



The natural choice for **your power**

Renewable Energy Specialists

16th January 2014

Mr John Bodger
Rotary House
Corbett Avenue
Droitwich Spa
Worcestershire
WR9 7ND

Eco2Solar Limited
Unit 8 John Samuel Building
Arthur Drive
Hoo Farm Industrial Estate
Kidderminster
Worcs, DY11 7RA
01562 745265
a.smith@eco2solar.co.uk
www.eco2solar.co.uk

Ref: Rotary House/PV/Jan14

Dear Mr Bodger,

Following our conversation this morning, we have revised our quote to include an additional two solar modules. The different in output in our quote may be due to the shade analysis; you would need to compare the shade factor for each quote in order to assess your returns. The Solar Edge optimisers we have proposed will reduce the impact of this shading, and also come with a **12 year warranty**. We have provided a standard inverter option too for comparison.

4.00 kWp PV System

We would install 16 x 250W Polycrystalline Solar PV modules split between the South West and South roof pitches of the property by securing the modules to the supports of the roof via an aluminium frame.

The dimensions of the modules are 1650 mm x 990 mm which would allow us to install the modules landscape on the South West roof and portrait on the South East roof as shown on the graphics at the end of the quote.

We can connect each module to a power optimiser, which would reduce the impact of shading later in the day from the tree to the West of the array. A Solar Edge inverter will also be installed to coordinate the optimisers and this will be installed in either the loft space or the kitchen. Alternatively a standard inverter could be installed which does not include the optimisers.

We would then run a twin and earth cable from the inverter into the consumer unit in the kitchen where we would install MCB/RCB breakers.

We would install isolators and switchgear next to the inverter and the consumer unit, together with a digital generation meter.

This allows you to provide your meter readings to your nominated utility provider in order to claim the Feed in Tariff payments from your electricity supplier for the next 20 years.

In addition to being paid the Feed in Tariff for all energy generated, many utility providers will pay you 4.64p for 50% of what you have generated as an "Export Bonus" payment.



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4.00 kWp Solar PV system representing:

Qty x 16 250W Poly-crystalline solar PV modules

Either 1 x Solar Edge SE4000 inverter and 16 Solar Edge Power Optimisers

or 1 x Samil Power 4000TL

Isolation switches, solar cables

Aluminium and stainless steel roof mounting kit, brackets, bolts

Multi contact connectors and couplers

Grid connection and compliance

Ofgem registered generation meter to claim FIT payments

Connection to consumer unit and electrical system

Access to roof pitch

Full installation, commissioning and make good

EPC Assessment and report

Deposit & Advanced Payment Insurance plus an Insurance Backed 5 year Workmanship Warranty

4.00kWp System including Solar Edge inverter and optimisers

£6,650 + VAT at applicable rate

4.00kWp System with a Samil Power inverter, no optimisers

£6,150 + VAT at applicable rate

Please see below the methodology used to estimate the annual performance of the PV system. The estimate uses Post Code specific information, the orientation and inclination of the roof pitch.

A. Installation data	South East	South West	Total
Installed capacity of PV system - kWp	0.50	3.50	4.00
Orientation of the PV system – (degrees from South)	35	55	
Inclination of system – (degrees from horizontal)	30	30	
Postcode Region	Zone 6	Zone 6	
B. Calculations			
kWh/kWp (kWh's per kWp irradiance for your region)	900	859	
Shade factor	1	0.813	
Estimated annual output in kWh's (units of electricity generated)	450	2,444	2,894



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Estimated energy generation and savings:

According to the government's SAP methodology above, it is expected that this system could generate a maximum of 2,894 kWh's of free electricity per annum.

As an MCS accredited installer we must issue the following statement:

"The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidance only. It should not be considered as a guarantee of performance."

"This shade assessment has been undertaken using the standard MCS procedure - it is estimated that this method will yield results within 10% of the actual annual energy yield for most systems."

This represents **£434** of electricity at today's prices of 15p per unit and you are entitled to use all of the free electricity that you are producing.

Under the Feed in Tariff scheme, properties with an Energy Performance Certificate of D and above will qualify to be paid **14.9p for every** kWh that is generated from the solar PV system, regardless of whether the energy is used or not.

The tariff rate of **14.9p** is then guaranteed to be paid for 20 years and is Retail Index Linked to rise according to inflation; assuming that you register the installation with them before 1st April 2014.

Assuming that you used half of the available electricity free of charge in the house and exported the rest to the Grid, you could enjoy the following savings:

Feed in Tariff payment for all energy generated: **£431**

Saving on electricity bill by using half of the energy at 15p per unit: **£217**

Export bonus of 4.64p for 50% of energy generated: **£67**

Total savings year one (assuming that you use half of the energy): **£715**

Annual Return using Solar Edge system: **10.8%**

Annual Return using Samil Power inverter: **11.6%**

Warranties included:

5 Years labour warranty (Eco2Solar)

12 Year Solar Edge Inverter warranty

25 Year Solar Edge Power Optimiser Warranty

10 Year Samil Power Inverter warranty

10 Year Solar Panel Product guarantee (free from defects)

Panel power output guarantee (10 years-90%, 80% for 25 years)

Deposit & Advanced Payment Insurance plus an Insurance Backed 5 year Workmanship Warranty



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We are members of the Solar Trade Association, MCS accredited (number 12 out of now 5000+) and our team are not sub-contracted which allows us complete control over the quality of every installation that we undertake. We have conducted installations on many commercial buildings, schools, universities, social houses and domestic properties throughout the UK and on behalf of clients such as Mansells Construction, Linden, Barratt Homes and the Environment Agency.

If you would like to accept my proposal then please let me know. I will then arrange for an Energy Assessor to conduct a survey at your convenience so that we may confirm whether your property meets the EPC band D or above in order to qualify for the higher level Feed in Tariff. We would then require a 25% deposit to confirm and place the components on order. A "what happens next" section is provided on the following pages to guide you through the process.

The deposit is insurance protected under the REAL Assurance DAWWI scheme and you will have a 7 day "cooling off period". The balance will be due upon completion.

I trust that this is acceptable, if you have any questions or require any assistance whatsoever then please do not hesitate to contact me at any time.

Thank you for the opportunity

Kind Regards

Andrew Smith
Technical Sales



Certificate Number ELC5404 Solar Heating, Solar Photovoltaic and Heat Pump Systems

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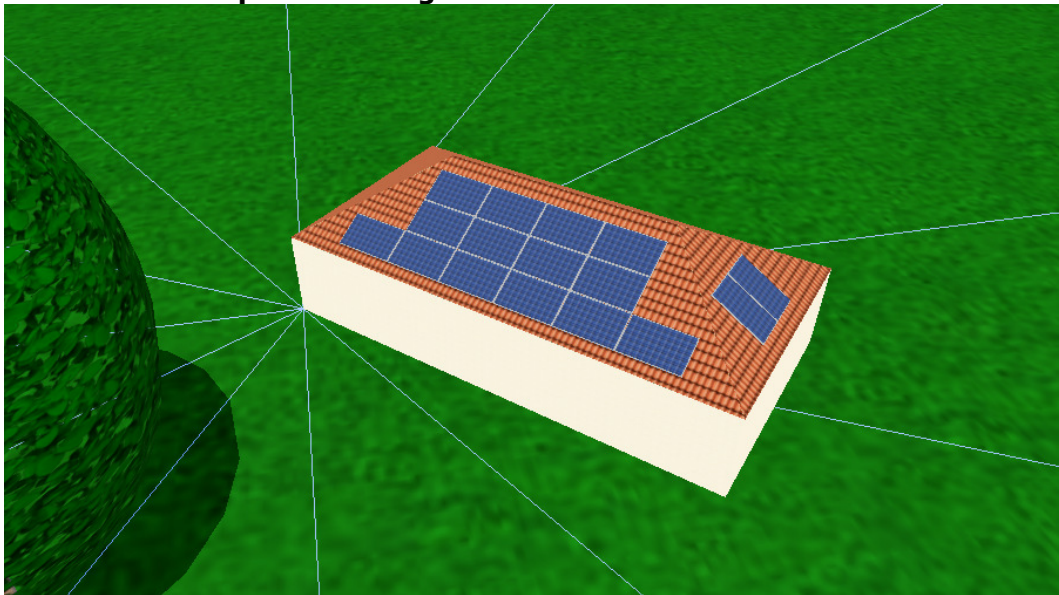
eco₂solar

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Proposed roof pitches for modules:



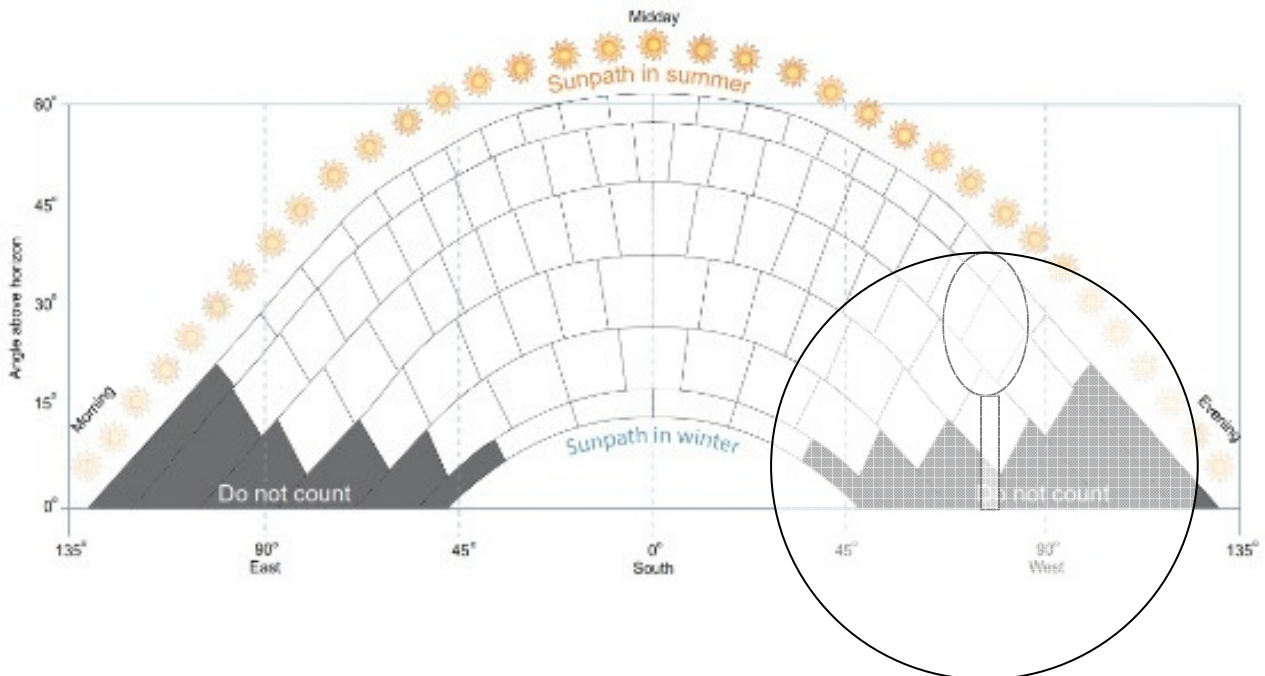
Proposed arrangement of PV modules on roof:



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Sunpath Horizon Diagram



Sunpath segments affected by shading from the tree 17.
 Shade factor: $1 - (17 * 0.011) = 0.813$



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Additional Information

Structural assessment

Eco2Solar recommend that a full structural assessment should be done on flat roofs and commercial buildings prior to installation. A typical structural assessment can cost approximately £350 and Eco2Solar can organise this on your behalf if required.

Payment terms

Payment is due upon completion unless otherwise agreed. Contracts over £20,000 may be subject to a credit check prior to installation.

Planning Permission

Solar PV is a permitted development for domestic properties. For properties other than a dwelling or a block of flats planning permission will be required. We have good contacts with local planning departments and would be happy to assist your application for planning with diagrams and plans of the proposed installation.

Quote validity

Prices quoted are subject to a full technical survey and are valid for 90 days.

DNO connections and applications

G59/2 applications are required for all PV systems over 16A per phase. Eco2Solar will process the application on your behalf free of charge. The DNO (District Network Operator) may take up to 45 days to process the application and will not allow the installation to proceed until the Grid has processed the application and provides authorisation for connection. In some cases the Grid may advise of additional costs to allow the connection to be made but Eco2Solar will advise you of any additional costs prior to installation.

Export metering

If your system is under 30kW then most utility providers will pay your Export Bonus based on a "deemed" assumption that you have exported 50% of the energy that you have generated, rather than installing an export meter themselves.

Most utility providers will charge an installation fee and annual service/maintenance charges if you insist on having an export meter installed.



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A few reasons for selecting Eco2Solar as your nominated installer:

- Ranked in the **top 10** installers in the UK by independent customer ratings on YouGen (see what our customers say about us on www.yougen.co.uk)
- Eco2Solar were the 12th Solar Energy company in the UK to receive MCS accreditation (now over 4,000)
- Winners of the WMCCE "SME Of The Year award, 2012" for Midlands and National Awards
- Our installers are not sub-contracted to allow us complete quality control
- We support Acorn Children's Hospice and donate a proportion of our profit to them for every installation that we do
- We are members of the Solar Trade Association and REA
- We have installed solar energy systems to over 3,000 domestic houses in the last 6 years
- High profile clients include Barratt Homes, Worcester and Warwickshire Council, Galliford Try, Birmingham City Council, Severn Trent, the NHS, Social Housing Providers and The Environment Agency
- We use sophisticated design software to design your system and account for shading issues so that each system is designed to provide the best use of your roof area
- We are CHAS and SAFEContractor approved contractors and all of our operatives carry CSCS health & safety cards
- We are NAPIT registered to satisfy Building Control "Part P"

Eco2Solar Warranty Charter

At Eco2Solar we aim to offer the best customer service and support levels in the renewable energy industry. Part of this requires us to provide guarantees and warranties should something go wrong.

Our level of support works on a number of levels – to provide you with complete confidence that we will never let you down.

1. REAL Assurance DAWWI Scheme

The Deposit and Workmanship Warranty Insurance (DAWWI) Scheme provides you as a customer of Eco2Solar with insurance cover for deposits and advance payments up to a maximum of 25% of the final contract price for a maximum of 120 days. The sum insured is capped at £7,500.

In addition it will provide you with a 5 year Insurance Backed Workmanship Warranty (up to a maximum contract value of £30,000) in the unlikely event that we cease to trade and are unable to honour any remaining commitments.

The Scheme is administered by Warranty Services Ltd, trading as QANW, and the insurance is underwritten by Guarantee Protection Insurance Ltd. (Both companies are members of the Kinnell Group of Companies.)



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2. Eco2Solar Parts & Labour Warranty

The Inverter has a warranty of 5 years and the modules carry a warranty of 10 years with a 25 year warranty on power output. The installation is guaranteed for 5 years except where the defect is due to misuse, neglect or damage. The customer may not contract any repair work to a third party without our consent. Modification to the system or alteration to the controller setting by unauthorised persons may invalidate warranty.

Deposit and payment details

In order to proceed we would require a deposit of 25% so that we may confirm and place the components on order. This can be received either by cheque, payable to Eco2 Solar Ltd, or as a bank transfer. If you wish to do an online BACS transfer then our details are below:

BANK DETAILS: Nat West
Account Name: Eco2 Solar Ltd
Account Number: 27065413
Sort Code: 60-12-12

Please post any cheques to:

Accounts Department
Eco2Solar Limited
Unit 8 John Samuel Building
Arthur Drive
Hoo Farm Industrial Estate
Kidderminster
Worcs, DY11 7RA
01562 745265

Your deposit is insurance protected under the REAL Assurance DAWWI Scheme (see <http://www.realassurance.org.uk/pdf/insurance-consumer-leaflet.pdf>) for more details.

Once this is received we will then send you a confirmation letter and our logistics department will be in touch to arrange your installation.

Upon completion of the installation you will be given your User Manual together with your invoice showing the balance which is due upon completion and your MCS certificate. Please make the cheque payable to Eco2 Solar Limited; our Electricians are authorised to collect the cheque on our behalf.



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What to do next

If you wish to proceed please contact your Eco2Solar Account Manager notifying them in writing (email or letter is fine) of your intention and they will then discuss arrangements for a structural assessment of the site (if necessary), and Energy Performance Assessor to conduct a survey.

Once your Energy Performance Certificate has been confirmed and you have paid your deposit, we will send a confirmation letter to confirm receipt of the payment and a sales contract will be issued in the post. Our logistics department will then be in touch to organise a convenient installation date to suit your requirements once structural reports, EPCs and DNO approval has been received.

Before our installation team arrive to carry out the installation, we strongly advise you contact your chosen electricity provider and inform them that you are having a solar PV system installed at your premises and to request the appropriate application forms. It is the responsibility of the customer to organise and research this as this contract is between the customer and the electricity/FIT provider and not Eco2Solar.

Feed in Tariffs

The Feed in Tariff provider will have a contract and paperwork that you need to complete before you can start receiving your Feed in Tariff payments. We want you to be able to take advantage of your solar PV system as soon as possible after it's installation, which is why we advise you obtain the forms from your provider prior to installation and complete as much of this as you can in preparation for the installation.

It is commonly called a "Feed in Tariff Application Form" or something similar, and can be obtained in a number of ways depending on your provider.

- a) Some have the form downloadable from their respective websites
- b) Some send it out in the post once you've contacted them over the phone
- c) Some will send it out in an email to you

The form contains questions such as "generation meter number", export meter and MCS certificate number which are kit specific and cannot be completed until the installation has been installed and commissioned.

Once the installation is completed we will register your system with the Microgeneration Certification Scheme (MCS) using their online database. You will then be given an "MCS Certificate", which you take a copy of and send along with your completed "Feed in Tariff Application Form", Energy Performance Certificate (**showing D rating or above to receive the higher rate FIT**) and a receipted paid invoice back to the provider. Please note that many providers will not process your FIT application and payments until the system is paid for in full and they have a paid invoice as proof. It is the customer's responsibility to ensure that you have completed all necessary paperwork and forms that the providers require prior to submitting your application. Although Eco2Solar can assist you where possible, we cannot be held responsible for



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incorrect applications or information as the necessary paperwork varies from one provider to the other.

Please contact your Feed In Tariff provider for any advice that you require in relation to payments or applications.

Please send all required paperwork to your provider as soon as possible after installation so that you are registered for the payments. Many providers will refuse to back date meter readings and payments if the forms are not received within 5 days of the installation/commissioning date.

It is important to note that when sending your completed Feed in Tariff application form you must provide an Energy Performance Certificate with a D rating or above in order to receive the higher rate. If you provide a certificate with an E rating or lower then you cannot re-apply with another EPC certificate with improved rating at a later date taken as once it is registered then the prevailing rate is set. Please contact us if you require any assistance.

It is the responsibility of the customer to set up the contract with the provider to enable the FIT and export meter payments; Eco2Solar cannot be held responsible for any loss of payments as a result of delays in processing the application forms after installation.

Eco2Solar are the installers only and the Feed in Tariff and Export meter payment arrangements are a contract between the customer and the provider.

If at any point, before or during the installation, you have any questions please feel free to contact the office. Below are some useful contacts for each department who will deal with your questions for you:

Contact number: 01562 745265

Logistics Department (Installation queries)

Mrs Gail Lobb

Sales/MCS/FIT Enquiries

Miss Jillian Aston

Technical Enquiries

Andrew Balfour

Accounts department

(Invoice, payment and deposit queries): Mrs Shelley Garrington



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