputation for consistently innovating and delivering forward-looking solar products helps set us apart. Our panel efficiency, capacity factors, lifespan, reliable system performance, cost, and forward-looking technologies which reduce the impacts of climate change, give us a strategic advantage over our many energy competitors. As we continue to grow our business and expand into more markets and as the sustainable benefits of our product continue to be recognized as an asset, we anticipate that our reputation will only increase.

Substantial business decisions made: SunPower continues to invest heavily in new solar panel production facilities since we are confident that the market for solar will continue to grow as the need to mitigate GHG emissions becomes more urgent. In 2015, we expand our solar cell manufacturing capacity by opening a new facility (Fab 4) in the Philippines with a planned annual capacity of 350 MW once the facility is fully operational.

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Clean	Support	2015 was a landmark year for solar policy with California's Net	Standards like the U.S. Clean Power Plan reinforce what leading

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
energy generation		Energy Metering 2.0, the U.S. Clean Power Plan (CPP), extension of the U.S. solar investment tax credit and the Paris COP21 agreement. SunPower's Public Policy Team is responsible for engaging in policy discussions around climate change and internal reporting the status of proposed climate change and renewable energy legislation and policy. In conjunction with the industry associations that we support, SunPower has been active in providing technical information to further the understanding of the industry and commenting on legislative solutions. Where possible, we help communicate the benefits associated with these policies to thought leaders and decision makers. We believe that clean energy policies are good for our environment, the economy, and companies. Increasingly, businesses rely on renewable energy and energy efficiency solutions cuts costs and reduce emissions.	companies already know: climate change poses real financial risks and substantial economic opportunities. We have broadly supported policies on a variety of types of climate change regulation which further enable and facilitate large commercial renewable energy investments in the USA and other countries that we operate in. These policies focus on topics such as utility innovation and net metering to provide our customers with more certainty in the market on a national and international scale. For example, in 2015, SunPower was instrumental in getting SEIA to engage on the CPP and wrote a portion on the role that solar panels provide in reducing GHG emissions.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Solar Energy Industries Association (SEIA)	Consistent	SEIA promotes comprehensive	SunPower is an executive board member of SEIA

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		climate and energy legislation at the state level. The policies that SEIA supports focus on advancing solar, a zero-emissions technology.	(including service on the executive committee). This commitment is broadly intended to drive sustainability through the entire solar industry supply chain and encourage the use of solar power by developing clear and consistent standards for the solar industry. In addition, SunPower works closely with the organization to create policy priorities, messaging, and to monitor legislation that affects the solar industry.
Silicon Valley Leadership Group (SVLG)	Consistent	SVLG supports AB32 and broader renewable policies in California.	SunPower works closely with SVLG to develop policy priorities, messaging, and to monitor legislation that affects the solar industry.
European Photovoltaic Industry Association (EPIA)	Consistent	EPIA broadly supports a climate and energy framework with a consistent focus on renewable energy, energy efficiency and emissions reductions.	SunPower is a board member of EPIA and a SunPower employee currently serves in the key leadership position as president. In this capacity, SunPower works closely with EPIA to develop policy priorities, messaging, and to monitor legislation that affects the solar industry.
BSW - Solar, Assolarre, ASIF, SER-SOLER, ENRPLAN, EDORA, Emirates Solar Industry Association (ESIA), PV CYCLE, Union Espanola Fotovoltaica (UNEF), Gruppo Imprese Fotovoltaiche Italiane (GIFI), Hellenic Association of Photovoltaic Companies (Helapco), Swissolar, CalSEIA, CEERT, IREC, LSA, PV Coalition, SEPA, Vote Solar, ASES, GASEIA, HREA, MOSEIA, NCSEA, ACORE, CFEE, CoSEIA, GSREIA, NYSEIA, MidAtlantic SEIA, CRS, AEC, Puerto Rico Energy Cluster	Unknown	These trade associations broadly promote the use of solar locally and internationally. This often includes support for low carbon technologies and climate change regulation.	SunPower works closely with trade associations that support solar and renewable energy through the development of policy priorities and messaging, and to monitor legislation that promotes the solar industry. SunPower sits on the board of CEERT, LSA, SEPA, Vote Solar, CFEE, MidAtlantic SEIA, CRS, and AEC. In this capacity, SunPower works closely with the board to determine the trade associations' position on climate change legislation. For example, in 2015, SunPower was instrumental in getting SEIA to engage on the CPP and wrote a portion on the role that solar panels provide in reducing GHG emissions.
Middle East Solar Industry Association (MESIA)	Consistent	MESIA works to expand the use of solar power in the Middle East.	A SunPower employee is currently the policy director for MESIA. SunPower works closely with MESIA to develop policy priorities, messaging, and to monitor legislation that affects the solar industry and to strengthen the local solar industry.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

No

CC2.3e

Please provide details of the other engagement activities that you undertake

SunPower created the SunPower Foundation to help create and motivate solar energy leaders through education, awareness, and participation in community solar energy projects and programs. (http://www.sunpower.org/)

The SunPower Foundation is a non-profit organization working with partners globally to accelerate the move to renewable energy. We're driven by an appreciation of the environment and a desire to preserve it. Solar energy has the power to transform the way people around the world use electricity—improving our communities and our planet.

Education is the first step toward change, and the SunPower Foundation partners with organizations that make change happen. The SunPower Foundation helps provide solar panels, information on solar power including lesson plans, and other solar education resources.

The SunPower Foundation website provides a platform to help unite communities to raise awareness and encourage the use of clean, renewable solar energy. The SunPower Foundation empowers everyone to be a solar advocate for their community.

One example of our solar advocacy is our work with Grid Alternatives in the San Francisco Bay Area. Over the past nine years, we have partnered with GRID Alternatives, a non-profit solar installer, to deliver new energy solutions and job training to low-income communities in California. GRID Alternatives empowers communities with renewable energy and energy efficiency services, helps low-income families with solar electric systems, and provides people with training and hands-on experience with solar power. We recently expanded our commitment to include donating solar panels for low-income homeowners in California and Colorado. Our partnership has resulted in 1,700+ solar electric systems installed, 8,000+ community volunteers trained, 4.7+ MW generating capacity, $44 million in energy cost savings over the projected lifespan of the systems, and 148,000 tons of GHG emissions avoided.

Finally, SunPower funds a SunPower education programs that empower learners and teachers with a focus on STEM. As a company, we have made a commitment to focus our community efforts on programs that foster local learning and growth. From teacher training programs to curriculum development and summer internships, we are helping our communities to build a strong foundation from which to foster solar technology education and professional development.

During the summer, SunPower offers paid internships to high school students interested in pursuing a career in solar technology. While earning a stipend, interns learn about the solar value chain and the career paths available to them. We expose them to project economics and engage them in a dialogue about the environmental benefits of renewable energy. What started in its inaugural year with 20 high school interns has successfully developed into an enriching summer

experience for 180 students per year.

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The policy team meets weekly to review policy and this provides an opportunity to ensure alignment and discuss our approach. This team works cross functionally and meets with the larger business units and management quarterly to advise and receive input on potential topics. Our executives are always invited to these meetings and encouraged to attend because often these policy discussions overlap with our corporate strategy. In addition, the impact of renewable energy and climate change legislation is also a topic of discussion at quarterly executive strategy meetings where corporate executives discuss long-term objectives and appropriate steps to be taken over each fiscal quarter to achieve these objectives. Therefore, the engagement with our executive team feeds into the long-term objectives adopted by the policy team and our day to day actions to influence policy.

Certain core principles around climate change have been adopted and we work to support state and federal policies. We always support policies that mitigate climate change and engage directly and indirectly through our numerous memberships and leadership positions in trade associations outlined in CC2.3c to make this happen.

Anything that is potentially controversial receives more screening. In these cases, our policy, corporate communications, and legal teams work together to ensure that we have a consistent message and approach. For example, we have applied a higher level of scrutiny to commenting on the Regional Greenhouse Gas Initiative (RGGI) to ensure that our message is consistent.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Intensity target
Renewable energy consumption and/or production target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (location-based)	75%	20%	Metric tonnes CO2e per unit of production	2012	247	2020	No, but we anticipate setting one in the next 2 years	In 2013, a new goal was established for the cell fabrication to reduce 2020 fabrication facility emissions 20% below the 2012 baseline year. With this goal, we are moving to a more targeted approach. The boundaries for the goal are based on a hot spot analysis that helped identify the largest opportunities

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
									to reduce emissions.
Int2	Scope 1+2 (location-based)	6%	15%	Metric tonnes CO2e per unit of production	2012	25	2020	No, but we anticipate setting one in the next 2 years	In 2013, a new goal was established for the assembly facilities to reduce 2020 emissions 15% below the 2012 baseline year. With this goal, we are moving to a more targeted approach. The boundaries for the goal are based on a hot spot analysis that helped identify the largest opportunities to reduce emissions.
Int3	Scope 1+2 (market-based)	100%	5%	Metric tonnes CO2e per unit of production	2014	263981	2015	No, but we anticipate setting one in the next 2 years	The use of an intensity target allows us to set robust targets while still accommodating for future business growth which is important to us given that our solar panel products help our customers reduce their GHG emissions and potentially meet science-based targets. For the past 3 years, we have had annual targets of reducing our absolute Scope 1 and 2 GHG emissions 5% per unit produced compared to the previous year. Using this approach, we are better able to set long-term targets and integrate our new fabrication facilities which we anticipate will be operating in the next couple of years. Going forward, we have officially committed to aligning this target with the Science Based Targets team at http://sciencebasedtargets.org/ and will be going through the quality check process in the next 24 months.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Increase	110	No change	0	We anticipate that the change in absolute emissions for 2020 will be a 110% increase. This equates to a 83% increase in overall Scope 1 and 2 emissions. This growth in absolute emissions is lower than the overall increase in production which is expected to go from 1,000 MW produced to 10,000 MW produced.
Int2	Decrease	46	No change	0	We anticipate that the change in absolute emissions at the assembly facilities for 2020 will be an 46% decrease. This equates to a 3% decrease in overall Scope 1 and 2 emissions. The change in emissions is in part through the installation of solar on our buildings and solar carports, and robust energy efficiency measures.
Int3	Increase	9	Decrease	0	The use of an intensity target allows us to set robust targets while accommodate for future business growth which is important to us given that our solar panel products help our customers reduce their GHG emissions and potentially meet science-based targets. For the past 3 years, we have had annual targets of reducing our absolute Scope 1 and 2 GHG emissions 5% per unit produced compared to the previous year. Using this approach, we are better able to set long-term targets and integrate our new fabrication facilities which we anticipate will be operating in the next year.

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity production	2014	411485	0%	2020	17%	As part of our Maximum PV plan, we are proactively working to reduce our carbon footprint by incorporating our solar products into the design of our manufacturing facilities. We have identified the economic and technical feasibility of maximizing the number of solar panels we could install at our manufacturing sites by 2020. By 2020 will generate 15 MW which is about 17% of our electricity usage onsite from zero emissions sources.
RE2	Other: Renewable energy consumption of our customers	1985	0	0%	2015	0%	2015 was an incredible transformational year demonstrating the importance of solar as a mainstream energy source. The momentum gained last year will ensure that solar power has a dominant place in the world's future energy mix. As a leading solar provider, we are squarely focused on meeting this unprecedented customer demand with unique and innovative high quality products. We empower our customers to generate their own clean, affordable, emissions-free electricity and we value our role as a sustainability advisor. Our solar solutions and services help our customers achieve meaningful cost, energy and carbon reduction goals. We're proud of our global customer portfolio. This includes being a trusted partner to strong well-known brands including six of the top ten solar corporate users and eight of the top ten home builders. About 500,000 residential consumers and hundreds of commercial customers utilize SunPower systems every day. Though we did not meet our target 10 gigawatts (GW) of SunPower solar systems deployed by 2015 as we expected when we set it, we are close. We are currently on pace to install 8.8 GW by the end of 2016 and 10.6 GW by the end of 2017. To date, more than 18,000,000 MTCO2e have been avoided cumulatively.

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int3	100%	100%	The use of an intensity target allows us to set robust targets while accommodate for future business growth which is important to us given that our solar panel products help our customers reduce their GHG emissions and potentially meet science-based targets. For the past 3 years, we have had annual targets of reducing our absolute Scope 1 and 2 GHG emissions 5% per unit produced compared to the previous year. This last year, we reduced our emissions by 9%.
Int1	37.5%	25%	We are already well on our way to meeting these goals and expect to achieve them in part through our Max PV plan which will further reduce our GHG emissions at these sites. In the last year, one of the challenges around meeting this target has been that we have added a new fabrication facility. Since this is still being brought online, the GHG per cell have been higher than they will likely be when the facility is operational and more consistent production is occurring.
Int2	37.5%	75%	We are already well on our way to meeting these goals and expect to achieve them in part through our Max PV plan which will further reduce our GHG emissions at these sites.
RE1	16.66%	25%	As part of our Maximum PV plan, we are proactively working to reduce our carbon footprint by incorporating our solar products into the design of our manufacturing facilities. We have identified the economic and technical feasibility of maximizing the number of solar panels we could install at our manufacturing sites by 2020. By 2020 will generate 15 MW which is about 17% of our electricity usage onsite from zero emissions sources.
RE2	100%	71%	We continued to grow production in 2015 to be able to produce more of our high quality panels. Though we did not meet our target 10 gigawatts (GW) of SunPower solar systems deployed by 2015 as we expected when we set it, we are close. We are currently on pace to install 8.8 GW by the end of 2016 and 10.6 GW by the end of 2017. To date, more than 18,000,000 MTCO2e of CO2e have been avoided cumulatively.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	At SunPower, we believe in changing the way our world is powered. SunPower innovates relentlessly to deliver industry-leading solar technology to residential, commercial and utility customers worldwide, while ensuring we maintain a light footprint and give back to communities globally. We empower our customers to generate their own clean, affordable, emissions-free electricity and we value our role as a sustainability advisor. Our solar solutions and services help our customers achieve meaningful cost, energy and carbon reduction goals. We're proud of our global customer portfolio. This includes being a trusted	Avoided emissions	Other: Evaluating the carbon reducing potential of solar	100%	More than 80% but less than or equal to 100%	2015 was an incredible transformational year demonstrating the importance of solar as a mainstream energy source. The momentum gained last year will ensure that solar power has a dominant place in the world's future energy mix. As a leading solar provider, we are squarely focused on meeting this unprecedented customer demand with unique and innovative high quality products. We look forward to creating the world's most innovative and sustainable energy company and to changing the way our world is powered. Over the last year, our production of solar panels continued to increase and expand the amount of renewable energy

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
	partner to strong well-known brands including six of the top ten solar corporate users and eight of the top ten home builders. About 500,000 residential consumers and hundreds of commercial customers utilize SunPower systems every day. During 2015, we completed Solar Star, the world's largest solar power plant project, which is now owned and operated by BHE Renewables. This solar project generates 748 MW annually. Over the course of the three year construction, the project created approximately 600 solar jobs, contributed millions of dollars in revenue for local businesses and now that it is in operation, creates enough clean, solar energy to serve nearly 255,000 California homes.					being generated by our customers. Our solar panel manufacturing facilities have a combined total rated annual capacity of close to 1.8 GW and to continue to advance the use of solar, SunPower has set a global goal to have a total of 10 GW of SunPower solar systems deployed to our residential and commercial customers by 2016. Once achieved, this will equate to approximately 18,000,000 MTCO2e of GHG emissions avoided annually for the 25-year service life of the product assuming a 2016 baseline year. This calculation assumes a capacity factor of 20% and 400,000 tons/TWh for Europe and 689,510 tons/TWh for the U.S. (USEPA) and the rest of world. The baseline year for this goal was 2007 and the final year is 2016.

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	11	366
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	28	350295
Not to be implemented	0	0

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Waste recovery	At the end of 2015, SunPower facilities in De Vernejoul and Toulouse, France, and our Mexicali facility earned landfill-free	4329	Scope 3	Voluntary	779100	30	<1 year	6-10 years	To earn verification, organizations must demonstrate that no more than 1 percent of waste generated at a single site

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	verification from NSF Sustainability. With this recognition, three SunPower facilities now hold the verification demonstrating that 99 percent of the waste generated at each location is diverted from landfills. Cumulatively, the 7 projects that we implemented in 2015 included projects from reducing hazardous waste to recycling PV to reusing products.								goes to the landfill. Additional criteria include documentation and implementation of waste sorting and management processes, active employee training programs, and routine audits to ensure compliance. With Landfill-Free Verification and Cradle-to-Cradle Certified™ Silver solar panel production, our landfill free sites are a sustainability model for SunPower manufacturing facilities worldwide
Other	75 percent of SunPower's solar panels now carry the Cradle to Cradle Certified mark which means they meet comprehensive product quality standard that evaluates product design, manufacturing, corporate citizenship and ethics principles. Products are assessed according to Material Health, Material Reutilization, Renewable	0	Scope 3	Voluntary	0	2600	>25 years	1-2 years	Three SunPower facilities are manufacturing Cradle to Cradle Certified solar panels, as we continue to help residential and commercial customers reach their long-term sustainability goals, whether by achieving LEED certification or having a positive impact on society and the environment. We are

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	Energy Use, Water Stewardship, and Social Fairness.								committed to making all of our solar panels more sustainable, in line with our dedicated focus to supporting the transition towards a circular economy that is restorative and regenerative by design.
Low carbon energy installation	We believe in using our own products to ensure we maintain a light footprint and have started installing new solar energy on our facilities as we work towards Max PV. Through our Max PV plan, we have identified the economic and technical feasibility of maximizing the number of solar panels we can install at our manufacturing sites by 2020. We installed more new solar projects at a number of our sites in 2015. At Fab 2, we completed the installation of solar panels on the carport to generate electricity for the Fab. At our Modco facility, we	296	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	75000	645550	4-10 years	>30 years	We have started installing new solar energy on some of our infrastructure as we work towards Max PV. Through this project, we are proactively working to reduce our carbon footprint by incorporating our solar products into the design of our manufacturing facilities. Through our Max PV plan, we have identified the economic and technical feasibility of maximizing the number of solar panels we can install at our manufacturing sites by 2020. At the end of 2015, we generated 3.9 MW of solar energy and under our plan, by 2020 will generate 15 MW which

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	completed an additional 855 kW Solar PV installation. At the end of 2015, we generated 3.9 MW of solar energy and under our plan, by 2020 will generate 15 MW. As part of our next steps, we will be installing more renewable energy in 2016 to complete the maximum PV program by 2020. If we reach Max PV, we expect to reduce our overall energy costs by 8%.								is about 17% of our electricity usage. As part of our next steps, we will be installing more renewable energy in 2015 to complete the maximum PV program by 2020. If we reach Max PV, we expect to reduce our energy costs by 8% and further reduce our exposure to carbon taxes or energy price volatility.
Other	We're proud of our global customer portfolio. This includes being a trusted partner to strong well-known brands including six of the top ten solar corporate users and eight of the top ten home builders. About 500,000 residential consumers and hundreds of commercial customers utilize SunPower systems every day. During 2015, we completed Solar Star, the world's largest solar power	336674	Scope 3	Voluntary Mandatory	0	0	<1 year	>30 years	We enter into joint agreements to develop solar projects which help our customers reduce their GHG emissions and potentially meet science-based targets.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	plant project, which is now owned and operated by BHE Renewables. This solar project generates 748 MW annually. Over the course of the three year construction, the project created approximately 600 solar jobs, contributed millions of dollars in revenue for local businesses and now that it is in operation, creates enough clean, solar energy to serve nearly 255,000 California homes.								
Energy efficiency: Building services	At our Fabs, we had a number of upgrades to our cooling towers. For Fab 2, we implemented a project which improved efficiency by upgrading from the bar cross fill to the versa cross fill on the cooling tower. We also replaced the aluminium cooling tower fan blades with fiberglass reinforced plastic which weighs less and thus is more fuel efficient. At Fab 3, we have been running	2870	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	438000	357000	<1 year	6-10 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	the cooling tower more efficiently by leveraging different modes given our operations and the associated cooling capacity demands.								
Energy efficiency: Processes	At our Fab 2 facility, we reduced the use of compressed dry air by installing a dedicated vacuum for APCVD Tools. This allowed us to turn off the compressor and air dryer because we were using compressed air to generate vacuum which wastes lots of energy. We also had a vacuum project at Fab 3 where we converted to direct vacuum earlier in our process.	2945	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	685000	240000	<1 year	21-30 years	
Energy efficiency: Building services	We replaced old lighting fixtures in our facilities with LED lights and turned-off lights in areas which were over illuminated for the task at hand or the occupancy. Through these projects, we reduced the lighting levels or made the lighting more efficient to	1965	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	54200	11700	<1 year	6-10 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	save energy across our fabrication and assembly facilities.								
Energy efficiency: Processes	We installed a new control to enable us to reduce the process cool water pump speed to achieve its optimal use and reduce kw consumption. Previously, there was no control on the process control water flow. At the same time, we also worked to reduce energy losses in the cable associated with the process cooling water.	81	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	108000	10200	<1 year	21-30 years	
Energy efficiency: Building services	At our Mexicali site, we reduced the operation during off hours of our air handling units to reduce energy use.	1	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	4600	0	<1 year	3-5 years	
Energy efficiency: Processes	We implemented a project in two phases for Fab 3 to double the capacity on some of our tools. This decreased the number of runs that were necessary for the same output.	864	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	914000	2500000	1-3 years	21-30 years	
Energy	We implemented a new	209	Scope 2	Voluntary	85000	0	<1 year	21-30	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
efficiency: Processes	project at Fab 3 which enabled direct discharge of the heat source from the tester which reduced the cooling demands for the room and resulted in an overall energy savings.		(location-based) Scope 2 (market-based)					years	
Energy efficiency: Processes	At one of our facilities, we replaced the oil loop pipe with a new pipe to make the air compressor cooling more efficient.	61	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	25000	0	<1 year	21-30 years	

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal incentives/recognition programs	Employees are engaged in finding ways to minimize the use of process manufacturing equipment through continuous experimentation and improvement activities focused on reducing consumption, thereby reducing emissions associated with SunPower's operations.
Financial optimization	Factory investments are oriented towards cost reduction and sustainability improvements. As part of this, SunPower has used

Method	Comment
calculations	heat exchange compressed dry air units to generate heat, eliminated diesel-fueled boilers, and eliminated LPG use at our newest factory. We continually look for new opportunities for efficiency and to add solar panels as part of our Max PV plan.
Dedicated budget for low carbon product R&D	At SunPower, we consider all of our products to be low carbon. For over 30 years, SunPower has pushed the boundaries of solar energy. Our world-record setting solar panel technology is only the beginning. SunPower innovates relentlessly to deliver the most advanced products and solutions, custom financing options and progressive sustainability practices. And our fully-integrated approach to systems, storage and software is fundamentally changing the future of energy. During 2015, we spent almost $100 million on all of our research and development efforts. Worldwide, we had over 5% of our staff working to develop our next generation solar technology and expand our product offerings. This innovation has translated into our patents and we currently hold 324 in the United States to protect our intellectual property around low carbon innovation.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communication	Underway -	10 - 15 / Operations	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC4.1/Sunpower-sustainability-report.pdf	We plan to release our next Sustainability Report in 2017 and it will contain carbon

Publication	Status	Page/Section reference	Attach the document	Comment
s	previous year attached			emissions data and reduction projects from 2014-2016. Further information on our sustainability program performance from 2013-2015 is available on our website: http://us.sunpower.com/about/sustainability/
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	39 / Climate change	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC4.1/SunPower_2015_Annual_Report.pdf	We extensively report on our financial performance and address risks including from climate change in our annual shareholder reports.
In voluntary communications	Underway - previous year attached	Environmental Health and Safety Scorecard	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC4.1/2014- SunPower-environmental-health-safety-scorecard-sustainability-performance-metrics.pdf	We also update our website each summer with the previous year's environmental sustainability data.
In voluntary communications	Complete	GHG Emissions and Energy Payback Time of AC Electricity Generated	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC4.1/PVSC_42_Manuscript_SunPower_OASIS V04 (2).pdf	SunPower completed a comprehensive LCA to better understand our the impacts and benefits from the carbon footprint of our products.

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	In the event that any of the countries where SunPower operates adopt regulations which cap or tax carbon emissions, it is likely that the cost of raw materials and energy will increase. It is common for the major source of electricity generation to be coal, natural gas,	Increased operational cost	3 to 6 years	Direct	More likely than not	Low-medium	The magnitude of the increase in energy costs from a carbon tax is dependent on a large number of national and international factors, but as a conservative estimate, we anticipate that it could align with the US EPA social cost of carbon at a 5% discount rate. For planning purposes,	By reducing our dependence on fossil fuel based energy sources at our manufacturing facilities, we are more resilient to energy price fluctuations. To do this, we conduct a GHG inventory and Carbon Reduction Action Plans, which are used to drive performance. As part of this, we have set targets to reduce	Over the last 5 years, SunPower has invested $335,000 in emissions reduction projects and these current projects save around 2,035 MTCO2e annually. We anticipate continuing to invest heavily in energy efficiency and installing solar on our buildings. Under the Max PV

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	or hydroelectric power, of which the first two are likely to be included in carbon tax or cap and trade schemes. If these industries receive carbon caps or taxes in the countries where SunPower operates, it is possible that the cost of energy could increase. Increases in energy costs could result in lower margins for SunPower products or increased pricing of products, which could adversely affect sales growth.						the estimated financial implications from a carbon tax of $12 per MTCO2e on Scope 1 and 2 emissions could result in an increase of $3 million in costs to our business.	the GHG emissions from our Modco facilities 15% below 2012 baseline by 2020 and from our fabrication facilities 20% reduction below 2012 baseline by 2020. We also proactively reduce our carbon footprint and are in the process of implementing an ambitious plan to install maximum PV (Max PV) at all of our manufacturing facilities to further reduce the carbon required to produce SunPower products on a per-MW basis. As part of this plan, we have identified the economic and technical feasibility of maximizing the number of solar panels we could install at our manufacturing sites. At Max PV, we will generate about 17% of our electricity usage at Max PV.	plan, our emissions will be reduced another 7,310 MTCO2e.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								This plan will more than double the PV at all of our facilities and if we reach Max PV, we expect to reduce our energy costs by 8% which will further reduce our exposure to carbon taxes.	

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Tropical cyclones (hurricanes and typhoons)	Research indicates that climate change could amplify the violent storms will occur between the Tropic of Cancer and the Tropic of Capricorn. SunPower's manufacturing	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low-medium	Our property, plant and equipment, located in the Philippines is valued at $321 million. Any damage to our facilities in the Philippines from more	At the company level, SunPower assesses risks and opportunities associated with climate change including typhoons with the help of a	We invest annually in our risk manager and in insurance with FM Global to make our sites more resilient to climate change and to adapt to

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	operations located in the Philippines and Malaysia are in this area and could experience damage as a result of typhoons and other extreme weather events. Substantial storm damage to these factories (or vendors/transport in the supply chain) as a result of climate change-related severe weather events could result in business interruption or severe impact resulting from a shortage of supply of products. Property damage could increase repair costs, cause lost work time, and lost revenue as operations need to shutdown to recover leading to disruptions in production.						extreme storms could result in financial loss. In addition to direct losses to infrastructure, if operations are down for too long, SunPower could also lose market share to competitors.	dedicated risk manager. Our risk manager is focused on identifying and mitigating risks and systematizing our internal processes. With the help of FM Global, a global property insurance company, SunPower assesses specific risks of potential facility sites, and then, to safeguard against loss, develops loss prevention strategies and facility development plans that exceed local standards. We ensure our facilities are categorized as highly protected risk which means the maximum	emerging concerns. The cost of management to have a dedicated risk manager is over $100,000 annually. The assessment of risks and appropriate upgrades are conducted annually for owned facilities. Through this process, potential issues are identified upfront, thereby reducing exposure to business interruption.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								level of protection that we can have by using FM Global to help us install the right level of systematic protection given the specific facilities that SunPower has and our unique operations. For example, in 2015, SunPower worked with FM Global to implement precautionary measures. We installed sprinklers, moved equipment, and more generally strengthened infrastructure at the Mexicali facility to ensure that it received highly protected status. At our new facility	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								which is under construction, FM Global regularly reviews construction documents and visits the site once a quarter to embed mitigation measures in the design itself. As a result, the company has identified and mitigated potential issues upfront, thereby reducing exposure to business interruption.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Uncertainty in market signals	The market for electric generation products is heavily influenced by federal, state and local government laws, regulations and policies concerning the electric utility industry in the United States and abroad, as well as policies promulgated by electric utilities. These regulations and policies often relate to environmental protection and other policies that promote the use of solar. For example, in the past, changes in government incentives have caused our revenues to decline. In the solar industry, government incentives make solar competitive	Reduced demand for goods/services	1 to 3 years	Direct	Likely	Medium-high	Since 2011, some of these government mandates and economic incentives were reduced or restructured, including the feed-in tariffs in Germany and incentives offered by other European countries. This has caused our earnings in Europe in 2011-2013 to decline and adversely impact our financial results. Revenues in our EMEA business unit declined from $924 million to $451 million between 2011 and 2013 despite a growth in revenues for SunPower as a whole. In 2013, EMEA represented 18% of our revenue and	SunPower's Public Policy Team is responsible for engaging in policy discussions around climate change and reporting the up-to-date status of proposed climate change and renewable energy legislation and policy. In conjunction with the industry associations that we support, SunPower has been active in providing technical information to further the understanding of the industry and commenting on legislative solutions. Where possible, we help communicate the benefits associated with these policies including environmental	The cost of engaging in policy discussions and supporting the robust adoption of solar on a national and global level is already embedded into our business. There are several dedicated employees that support this effort who work on the Policy and Market Strategy teams. In 2015, SunPower spent $16.8 million in sales and general administrative fees to expand marketing efforts and facilitate awareness around our product.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	with retail electricity rates and wholesale peak power rates. Various government bodies in most of the countries where we do business provide incentives in the form of feed in tariffs, rebates, tax credits, and other incentives and mandates, such as renewable portfolio standards. Without the growth in these regulations, further investment in the research and development of alternative energy sources as well as customer purchases of solar power technology, could be deterred. Over the last couple years, SunPower has experienced						now they are only 8%.	impact reduction, job creation, and cost savings. We have broadly supported climate change regulation with a focus on the USA and the other countries that we operate in around the world. Our support is for further utility regulation and rate design, net meter, and fixed charges to provide our customers with more certainty in the market on a national and international scale. For example, 2015 was a landmark year for solar policy with California's Net Energy Metering 2.0, the U.S. Clean Power Plan (CPP), extension of the U.S. solar investment tax credit and the Paris COP21	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	increased volatility in these regulations as various programs are introduced and then ended.							agreement. We supported policies on all of these regulations which further enable and facilitate large commercial renewable energy investments in the USA and other countries that we operate in. On the CPP, SunPower was instrumental in getting SEIA to engage and wrote a portion of the report on the role that solar panels provide in reducing GHG emissions.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	Emerging renewable energy regulation drives demand for SunPower solar panels. For example, electricity suppliers can purchase SunPower products and/or systems to fulfill requirements of regional Renewable Portfolio Standards (RPS).	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	High	While remaining focused on our U.S. market, we plan to continue to expand our business in growing and sustainable markets, including Africa, Australia, China, Saudi Arabia, South America, and Turkey. In South Africa, construction of our 86 MW Prieska project remains on plan as we ramp our 160-MW South African panel manufacturing facility to support our large scale project efforts in this region. This project was done in conjunction with two of	SunPower's Public Policy Team is responsible for engaging in policy discussions around climate change and reporting the up-to-date status of proposed climate change and renewable energy legislation and policy. In conjunction with the industry associations that we support, SunPower has been active in providing technical information to further the understanding of the industry and commenting on legislative solutions. Where	The cost of engaging in policy discussions and supporting the robust adoption of solar on a national and global level is already embedded into our business. There are several dedicated employees that support this effort who work on the Policy and Market Strategy teams. In 2015, SunPower spent $16.8 million in sales and general administrative fees to expand marketing efforts and facilitate awareness around our product.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							similar size were an aggregate of approximately $379 million in revenue for SunPower.	possible, we help communicate the benefits associated with these policies including environmental impact reduction, job creation, and cost savings. We have broadly supported a variety of types of climate change regulation with a focus on the USA and the other countries that we operate in around the world. Our support is for further utility regulation and rate design, net meter, and fixed charges to provide our customers with more certainty in the market on a national and	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								international scale. For example, 2015 was a landmark year for solar policy with California's Net Energy Metering 2.0, the U.S. Clean Power Plan (CPP), extension of the U.S. solar investment tax credit and the Paris COP21 agreement. We supported policies on all of these regulations which further enable and facilitate large commercial renewable energy investments in the USA and other countries that we operate in. On the CPP, SunPower was instrumental in	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								getting SEIA to engage and wrote a portion of the report on the role that solar panels provide in reducing GHG emissions.	

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	With the changes in weather around the world, there are increasing challenges around water supply and availability. One concern on utility scale installations is the cleaning of the panels.	Increased demand for existing products/services	>6 years	Direct	About as likely as not	Medium	Our ability to expand and grow in the utility scale solar market is a significant part of our ongoing business and the use of Greenbotics in our program to develop scalable, fully	We continue to innovate around our products by investing in research and development to make the more resilient to a changing climate. The impact of factors like shading, temperature, mounting and	Innovation is the key to our business and ensuring that our products are more resilient going forward. We engage in extensive research and development efforts to improve solar cell efficiency

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Regular cleaning is necessary to maintain high power generation but can also be water intensive. Where solar panels are located in solar abundant but arid environments such as deserts, having potable water for cleaning poses a challenge. To reduce the water and labor required for cleaning, SunPower purchased and uses a Robotic Cleaning System made by Greenbotics, Inc. to automatically clean panels using less water. The robots may be configured for						integrated, vertical approach to constructing and developing utility-scale photovoltaic power plants in a sustainable way. We are currently deploying this technology on many of the utility-scale solar power systems for which we provide operations and maintenance services. The robots may be configured for use with a variety of solar panels and mounting types, including fixed-tilt arrays and single access trackers and significantly reduce water use and improve system performance. If	positioning can affect the amount of electricity generated and thus reduce the overall system efficiency. In light of the negative impact of dust and dirt on solar panel performance, in November 2013 we acquired solar panel cleaning service Greenbotics, Inc., to expand our energy services offerings for large ground-mount systems. Notably, the SunPower Robotic Cleaning System uses 90% less water than traditional cleaning systems—an ideal solution for arid environments in terms of both	through enhancement of our existing products, development of new techniques such as concentrating photovoltaic power, and reducing manufacturing cost and complexity. Our research and development group works closely with our manufacturing facilities, our equipment suppliers and our customers to improve our solar cell design and to lower solar cell, solar panel and system product manufacturing and assembly costs. In 2015, our research and development budget was $99 million.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	use with a variety of solar panels and mounting types and significantly reduce water use and improve system performance. This robot system has come to be a market differentiator for us from other large scale solar installers.						just one utility scale sale a year is made based on the integration with Greenbotics, revenue associated with that sale could be over $50 million.	maximizing performance while minimizing environmental impact. By cleaning PV panels in dusty regions can increase power harvest by up to 15 percent using less than half a cup of water to wash each panel. The SunPower Robotic Cleaning System helps ensure that our solar panels continue to operate under any condition and having this innovative technology continues to help us differentiate from our competitors in the utility scale solar installation space.	
Change in temperature extremes	With higher temperatures and more	New products/business services	3 to 6 years	Direct	Likely	Medium-high	The current size of the market for	Over the next five years, we expect to see a	SunPower invested $20 million of growth

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	extreme storms, there will be more disruptions to existing utility services. To avoid disruption, we expect to see more localized generation and greater connectivity between devices.						home energy networks (which Tendril's services are part of) is almost $750 million and customer demand for these products is expected to rise quickly over the next couple years. Technavio's report, Global Smart Grid HAN Market 2015-2019, suggests that the market could grow at a compound annual growth rate of 15%.	disruptive shift in the energy market, with solar power, energy storage, smart devices, energy management technologies and electric vehicles being combined. We see “Smart Energy” as a way to harness our world’s energy potential by connecting our powerful and reliable solar systems on the market with an increasingly vast array of actionable data that can help our customers make smarter decisions about their energy use. Our Smart Energy initiative is designed to add layers of intelligent control to homes, buildings and grids—all	capital into Tendril and to license its Energy Services Management (ESM) Platform software. Enhanced by SunPower's vast amount of solar related data, the ESM Platform powers the development of new Smart Energy applications for a broader set of consumers and utilities. The system will then offer advice on shifting usage, such as running a dishwasher or charging an electric vehicle when PV production is highest.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								personalized through easy-to-use customer interfaces. In order to enhance the portfolio of Smart Energy solutions we offer, we continue to invest in integrated technology solutions to help customers manage and optimize their energy management. We have an investment in Tendril Networks, Inc. and have licensed its data-driven Energy Services Management Platform. We believe that this open, cloud-based software platform provides the infrastructure, analytics and understanding	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								required to power the development of new Smart Energy applications that will deliver personalized energy services to our residential customers.	

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	At SunPower, we benefit from changing consumer behavior based on increased public awareness of climate change, environmental concerns, and regulatory	Increased demand for existing products/services	3 to 6 years	Direct	Very likely	Medium-high	At SunPower, we consider all of our products to be low carbon. For over 30 years, SunPower has pushed the boundaries of solar energy. Our world-record setting	2015 was an incredible transformational year demonstrating the importance of solar as a mainstream energy source. The momentum gained last year will ensure that	During 2015, we spent almost $100 million on all of our research and development efforts. Worldwide, we had over 5% of our staff working to

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	requirements. These all drive demand for SunPower's solar panels. At SunPower, we believe in changing the way our world is powered. SunPower innovates relentlessly to deliver industry-leading solar technology to residential, commercial and utility customers worldwide, while ensuring we maintain a light footprint and give back to communities globally. We empower our customers to generate their own clean, affordable, emissions-free electricity and we value our role as a sustainability advisor. Our						solar panel technology is only the beginning. SunPower innovates relentlessly to deliver the most advanced products and solutions, custom financing options and progressive sustainability practices. And our fully-integrated approach to systems, storage and software is fundamentally changing the future of energy. In 2015, the residential leasing program increased revenues to $129,962,000 which was double from two years prior. We expect to see	solar power has a dominant place in the world's future energy mix. As a leading solar provider, we are squarely focused on meeting this unprecedented customer demand with unique and innovative high quality products. We look forward to creating the world's most innovative and sustainable energy company and to changing the way our world is powered. We are actively working to differentiate our products and communicate about their benefits to larger audiences. Over the last year, our production of solar panels continued to increase and expand the amount of	develop our next generation solar technology and expand our product offerings. This innovation has translated into our patents and we currently hold 324 in the United States to protect our intellectual property around low carbon innovation.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	solar solutions and services help our customers achieve meaningful cost, energy and carbon reduction goals. We're proud of our global customer portfolio. This includes being a trusted partner to strong well-known brands including six of the top ten solar corporate users and eight of the top ten home builders. About 500,000 residential consumers and hundreds of commercial customers utilize SunPower systems every day. Our reputation for consistently innovating and delivering						continued growth going forward due to ongoing expansion and increased market interest.	renewable energy being generated by our customers. To continue to advance the use of solar, SunPower has set a global goal to have a total of 10 GW of SunPower solar systems deployed to our residential and commercial customers by 2016. Once achieved, this will equate to approximately 19.4 million metric tonnes of Scope 1 carbon dioxide equivalents avoided annually for the 25-year service life of the product assuming a 2016 baseline year.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	forward looking solar products helps to set us apart. As we continue to grow our business and expand into more markets, and as the sustainable benefits of our product continue to be recognized as an increasing asset, we anticipate that the interest in our product will only increase.								

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sun 01 Jan 2012 - Mon 31 Dec 2012	1284
Scope 2 (location-based)	Sun 01 Jan 2012 - Mon 31 Dec 2012	255714

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 2 (market-based)		

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)
NF3	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
Other: CF4	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other:		Other:	The emissions factors that have been applied to develop this inventory in response to question CC7.4 are attached.

Further Information

The emissions factors that have been applied to develop this inventory in response to question CC7.4 are attached.

Attachments

https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/SunPower Worksheet-for-question-cc7.4_2016_Final.xlsx

Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

2626

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
275999	268955	In the past, we have calculated our emissions using the location based approach. However, since we have several locations in California, we are using some market-based mechanisms to reduce our overall emissions.

CC8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Scope 1 emissions for small offices including space heating	Emissions are not relevant	No emissions from this source	No emissions from this source	The source was excluded because it was de minimis and there is uncertainty in any approach used to estimate these emissions since it is variable based on temperature and equipment. Additionally, these are leased spaces and SunPower does not have operational control, hence we cannot measure the impact of our energy conservation programs in these locations.
Scope 2 emissions	No emissions	No emissions	No emissions	No emissions are excluded.

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
	excluded	excluded	excluded	

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	Less than or equal to 2%	Metering/ Measurement Constraints	All of the actual usage data has been collected for onsite fuel use in 2015. Any uncertainty from Scope 1 emissions is due to issues with the metering equipment.
Scope 2 (location-based)	Less than or equal to 2%	Assumptions	SunPower estimated Scope 2 emissions for its administrative support offices. The value is based on estimated electricity consumption based on the square footage and number of employees. These administrative support offices make up 2% of the 2015 Scope 2 emissions.
Scope 2 (market-based)	Less than or equal to 2%	Assumptions	SunPower estimated Scope 2 emissions for its administrative support offices. The value is based on estimated electricity consumption based on the square footage and number of employees. These administrative support offices make up 2% of the 2015 Scope 2 emissions.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC8.6a/CDP Verification Letter_SunPower CY2015_v 1 (3).pdf	2/ Verification letter	ISO14064-3	100

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC8.7a/CDP Verification Letter_SunPower CY2015_v 1 (3).pdf	2/ Verification letter	ISO14064-3	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year change in emissions (Scope 1 and 2)	We had previously started the verification process but did not complete that work until this year. As part of that, we reviewed our emissions in 2014.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e

Country/Region	Scope 1 metric tonnes CO2e
Malaysia	82
Mexico	42
Philippines	1210
United States of America	995
Australia	1
South Africa	5
Morocco	291

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division
By facility
By GHG type
By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Manufacturing	1339
Office	1287

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Fab 2 (Philippines)	1006	12.87	121.77
Fab 3 (Malaysia)	82	2.34	102.21
Modco (Philippines)	159	14.28	121.06
Richmond (US)	2	37.91	-122.36
San Jose (US)	993	37.42	-121.95
Mexicali (Mexico)	42	32.62	-115.46
Fab 4 (Philippines)	46	14.26	121.06
Cape Town (South Africa)	5	-34.01	18.50
Intl. Owned Vehicles (Morocco)	291	31.47	7.5
Intl. Owned Vehicles (Australia)	1	25.16	133.46

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	2602
CH4	4.05
N2O	2.98
Other: CF4	0.04
HFCs	1

GHG type	Scope 1 emissions (metric tonnes CO2e)
NF3	17

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Backup Generators	1043
Company Vehicles	1293
Canteen / Heating	257
Forklift Distillate Diesel No.2 Fuel	11
Forklift LPG - Liquid	2
Forklift LPG- Mass	2
Forklift Petrol Fuel	1
Cell R&D and Cell Manufacturing	17
Cell R&D	0.04
Air Conditioning	1

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
France	545	545	5933	11
Malaysia	146248	146248	212635	1265
Mexico	8519	8519	19570	640
Morocco	31	31	45	0
Philippines	108199	108199	222167	796
South Africa	165	165	190	0
United States of America	12292	5248	14787	625

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division
By facility
By activity

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Manufacturing	263036	263036
Support Offices	12962	5918

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Anaheim 1, CA, USA	32	32
Anaheim 2, CA, USA	32	32
Austin 1, TX, USA	663	663
Austin 2, TX, USA	219	219
Binan, Philippines	471	471
Davis, CA, USA	36	36
Fab 2, Philippines	97618	97618
Fab 3, Malaysia	146248	146248
Fab 4, Philippines	1971	1971
Lyon 1, France	142	142

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Mexicali, Mexico	8519	8519
Modco, Philippines	8138	8138
Milpitas, CA, USA	258	258
Morocco, Africa	31	31
Richmond 1, CA, USA	3042	1577
Richmond 2, CA, USA	682	682
San Jose 1, CA, USA	6677	1099
San Jose 2, CA, USA	620	620
San Diego, CA, USA	8	8
Toulouse, France	205	205
Cape Town, South Africa	165	165
Fremont, CA, USA	22	22
Lyon 2, France	26	26
De Vernejoul, France	172	172

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Purchased Electricity	257310	268266
Natural Gas (leased facilities)	689	689

Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	Energy purchased and consumed (MWh)
Heat	4599
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

14520

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Distillate fuel oil No 2	7003
Liquefied petroleum gas (LPG)	1197
Natural gas	3402
Motor gasoline	2918

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates	625	Several of our facilities are located in California where the California Air Resources Board as part of the implementation of AB 32 is working to reduce GHG emissions 80% below 1990 levels by 2050. A component of the plan is to require utilities to increase the amount of renewable energy that they sell to retail customers as part of the California Renewables Portfolio Standards (RPS) Program which aims to improve clean energy and reduce pollution. Under the RPS, utilities are required to sell at least 33% renewable energy by 2020 and 50% renewable energy by 2050. The RPS is aligned with AB 32 and the regulation is designed to reduce overall greenhouse gas emissions. As a result, our facilities located in California have lower emissions than the state as a whole.

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
478664	475327	3337	3337	3337	

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	13	Decrease	We had more than 20 new Scope 1 and 2 emissions reduction projects in 2015 which we estimated saved over 9,300 MTCO2e. In addition, we had emissions reductions projects that where started as far back as 2009 which are contributing to ongoing emissions reductions of about 19,400 MTCO2e. We also moved from calculating our market based GHG emissions which has further reduced our emissions 7,044 MTCO2e. Therefore, the change is (35,800/274,207)*100=13%.
Divestment	0.02	Decrease	SunPower closed a large number of small office locations around the world as part of a restructuring effort.

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
			The reorganization plan realigned resources consistently with SunPower's global strategy and improving overall operating efficiency and cost structure. Most of the office spaces that were divested were small and had a minimal footprint. Therefore, the change in boundary is (556/274,207)*100=0.02%.
Acquisitions	0	No change	To expand our business and maintain our competitive position, we have acquired a number of other companies and entered into several joint ventures over the past several years, including our 8point3 joint venture with First Solar and our acquisitions of Cogenra Solar, Inc. and Solaire Generation, Inc. in fiscal 2015. At present, 8point3 is not factored into our inventory because it operates as independent entity. Cogenra Solar, Inc. and Solaire Generation, Inc. only accounted for 30 MTCO2e which is less than 1% of the overall inventory.
Mergers	0	No change	There were no mergers in 2015.
Change in output	11	Increase	Production at our facilities continues to increase and we have expanded operations in Mexicali and Fab 2. In 2015, cell production increased by 11% and based on this, we assumed that if emissions were directly coupled to our production, our Scope 1 and 2 emissions would have increased by the same amount.
Change in methodology	0	Decrease	We have adjusted our Scope 2 emissions reporting to now also calculate market based GHG reductions. As a result, our Scope 2 market based number has decreased as we now account for low carbon emissions associated with electricity from My Clean Energy and Pacific Gas and Electric in California.
Change in boundary	1	Increase	Fab 4 was opened in late 2015 and started producing wafers. The total GHG emissions from Fab 4 amounted to 2017 MTCO2e. Therefore, the change in boundary is (2,017/274,207)*100=1%.
Change in physical operating conditions	0	No change	There were no changes in physical operating conditions in 2015.
Unidentified	0	No change	There were no unidentified changes in 2015.
Other	0	No change	There were no other changes in 2015.

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.000172	metric tonnes CO2e	1576473000	Market-based	98	Increase	Though the quantities of cells that we manufactured increased, our revenue declined by 48%. Therefore, our intensity per unit of currency has fluctuated but we have used emission reduction projects to reduce our GHG emissions per unit of output. We had more than 20 new Scope 1 and 2 emissions reduction projects in 2015 that saved 9,300 MTCO2e.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
33	metric tonnes CO2e	full time equivalent (FTE)	8309	Market-based	11	Decrease	Our full time employees increased as did our emissions. In 2015, full time employees grew by 16% while our emissions only increased by 3% which is 7,600

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
		employee					MTCO2e. We had more than 20 new Scope 1 and 2 emissions reduction projects in 2015 that saved 9,300 MTCO2e and we anticipate that our GHG emissions will be further reduced in future years through our Max PV plan.
100	metric tonnes CO2e	Other: MWH solar produced	2704	Market-based	9	Decrease	Our output continues to increase while we have simultaneously invested in GHG reduction projects including efficiency improvements and the robust use of solar panels. Emissions were reduced faster than production increased hence the decoupling of the two. In 2015, cell production increased by 11% while our emissions only increased by 3% which is 7,600 MTCO2e. We had more than 20 new Scope 1 and 2 emissions reduction projects in 2015 that saved 9,300 MTCO2e and we anticipate that our GHG emissions will be further reduced in future years through our Max PV plan.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance

Further Information

Given that our total Scope 1 emissions are only 2,627 MTCO2e, we do not anticipate being included in emissions trading schemes in the future since most schemes have higher per facility thresholds for inclusion. However, we continue to monitor for changes around emissions trading programs in the countries where our facilities are located.

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Not relevant, explanation provided	0		0.00%	Outside of our fabrication facilities, we have primarily office based operations. In our offices, we have Green Teams that are working to ensure our operations are adhering to sustainable practices.
Capital goods	Relevant, not yet calculated	0		0.00%	Through our LCA calculation, the emissions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					associated with the Mono−Si wafer, Mono−Si CZ ingot, Poly-Si, and MG−Si account for 40.5% of the overall carbon footprint of the product.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, calculated	0		0.00%	The majority of fuel and energy activities are captured in the Scope 1 and 2 GHG emissions inventory. However, some are not including like the emissions from the plasma dissociation of NF3. This represents a de minimis source of overall emissions(>99%).
Upstream transportation and	Relevant, calculated	11537	SunPower uses the Infodis tool to track and monitor shipments. This tool also provides estimates of GHG emissions based on estimates of distances provided by Google and the NTM emissions factors. Infodis uses the NTM protocol for emissions	100.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
distribution			factors since it has a variety of emissions factors for road, ocean, and air transport.		
Waste generated in operations	Relevant, calculated	0	We use averages from the EPA WARM model to convert our waste data into emissions. For municipal waste, we apply a factor of 0.48 and for recycled waste, we apply a factor of -2.38.	0.00%	We have launched a Zero Waste to Landfill initiative across all of SunPower's panel assembly operations. At the end of 2015, SunPower facilities in De Vernejoul and Toulouse, France, joined the company's Mexicali facility in earning landfill-free verification from NSF Sustainability. With this recognition, three SunPower facilities now hold the verification demonstrating that 99 percent of the waste generated at each location is diverted from landfills. To earn

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					verification, organizations must demonstrate that no more than 1 percent of waste generated at a single site goes to the landfill. Additional criteria include documentation and implementation of waste sorting and management processes, active employee training programs, and routine audits to ensure compliance. With Landfill-Free Verification and Cradle-to-Cradle Certified™ Silver solar panel production, our landfill free sites are a sustainability model for SunPower

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					manufacturing facilities worldwide.
Business travel	Relevant, calculated	6698	Corporate air travel data are collected and extrapolated based on the trip mileage. This information is provided by our global travel provider and converted to GHG emissions using short, medium, and long haul emissions factors from the WRI Cross Sector tools dated April 2014 and the EPA business air travel tool.	100.00%	SunPower includes emissions from corporate air travel but excludes emissions relating to other parts of business travel including car rental and hotel stays because the data are not available.
Employee commuting	Relevant, calculated	2479	Employee commuting data is collected and extrapolated based on the number of trips. As part of this number, we calculate both the emissions from alternative commuting using our bus network and also those associated with driving to work.	0.00%	This combines the emissions from alternative transportation and driving to work. We pride ourselves on having robust alternative transportation programs including employees who bike, drive alternative fuel vehicles, and shuttle to work. We

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					continue to see the growth in these alternative commuting programs. For example, at our Richmond and San Jose facilities in 2013, we only had 17 electric vehicle drivers and now we have 125. An additional 30% of our employees bike or take transit in these locations. We also have a robust shuttle network at some of our manufacturing facilities and 75% of our employees use this shuttle network to get to work. This is an increase from 70% in 2014. Despite all of our investment in alternative commuting, the

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					number of employees continues to grow as do our emissions.
Upstream leased assets	Not relevant, calculated	0	SunPower has phased out contract manufacturers and is now producing all solar panels.	0.00%	SunPower has phased out contract manufacturers and is now producing all solar panels.
Downstream transportation and distribution	Relevant, calculated	6687	SunPower uses the Infodis tool to track and monitor shipments. This tool also provides estimates of GHG emissions based on estimates of distances provided by Google and the NTM emissions factors. Infodis uses the NTM protocol for emissions factors since it has a variety of emissions factors for road, ocean, and air transport. Numbers are calculated based on the percentage of total amount distance * weight outbound shipments from this facility to the market. These numbers include all shipments from the factory to the warehouse to the end customer/project site.	100.00%	Downstream Logistics includes global shipments from factories to warehouses to end customers or project sites handled by contract Logistics service providers.
Processing of sold products	Relevant, calculated	12684	SunPower uses the Infodis tool to track and monitor the processing of sold products. This tool also provides estimates of GHG emissions based on estimates of distances provided by Google and the NTM emissions factors. Infodis uses the NTM protocol for emissions factors since it has a variety of emissions factors for road, ocean, and air transport.	100.00%	Our solar panels are installed by a variety of contractors on individual roofs and as part of large commercial and residential

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					installations. Through our LCA calculation, the emissions associated with the balance of system account for 11.6% of the emissions associated with the product.
Use of sold products	Relevant, calculated	0	SunPower used a lifecycle analysis approach to estimate the overall emission reductions from the use of sold products. A SunPower system operating in average US conditions will have a net energy production of 8278 kWh/kWdc over the 30 year lifetime of the product. More information on this can be found at https://www.bnl.gov/pv/files/pdf/242_27EUPVS_Fthenakis_SunPower_6CV.4.14.pdf	0.00%	SunPower has set a global goal to have a total of 10 GW of SunPower solar systems deployed to our residential and commercial customers by 2016. Once achieved, this will equate to approximately 19.4 million metric tonnes of Scope 1 carbon dioxide equivalents avoided annually for the 25-year

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					service life of the product assuming a 2015 baseline year. This calculation assumes a capacity factor of 20% and 400,000 tons/TWh for Europe and 689,510 tons/TWh for the U.S. (USEPA) and the rest of world. The baseline year for this goal was 2007 and the final year is 2016.
End of life treatment of sold products	Relevant, not yet calculated	0		0.00%	We provide appropriate reuse and recycling options for our products. Our solar systems are covered under warranty for 25 years; under normal use, our products are

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					expected to exceed their warranty period and perform for another 15 years, bringing their expected usable life to 40 years. After their 25-year warranty period, SunPower customers may elect to participate in our worldwide program that pays for the recycling of these systems provided that warranty conditions are met. We want to ensure our products are returned to SunPower for proper handling, reuse and recycling. As part of our global recycling policy, SunPower works

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					with customers to cover the costs for deinstallation, collection, reuse and recycling for all purchased and leased systems under the warranty period. Functional items are reused and non-functional items are sent to SunPower-approved recyclers. In Europe, we participate in PV Cycle, an industry-wide solar panel take-back and recycling program. In 2016 we plan to implement an expanded, global Product Take-back, Reuse and Recycling Program. We are committed to becoming a Zero-

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					Waste-to-Landfill company and do not allow scrap materials to be sent to landfills.
Downstream leased assets	Not relevant, calculated	0		0.00%	SunPower leases all of the office buildings at this time and we have estimated the emissions in the Scope 1 and 2 inventory. Other downstream leased assets including warehouses are captured in the GHG inventory.
Franchises	Not relevant, calculated	0	SunPower does not have any franchises to report at this time.	0.00%	SunPower does not have any franchises to report at this time.
Investments	Not relevant, calculated	0	SunPower does not have any investments to report at this time.	0.00%	SunPower does not have any investments to report at this time.
Other (upstream)	Not relevant,	0	SunPower does not have any other upstream Scope 3 emissions to report at this time.	0.00%	SunPower does not have any other

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	calculated				upstream Scope 3 emissions to report at this time.
Other (downstream)	Not relevant, calculated	0	SunPower does not have any other downstream Scope 3 emissions to report at this time.	0.00%	SunPower does not have any other downstream Scope 3 emissions to report at this time.

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	First year it has taken place	Reasonable assurance	https://www.cdp.net/sites/2016/95/30495/Climate Change 2016/Shared Documents/Attachments/CC14.2a/CDP Verification Letter_SunPower CY2015_v 1 (3).pdf	2/ Verification letter	ISO14064-3	90

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Waste generated in operations	Emissions reduction activities	5	Decrease	At the end of 2015, SunPower facilities in De Vernejoul and Toulouse, France, joined the company's Mexicali facility in earning landfill-free verification from NSF Sustainability. With this recognition, three SunPower facilities now hold the verification demonstrating that 99 percent of the waste generated at each location is diverted from landfills.
Use of sold	Emissions	11	Decrease	The use of our sold products quickly dwarfs the emissions associated with the production of

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
products	reduction activities			solar panels. Our recent LCA suggests that the carbon payback period occurs within just 9 months of operation. Given that SunPower has set a global goal to have a total of 10 GW of SunPower solar systems deployed to our residential and commercial customers by 2015 we are reducing overall emissions. Once achieved, this will equate to approximately 19.4 million metric tonnes of Scope 1 carbon dioxide equivalents avoided annually for the 25-year service life of the product assuming a 2015 baseline year. This last year, our production increased 11%.
Upstream transportation & distribution	Change in methodology	9	Decrease	We had a change in calculation methodology and factors that caused us to decrease emissions.
Downstream transportation and distribution	Change in methodology	41	Decrease	We had a change in calculation methodology and factors that caused us to decrease emissions.
Business travel	Emissions reduction activities	33	Decrease	Though our business continues to grow, we have a corporate program to reduce company air travel. We continue to work to ensure that we are only traveling when it is critical and to optimize our trips when we do travel.
Employee commuting	Change in output	55	Increase	Our production and workforce continue to grow which increases the overall emissions from employee commuting associated with alternative transportation and driving to work. While the overall emissions have increased, we pride ourselves on having robust alternative transportation programs including employees who bike, drive alternative fuel vehicles, and shuttle to work. We continue to see the growth in these alternative commuting programs. For example, at our Richmond and San Jose facilities in 2014, we only had 82 electric vehicle drivers and now we have 125. An additional 30% of our employees bike or take transit in these locations. We also have a robust shuttle network at some of our manufacturing facilities and 75% of our employees use this shuttle network to get to work. This is an increase from 70% in 2014. Despite all of our investment in alternative commuting, the number of employees continues to grow as do our emissions.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success

SunPower is committed to working with the best suppliers in the industry to provide our customers with outstanding products and services. Over the last couple of years, we have taken a phased approach to integrating sustainability into our requirements and we hope that this will enable our suppliers develop and mature their climate change programs. We started by having suppliers adhere to our Supplier Sustainability Guidelines, introduced a scorecard, and now we are working to roll-out a program to collect quantitative data.

We have established Supplier Sustainability Guidelines to ensure legal, financial, and corporate social responsibility standards are integrated throughout our supply chain. SunPower's Supplier Sustainability Guidelines which we expect each of our suppliers to meet are based on the Solar Energies Industry Association's (SEIA) Solar Commitment, which draws upon the Code of Conduct from the Electronics Industry Citizenship Coalition (EICC).

As part of our program, suppliers need to actively reduce consumption of natural resources and energy; identify and control environmental impacts of manufacturing processes, business operations, and product technology; and make data available. Suppliers are also expected to adopt and establish a management system that complies with local laws and requirements, conforms to Sustainability Guidelines, and facilitates continuous improvement. These actions are reported back and reviewed by SunPower through online assessments, supporting information, and on-site audits.

In conjunction with this, we introduced an annual supplier scorecard to define leadership and encourage our suppliers to adopt best practices. Relative to climate change, we ask suppliers to self-report the levels at which they use renewable energy in their operations. The score is awarded based on a low, medium, and high program ranking. A low program is where 5% of energy comes from renewables, medium is 50%, and finally a high program has 75% renewable energy. The goal of this program is to demonstrate continual improvement.

Finally, SunPower is working closely with suppliers to collect quantitative data. SunPower has introduced a supplier scorecard that asks ten questions about sustainability program maturity. Going forward, this data will be analyzed and benchmarked to identify opportunities to drive improvement throughout our supply chain.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend (direct and indirect)	Comment
0	80%	We currently do not provide the number of suppliers we engage with because we consider this sensitive information. Our Supply Chain Sustainability program has communicated our expectations and requirements using our Supplier Sustainability Guidelines and Environmental Product Content Specification to our key suppliers representing over 80% of our spend.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Use in supplier scorecards	We have introduced an annual supplier scorecard to define leadership and encourage our suppliers to adopt best practices. Relative to climate change, we ask suppliers to self-report the levels at which they use renewable energy in their operations. The score is awarded based on a low, medium, and high program ranking. A low program is where 5% of energy comes from renewables, medium is 50%, and finally a high program has 75% renewable energy.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Linda Perry-Lynch	Corporate Sr. Director Environmental Health Safety & Sustainability	Environment/Sustainability manager

Further Information

CDP 2016 Climate Change 2016 Information Request