From: Jamie Vaughan < jvaughan@novaluxenergy.com> Subject: Re: Mitre House Solar Panels (and crazed tenants)

Date: 13 June 2012 12:11:35 GMT+01:00
To: Paul Brown-Constable <studio@graffiti.biz>

2 Attachments, 3.2 MB

### Dear Paul,

Good to meet you yesterday. No worries about your neighbour. These things happen every now and again!

Please find attached a quotation and a design of the system. Unfortunately, due to the shape of the building, shading is causing a bit of a problem. I have managed to design a 2kW system for the roof. I know the attached picture looks as though panels could be installed on the left side, but there is a lot of shading going on in this area during other parts of the day. Unfortunately the returns are not as high as I would like to get them to due to shading. As a result the payback period has been extended.

The quote does not include a structure survey and an Energy Performance Certificate assessment, but if you would like to proceed, we can organise these for you.

If you have any further questions, please let me know.

I look forward to hearing how you get on pitching this to your committee.

Best Regards,

Jamie



On 12 Jun 2012, at 22:53, Paul Brown-Constable wrote:

Dear Jamie

Many thanks for attending today and advice etc - and I look forward to you initial outline report -

I can only apologise for that quite extraordinary interruption, but to be fair, I did warn you of the politics, but even I was surprised at the ferocity etc - she's a new Italian neighbour and none too pleased with the way the Internal Decor is progressing contrary to her preferences....

In short - women - avoid 'em, my friend! Talk soon, but again, many thanks - Paul B-C

<xGraffiti Logo EMAIL.png>

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Jamie Vaughan Managing Director

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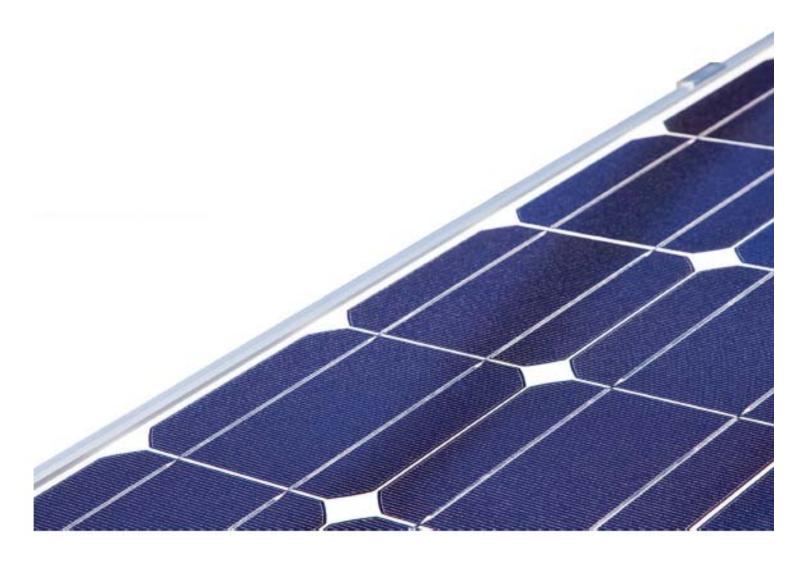
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Whilst Novalux Energy Solutions Ltd believe that the information is correct at the date of this e-mail, no warranty or representation is given to this effect and no responsibility can be accepted by Novalux Energy Solutions Ltd to any end users for any action taken on the basis of this information.



# Mitre House 2kW Solar PV system

info@novaluxenergy.com
07837642415







Novalux Energy Solutions Ltd 223a Kensington High Street London W8 6SG

Paul Brown-Constable Mitre House King's Road London SW3 4TP

Tel: 07983333543 Date: 13/06/2012 Email: studio@graffiti.biz Ref: 20-0223

Dear Paul

# Re: Solar Photovoltaic (PV) system

Thank you for giving Novalux the opportunity to quote for the design, supply and installation of a photovoltaic system.

We have selected Suntech 250Wp monocrystalline modules as they are the current market leaders in terms of performance output, values and product and performance warranties. The system we have quoted is a 2kWp system based on the roof area available and your project requirements.

If you have any questions or require additional information regarding this quotation please do not hesitate to contact me.

Kind regards

Jamie Vaughan

Director

# **NOVALUX ENERGY SOLUTIONS**

+44 (0) 20 8133 0396 +44 (0) 7584 255 378 jvaughan@novaluxenergy.com









# Your solar PV installation

Novalux will oversee every aspect of solar PV development from design and planning to procurement and installation. Our team are experienced industry professionals who have carried out work throughout the country on B2B commercial scale installations. We will take care of your building and design the best solution for your needs.

Our team will advise you on the most suitable system for your project at every stage. We source only high quality materials and leading brands at competitive prices to give you the best return on your investment.

We understand PV is a long term investment and we want to deliver a professional service throughout the system's life.





We will hold the following nationally recognised accreditations.













NOVALUX ENERGY SOLUTIONS LTD
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# System Description: 2kWp system

# Performances based on the output generated using SAP calculations:

687 kWh/kWp/yr Orientation: South Angle from 30° 0.568 kgCO<sub>2</sub>/kWh Horizontal:

System Size (Peak Output)	2	kWp
Estimated Annual Energy Production	1,373	kWh/yr
Carbon Emission Savings	780	kgCO <sub>2</sub> /yr
Area of Active PV	10	$m^2$

Item	No.	Description		Cost
Modules	8	Suntech 250w modules	£	incl.
Inverter		Selected to match panel & system size	£	incl.
Mech Install		Flat roof mounting system	£	incl.
Elec Install		AC & DC electrical equipment	£	incl.
G59 Protection		Relay, commission & DNO witness if necessary	£	incl.
Metering		Ofgem approved generation meter	£	incl.
Labour		Installation & commissioning	£	incl.
Access		Scaffolding included	£	incl.

Total including VAT	£	4,540
Price per kWp	£	2,270

Preliminary Services			
Structural	Survey	£	excl.
Planning	Planning	£	excl.
Site Survey	Detailed Site Survey	£	inc.
Designs	Engineering Designs, Schematics	£	inc.
Display & Alarm	No Display or Alarm Included	£	excl.
Monitoring	No Monitoring Included	£	excl.
Sensors	No Sensors Included	£	excl.

**Total Including Extras** £ 4,540















# Financial Savings & the Feed-in Tariff:

# Electricity generation:

In 2010, the UK government introduced the Feed-in-Tariff to incentivise the installation of solar PV. Your FiT supplier is obliged to pay you the following rates for every unit of electricity you generate from your solar PV system, regardless of whether you use this or not. These rates are linked against RPI and are guaranteed for 25 years. We will assist in submitting your application to ensure you receive your FiT payments.

Size of PV system	Feed in Tariff (p/kWh)
<4kW (New Build)	21.0
<4kW (Retrofit)	21.0
>4-10 kW	16.8
>10-50kW	15.2
>50-150kW	12.9
>150-250kW	12.9
>250kW-5MW	8.5
Off Grid System	8.5

**Exporting to the grid:** If you do not use all of the energy your system generates, you will export the remainder back to the grid. Your FiT provider will pay you an extra 3.1p for every unit you sell back. For systems under 30kWp, 50% of the electricity generated is deemed to have been exported and will qualify for an extra 3.1p payment, even if the electricity is used in the building.

Saving on your electricity bill: While your panels are generating electricity, you will save around 10 p for every unit you use. If you need more electricity, you will buy it from the grid at your normal rate.

### Your returns:

Peak Output (kWp)	2
Estimated Annual Energy Production (kWh/year)	1,373
Capital Cost excl VAT (£)	£4,540
FiT Generation Rate Applicable (p/kWh)	21p
Electricity Saving Rate (p/kWh)	10.0p
Percentage of Electricity Exported (3.1p/kWh)	50%
FiT Money Earned (£/year)	£309
Electricity Money Saved (£/year)	£69
Total (£/year)	£378
Annual Return	8.3%
Average Annual Return (25 Yr Term)	9.1%











# 25 Year Financial Projections

To reflect the simple payback and anticipated returns all monies below are at today's values i.e. they are not inflated by annual RPI increases. The assumptions do however account for reduced performance of the PV system (0.5% per year) and the rising energy costs in 'real terms'

- If modelled the RPI inflation and annual FIT increases would be 2%
- Electricity prices rise in line with previous 10 year average (7% per year)
- The 'real terms' energy saving increases is therefore 5% (7% minus 2%)

Year	FIT & Export (£/year)	Money Saved (£/year)	Cumulative Benefit (£)
1	309	69	378
2	307	72	757
3	306	75	1,138
4	304	78	1,521
5	303	82	1,905
6	301	85	2,292
7	300	89	2,681
8	298	93	3,073
9	297	97	3,467
10	295	102	3,865
11	294	106	4,265
12	292	111	4,668
13	291	116	5,076
14	290	121	5,486
15	288	127	5,901
16	287	132	6,320
17	285	138	6,744
18	284	145	7,172
19	282	151	7,606
20	281	158	8,044
21	280	165	8,489
22	278	172	8,939
23	277	180	9,396
24	275	188	9,859
25	274	196	10,329
Total	7,279	3,050	10,329

# 25 Year Investment Summary:

Capital Cost: 4,540

Profit: 5,789

Simple Payback: 11.7 yrs







# **Supporting Information**

This quotation is for the design, supply, install, connect and commission of the solar PV system. Please see the items below for more information upon which this quotation is based.

# PV Performance Display & Communications

An Ofgem approved total generation meter giving cumulative energy generated is fitted as standard but for further levels of display and monitoring capability Novalux offers various additional displays if required:

1) Bluetooth display showing current generation, CO<sub>2</sub> savings & total energy generated.



2) Web box: Users can log in to a web page giving real-time performance of the system.





3) Sensors to accurately measure weather conditions and its impact on plant performance. This makes it possible to detect shading, dirt and a gradually declining array performance thus maximising yield security.



Please note that displays normally require data cables from the generation meter to the display position with a power supply. The web box unit requires an Ethernet connection local to the inverter(s) position. We assume data & power connections will be available to our equipment. Equipment make & model may differ from that shown in pictures.







### Maintenance Contracts

Novalux offers various levels of maintenance and monitoring contracts to ensure your system is running to its optimal performance. Further details can be provided upon request.

### Import/Export Meter

For systems over 30kWp, an import/export meter is needed. If your building does not have one, this will need to be arranged with your electricity supplier.

### Installation conditions

The PV system will be installed by us and connected to existing MCB. Where existing MCB does not have sufficient capacity or fuseways, the client may instruct Novalux to upgrade the MCB at additional cost, or have their own electrician make the adjustments, we will also check installation and commission to issue warranty certificate.

### **Inverters**

Inverters will be selected from our preferred suppliers to best match the system criteria.

### Access and edge protection

A means of access to the rooftop and edge protection to enable the safe installation of the solar arrays whilst working at height will be provided by Novalux.

### Lifting

A scaffold hoist, crane, telescopic forklift or platform lift will be provided by Novalux to facilitate the safe lifting of panels and associated mounting equipment to the roof.

### Structural Assessment

Structural assessments of the capacity of the roof for carrying PV is not included in our scope of works. Novalux will provide information on the proposed system to assist the structural calculations.

### Roof Fixings

Penetrative fixings will be used to attach to the roof skin at the top of the trapezoidal sheets, much in the same way that the sheets are fixed themselves.

### Point of Connection

We have assumed that our inverters will be located in a suitable location and lockable AC cabling will be routed on existing primary cable containment between a three phase connection position and our inverters. Where no containment is available Novalux will install cabling in an appropriate manner.

### Welfare Facilities

An area to be provided for the operatives for shelter, drinking water and toilet facilities to be provided by others.

### Health and Safety

Under the CDM Regulations our installer will be the "designer" of the PV system. If this project is notifiable our installer will provide the appropriate risk assessments and method statements. However, please note, under the CDM Regulations, it is your responsibility to inform Novalux of any site specific risks of which you are aware. Our installer's Health and Safety Policy is available on request.







### Please note the following clarifications

- Costs shown are Exclusive of VAT.
- Due to the proportion of solar panel cost, this quote is invalid if the exchange rate drops below 1.11 EUR to the GBP
- The specific panel type will be provided unless it is not available or superseded by a newer model. If this is the case, an equivalent panel will be supplied.

### Irrecoverable VAT

VAT can be complicated and you should check carefully how it might affect the costs of your project. In general, if an organisation is VAT registered it is able to recover any VAT that Novalux has to charge. In certain circumstances VAT may not be recoverable and will therefore add to the costs of your project.

# Payment Terms

Invoices will be raised on completion of each stage and paid in accordance with our terms and conditions:

2 On receipt of authorisations for Preliminary Services 30%* 3 Delivery of materials and equipment to site 45%*	
3 Dolivory of materials and equipment to site 15%	
5 Delivery of illaterials and equipment to site 45%	
4 Commissioning by the installer of the system 5%*	

Please allow 6-10 weeks from placing your order with us before we can deliver equipment to your site. Please note that we need a confirmed order from you before we do any detailed designs, order equipment or allocate any stock for your project.

# Standard energy prediction (SAP) disclaimer

SAP Estimated Performance				
SAP output	1,373 kWh/yr			
Orientation	South			
Angle	30°			

"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 Government's standard assessment procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be considered as a guarantee."

### **Embodied Energy**

It is generally recognised that the amount of energy required to produce PV is generated by the modules in 2-4 years of operation (the figure is dependent on the precise installation location).

# Warranty and Expected Life of System

We offer a 2 year workmanship warranty. The modules typically come with a 5 or 10 year product warranty and a 25 year peak power warranty. The inverters have a 5 year product warranty.

Many PV systems installed over 30 years ago are still operating, the expected system life is 40 to 60 years.







### Sub Contract

The costs cover design, supply, installation and commissioning of the PV system. All site installations will be carried out by our contractor.

### Terms and Conditions

This offer is made subject to Novalux Energy Solutions Ltd standard conditions of sale as attached.

# This quote is valid for 30 days

HOW TO ORDER: To order you Novalux system and allow us to schedule your site survey, please sign and return the acceptance form attached.

### Cooling Off Period

After signing this Contract, you have a 7 day period during which you may cancel the contract without penalty. After this time, cancellation may incur a financial cost. Any cancellation charge will be determined on the basis of the actual costs incurred by Novalux such as transport of products and erection of scaffolding. Cancellation must be made in writing.

# Planning Permission Confirmation

By signing the contract, you are confirming that you have received Planning Permission or a Building Warrant for the proposed installation, or ascertained that these are not required or instructed Novalux to apply on your behalf. We cannot be held responsible for any installations where Planning Permission of a Building was required but not obtained, and no refunds will be offered.

If we are instructed to apply for planning persmisison, DNO applications and perform structural surveys on your behalf and applications are not succesfull any remaining funds held in account above the cost of applying for planning permisison, designs, DNO application, structural surveys and any other costs incurred by Novalux up to that point as specified on the attached quotation will be refunded to the client and this contract will be terminated. Novalux will proceed to order equipment and start the installation only if all authorisations are granted.

We are a member of the Renewable Energy Assurance Scheme and this document is prepared in accordance with its Consumer Code.







By signing this form, you are confirming the order for the Products and Installation Services specified on the attached Quotation. This order will become binding when we notify you of its acceptance and will be governed by our Terms and Conditions.

Invoice to (name):	 	
Address:	 	
Contact Name:	 	
Telephone Number:		
Installation Address:	 	
Customer Signature	Customer name (please print)	Date

Please sign, scan and return to <a href="mailto:info@novaluxenergy.com">info@novaluxenergy.com</a> or post to: Novalux Energy Solutions Ltd, 223a Kensington High Street, London, W8 6SG







#### Introduction and interpretation

- These are the terms and conditions referred to in the attached Proposal. In these conditions 'we' means Novalux Energy Solutions Ltd and references to 'us' and 'our' are construed accordingly. 'You' means 'the Client' named in the Proposal and references to 'your' are to be construed accordingly. Where the definition is used the word or phrase in question is shown in italics - for example Proposal. The definitions used are as follows:
- 'the Proposal" the proposal to which these conditions are attached 1.1.1
- 'the Contract' the contract made between the Client and us for which the Services are required
- 1.1.3
- 'the Client' the individual or the organisation to whom the Proposal is addressed 'the Services' the services the subject of the Proposal. Including the documents issued by Novalux Energy Solutions Ltd defining the services to be provided and the price payable for the services 1.1.4
- 'Preliminary Services' authorisations for the installation of our systems on your property including but not limited to planning applications, DNO applications, structural surveys, site surveys and
- 'Goods" : all items supplied as part of the Service including all PV system components
- 1.1.7 "Price": the price specified in the Proposal or subsequently agreed between the parties
- In these conditions
- Reference to a statute or statutory provision includes a reference to it as from time to time amended extended or re-enacted.
- 1.2.2
- Words denoting the singular number only include the plural and vice versa Unless the context otherwise requires reference to a clause is to a clause of these conditions 1.2.3
- The headings are inserted for convenience only and do not affect the interpretation of these conditions
- These conditions shall apply to the contract for the Services described in our Proposal to the exclusion of all other terms and conditions including any terms or conditions which you may purport to apply under any quotation, form, invoice, order or other similar document.
- 14 Any variation to these conditions (including any special terms and conditions agreed between the parties) shall be of no effect unless agreed by us in writing.

#### 2.

- The price shall be as stated in the Proposal. All figures exclude VAT unless otherwise stated. Our payment terms are on receipt of invoice. On amounts due but not paid we reserve the right to charge interest at the statutory rate or 2% above the Barclays Bank plc base rate applicable at the time the payment was due whichever is the higher.
- We reserve the right to revise our Price if circumstances arise which will increase our costs. We will only incur these costs with your permission. Work will not proceed until additional work and costs
- No discounts on our Price shall be made nor retentions held against sums paid to us unless specifically agreed before an order is placed.

  Where we are asked to perform Preliminary Services we will not proceed to order Goods or carry out any further Services until we have written notice of approved authorisations for the Preliminary Services. Should the project not be able to continue due to a Preliminary Service not being authorised, the client will be charged as set out in the Proposal for the costs incurred for Preliminary Services and any remaining sums held by Novalux will be returned to the Client. This Contract will be terminated on receipt of a written refusal of Preliminary Services and no further invoices will be raised or Services performed.

#### 3. The Services and Programme

- The Services to be provided by us are defined in the Proposal. No materials will be ordered or allocated for the Services until an order is placed and we have received written authorisation for the Preliminary Services. We shall not be liable for any delay in any programme caused by your failure to place a confirmed order sufficiently early.
- The Proposal is based on facts known at the time of its preparation including information supplied by you. Subsequent information and/or changes in circumstances may mean that the services need to be redefined. An equitable adjustment shall be made to the Price and / or the programme if any change to the project causes a significant change in the Services, costs or the time for delivery of the
- The estimated time for delivery of the Services is stated in the Proposal. The Client shall allow at least 12 weeks between placing an order and delivery of the Goods to site. Unless otherwise agreed time shall not be of the essence.

- All Services will conform to the agreed specifications and shall be performed with reasonable skill care and diligence in accordance with accepted professional standards of a competent contractor. Installation will be undertaken during normal working hours. i.e. Monday Friday between 8.00 17.00 hours.

  Our contract with you does not cover changes to your electricity metering arrangements. We accept no liability whatsoever for unauthorised use of a grid connected electricity generating system or any delays to your programme caused by changes to your electricity metering
- Our programme to complete the Service is as defined in our Proposal. In the event of inclement weather our installation programme will be extended by the number of days productivity lost without

#### 4. Delivery, Risk and Property

- 4.1 Delivery shall be of the whole or such part of the Goods and at such time or times shall be directed by us. Unless otherwise agreed, risk in all Goods passes on delivery to site and you will be responsible for off-loading and the secure storage of the Goods.
- 4.2 Whilst all reasonable steps will be taken to ensure that any quoted delivery date is adhered to, we will not be liable for delay in delivery arising from causes outside of our control. Liability for proven loss from delay in delivery arising from causes within our control shall in any event be limited to a maximum no greater than the contract price for the goods or services in question
- Our price is on an ex works basis Title shall pass on the basis of the following;
- Legal and beneficial ownership of all goods sold by us shall remain vested in Novalux Energy Solutions Ltd until payment in full of the Services detailed in this proposal. Until such time you must keep those goods distinct from your own property, and must not purport to sell or otherwise transfer legal or beneficial ownership of them. Until ownership has transferred to you, you have full licence to make use of the goods in your business, but at any time at which payment of (i) the invoice relating to those goods and (ii) any other invoice is late for payment, or that you are subject to any form of insolvency or to any debt recovery action or occurrence (save for litigation defended by you and not yet the subject of a judgement), then we may without notice recover possession of the goods. For this purpose you hereby irrevocably licence Novalux Energy Solutions Ltd and its agents to enter upon your property (or the property where are goods are installed) and (as far as reasonably necessary) to disassemble any machinery. In addition you undertake to obtain equivalent licences for any third party on whose property the goods will be sited and agree to indemnify the failure to obtain such licences, or otherwise from Novalux Energy Solutions Ltd's recovery of the goods in accordance with this clause.

  Upon delivery of our goods and during installation it is your responsibility to protect our works from damage howsoever caused, and you will be responsible from indemnifying us for the cost of
- rectifying any damage caused.

#### 5. Default and Insolvency

If you commit an act of bankruptcy or enter into liquidation or have a provisional liquidator or a receiver or an administrative receiver appointed or enter into any arrangement or composition with your creditors then we may determine this contract at any time thereafter. In such an event, you hereby irrevocably licence Novalux Energy Solutions Ltd and its agent to enter upon your property (or the property where are goods are installed) and (as far as reasonably necessary) to disassemble any machinery. In addition you undertake to obtain equivalent licences for any third party on whose property the goods will be sited and agree to indemnify the failure to obtain such licences, or otherwise from Novalux Energy Solutions Ltd's recovery of the goods in accordance with this clause.

#### 6. Indemnity and Insurance

6.1 You shall hold and keep us fully indemnified from and against all actions, costs, claims, demands, and liability whatsoever in respect of any injury or damage to persons or property due to or arising out of the performance of the Services detailed in our proposal or any breach by you of these terms and conditions or any terms or obligations implied by law or any other relevant statutory provision as may be in force from time to time. You shall at all times have sufficient insurances in place and provide written evidence to us upon request.







#### 7. Warranty

- All warranties whether express or implied including without limitation warranties of fitness for purposes are expressly excluded.
- We shall not be liable to you for
- defects in the Goods caused by fair wear and tear, abnormal or unsuitable conditions of storage or use or any act, neglect or default of the Client; other defects in the Goods; any costs incurred or losses suffered as a result of incorrect installation of the Goods by you in particular on supply only contracts.
- 7.2.2 7.2.3
- If we accept liability under these conditions our only obligation shall be at our option
- to make good any shortage or non-delivery; to replace or repair any Goods found to be damaged or defective; to re-perform any part of the Services;

- to re-perform any part of the Services, to refund to you the amount paid by you for the Goods which are the subject of a claim.

  We shall not be liable for any loss, damage or liability of any kind suffered by any third party directly or indirectly caused by repairs or remedial work carried out without our prior written approval. You shall indemnify us against each loss, liability, and cost arising out of such claims.
- 7.5 Our aggregate liability to you, whether for neglicence, breach of contract, misrepresentation or otherwise, shall in no circumstances exceed the Price of the Services as determined by the net price We shall not be liable to you for any loss, damage or injury, direct or indirect, resulting from defects in design, materials or workmanship or otherwise caused howsoever arising (and whether or not caused by our negligence or the

- any loss, darlage of our employees or agents) other than liability for death or personal injury resulting for our negligence; any indirect or consequential loss or expenses suffered by you, howsoever caused, and including, without limitation, loss of anticipated profits, goodwill reputation, business receipts or contracts, or losses or expenses resulting from third party claims.

  Our prices are determined on the basis of the limits of liability set out in these conditions. You may by written notice to us request Novalux Energy Solutions Ltd to agree a higher limit of liability provided insurance cover can be obtained for such higher limit. We may effect insurance up to such limit and you shall pay on demand the amount of the premiums. You shall disclose such information as the insurers shall require and in no case shall you be entitled to recover from us more than the amount received from the insurers.

  Any additional warranty provided by us relating to the Services is stated in the Proposal. We will also pass on to you the benefit of any warranty given by the manufacturer of the Goods.

#### 8. Confidentiality and Non-Solicitation

- You shall treat all confidential information belonging to us as confidential and safeguard it accordingly; and shall not disclose any confidential information without our prior written consent.
- Neither party shall recruit or engage directly or indirectly whether as an employee or as a contractor or through any third party any personnel who have been connected with the delivery of the Services

#### 9. Intellectual Property Rights

- For the purposes of these terms "Intellectual Property" means any patent, rights to inventions, utility model, registered design, copyright and related right, database right, design right, topography right, trade mark, service mark, trade, business and domain name, right in goodwill or to sue for passing off, unfair competition right, right in computer software, in each case whether reg unregistered and including all applications for and renewals or extensions of such rights, and all similar or equivalent rights or forms of protection whatsoever in any part of the world.
- Any and all of the Intellectual Property in the drawings, concepts or other materials that we may provide to you in connection with the Contract shall remain the exclusive property of the Novalux Energy
- Solutions Ltd and you shall not during or at any time after the expiry or termination of the contract in any way question or dispute the ownership of any such rights of Novalux Energy Solutions Ltd.

  You agree that any new Intellectual Property that arises in connection with the contract, or products belonging to us, shall be owned absolutely by Novalux Energy Solutions Ltd. You hereby assign to us with full title and guarantee all rights in and to any such new Intellectual Property for the full duration of such rights, wherever in the world enforceable, and shall procure such an assignment from any employee, consultant or any other party who is involved with the contract. You agree to execute (or procure that the employee, consultant or any other party it shall involve with the contract executes) all documents and assignments and do all such things as may be necessary to perfect our title to the new Intellectual Property or to register Novalux Energy Solutions Ltd as owner of all registerable rights
- Copyright in all outputs generated by Novalux Energy Solutions Ltd in connection with the Services (such as drawings and reports) shall remain vested in Novalux Energy Solutions Ltd but you shall have a licence to copy and use such outputs for any purpose solely related to the project for which the Services are performed. We shall not be liable for any use by you of any of the outputs for any purpose other than that for which the same were prepared and provided.

#### 10. Waiver

No delay, neglect or forbearance on the part of either party in enforcing against the other party any term or condition of the contract shall either be or be deemed to be a waiver or in any way prejudice any right of that party under this Proposal.

### 11.

If Novalux Energy Solutions Ltd is prevented from or delayed in the carrying on of its business due to circumstances beyond its reasonable control including, but not limited to, acts of God, governmental actions, war or national emergency, acts of terrorism, protests, riot, civil commotion, fire, explosion, flood, epidemic, lock-outs, strikes or other labour disputes (whether or not relating to either party's workforce), or restraints or delays affecting carriers or inability or delay in obtaining supplies of adequate or suitable materials, provided that, if the event in question continues for a continuous period in excess of 90 days, we shall be entitled to give notice in writing to terminate the contract

#### 12. Contracts (Rights of Third Parties) Act

No delay, neglect or forbearance on the part of either party in enforcing against the other party any term or condition of the contract shall either be or be deemed to be a waiver or in any way prejudice any right of that party under the Contract.

You shall not assign or transfer the Contract from Novalux Energy Solutions Ltd or the benefit of this Contract to any third party except with our written consent.

#### 14 Enforceability

If any provision in the Contract shall in whole or in part be held to any extent to be unlawful or unenforceable under any enactment or rule of law, the remainder of the provisions shall stand in full force and effect.

### 15

Any notification by either party to the other under the contract shall be in writing, delivered by first class post, by fax or e-mail to the other party at the address shown in the purchase order. All notices 15.1 shall be deemed duly given on the day of posting or if sent by fax or e-mail immediately when the notice is transmitted.

#### 16. Proper Law

This Contract shall be subject to and construed in accordance with English Law and the parties submit to the jurisdiction of the English Courts.





NOVALUX ENERGY SOLUTIONS LTD

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Paul Brown-Constable **SW3 4TP** 

**(0)79 8333 3543** studio@graffiti.biz PV No: 66-00017

15 June 2012

Dear Paul,

It was good to talk to you on the survey.

I Wal

On the site survey we talked about saving money on your energy bills, and I've taken this into account to prepare your quote.

This document talks you through the benefits, costs and processes involved with installing a solar PV system at your home. I hope you'll find it helpful.

Have a good read, and I'll give you a ring in a couple of days to talk about the next steps. In the meantime, please get in touch if you have any questions at all - I'm always happy to talk on 01372 860 792

Kind regards,

Brendan Walsh



# Your design options

# How I've worked out your options

Using site survey measurements of your property I have calculated that your roof is pitched at 30 degrees and faces in a southeast direction.

The table below shows the return on the investment for your system.



# Your options, at a glance

PV Design	System Size	Panel Type	Total Cost	Annual Energy Generation	Annual Feed- in Tariff	Annual Bill Savings	Annual Total	Return on investment
1	4 kWp	16 x Suntech 250W	£12,118	3,286 kWh	£741	£237	£978	8.07%



# **Design 1**

# 4.00 kWp Suntech System

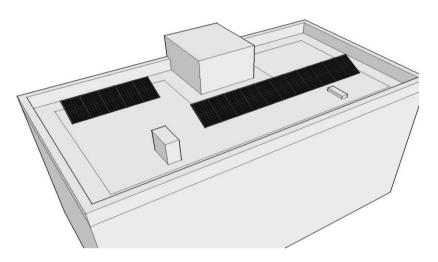
Project no: 66-00017 Date 15 June 2012

# 2009 SAP Software

Estimated output: 3,286 kWh/yr 1,739 kg/yr CO<sub>2</sub> saving\*:

\*based on 0.529 kgCO2/kWh

# **Roof Layout**



# Cost breakdown

Stage	Item	Description	Cost
Pre Design	Paperwork	G83 permission (if applicable)	Included
	Structural	Building regulation assessment and sign off	£148
	EPC	Energy Performance Certification survey and certification	£90
Installation	Project team	Project manager and installation team	£921
	Panels	16 x 15.40% efficient Suntech Panels (STP250S-20/Wd)	£3,466
	Inverter	1 x Leading manufacturer Kaco Powador 4202 Inverter, 95.9% efficient	£1,420
	Mounting frame	Building regulation compliant Conergy mounting frame	£2,143
	Fixings	All associated fixings for mounting frame	£334
	Electrics	All AC and DC electrical equipment	£528
	Metering	Ofgem approved generation meter	£88
	Scaffolding	Full Scaffolding	£900
Aftercare	Paperwork	MCS Certificate	Included
	Warranty	5 years full comprehensive warranty (extended warranties are available)	Included
	Insurance	Insurance backing for warranty	£60
	Support	24 hour support line	Included

Cost before VAT	£	10,098
VAT at 20%	£	2,020
Total cost including VAT (installed before 1st August)	£	12,118
Annual return on investment (21p FIT rate)		8.07%
Annual return on investment after 1st August (16p FIT rate)		6.90%

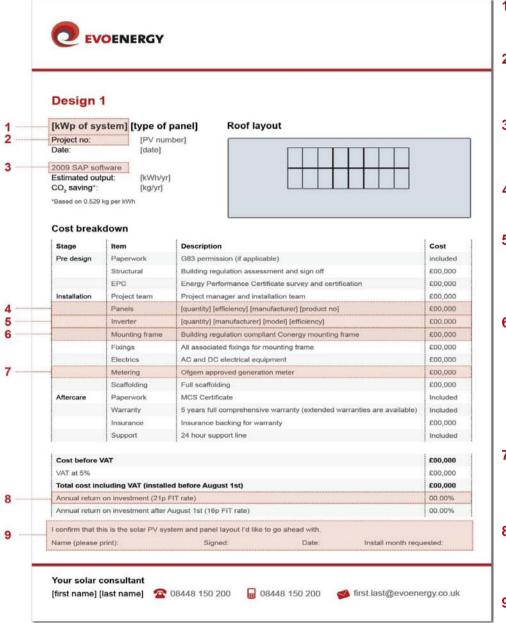
I confirm this is the Solar PV system and panel layout I'd like to go ahead with.

Name (please print): Signed: Date signed: Install month requested:

Your solar surveyor



# **Understanding your quote**



### 1 kWp of system

The size/power rating of the system. Most domestics systems we install are around 3 kWp

# 2 Project no

Your unique project ID. It's how we identify your system on our records, so you'll need to have it ready every time you speak to us.

### 3 SAP

Standard Assessment Procedure 2009 - the government tool we've used to calculate energy output.

# 4 Panel description

The technology type, manufacturer and product code of the panels.

### 5 Inverter description

The manufacturer, model, warranty and efficiency of the inverter. We always match the inverter model to the chosen panels so that both are compatible.

# 6 Mounting frame and fixings description

The mounting system is a relatively small part of the cost, but one of the most important parts of the system. It holds the system securely, protecting both the solar panels and your property. We use superior materials from market-leading supplier Conergy and have worked with them to develop our own fixings.

# 7 Metering description

Shows you how much energy your system's generating. You'll earn feed-in tariff payments for every kWh you produce.

# 8 Annual return on investment

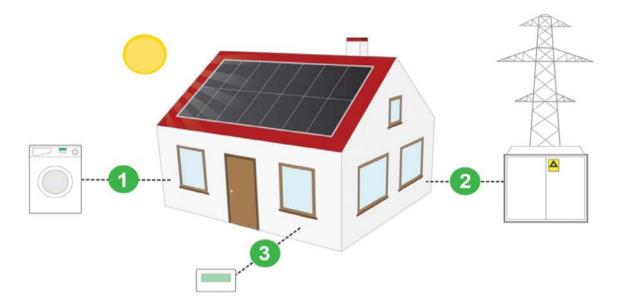
Inflation-linked, tax-free returns. This calculation is based on today's electricity prices (14.4p), so as that increases the returns will go up too.

# 9 Signature line

If you'd like to go ahead, sign and date this page and post it back to us, or scan it and send it by email.



# Where your returns come from



# 1 Savings on your bills

Electricity generated by your solar panels will feed directly into your house, so it will power any appliances you're using during daylight hours. As the price of electricity continues to rise, using your own solar energy will help protect you against increasing energy bills. A typical south-facing home with a 3kWp (12 panel) system could save around £185 a year - and that's based on today's electricity prices.

Lots of our customer save more by changing small habits, such as using the washing machine and dishwasher during the day instead of the evening.

# 2 Selling to the grid

As you probably won't use all the energy you generate, what's left over will be exported to the grid. Your electricity provider will pay you an extra 3.1p for every unit you sell back. Most suppliers can't meter exported units, so they assume you'll use half the units you produce in your house and export the other half to the grid.

# 3 Earning the feed-in tariff

Your electricity supplier will pay for every unit of electricity your system generates, whether you use it in your home or not.

Size of PV system	Feed-in tariff (p/kWh)
< 4 kWp (new build)	21.0
< 4 kWp (retrofit)	21.0
4 -10 kWp	16.8

From 1 April 2012, it's likely homes will need to meet additional energy efficiency standards to qualify for the full tariff.

# Adding up the benefits

We use all of the above to calculate your return on investment. Together, these savings and payments add up to a great investment that's guaranteed by the Government for the next 25 years.



# Your energy output and financial returns

# How we've worked out your energy output

The performance you'll get from any PV system depends on the amount of sunlight it receives, so it's not possible for us or anyone else to predict this with total accuracy. We follow the recommendation of the Building Research Establishment (BRE) and use the government's Standard Assessment Procedure (SAP) to predict annual energy generation.

The SAP calculation is based on the size of the system in kWp and how much light is predicted to hit your roof (otherwise known as irradiance) in W/m<sup>2</sup>. If your roof happens to be slightly shaded we take this into account too.

Here's how it works for Design 1:

Energy Output kWh/yr		System kWp		Shading		Irradiance		Constant
	=	-	X		X		X	
3,286		4.00		1		1,027		0.8

# How we've calculated your financial returns

As we explained on page 6, your financial returns come from the savings you make on your energy bills, the payments you receive for selling energy back to the grid (export tariff), and the payments you earn for every unit of energy you produce (generation tariff).

Here's an example for Design 1:

1	Bill savings	(3,286 / 2) x 14.4p	£	237
2	Earnings from exporting	(3,286 / 2) x 3.1p	£	51
3	Earnings from generating	3,286 x 21p	£	690
	Total yearly benefit		£	978
	Installation cost		£ 12	2,118
Ye	ar 1 return on investment	£978 / £12,118 x 100		3.07%

Your investment should increase as energy prices rise. At the moment, this price increase is around 7% each year (according to DECC). Feed-in tariff payments are guaranteed by the Government to increase in line with inflation.



# Reasons to choose us

We understand that installing solar panels is a big decision and it's important for you to choose a supplier you can trust. Here are a few reasons why you can have complete confidence in us.

# **Feedback**

We don't like to blow our own trumpet, but thankfully we have <u>plenty of happy customers</u> who are willing to do it for us. We get consistently good feedback and many people are so pleased with our service they recommend us to friends and neighbours. In fact, we get an incredible 30% of our new business that way.

We also have a network of customers who are willing to open up their homes to you, show you their panels and tell you what it was like to work with us. We've installed systems all over the UK, so wherever you are there will be someone close by who'd be happy to chat with you. Sound good? Give us a call and we'll fix it all up for you. Or you can download and view a case study in your area.

### **Awards**

In the past year we've been named the Renewable Energy Association's Installer of the Year, Solar Installer of the Year at the Renewables Award, and the Solar Energy Provider of the Year at the Renewable Energy Infrastructure awards. We're also recommended by Which? magazine and consumer website moneysavingexpert.com. Independent judges have been impressed by our combination of technical expertise and first-rate customer service - so you can be confident you're working with the best in the industry.









# **Aftercare**

Your panels will keep on working for you through the seasons, year after year - and so will we. Our service doesn't stop when your installation's complete and we're always on hand to answer any questions and help you get the best from your system.

When installed properly, solar PV systems require very little maintenance. All our installations carry a full warranty, so in the unlikely event that you have any problems or loss of performance we'll quickly put things right. If you do have any problems with your system, we'll carry out the necessary remedial work within one week. If your system's down beyond that time we'll compensate you for the feed-in tariff payments you would have earned until you're back up and running.

EvoEnergy is a well-established, well-respected company with financial security and a robust business plan. We're also very careful about who we work with. We only use trusted suppliers like SunPower, Panasonic, Suntech, KACO and SMA, so you can be sure they'll be around to honour your guarantee.



# Reasons to choose us

# **Experience**

We were established in 2007 and have worked on thousands of installs for homes and businesses. From 1,380-panel commercial systems to free-standing solar trees for the University of Cambridge, our breadth of experience means we can handle all kinds of solar PV projects, however technical or unusual.

# **Expertise**

Our CEO Kevin Hard founded EvoEnergy after studying his PhD at the Institute of Sustainable Energy Technologies at the University of Nottingham. An expert in solar photovoltaics, he built the company around a team of highly skilled, like-minded professionals. We've continued to attract the brightest talent in the industry and invest heavily in training our teams. As we know our stuff, we can give you all the information you need to make an informed decision.

# Design

With so many factors affecting the performance of solar PV, no two roofs are the same and there's no one-size-fits-all solution. Even though the mounting system only represents around 10% of the overall cost, it is actually around 90% of the design complexity. Our technical and design expertise means we create bespoke solutions every time, selecting the components and panel layout that best suit your roof and your energy needs.

### **Accreditations**

We are Renewable Energy Assurance Listed and have a long list of nationally recognised accreditations. These include the Microgeneration Certification Scheme (MCG), the Construction Skills Certification Scheme (CSCS) and the Independent Warranty Association (IWA), and they're all there to reassure you you're in competent hands.











# **Further Reading**

Some extra information and handy resources. Just click to download each document as a pdf.

# **Panel Comparison**

An at-a-glance look at the panels we stock

### Panel specifications

Some more detailed information on the panels we've recommended for you

# VPhase voltage optimisation

A handy guide to how VPhase works, and how it could reduce your energy bills

### Questions for your surveyor

Comparing suppliers? Here are a few questions you should ask

# Frequently asked questions

A few need-to-know facts about our company and service

# Spread the word

How to tell a friend about EvoEnergy

### **Customer Promise**

The standards you can expect when you work with us

# **Industry reviews**

Read more about our awards and recommendations

# **Solar Thermal Information**

Information on Solar Thermal systems

# Terms and conditions

Read more about our 5 year PV terms and conditions Read more about our 10 year PV terms and conditions Read more about out 5 year Solar Thermal terms and conditions