

# Photovoltaic Quotation Performance Report

**Client:** Mr Steve Henry

**Site Address:** Narborough Stables, Main Road, Narborough, King's Lynn

**Custom Reference:** 75% Self Consumption

**Project:** 5.76 kWp (18 x 320.00 W)



*Generating Brighter Futures*





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Date: 19/12/2019

Quotation: CJES5489-01/19-12-19/SD  
 Custom Reference: 75% Self Consumption  
 Site Reference: Narborough Stables

Dear Mr Steve Henry,

Further to your recent enquiry with reference to the Solar Photovoltaic (PV) system. We have pleasure in providing a fixed price quotation & performance report. If the quotation is of interest to you, please return the acceptance form attached.

**Proposal is based upon the following information:**

Array	Zone Region	Area	Inclination (Degrees from Horizontal)	Orientation (Degrees from South)	Shade Factor
#1	East Anglia	4.00m x 7.00m = 28.00m <sup>2</sup>	20°	90°	1.00

**Proposed Performance Estimate based upon the Standard MCS Procedure:**

Array	Installed Capacity (stc)	Panel Wattage	Number of Panels	kWh/kWp (Kk from Table)	Estimated Annual Output (kWp*Kk*SF)
#1	5.76 kWp	320.00 Wp	18	791.00 Kk	4,556.16 kWh/year

Included in the above system.

1. To supply & fit 1 No. on-roof PV Array.
2. To supply & fit associated Inverter(s) & electrical installation.
3. To supply & fit 1 No. single phase kWh meter to measure yield produced by the PV system(s) (remote monitoring is available at extra cost).
4. Commissioning, testing & leaving in full working order.
5. MCS Commissioning Certificate & notification to Genserv (Requirement for the Feed-In Tariff scheme).



## Quotation:

### Supply & Install all of the Above

£ 4,369.00

### VAT

£ 218.45

### Total

£ 4,587.45

This Quotation is based upon the following:

1. Typical dwelling requiring scaffold access over one elevation.
2. V.A.T is at current rate and subject to any government changes.
3. It is assumed the existing electrical installation safe and installed to current regulations.
4. The roof structure is sound & suitable for PV modules.

### Investment Return per Annum:

Year	Feed-In Tariff	Export Income	Electricity Saving	Total Benefit	Benefit Accumulated *
1	£ 0.00	£ 62.65	£ 546.74	£ 609.39	£ 609.39
5	£ 0.00	£ 69.34	£ 640.96	£ 710.30	£ 3,294.32
10	£ 0.00	£ 78.71	£ 781.89	£ 860.60	£ 7,285.05
15	£ 0.00	£ 89.35	£ 953.81	£ 1,043.16	£ 12,121.53
20	£ 0.00	£ 101.43	£ 1,163.53	£ 1,264.96	£ 17,985.45

According to the estimate return per annum above, the cost of the system will be offset by the benefit accumulated on year 6 from the date of installation.

If £4,587.45 (cost of system) was deposited in an investment for 20 years (assuming that the income tax is paid at 22.00% on the interest accumulated) an interest rate of 9.06% per annum would be required on the investment to achieve a return of **£17,985.45** \*.

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 and is given as guidance only. It should not be considered as a guarantee of performance.

Your annual CO<sup>2</sup> offset for this installation totals: **2,587.90 Kg**.

Please note where the shade factor stated above is less than 1:

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 is an estimated return on investment for guidance only, it includes;

1. FIT @ 0.00p/kWh
2. 25% Energy exported @ 5.50p/kWh
3. 75% Energy used on site @ 16.00p/kWh (typical energy provider)
4. General inflation (RPI) year on year @ 3.50%
5. Fuel inflation year on year @ 5.00%

## Considerations:

### Planning Permission:

In most cases fixing solar panels to a roof is likely to be considered "permitted development" however if the property is in a conservation area or the solar panels protrude above 200mm from the roof you will need to apply for planning permission. It is the customer's responsibility to confirm all planning consents. If you need further guidance please do not hesitate to contact us.

### Scaffolding & Access:

Scaffolding is often required to access the roof and to enable a safe place to work. Clear access for workmen & deliveries will be required at all times.

### Electrical Installation:

A suitable wall area approximately 700mm x 700mm will be required for the Inverter, Isolating switches and metering. The installation will be connected to the existing consumer unit in accordance with current regulations & Part P building regs.

### Lightning Protection:

The risk of lightning strikes to PV solar panel systems is very low. Specialist lightning protection may be required if the PV array is very large or it becomes the tallest structure in the area. If you need further guidance please contact us for a list of lightning protection companies.

### Health & Safety:

Company Health & Safety policy, risk assessments and method statements are available to download at [www.cjsolar.co.uk/downloads](http://www.cjsolar.co.uk/downloads)

### Payment:

Final payment is required on completion of installation and is required before we issue the Feed-In Tariff certificate.

### Notice of Right to Cancel:

You have the right to cancel your order up to seven days after the receipt of instruction at no cost. If you wish to cancel your order please advise in writing to CJ Electrical. CJ Solar division is a member of the REAL Assurance Scheme Consumer Code, companies who sign up to the code are committed to providing high standards of service and expertise.

## Please Note:

### Solar Production

The above systems kWhr calculation has been taken from The Guide to the Installation of Photovoltaic Systems 2012, which is in compliance with MCS Microgeneration Installation Standard MIS 3002, the calculation is:

Annual AC output (kWh) = kWp x Kk x SF

kWp = size of system

Kk = Orientation/Inclination/Postcode region, the Kk (kWh/kWp) is taken from table.

SF = Shading factor.

This system performance calculation has been undertaken using estimated values for array orientation, inclination or shading. Actual performance may be significantly lower or higher if the characteristics of the installed system vary from the estimated values.

### Qualifications

Within the quotation we have allowed for the following:

- Solar Modules as above.
- 1 No string Inverter.
- Live time monitoring of the PV system via the internet.
- MID approved generation meter.
- DC cabling.
- DC isolator.
- DC Containment - Black plastic conduit or Kopex.
- AC isolator.
- AC supply cabling.
- On-Roof brackets, panel fixings and rails.
- EasyDec Access System, if scaffold is required additional costs will be incurred (Please allow a Budget figure of £600.00).
- DNO (Distribution Network Operator) notification after installation (applicable for systems under 3.68kW single phase or 11.04kW 3 phase systems only).
- MCS Certification.

We have made no allowance for the following items within our quotation unless clearly mentioned above:

- Completion of Ofgem Smart Export Guarantee applications on behalf of the owner of the Solar PV System.
- Scaffold/edge protection/netting under skylights or lift access equipment for materials, we assume free use of scaffold etc during roofing works.
- Internet connection for the monitoring listed above.

It is the responsibility of the Solar PV system owner to complete all Ofgem Smart Export Guarantee applications, we are not permitted within Ofgem rules to complete these on behalf of the owner.

We have assumed the free use of on site welfare facilities, storage for materials, water and electricity for the duration of the contract.

Within the above quotation we have allowed for all works to be carried out in normal working hours, which are 7.30 AM to 5.00 PM and that we will be provided unrestricted access for the duration of the contract.

This quotation is valid for a period of 60 days from the above date.

This installation would be carried out in accordance with the 18th Edition IEE Regulation BS 7671 2018, Relevant Code of Practice, NIC EIC Wiring Inspection Council, British Standards, Building Regulations, MCS (Microgeneration Certification Scheme) and Engineering Recommendations G98 & G99.

Upon completion of the above work all relevant NIC-EIC and MCS certificates will be issued, we will also notify the DNO (Distribution Network Operator) that the Solar PV installation has been connected to the local electrical network.

**Please Note:**

**Smart Export Guarantee proposed by BEIS ( Department for Business, Energy and Industrial Strategy)**

BEIS propose that households and businesses installing new solar panels post 1st April 2019 will be guaranteed payment for power provided back to the grid under government proposals set out to unlock the smart energy systems of the future. The proposed 'Smart Export Guarantee' (SEG) would replace the existing 'Feed-in Tariff' scheme (FIT), with electricity suppliers paying new small-scale energy producers for excess electricity from homes and businesses being put back into the energy grid. The new scheme could create a whole new market, encouraging suppliers to competitively bid for this electricity, giving exporters the best market price while providing the local grid with more clean, green energy, unlocking greater choice and control for solar households over buying and selling their electricity. Further information is due for release in 2019 confirming the situation.

**VAT Rate Changes as of 1st October**

The installation of certain energy saving materials into any residential accommodation has been subject to the reduced VAT rate of 5%. With effect from 1 October 2019, this will be more restricted.

Installation services on their own will remain subject to 5% VAT.

Installation services together with qualifying materials will only be subject to 5% VAT in three situations.

1. The customer is over 60 or in receipt of certain benefits.
2. The customer is a registered housing association.
3. The building in question is a care home, hall of residence, or other 'relevant residential purposes' building.

If the customer or building does not qualify under the above heading, the goods and services can still be subject to 5% VAT provided that the goods make up no more than 60% of the total charge. If they do, then 5% VAT can only apply to the services element.

**Company Summary:**

CJ Electrical based at Ransomes Europark in Ipswich has been trading since 1988. With over 50 employees the company offers comprehensive electrical contracting service to its range of customers. The solar division was set up to ensure the company could offer the very best advice and service within the increasingly growing Renewable Energy market. The division offers a service which is project specific for each of its customer's requirements, site design, installation and advice.

We are accredited (Number NIC 1294) members of the Microgeneration Certification Scheme (MCS) which is an independent scheme that certifies microgeneration products and installers in accordance with consistent standards providing greater protection for consumers.

I trust I have correctly interpreted your requirements, however if you do require any further quotations for other sizes or manufactures please let me know.

If you require any further information please do not hesitate to contact me.

Regards

CJ Solar Installation is a trading division of CJ Electrical Contracting Services Ltd.  
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### Acceptance Form

I accept the above quotation for the sum of £4,587.45 (inc. VAT) at 5.00%.  
I understand it is the customer's responsibility to confirm all planning consents.

**Print Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

Once the acceptance form is received we will contact you to arrange a convenient installation date.

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Thank you for your order.

