

Module: Introduction**Page: Introduction****CC0.1****Introduction**

Please give a general description and introduction to your organization.

SunPower has been a leader in the solar industry for 30 years, originally incorporated in California in 1985 under the symbol "SPWR." 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 is dedicated to changing the way the world is powered. We believe SunPower's breakthrough technology is unmatched in long-term reliability, efficiency and guaranteed performance. SunPower's solar cells and solar panels are manufactured using proprietary processes, and their technologies are based on more than 30 years of research and development. Through design, manufacturing, installation and ongoing maintenance and monitoring, SunPower provides its high performance solar technology to residential, commercial and utility customers worldwide. We sell our solar power components, including panels, balance of system components, and inverters to dealers, systems integrators, and distributors.

We sell our products to the Americas, Europe, Middle East, Africa and Asia Pacific. Our scope and scale allow us to deliver solar solutions across the world, ranging from consumer homeowners to the largest commercial and governmental entities. Residential, business, government and utility customers rely on our experience and proven results to maximize their return on investment.

Supporting renewable energy policy development and the broad scale commercialization of solar is one of the important ways SunPower contributes to global efforts aimed at averting climate change and protecting natural resources. Replacing fossil-based energy such as electricity produced from coal-fired power plants significantly reduces carbon dioxide (CO₂), which helps companies and/or countries move towards a low carbon economy. Every megawatt (MW) of solar cell capacity that SunPower deploys is a carbon-free MW which is replacing or offsetting the need for other power sources that are not likely to be as climate friendly. SunPower has set a global goal to have a total of 10 gigawatts (GW) of SunPower solar systems deployed by 2016. This equates to reducing approximately 19.4 million metric tons of CO₂. Worldwide, SunPower has already deployed more than 4 GW of solar systems and more than 1.5 GW of cost-competitive, large-scale solar power systems.

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
Wed 01 Jan 2014 - Wed 31 Dec 2014

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
Australia
Belgium
Chile
France
Germany
Italy
Japan

Select country
Malaysia
Mexico
Morocco
Philippines
South Africa
Spain
Switzerland
United Arab Emirates
United Kingdom
United States of America

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

- i) The President and Chief Executive Officer (CEO) of SunPower is the person with the highest level of direct responsibility for climate change at SunPower.
- ii) The President and CEO oversees the operations of SunPower and reports on these activities, including climate change, to the Corporate Executive Board. At SunPower, senior leadership members of the Corporate Social Responsibility (CSR) Council, are responsible for the deployment of internal communication regarding the company's sustainability activities. The Council is chaired by the Executive Vice President of Administration, who reports directly to the President and CEO of SunPower (who is also a board member), on the progress and performance of climate change initiatives as well as on other sustainability initiatives. The Council is responsible for SunPower's corporate 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 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. The Council meets regularly and periodically reports to the Board of Directors. 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 project	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	SunPower operations worldwide	> 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

i) At the company level, SunPower assesses risks and opportunities associated with climate change with the help of a new dedicated risk manager. Our risk manager is focused on identifying and mitigating risks and systematizing our internal processes. Currently, risks are brought before the CSR Council which sets the mission, vision and annual strategic plan for the company with regard to climate change. Our annual strategic plan is used to drive action on the identified risks to a number of teams within SunPower that then also have accountability for achieving corresponding strategic objectives.

ii) 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 and drive performance. 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 assesses specific risks to facility sites and then, to safeguard against loss, develops loss prevention strategies and facility development plans in our efforts to exceed local protection standards. We ensure our facilities are categorized as highly protected, which means that we have the maximum level of protection. We ensure this 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. 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.

CC2.1c

How do you prioritize the risks and opportunities identified?

We are careful to evaluate both physical and reputational risks and opportunities 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 mitigation or adaptation impact, how easy it is to make the identified change, 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. With the help of FM Global, 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 protection standards. As a result, the company has identified and mitigated potential issues upfront, thereby reducing exposure to business interruption.

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
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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

i) 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.

ii) 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. Regulatory changes influence SunPower's market.

iii) Short-term strategy: 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 have set a global goal to have 10 gigawatts (GW) of SunPower solar systems deployed by 2016, which equates to reducing approximately 19.4 million metric tons of CO₂. To do this, we currently sell our products to customers ranging from consumer homeowners to large commercial and governmental entities.

iv) Long-term strategy: 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 2.45 MW of solar energy and under our plan, by 2020 will generate 15 MW which is about 17% of our electricity usage. As part of our next steps, we will be installing 1.6 MW in 2015 and aim to complete the Maximum (Max) 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.

v) 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.

vi) 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. We plan to expand our solar cell manufacturing capacity through the construction of a facility in the Philippines with a planned annual capacity of 350 MW once fully operational in fiscal 2015.

CC2.2b

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 energy generation	Support	SunPower has supported California's Global Warming Act of 2006 (AB32), which requires GHG emissions to be reduced to 1990 levels by 2020. In 2010 when AB32 was challenged and put back on the ballot, SunPower supported the "No on Prop 23, I'm a solar YIMBY (yes, in my backyard)" campaign which helped contribute to the defeat of Proposition 23.	SunPower supported the legislation with no exceptions by submitting letters of support and joining with other organizations to communicate the potential impacts. SunPower was part of a coalition of stakeholders that worked to provide consistent information to the public about the synergies between AB32 and the drivers for their business from the sale of solar panels to the creation of green jobs.
Other: Climate	Support	SunPower's Public Policy Team is responsible for engaging in policy discussions around climate change and internal reporting	We have broadly supported a variety of types of climate change regulation with a focus on the USA and other countries that we

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
change regulation		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, which we believe includes environmental impact reduction, job creation, and cost savings.	operate in. We support 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.

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 climate and energy legislation at the state level. The policies that SEIA supports focus on advancing solar, a zero-emissions technology.	SunPower is an executive board member of SEIA (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

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?
Silicon Valley Leadership Group (SVLG)	Consistent	SVLG supports AB32 and broader renewable policies in California.	to monitor legislation that affects the solar industry. 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, AriSEIA, CalSEIA, CEERT, IREC, LSA, PV Coalition, SEPA, Vote Solar, ASES, Austin Chamber, GASEIA, Gulf Coast Power Association, HREA, MOSEIA, NCSEA, ACORE, CFEE, CoSEIA, GSREIA, NYSEIA, REMA, Puerto Rico Energy Cluster	Unknown	These 32 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 32 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, and REMA. In this capacity, SunPower works closely with the board to determine the trade associations' position on climate change legislation.
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

Do you fund any research organizations to produce or disseminate public work on climate change?

Yes

CC2.3f

Please describe the work and how it aligns with your own strategy on climate change

SunPower funds research organizations that advance the research and development around solar panels. These research organizations further the scientific understanding of climate change mitigation technologies such as solar panels. An example of this is SunPower-funded research on the life cycle analysis of a solar panel to help provide a clear summary of the environmental benefits of solar panels and help identify where there are opportunities to improve.

In addition to the funding of direct research, we are an active and publically visible sponsor of events like the Clean Power Champion Awards where pioneers of energy conservation and green, renewable energy are recognized for their contribution to the field.

CC2.3g

Please provide details of the other engagement activities that you undertake

i) 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/>)

ii) 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.

iii) 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.

iv) 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 eight 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.

CC2.3h

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?

There are a number of cross functional meetings where staff regularly discuss our overall sustainability strategy and ensure that our approach to policy is consistent with that strategy. SunPower's Public Policy Team is responsible for engaging in policy discussions around climate change and reporting on the status of proposed climate change and renewable energy legislation and policy. 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.

CC2.3i

Please explain why you do not engage with policy makers

CC2.4

Would your organization's board of directors support an international agreement between governments on climate change, which seeks to limit global temperature rise to under two degree Celsius from pre-industrial levels in line with IPCC scenarios such as RCP2.6?

Yes

CC2.4a

Please describe your board's position on what an effective agreement would mean for your organization and activities that you are undertaking to help deliver this agreement at the 2015 United Nations Climate Change Conference in Paris (COP 21)

SunPower supports policies that advance climate change legislation and aligns with our long-term objectives of climate change mitigation. For COP 21, our majority owner, Total Energies Nouvelles Activités has taken an active leadership role and has signed on to the CDP's "Road to Paris 2015" commitment, which represents the business community in the U.S. on COP 21 issues.

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

Intensity 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 (metric tonnes CO2e)	Target year	Comment
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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	Target year	Comment
Int1	Scope 1+2	79%	20%	Other: metric tonnes CO2e per solar cell megawatt (MW) produced	2012	233492	2020	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 greatest opportunities to reduce emissions.
Int2	Scope 1+2	7%	15%	Other: metric tonnes CO2e per solar modules megawatt (MW) produced	2012	15024	2020	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 greatest opportunities to reduce emissions.

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	Decrease	15	No change	0	The change in absolute emissions is in part through the installation of solar on the buildings and robust energy efficiency measures.
Int2	Decrease	15	No change	0	The change in absolute emissions is in part through the installation of solar on the buildings and robust energy efficiency measures.

CC3.1d

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

ID	% complete (time)	% complete (emissions)	Comment
Int1	25%	72%	In 2013, a new goal was established for the cell fabrication to reduce 2020 fabrication facility emissions 20% below the 2012 baseline year. In addition, for assembly facilities our target emissions reduction is 15% below the 2012 baseline year. We are already well on our way to meeting these goals and expect to achieve them in part through our maximum PV plan which will further reduce our GHG emissions at these sites.
Int2	25%	23%	

CC3.1e

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

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

CC3.2a

Please provide details of how the use of your goods and/or services directly enable GHG emissions to be avoided by a third party

i) We contribute to global climate change efforts through the continued growth and evolution of our company, which helps our customers reduce their carbon footprint. SunPower's products and systems utilize solar photovoltaic technology to convert solar energy into electricity. By installing our solar panels, the electricity generated by SunPower's products is used to displace electricity generated from the combustion of fossil fuels, thus avoiding GHG emissions. SunPower's products are used in residential buildings, commercial buildings, and central power plant systems to provide electricity in virtually every sector of the economy and since our panels are more efficient than those of our competitors, we continue to help customers more efficiently reduce emissions per MW installed than our competitors.

ii) Over the last year, our production of solar panels continued to increase and expand the amount of 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.

iii) 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.

iv) There are a number of Clean Development Mechanism (CDM) and Joint Implementation (JI) protocols that allow for solar to supplant other forms of carbon-intensive energy generation. Therefore, many of our panels are purchased and used to offset emissions. However, SunPower is not considering originating credits for the use of our product directly but support this use by our customers because these market mechanisms can help make solar a more cost effective option.

Other) Our non-profit partnership with GRID Alternatives 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 greenhouse gas emissions avoided.

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	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	15	5415
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
Energy efficiency: Building services	Converted 448 fluorescent lamps to LED lamps at our Modco facility	65	Scope 2	Voluntary	13200	12503	1-3 years	6-10 years	
Energy efficiency: Building services	Reduced the chiller operation from 4 units to 3 units at our Modco facility	708	Scope 1 Scope 2	Voluntary	996000	0	<1 year	6-10 years	
Energy	Installed additional	114	Scope	Voluntary	23560	11498	<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
efficiency: Building services	412 LED lamps to replace conventional lamps on the manufacturing floor at our Modco facility		2						
Energy efficiency: Building services	Installed 8 LED lamps at shop floor at our Modco facility	4	Scope 2	Voluntary	2224	4336	1-3 years	6-10 years	
Energy efficiency: Processes	Change the pump running Hz from manual (50Hz) to auto controller (47Hz) at our Fab 3 facility	428	Scope 2	Voluntary	68068	0	<1 year	11-15 years	
Energy efficiency: Processes	Used the variable frequency drive (auto controller) to control pump instead of manual control at our Fab 3 facility	158	Scope 2	Voluntary	25076	0	<1 year	<1 year	
Energy efficiency: Processes	Changed the condenser cooling pump and evaporation chiller pump from manual control to auto controller to optimize the chiller & improve efficiency at our Fab 3 facility	1606	Scope 2	Voluntary	255312	0	<1 year	<1 year	
Energy	Re-configuration of	648	Scope	Voluntary	120000	10000	<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	pipng system of LT & HT chillers from parallel to series connection to optimize the HVAC system at our Fab 2 facility		1					years	
Energy efficiency: Building services	Replaced old lighting fixtures with LEDs in the at manufacturing changing rooms at our Fab 2 facility	10	Scope 2	Voluntary	1811	3349	1-3 years	11-15 years	
Energy efficiency: Building services	Replaced old lighting fixtures with LEDs in the at manufacturing changing rooms at our Fab 2 facility	43	Scope 2	Voluntary	7800	6151	<1 year	6-10 years	
Energy efficiency: Processes	Reduced the height of the AC diffuser to improve temperature in the backend area improving overall efficiency at our Fab 2 facility	459	Scope 2	Voluntary	84000	17210	<1 year	11-15 years	
Energy efficiency: Processes	Replaced the Cooling Tower blade with a lighter material (FRP) to improve efficiency at our Fab 2 facility	34	Scope 1	Voluntary	6290	12940	1-3 years	6-10 years	
Energy efficiency:	Replaced the fills of the 9 units cooling	962	Scope 1	Voluntary	176118	214116	1-3 years	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
Building services	tower using versa cross to improve efficiency at our Fab 2 facility								
Low carbon energy installation	Installed solar panels over the carports in the parking lot.	88	Scope 2	Voluntary	13365	80200	4-10 years	21-30 years	We have started installing new solar energy on some of our infrastructure as we work towards maximum PV. 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 2.45 MW of solar energy and under our plan, by 2020 will generate 15 MW which is about 17% of our electricity usage. As part of our next steps, we will be installing 1.6 MW in 2015 and aim 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.
Low carbon	Installed solar panels	90	Scope	Voluntary	217000	809581	4-10	21-30	We have started installing new

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 installation	over the carports in the parking lot. This reduced total facility grid electricity consumption by 18%.		2				years	years	solar energy on some of our infrastructure as we work towards maximum PV. 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 2.45 MW of solar energy and under our plan, by 2020 will generate 15 MW which is about 17% of our electricity usage. As part of our next steps, we will be installing 1.6 MW in 2015 and aim 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.

CC3.3c

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

Method	Comment
Employee engagement	Internal Goals for Efficiency and Consumption Reduction: 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.
Other	Internal Efficiency Metrics: The equipment at facilities have efficiency performance indicators so that decisions on capital investment from line to line, and factory to factory, result in continuous performance improvement.
Financial optimization calculations	Financial Optimization: Factory investments are oriented towards cost reduction and sustainability improvements. As part of this, SunPower has used heat exchange compressed dry air units to generate heat, eliminated diesel-fueled boilers, and eliminated LPG use at our newest factory.

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
In voluntary	Underway - previous	15/ GHG Emissions	https://www.cdp.net/sites/2015/95/30495/Climate Change 2015/Shared

Publication	Status	Page/Section reference	Attach the document
communications	year attached		Documents/Attachments/CC4.1/sunpower-sustainability-report.pdf

Further Information

Further information on our sustainability programs is available on our website: <http://us.sunpower.com/about/sustainability/>

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, 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. These costs increases could result in lower	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, the estimated financial implications from a carbon tax of \$12 per MTCO ₂ e on Scope 1 and 2 emissions could result in an increase of \$3 million in costs to our business.	We monitor emerging regulation and are proactive in reducing our carbon footprint and exposure to carbon price fluctuations. 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 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	Over the last 5 years, SunPower has invested \$335,000 in emissions reduction projects and these current projects save around 2,035 MTCO ₂ e annually. We anticipate continuing to invest heavily in energy efficiency and installing solar on our buildings. Under the maximum PV plan, our emissions would be reduced another 7,310 MTCO ₂ e.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>margins for SunPower products or increased pricing of products, which could adversely affect sales growth.</p>							<p>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. Across all of our facilities, we currently generate 2.45 MW of solar energy and will generate 15 MW which is about 17% of our electricity usage at Max PV. This plan will more than double the PV at all of our facilities. For example, Fab 2 has 180 KW of PV and under the Max PV plan will add an additional 4.5 MW on ground mounted tilts, carports, and the roof. As part of our next steps on the Max PV plan, we will be installing 1.6 MW in 2015 and aim to complete the</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								program by 2020. 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 change 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 operations located in the Philippines and Malaysia are in this area and	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low-medium	Our property, plant and equipment, located in the Philippines represents \$321 million worth of asset. Any damage to these operations from more extreme storms could result in	At the company level, SunPower assesses risks and opportunities associated with climate change including typhoons with the help of a newly hired a dedicated risk manager. Our new risk	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 emerging concerns. The cost of management to

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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.</p>						<p>financial loss. In addition to direct losses to infrastructure, if operations are down for too long, SunPower could also lose market share to competitors.</p>	<p>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 level of protection that</p>	<p>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.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>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, as part of the annual FM Global review, they identified several opportunities to harden infrastructure and make the site more resilient which SunPower implemented. As a result, the company has identified and mitigated potential issues upfront, thereby reducing exposure to business</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								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	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.	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	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 organization. There are several dedicated employees that support this effort who work on the Policy and Market Strategy teams. For all of our sales and general

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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 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</p>						<p>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.</p>	<p>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 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</p>	<p>administrative fees, SunPower spent \$16.8 million which was a 6% increase in 2014 to expand marketing efforts and facilitate awareness around our product.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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 increased volatility in these regulations as various programs are introduced and then ended.</p>							<p>international scale. For example, in 2010 when the California climate change legislation was challenged and put back on the ballot, SunPower supported the "I'm a solar YIMBY (yes, in my backyard)" campaign which helped contribute to the defeat the ballot measure and keep California's climate change program moving. Ultimately, the state has adopted more ambitious targets for renewable energy to meet the climate change mitigation targets providing further certainty to consumers, but there was a time when this was in question and consumers felt</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								hesitant about solar.	

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	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	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	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 organization. There are

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>systems to fulfill requirements of regional Renewable Portfolio Standards (RPS). There are also carbon tax schemes in South Africa that are supporting the development of solar.</p>						<p>Arabia, South America, and Turkey. For example, we have two utility scale solar power systems under construction in South Africa totaling 33 MW. There is also another project for 68 MW that was contracted by the end of 2014. This last project was done in conjunction with two of similar size were an aggregate of approximately \$379 million in revenue for SunPower.</p>	<p>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 impact reduction, job creation, and cost savings. We have broadly supported a</p>	<p>several dedicated employees that support this effort who work on the Policy and Market Strategy teams. For all of our sales and general administrative fees, SunPower spent \$16.8 million which was a 6% increase in 2014 to expand marketing efforts and facilitate awareness around our product.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>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 international scale. For example, in 2010 when the California climate change legislation was challenged and put back on the ballot, SunPower supported the "I'm a solar YIMBY (yes, in my backyard)"</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>campaign which helped contribute to the defeat the ballot measure and keep California's climate change program moving. Ultimately, the state has adopted more ambitious targets for renewable energy to meet the climate change mitigation targets providing further certainty to consumers, but there was a time when this was in question and consumers felt hesitant about solar.</p>	

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 mean (average) precipitation	With the changes in weather around the world, there are an the increasing number of sunny days in places around the world, there could be a growth in the number of places where solar is a cost competitive form of energy generation. One concern on utility scale installations is the cleaning of the panels. Regular cleaning is necessary to maintain high power generation but can also be water intensive. Where solar panels are located in solar abundant but	Increased demand for existing products/services	>6 years	Indirect (Client)	Unlikely	Medium-high	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 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	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 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	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 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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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. This has come to be a market differentiator for us from other large scale solar installers.</p>						<p>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 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.</p>	<p>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 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</p>	<p>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 2014, our research and development budget was \$73 million.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								us differentiate from our competitors in the utility scale solar installation space.	
Change in temperature extremes	With higher temperatures and more 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.	New products/business services	3 to 6 years	Direct	Likely	Medium-high	No other comparable market offering provides this kind of depth and breadth of service and value to consumers and utilities. This solution offers tremendous benefits on both sides of the meter, from more reliable and cost-effective energy for the consumer to enhanced grid-management and ancillary services capabilities for utilities.	Over the next five years, we expect to see a disruptive shift in the energy market, with solar power, energy storage, smart devices, energy management technologies and electric vehicles being combined to ensure continuous service. Our unique hardware and software platform allows customers to bundle solar, energy storage, and other distributed resources and manage them as a fleet to enhance the long-term value of their energy investments. We	SunPower has invested in a partnership with Sunverge and is engaged in marketing and delivery of this new product.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>can deliver an 'end-to-end' solar and storage solution that bundles services from design and installation to monitoring, support and beyond. Sunverge's adaptable and reliable storage solutions with SunPower's high performance solar technology, gives consumers a 'Smart Energy' solution that will deliver unprecedented levels of personalization, value and control. Providing this integrated solution to utilities allows them to access the benefits of rooftop solar and storage at significant scale.</p>	

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 requirements. These all drive demand for SunPower's solar panels. Our reputation for consistently innovating and delivering 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	Increased demand for existing products/services	3 to 6 years	Direct	Very likely	Medium-high	In 2014, the residential leasing program increased revenues to \$129,962,000 which was double from two years prior. We expect to see continued growth going forward due to ongoing expansion and increased market interest.	We are actively working to differentiate our products and communicate about their benefits to a larger audience including residential home owners. In fiscal 2011, we launched our residential lease program which provides U.S. customers SunPower systems under 20-year lease agreements that include system maintenance and warranty coverage. SunPower residential lease customers have the option to purchase their leased solar systems upon the	We have invested \$21.3M in these solar power systems to continue to grow and develop this program.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	as an increasing asset, we anticipate that the interest in our product will only increase.							sale or transfer of their home. We plan to continue to expand the program, and are exploring opportunities to offer additional financial products to customers in the United States and in select international markets, certain of which may occur in fiscal 2015.	

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	Sun 01 Jan 2012 - Mon 31 Dec 2012	255714

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)

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
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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/2015/95/30495/Climate Change 2015/Shared Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/SunPower Worksheet-for-question-cc7.4.xlsx](https://www.cdp.net/sites/2015/95/30495/Climate%20Change%202015/Shared%20Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/SunPowerWorksheet-for-question-cc7.4.xlsx)

Page: CC8. Emissions Data - (1 Jan 2014 - 31 Dec 2014)

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

3277

CC8.3

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

260704

CC8.4

Are there 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 Scope 2 emissions excluded from this source	Explain why the source is excluded
Scope 1 emissions for small offices including space heating	Emissions are not relevant	No emissions from this source	The source was excluded because it was de minimis and there is lots of uncertainty in any approach used to estimate these emissions since it is variable based on temperature and equipment.
Scope 2 emissions	No emissions		

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is 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 2014. Any uncertainty from Scope 1 emissions is due to issues with the metering equipment.
Scope 2	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 2014 Scope 2 emissions.

CC8.6

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

No third party verification or assurance

CC8.6a

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

Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)

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 your reported Scope 2 emissions

No third party verification or assurance

CC8.7a

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

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
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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
No additional data verified	SunPower explored having a verification done this year but due to timing issues was not able to complete this exercise prior to the deadline for completing the CDP. Through this process, some changes were made to the methodology around the inventory. For example, natural gas usage in leased buildings was reclassified as Scope 2 emissions using The Greenhouse Gas Protocol since SunPower is purchasing the heat component and therefore the emissions are Scope 2. Going forward, the intent is to have more data verified.

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 2014 - 31 Dec 2014)

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
Malaysia	49
Mexico	28
Philippines	2757
United States of America	443
France	0

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	2833
Business Operations	443

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Fab 1 (Philippines)	9	14.28	121.06
Fab 2 (Philippines)	2603	12.87	121.77
Fab 3 (Malaysia)	49	2.34	102.21
Modco (Philippines)	139	14.28	121.06
Richmond (US)	415	37.91	-122.36
San Jose (US)	28	37.40	-121.95
Mexicali (Mexico)	28	32.64	-115.53
Fab 4 (Philippines)	5	14.26	121.06

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	3234
CH4	8
N2O	6
Other: CF4	27
HFCs	1

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Backup Generators	2582
Company Vehicles	415
Canteen	252
Wafer Processing	28

CC9.2e

Please break down your total gross global Scope 1 emissions by legal structure

Legal structure	Scope 1 emissions (metric tonnes CO2e)
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Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2014 - 31 Dec 2014)

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 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for in CC8.3 (MWh)
Australia	125	152	0
Belgium	1	4.5	0
Chile	1	3	0
France	431	5742	17
Germany	72	150	0
Italy	43	108	0
Japan	34	69	0
Malaysia	136245	198092	1655
Mexico	6715	14921	0
Morocco	31	45	0

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for in CC8.3 (MWh)
Philippines	106315	216295	415
South Africa	150	173	0
Spain	48	166	0
Switzerland	2	68	0
United Arab Emirates	12	19	0
United Kingdom	3	7.5	0
United States of America	10475	11112	591

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 (metric tonnes CO2e)
Manufacturing	249563
Business Operations	11141

CC10.2b

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

Facility	Scope 2 emissions (metric tonnes CO2e)
Anaheim, CA, USA	32
Austin, TX, USA	938
Melbourne, Australia	125
Davis, CA, USA	24
Birmingham, United Kingdom	3
Brussels, Belgium	1
Fab 1, Philippines	1433
Fab 2, Philippines	95731
Fab 3, Malaysia	136245
Faenza, Italy	25
Geneva, Switzerland	2
Frankfurt, Germany	72
Modco, Philippines	8436
Paris, France	1
Portland, OR, USA	16
Richmond, CA, USA	2912
Roseville, CA, USA	12
San Jose, CA, USA	6289
Masdar, UAE	12
Madrid, Spain	48
Tokyo, Japan	34
Mexicali, Mexico	6714
Hamilton, NJ, USA	33
Mexico City, Mexico	1
Cape Town, South Africa	150
Porcellette, France	152

Facility	Scope 2 emissions (metric tonnes CO2e)
Toulouse, France	137
La Tour de Salvagny, France	23
Milan, Italy	18
Rabat, Morocco	31
Santiago, Chile	1
Villerfranche Sur Saone, France	118
Austin 2, TX, USA	219
Fab 4, Philippines	715

CC10.2c

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

Activity	Scope 2 emissions (metric tonnes CO2e)
Purchased Electricity	260079
Natural Gas (leased facilities)	625

CC10.2d

Please break down your total gross global Scope 2 emissions by legal structure

Legal structure	Scope 2 emissions (metric tonnes CO2e)
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Further Information

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 fuel, electricity, heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Fuel	15529
Electricity	444043
Heat	0
Steam	0
Cooling	0

CC11.3

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

Fuels	MWh
Distillate fuel oil No 2	11281
Liquefied petroleum gas (LPG)	3084

Fuels	MWh
Natural gas	1164

CC11.4

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

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
Grid connected low carbon electricity generation owned by company, no instruments created	2087	During 2014, our on-site renewable installations on our fabrication facilities in the Philippines and Malaysia generated 2,070 MW. We also generated 17 MW on our Modco in France.
Grid connected low carbon electricity generation owned by company, no instruments created	591	At our San Jose and Richmond offices we generate 591 MW from our R&D solar panels and onsite installations.

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	Comment
Emissions reduction activities	6.1	Decrease	In 2014, SunPower had 15 new emissions reductions activities that resulted in greater overall energy efficiency and onsite power generation. Based on our estimates, our 15 projects reduced greenhouse gas emissions 5,415 MTCO ₂ e. These were in addition to the emissions reductions projects that were started as far back as 2009 which are contributing to ongoing overall emissions reductions for 2014 of 14,071 MTCO ₂ e. Since our Scope 1 and 2 emissions last year were 263,981, there was a 5.3% reduction in Scope 1 and 2 emissions. We arrived at this by $(14,071/263,981)*100=5.3\%$. We also installed onsite solar energy which resulted in further reduction of $(2,180/263,981)*100=0.8\%$.
Divestment	0	Decrease	SunPower closed a large number of small office locations around the world as part of a restructuring effort. The November 2014 reorganization plan aimed towards realigning 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.
Acquisitions	0.09	Increase	SunPower had a number of acquisitions over recent years. For example, in July 2010, we formed AUOSP as a joint venture with AUO. In January 2012, we acquired Tenesol, and in November 2013, we acquired Greenbotics, Inc. In November 2014, we acquired SolarBridge Technologies, a developer of integrated microinverter technologies for the solar industry. Greenbotics increased emissions by 24 MTCO ₂ e and SolarBridge by 219 MTCO ₂ e. Therefore, the change in boundary is $((219+24)/263,981)*100=0.09\%$.
Mergers	0	No change	There were no mergers in 2014.
Change in output	18	Increase	Production at our facilities continues to increase. In 2014, production increased by 18% 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	No change	SunPower pursued verification for the first time this year and due to timing issues was not able to complete this exercise prior to the deadline for completing the CDP. Through the verification process, some changes were made to the methodology around the inventory. For example, natural gas usage in leased buildings was reclassified as Scope 2 emissions using The Greenhouse Gas Protocol since SunPower is purchasing the heat component and therefore the emissions are Scope 2. As a result of these changes, the reclassification of the natural gas emissions in leased buildings further amplified the existing trend. Scope 1 emissions further decreased and Scope 2 emissions increased.
Change in boundary	0.09	Increase	SunPower had a number of acquisitions over recent years. For example, in July 2010, we formed AUOSP as a joint venture with AUO. In January 2012, we acquired Tenesol, and in November 2013, we acquired Greenbotics, Inc. In November 2014, we acquired SolarBridge Technologies, a developer of integrated microinverter technologies for the solar industry. Greenbotics increased emissions by 24 MTCO ₂ e and

Reason	Emissions value (percentage)	Direction of change	Comment
			SolarBridge by 219 MTCO ₂ e. Therefore, the change in boundary is $((219+24)/263,981)*100=0.09\%$.
Change in physical operating conditions	0	No change	The closed Fab 1 is transitioning into Fab 4. This process is targeted for completion in late 2015 so for 2014, there were no changes in physical operating conditions.
Unidentified	0	No change	There were no unidentified changes in 2014.
Other	0	No change	There were no other changes in 2014.

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	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.000087	metric tonnes CO ₂ e	unit total revenue	5	Increase	Revenue for the year increased 21% compared to the previous year while over the same period our absolute emissions increased due to the optimization of existing facilities and addition of new facilities. Our Scope 1 emissions continue to decline but were offset by the increases in Scope 2 emissions. Our production increased by 18% which outpaced all other increases and demonstrates that emissions were reduced faster than production increased hence the decoupling of the two. Our GHG emissions will be further reduced in future years through our Max PV plan.

CC12.3

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
37	metric tonnes CO2e	FTE employee	12	Increase	Our full time employees increased as did our emissions. However, our production increased by 18% which outpaced all other increases and demonstrates that emissions were reduced faster than production increased hence the decoupling of the two. Our GHG emissions will be further reduced in future years through our Max PV plan.

CC12.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
213	metric tonnes CO2e	Other: megawatt (MW) cells produced	16	Increase	Our output continues to increase while we have simultaneously invested in GHG reduction projects including efficiency improvements and the robust use of solar panels. Our GHG emissions will be further reduced in future years through our Max PV plan.

Further Information

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
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Further Information

Given that our Scope 1 emissions for all of our facilities amounts to only 3,277 MTCO2e, we do not anticipate being included in emissions trading schemes in the future since most schemes set higher per facility thresholds than our overall output. However, we continue to monitor to see if any changes are made to the emissions trading programs in the countries where our fabrication 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	Relevant, not yet				SunPower is in the process of

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
services	calculated				conducting a comprehensive LCA that will help identify the emissions from purchased goods and services
Capital goods	Relevant, not yet calculated				SunPower is in the process of conducting a comprehensive LCA that will help identify the emissions from purchased goods and services
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				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 destruction. This represents a de

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
					minimis source of overall emissions.
Upstream transportation and distribution	Relevant, calculated	12684	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.	100.00%	
Waste generated in operations	Relevant, not yet calculated				Waste data is collected but is not converted into GHG emissions. Going forward, SunPower will consider using emissions factors from the US Environmental Protection Agency's (EPA) Waste Reduction Model (WARM) to convert the volume of waste into GHG emissions. We have launched a Zero Waste to Landfill initiative

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
					across all of SunPower's panel assembly operations. In 2014, we had our very first Zero Waste to Landfill site at our module assembly plant in Mexico. Looking forward, we have plans to move other manufacturing and office facilities toward zero waste to landfill thereafter.
Business travel	Relevant, calculated	10122	Corporate air travel data are collected and extrapolated based on the trip mileage.	100.00%	SunPower includes emissions from corporate air travel but excludes emissions relating to other parts of business travel including car rental and

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
					hotel stays because the data is not available.
Employee commuting	Relevant, calculated	3901	Employee commuting data is collected and extrapolated based on trips.		This combines the emissions from alternative transportation and driving to work. To get to the Fab 2 facility, 83% of the employees use a shuttle and at Fab 3 24% of the employees use a shuttle provided by SunPower to get to work.
Upstream leased assets	Not relevant, explanation provided				SunPower owns all of the manufacturing at this time and there are no other upstream leased assets.
Downstream transportation and distribution	Relevant, calculated	10122	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.	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
Processing of sold products	Relevant, not yet calculated				Our solar panels are installed by a variety of contractors on individual roofs and as part of large commercial installations. Given the number of installations, and the variables, we have not yet calculated these emissions.
Use of sold products	Relevant, calculated	0	SunPower used a lifecycle analysis approach to estimate the overall emissions 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%	Our solar panels are net producers of energy. In practice, that means the amount of energy a solar panel will produce over its lifetime is greater than the amount of energy required to produce the panel. The time it

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
					<p>takes to reach this break-even point is called the energy payback time (EPBT). The SunPower module payback time is less than 18 months, and the useful life of those panels is warranted for 25 years. During that time, our panels produce nearly twice as much net energy as high efficiency cadmium telluride and more than triple that of standard thin film panels. This means a SunPower panel can be expected to produce more than 20 times the amount of energy over its lifetime</p>

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
					than it took to produce the panel.
End of life treatment of sold products	Relevant, not yet calculated				SunPower is in the process of conducting a comprehensive LCA that will help identify the emissions from the end of life treatment of sold products. 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 expected to exceed their warranty period and perform for another 15 years,

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
					<p>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 with customers to cover the costs</p>

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
					<p>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 and have plans for a global Product Take-back, Reuse and Recycling Program. We are committed to becoming a Zero-</p>

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, explanation provided				SunPower leases all of the office buildings at this time and has 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, explanation provided				SunPower does not have any franchises at this time.
Investments	Not relevant, explanation provided				SunPower does not have any investments at this time
Other (upstream)	Not relevant,				SunPower does not have any

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
	explanation provided				other upstream Scope 3 emissions to report at this time.
Other (downstream)	Not relevant, explanation provided				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

No third party verification or assurance

CC14.2a

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

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 3 emissions verified (%)
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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
Business travel	Change in methodology	35	Increase	The boundaries on how we calculate GHG emissions were updated to include Asia air travel booked through travel agency. In addition, there were a number of new assets put into operation and some divested over the course of 2014. This also led to increases in our GHG emissions from business travel.
Employee commuting	Change in methodology	55	Decrease	The emissions from employee commuting are the sum of the emissions from alternative commuting and driving to work. Emissions decreased due to change in the estimation methodology and emissions factor. Emissions from alternative commuting also continue to decrease due to emission reduction actions which streamlined the operation of the shuttle

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
				system.

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

Yes, our customers

Yes, other partners in the value chain

CC14.4a

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

i) SunPower has engaged suppliers on GHG emissions and climate change strategies using the Solar Energy Industries Association (SEIA) Commitment for Environmental and Social Responsibility (“the Commitment”). The Commitment defines common practices and expectations for all solar industry participants, including manufacturers, suppliers, subcontractors, and customers in the solar value chain. The Commitment encourages participants to go beyond legal compliance, drawing upon internationally recognized standards, to advance social and environmental responsibility. SunPower publicly endorsed the Commitment statement of the SEIA in March of 2012.

ii) SunPower is working closely with our suppliers to report quantitative data in the next couple years. In 2013, SunPower introduced suppliers to SEIA’s Solar Commitment as the SunPower Supplier Sustainability Guidelines and started incorporating sustainability requirements into the scorecard. This year, SunPower asked suppliers if they are familiar with the Commitment and if they are tracking their emissions. Starting in 2015, SunPower will request quantitative data. Going forward, this data will be analyzed and benchmarked to identify opportunities to drive improvement throughout our supply chain. We hope that by taking a phased approach our suppliers will have time to develop processes around monitoring and reporting emissions.

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	Comment
	80%	Our Supply Chain Sustainability program has communicated our expectations and requirements via 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
Identifying GHG sources to prioritize for reduction actions	We are in the process of asking our suppliers to submit their GHG data to us. When we collect this data, it will be used to prioritize actions. We have piloted this approach to reducing emissions in our supply chain with our silicon suppliers. Using data from our silicon suppliers we updated our product carbon footprint assessment and identified hot spots in our supply chain. From there we have started to develop strategies for reduction.
Use in supplier scorecards	We are rolling out a new supplier excellence program for 2015 and are in the process of finalizing the program and will be communicating our expectations to suppliers. Our plans include having different tiers of suppliers and setting quantitative goals and targets. We hope to share more next year.

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

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	Business unit manager

Further Information

CDP 2015 Climate Change 2015 Information Request