

# Environmental statement

2015 - 2016





# Introduction

Solarcentury is one of the world's most trusted, respected and long-standing solar companies.

In fact, we've been around since the early days of the solar industry. Founded in 1998, we've been part of the evolution that has made PV the attractive investment it is today. We've put solar on a vast range of sites, and have won multiple awards for product innovation.

What's more, we're in it for the long-haul. This isn't just our business, it's our mission. Our commitment to making solar accessible is deep-rooted and long-term, and our solidly-established business is growing steadily worldwide.

What do we do?

We work directly with our clients to design and install commercial, industrial and utility scale solar. We also supply our products and services to installers and distributors. All of our customers benefit from our experience in terms of engineering quality, superior yields and sheer breadth of deployment.

We're a big believer in helping solar PV change our world for the better. Every year we contribute 5% of our net profits to the charity we founded, SolarAid, which aims to eradicate kerosene lamps from Africa by 2020.

This statement covers the management and reporting of the significant environmental aspects associated with the design and project management of installation of renewable energy solutions at the head office location 50 Great Sutton Street, Clerkenwell, London, EC1V 0DF and the warehouse facility at 8 Lion Park Avenue, Chessington.



# Our vision

We want to make a big difference in the fight against climate change through widespread adoption of solar power. The sun bathes the earth with an incredible amount of energy. In a day, enough sunlight hits the earth to power the world for several years. Humanity is increasingly harnessing the power of the sun making the 21st century the solar century.

We envisage solar systems on the roofs of homes and businesses, backed up by solar farms and the whole family of renewables; supplying clean power and achieving deep cuts in CO<sub>2</sub> emissions. As the global market for renewable energy grows, millions of jobs are being created in research, installation and manufacturing.

# Walking our talk

We operate according to three working principles. These inform and direct the environmental performance of our company and cover every aspect of our operations. As a company that is founded on environmental objectives, every aspect of our work seeks to reduce emissions from homes and businesses as well from our own activities and installation projects.

This document reports our progress against our principles and our environmental goals. This EMAS statement covers our UK-based activities during the financial year April 2015 to March 2016.

# Solarcentury principles

## To create lasting positive change

We exist to make positive changes in the world of energy: economically, environmentally and socially.

## To make our business thrive

We deliver change by building an inspiring and sustainable business that invest in its people and those it works with.

## To create great ideas, products and services for our customers

We lead in imagination and innovation in order to make solar simple and accessible.



Solar panels on a cricket pavilion in Eynsham



# Statement from our CFO

Solarcentury has had another impressive year. We built the 40MWp Cowdown solar farm near Andover in a record-breaking 89 days. We built and launched the largest car port system in Africa at Garden City Mall in Nairobi. We built our first solar farm in Germany on a former waste disposal site, our first solar farm in the Netherlands on the island of Ameland and completed a 10MWp project in Panama. At a domestic level, we launched our joint offer with IKEA to bring solar to a large audience of homeowners and we started installing our new building-integrated PV system; Sunstation - which is already garnering acclaim from leading designers, installers and homeowners alike.

As we become more geographically diverse, it's critical that we maintain our environmental and social goals. It's in the DNA of the company. We aim to be a positive influence on all those we meet and work with across all of our business activities.

It has always been clear that Solarcentury is in business for a purpose – to use solar for social good. There are some great examples in this report; our donation to SolarAid, our donation of a solar system to Tate Modern, and our significant planting programmes.

I am proud to be working with a company that places so much importance on sustainability and the environment.

Neil Perry, CFO



New product Sunstation launched and installed

## Environmental policy

The Chief Executive Officer, Board of Directors and Managers are committed to achieve excellence in the company's environmental management system. We will;

- Ensure that the Environmental Management System is appropriate to the nature, scale and impact of its activities, products and services,
- Conduct activities in a manner that will demonstrate our respect for the environment, continually improve our performance, reduce our impact and prevent pollution,
- Comply with all environmental legislation and other requirements to which we subscribe,
- Manage an effective Environmental Management System that complies with ISO 14001 and EMAS verification requirements.

This policy statement is reviewed annually and made known to all employees, clients, suppliers and subcontractors. This Policy is displayed on company systems and can be viewed on our website by the general public and interested third parties.



Neil Perry, CFO  
May 2016

## Environmental management

Corporate Social Responsibility is core to our organisational culture and all employees have a responsibility to ensure we meet our commitments and objectives. Our Environmental Management System (EMS) is certified to the international ISO 14001:2004 standard and is regularly reviewed by the senior management team to ensure our continuous improvement against our targets to reduce our environmental impact. The compulsory employee induction programme for new employees covers information on the Environmental Management System, documentation and our objectives. A register of environmental aspects and impacts is maintained along with a register of environmental legislation, which are taken into consideration when establishing new objectives and targets. The significant environmental impact of each department and / or activity has been identified and responsibility has been assigned, to take the lead on monitoring and reporting.



# Progress against our principles

**To create a lasting positive change:** We exist to make positive changes in the world of energy: economically, environmentally and socially

During 2015/16, we installed or distributed 196 MWp of solar.

A significant proportion of the solar we deployed was installed as ground-mounted solar farms in the UK. Solar farms are the quickest and the lowest impact route to creating new electricity capacity. They are simple to build and reduce solar prices for all. However, during the year, the new UK government put an early end to the subsidy that supports ground-mounted solar in the UK. We will therefore be focusing our efforts on overseas markets. In the UK, we remain committed to commercial and residential rooftops.

For the solar farms that were developed and built by Solarcentury during the year, we improved the hedgerows where there were gaps, built entire new hedges and turned the space into wildflower meadows. During the year, we planted 29,000 hedgerow plants and over 313 hectares of wildflower meadow and grassland. Each hedgerow plant will store a tonne of carbon over its lifetime. And the type of wildflower grasslands we have planted can store up to 3 tonnes of carbon per year per hectare.

**To make our business thrive:** We deliver change by building an inspiring and sustainable business that invests in its people and those it works with

Our goal is to build an inspirational team who are themselves inspired by their mission, their work, work conditions, and personal development. Our team is currently made up of 211 people across eight countries, the UK, the Netherlands, South Africa, Kenya, Ghana, Panama, Chile and Mexico.

During the year, Solarcentury was accredited as a Living Wage employer. We also invested substantially in developing our people. For example, two thirds of our employees received additional health and safety training.

We run a popular series of '101' workshops on broad topics from storage to PV manufacturing. These ensure that our people are able to advocate effectively for solar.

Every year we donate 5% of our net profits to SolarAid. During 2015, we presented our donation for the previous financial year: £285,000

**To create great ideas, products and services for our customers:**

We lead in imagination and innovation in order to make solar simple and accessible

Solarcentury's own products are an important part of our mission to increase the adoption of solar photovoltaic technology. By installing solar on buildings, otherwise redundant surfaces are used to harness the energy of the sun and convert it directly into electricity without any noise or carbon emissions. To serve this part of the market, we design, develop and manufacture our own building-integrated solar products which offer our customers solutions which are:

- cost effective
- fit safely with building structures
- simple to install using normal trade practices
- aesthetically harmonious with the built environment.

Our new BIPV product - Sunstation - was installed in the UK and Netherlands and has been widely applauded by the industry for being both cost-effective and easy to install. The product received an IF international design award in recognition of the quality of its aesthetic and ease of use.

We look for ways to communicate the power and benefits of solar to make the technology attractive and accessible. During the year we invested substantially in building proprietary web applications to make it easy for homeowners to explore how solar can benefit them and then go on to place an order online. We have now launched this offer in partnership with IKEA in the UK.



# Environmental progress

As the company grows we recognise that we make a bigger impact on the planet. This is why we go beyond the requirements of the ISO 14001:2004 by subscribing to the requirements of the European Union's eco-management and audit scheme (EMAS), which requires participating organisations to submit a public statement detailing their environmental performance. This report looks at our total environmental impact in relation to our sales volumes, which we believe to be the most accurate way of describing the environmental effects of our business.

## Environmental aspects and impacts

We have determined our significant environment aspects to be: energy consumption - electricity, gas and water, material usage (paper, packaging) and the use of fuel for delivery and business travel. Our aspects and impacts are continuously monitored to ensure they represent our activities, services and products.

Location	Significant aspect
Office	<ul style="list-style-type: none"> <li>Resource use</li> <li>Waste</li> </ul>
Warehouse	<ul style="list-style-type: none"> <li>Resource use (oils/fuels etc.)</li> <li>Waste</li> <li>Material usage</li> </ul>
Site and client facing activities	<ul style="list-style-type: none"> <li>Resource use (oils/fuels etc.)</li> <li>Emissions to air</li> <li>Waste</li> </ul>

The significance of these environmental aspects is decided using a scoring matrix. Aspects above a certain threshold are deemed significant. The Environmental Aspects and Impacts Register lists the impacts that the company has direct control over. The significance of these Aspects is decided by using a scoring matrix. The related legal controls are also listed to ensure legal compliance across our activities.

The main materials and energy flows created by Solarcentury can be largely summarised as the supply, shipping and logistics of delivering solar panels to our customers and the travel required to run our business.

The main material environmental impact of photovoltaics stem from the production of photovoltaic laminates over which we have little control.

We review all environmental legislation that applies to our business, including legislation that may apply in the future. We have never had any legal action taken against the company for non-compliance with environmental legislation and have not been responsible for any environmental incidents that cause environmental pollution.

Solarcentury aims to operate without damaging the environment, but we recognise that some activities which cause pollution are essential to the functioning of our business. During 2015/2016 we have been expanding in new territories outside of the UK and Europe, because of this expansion we have had a bigger impact. The following table shows the CO<sub>2</sub> emissions from our office energy consumption and business travel in relation to our sales volumes.

We do not report on material usage as we are not a manufacturer and do not control the means of production. Also, because our business is not continuous in the market sector in which it operates, we are unable to consistently report on a repeatable basis our figures on biodiversity, however, it is reported when deemed appropriate against the progress of our principles. We also do not report on hazardous waste due to the minimal levels we produce

# Comparison over time and analysis of trends and developments

	2011/12	2012/13	2013/14	2014/15	2015/16
MWp installed or distributed	30	98	120	245	155
People employed	120	130	142	175	198
Electricity (100% renewable) MWh	118	119	204	121	110
Electricity (non renewable) MWh	0	0	2	0	0
Gas MWh (Warehouse)	62	68	62	64	61
Gas MWh (Office)	-	-	168*	145*	143*
Total direct energy use per employee MWh	1.5	1.43	3.07	1.88	1.59
Percentage of renewable energy	65.6%	63.6%	46.8%	36.67%	35.03%
Water used in m <sup>2</sup>	764	791	924**	1121**	1226*
Water used per employee m <sup>2</sup>	6.37	6.08	6.51	6.41	6.19
Plane miles	128,792	347,409	676,616	691,069	1,129,129
Car miles	116,063	89,065	152,504	182,012	264,800
Train miles	119,587	106,642	168,670	232,148	177,490
Van miles	-	-	140,000 <sup>1</sup>	122,000	117,000
Other transport miles (bus and boat)	74,476	100,390	592	1,954	2,106
Emissions from freight tonnes CO <sub>2</sub>	1,187	1,168	1,369	5,641	3,435
Number of environmental complaints	0	0	0	0	0
Number of environmental incidents	0	0	0	1	2
Number of unique times EMAS Statement downloaded from website	206	103	137	54	53
Tonnes of packaging materials used	126	166	326	738	1796
Tonnes of paper purchased	1.56	1.27	1.44	1.15	2.72
<b>Waste - head office</b>					
recycled tonnes	3.4	7.5	4.8	5.4	3.8
landfill tonnes	0.2	0	0	0	0
waste to energy tonnes	0.8	1.2	2.9	5.1	4.2
<b>Waste - warehouse</b>					
recycled tonnes	5.2	5.5	13.9	6.3	16.9 <sup>#</sup>
landfill tonnes	4.6	0	0	0	0
waste to energy tonnes	-	2.3	6.3	5.9***	9.9
Total waste tonnes	14.20	16.50	27.90	22.7	34.8
Total waste per employee tonnes	0.12	0.13	0.20	0.13	0.18
Total waste per MWp	0.16	0.17	0.23	0.09	0.22
CO <sub>2</sub> (t) total	105.80	116.15	280.25	272.63	330.63
CO <sub>2</sub> (t) per employee	0.88	0.89	1.97	1.56	1.67
CO <sub>2</sub> (t) per MWp	3.53	1.19	2.34	1.11	2.13

## Data as financial year April to March

Notes: To calculate the CO<sub>2</sub> output for 2015/16, the Carbon Trust conversion factor calculator was utilised which uses Defra's 2014 conversion factors. We do not report on hazardous waste production as output is minimal. \*The gas at head office is estimated due to being a managed service building, company specific data is not available. As such the total gas usage has been divided by floors occupied. \*\*The water at head office is estimated as, due to being a managed building, company specific data is not available. The landlord could not provide any verifiable data, as such, we used the average water consumption per employee over the previous 5 FY to estimate water used based on our current number of staff. <sup>1</sup>Pre 2013/14 van mileage was classed as 'other', we have deemed this significant enough to have its own category. \*\*\*Waste to energy weights from the warehouse have been estimated by using average lift weight and number of lifts due to waste collection company failing to weigh all lifts. <sup>#</sup>Estimated due to lack of data from waste carrier. Average percentage of waste recycled over past 4 years used.



# Environmental programme

## – main objectives

The objectives and targets below are based on what we see as our significant environmental impacts, as outlined in this document.

### Objective 1.

To develop products which have minimal environmental impacts throughout their lifecycle.

### Objective 2.

To record and measure sufficient data in order to be able to report to level four of our CO<sub>2</sub> emissions hierarchy shown on previous page.

### Objective 3.

To be fully accountable for our impacts on the environment and demonstrate year on year improvements.

#### Total carbon dioxide emissions

Our main objective is to reduce CO<sub>2</sub> emissions from the built environment and we monitor our own CO<sub>2</sub> output closely. We have chosen to separate this into four levels in order to be able to compare ourselves with other companies and to be as transparent as possible about our reporting.

#### Our four levels of CO<sub>2</sub> emissions are:

1. Office energy consumption  
We report at this level.
2. Office energy consumption + travel - still not an accurate picture of our total impact but many companies only go this far.  
We report at this level.
3. Office energy consumption + travel + transportation of goods.  
We report at this level.
4. Office energy consumption + travel + transportation of goods + manufacturing of products.  
We have not achieved this level of reporting.

# Review of environmental objectives and targets 2015/16

## 2015/16 Target Summary

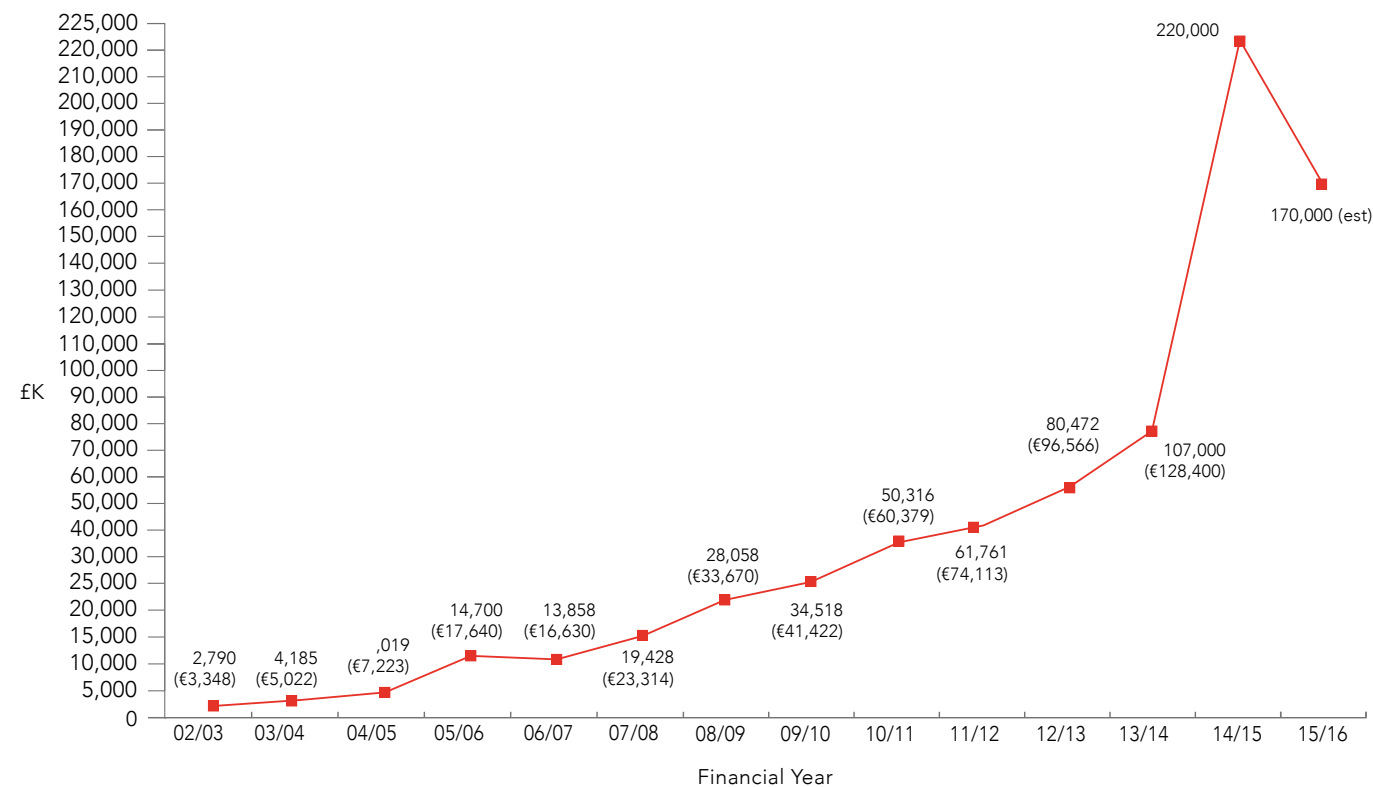
- We set out to promote responsibility for the environment amongst both our staff and our supply chain. We have revamped the Induction process for new employees including a compulsory induction covering our Environmental Management and improvement programmes. We operate an internal electronic communications board that allows for the promotion of environmental issues. In the light of government cuts to solar subsidies, staff organised a campaign resulting in extensive letter writing to constituency MP's as well as taking part in a flash mob and the Climate March. We also timed the launch of our donated system to Tate Modern to coincide with the closing of the Feed-in Tariff consultation to maximise press coverage. Our three monthly 'town hall meetings' to which all staff are required to attend, known as Q Reviews, include a summary by the company's founder on the continuous effort to fight climate change.
- We aimed to ensure that 50% of vendors have or are working towards ISO 14001. Those vendors defined as critical to achieving our organisational needs are recorded on the Approved Suppliers List. This list was reviewed to determine the number of suppliers that have achieved ISO 14001. We found that 61% had achieved this standard.
- We aimed to develop the lifecycle for Sunstation product through live data and mini assessment projects. The LCA methodology has been developed, despite the lack of international consistency in attributing environmental impacts. It is proposed that validity of this model is tested by the Imperial University. However in establishing the model to analyse baseline data, it has been discovered that our control over the most significant environmental impacts is limited. As Sunstation is contract manufactured, the cost of making incremental improvements would be insignificant to the overall impact. While we will continue to report on the impact of our own product, it has been identified that significant environmental cost-down can be achieved in other areas of the business.
- We aimed to ensure that 80% of all waste generated by our activities is recycled / re-used. It has become evident that while monitoring this objective, the waste return figures were not verifiable due to waste contractor's methods. A new system of weighing waste has been set up internally which will give a more accurate and reliable indication of the waste that is recycled / re-used.
- We set out to promote awareness of solar through the National Curriculum. SolarAid, the University of York Science Education Group (UYSEG) and Solarcentury have collaborated to produce a pack of teachers' notes and student worksheets for Key Stage Four: Learning about the impact and uses of solar photovoltaics in Africa and the UK. While teaching about air quality, sustainable energy, and working scientifically, for GCSE Sciences 2016 (students aged 14-16), this three lesson resource pack provides opportunities to draw on ideas from physics, chemistry and biology, showing that often all the sciences are needed to describe and solve problems.
- We set out to undertake a Bumblebee Audit at three representative sites. These audits were completed in 2015 at Chalcroft Solar Park, Hill Farm and Stratton Hall. At Hill Farm the Bumblebee Conservation Trust reported that the site was far better-vegetated and more floristically diverse than in 2014, and bee numbers were also up considerably. However for the Stratton Hall site, it was noted that it would be better to mow the site as a mosaic so that at least part of the site remains suitable throughout the flight season.
- We set out to donate funds to local parishes to improve local biodiversity where we develop solar farms. Solarcentury recognises that the construction phase of a solar farm can be disruptive and it recognises that there isn't automatically a direct benefit to neighbours of the solar farm. Solarcentury wants the local community to share the benefits and wants to be a 'good neighbour'. As such the Solarcentury's Community Fund administered by GrantScape has identified a number of projects for the benefit of local communities ranging from; a new community broadband scheme, the restoration of a disused building dating from 1874, a grant towards the restoration of a church roof and funds for village benches and wildflower areas. For further details of the community schemes we have helped fund, please go to the following link; [www.grantscape.org.uk/fund/solarcenturycf](http://www.grantscape.org.uk/fund/solarcenturycf).

## 2016/17 targets

For the next coming year the following improvement objectives will be incorporated into departmental quality plans as appropriate.

1. Following the Bumblebee Conversation Trust ongoing survey of sites, we will seek expert advice and discuss ways to increase insect-pollinated plant species, for built sites that are under our O&M management.
2. Following the launch of our offer with IKEA, we will take the opportunity to publish and promote environmental awareness amongst our homeowner client base. The aim is to publish 4 environmental stories over the next 12 months.
3. We will also measure and lessen the environmental impact of the services and activities associated with this new retail offer. The aim is to reduce the impact, on established baseline activities by 10% over the next year.
4. Following the initiative to promote awareness of solar through the National Curriculum, we will measure the uptake of the programme.
5. We have a long standing commitment to only use electric taxis for short distance corporate travel. For cost reasons this is not proving to be sustainable. However to offset this, we aim to ensure that 10% of business miles is undertaken in a hybrid hired cars. We will positively discourage the use of diesel-fueled hire cars.

## Turnover



## Conclusion

### Verifiers Declaration

BSI (British Standards Institute) as appointed verifier to Solarcentury Ltd, is delighted to confirm that further to consideration of the documentation, data and information resulting from the company's internal procedures examined during the verification process, it is evident that the environmental policy, programme, management system and management review, meet the requirements of the EMAS Regulation 761/2001.

Validator: Richard Edmond (BSI)

The validation and verification was completed on 13/06/16.

BSI is accredited for EMAS verification with the registration number UK-V-002.

## Economic aspects of environmental protection

Applying for EMAS accreditation has required adequate resources to enable the EMS to be implemented and controlled, including human resources, specialised skills, technology and funding. However, the benefits of having an effective EMS, to reduce our energy/ waste/ travel bills far outweigh the associated costs of certification. EMAS certification helps us access tender opportunities as many clients now expect supplier organisations to prove their environmental commitments through robust reporting.

Our deadline for the next environmental statement is in May 2017 and will be the responsibility of the EMAS team. Any comments or feedback on this report can be sent via the following address:

[enquiries@solarcentury.com](mailto:enquiries@solarcentury.com)

or

Solarcentury  
50 Great Sutton Street  
London, EC1V 0DF

Tel: 020 7549 1000

More information about Solarcentury, our products and services is available on our website: [www.solarcentury.com](http://www.solarcentury.com)





# Find out more

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+44 (0)20 7549 1000

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50 Great Sutton Street  
London EC1V 0DF

T +44 (0)20 7549 1000

F +44 (0)20 7549 1001

[www.solarcentury.com](http://www.solarcentury.com)