

## Thank you for getting in touch Sunlit Solar!

At Sunlit Solar, we pride ourselves on providing high-quality installations tailored to the best fit for each customer. We only use trained installers for our surveys, never a salesman, to ensure that our initial estimates are as accurate as possible.

All of our materials are from well-established manufacturers with a history in renewable energy and technological development. They are installed to the highest standards possible by a team of dedicated professionals from the Sunlit Solar team.

**We are a friendly, family run business with over 20 years' experience in the industry and we believe passionately in a future powered by the sun.**



As per the images below, we have put this pack together to provide indicative pricing for 4 different options of system. All pricing is approximate, and a site survey would need to be carried out in order to ensure that your roof would be suitable for these options. The example roof we have used is almost south-facing, so this is a factor that would need to be taken into consideration when comparing returns with an array on your own roof. The first two options are for systems with an installed net capacity of 3.7kw, they have an array design of 10 all-black JA Solar 370w arranged in two neat rows of 5 modules in portrait. The second two options are for systems with an installed net capacity of 7.4kw, they have an array design of 20 all-black JA Solar 370w arranged in two neat rows of 10 modules in portrait. The main difference between options 1 and 2 and options 2 and 3 are the different inverters. Options 1 and 3 include a less sophisticated inverter manufactured by Solis whereas options 2 and 4 use the very sophisticated Solar Edge technology within the array. The fully optimized SolarEdge systems combine sophisticated, digital control technology to achieve superior solar power harvesting and best-in-class reliability. The Solar Edge system would come at a premium so would reduce your return although SolarEdge promote 25% better yield using their system, which unfortunately we cannot illustrate to you due to MCS and RECC guidelines, but if that were the case the extra initial outlay would be worth it. There is more information on Solar Edge on page 7 of this document.



Array design Options 1&2



Array design Options 3&4

## Option 1 - Array Design & Production Summary

### 3.7kW JA Solar (10x370w) + Solis – South 5°

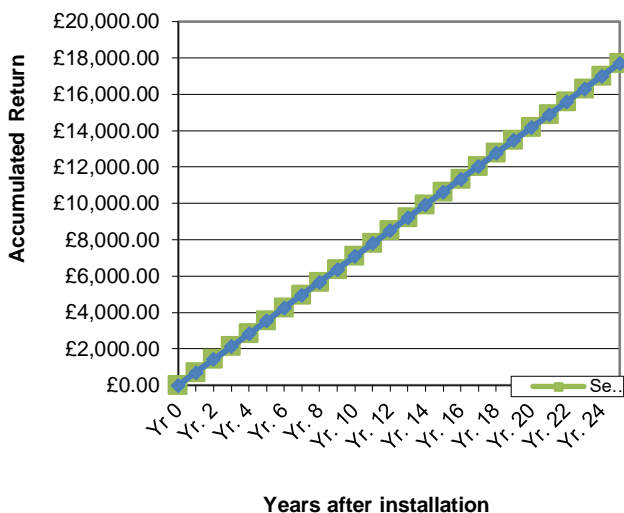
#### Estimated Production Level & Return

|                     |            |
|---------------------|------------|
| KWph PA             | 3589       |
| Total Return 20 Yrs | £17,719.13 |
| Av. Annual Return   | £708.77    |
| Annual R.O.I        | 10.14%     |
| Year of payback     | 10         |
| Cost (exc VAT)      | £6,990.41  |
| Cost (incl VAT)     | £6,990.41  |

#### System Details

|                      |          |
|----------------------|----------|
| System Size (Kw)     | 3.7      |
| Sq. M. of panel req. | 19.11    |
| Elevation            | 35°      |
| Orientation          | South 5° |
| Shading              | Little   |

#### Cumulative Annual Return



As MCS certified installers, the levels of production in our estimate are based on the 2005 SAP calculations as stated in the MCS documentation. This means that all systems of an identical size should have the same levels of output.

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 on the government's Standard Assessment Procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be taken as a guarantee of performance.

## Return Illustration

The illustrations above show the potential value of the electricity generated by your PV system under the terms of the Smart Export Guarantee which replaces the Feed-in tariff. Calculations are based on the following formula found in the SAP 2009 document "0.8 x kWp x S x Kpv" Where kWp is the size of the installed system, S is the radiation value and Kpv is the shading value. (\*subject to DNO approval for systems greater than 3.68kw).

#### System Size & Output

|                                     |          |
|-------------------------------------|----------|
| Installed system size               | *3.7kWp  |
| Estimated Annual system output (Gd) | *3589kWh |

#### Basic Payback Calculation

|  |                                  |
|--|----------------------------------|
| Proportion of electricity generated exported to grid (Ex): | *50%                             |
| Standard import tariff at average unit price (It)          | *£0.34(unit price as at 1/10/22) |
| Proposed export tariff4 (Et)                               | *£0.055                          |
| Annual Value of feed in tariff                             | Vf = Gd x Ft                     |
| Annual Value of electricity consumed                       | Vc = Gd x (100-Ex) x It          |
| Annual value of electricity exported                       | Ve = Gd x Ex x Et                |
| Total Value of electricity generated                       | Vt = Vf + Vc + Ve                |
| Basic Payback  | Py = Cost / Vt                   |

## Option 1 - Equipment Summary

### The Inverter

Solis Inverters are a division of Ginlong Technologies, which has been manufacturing Solar and Wind Generator Inverters and Wind Generators for over 20 years. Ginlong prides itself on offering world class design and quality, while retaining competitive pricing. The Solis inverters represent a well-respected, value priced brand of inverters and come with a five-year warranty as standard with an optional 10-20-year upgrade.



|                      |               |
|----------------------|---------------|
| <b>Manufacturer:</b> | <b>Solis</b>  |
| <b>Rated Power:</b>  | <b>3,600W</b> |
| <b>Weight:</b>       | <b>11.5kg</b> |
| <b>Max DC Power:</b> | <b>4,200W</b> |
| <b>Max AC Power:</b> | <b>3,680W</b> |
| <b>Warranty:</b>     | <b>5yrs</b>   |

### The Monitoring

We can also provide a Solis monitoring device with all the installation that allows remote monitoring of the production levels of the inverter and the system in its entirety to ensure that you are able to see how well your system is performing. (The monitoring is not included in the quote)



### The Panels

JA Solar modules reduce cell series resistance and stress between cell interconnectors improves module reliability and module conversion efficiency.

Features;

- High output power
- Less shading effect
- Lower temperature coefficient
- Better mechanical loading tolerance

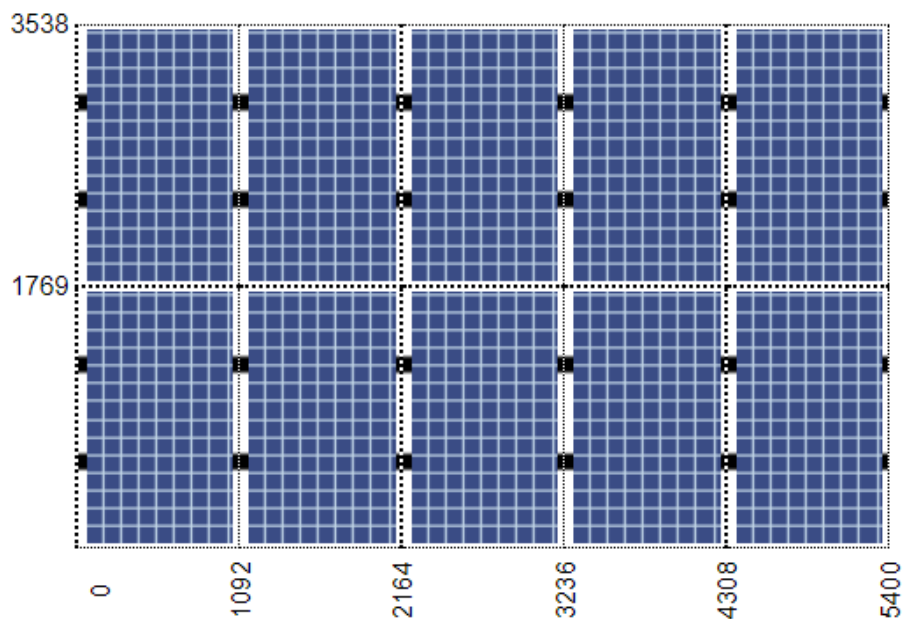


JA SOLAR

|                         |                        |
|-------------------------|------------------------|
| <b>Manufacturer:</b>    | <b>JA Solar</b>        |
| <b>Watts per panel:</b> | <b>370w</b>            |
| <b>Cell Type:</b>       | <b>Monocrystalline</b> |
| <b>Efficiency:</b>      | <b>19%</b>             |
| <b>Warranty:</b>        | <b>12 yrs</b>          |
| <b>Dimensions mm:</b>   | <b>1052x1769x35</b>    |
| <b>Weight:</b>          | <b>18.7kg</b>          |

## Option 1 - Equipment List

| Item #                                      | Description   | Quantity | Part Number                    |                  |
|---|---|----------|--------------------------------|------------------|
| <b>Solar &amp; Electrical Equipment</b>     |   |          |                                |                  |
| 1   | JA Solar 370W Mono MBB Percium Half-C All Black Short Frame MC4 | 10       | JAM60S-21-370-MR               |                  |
| 2   | Solis 3.6kW 5G Dual MPPT - Single Phase with DC                 | 1        | SOL-3.6-5G-DT-DC               |                  |
| 3   | Dektite Lead Multicable Solar Flashing (Tiled or Slate)         | 1        | DNLS10MB                       |                  |
| 4   | End Clamp+ 30 - 50mm Black                                      | 8        | REN-420081-B                   |                  |
| 5   | Middle Clamp+ 30 - 50mm Black                                   | 16       | REN-420082-B                   |                  |
| 6   | Wood screw pan head 6 x 80 SIT30 Single (900318) (Pack of 21)   | 4        | REN-900318-21                  |                  |
| 7   | Roof hook UK Flexible (without wood screw)                      | 28       | REN-420182                     |                  |
| 8   | VarioSole + End Cap 41x35 rail Single - Black                   | 8        | REN-900245-B                   |                  |
| 9   | VarioSole+ Rail connector for rail 41 x 35 mm                   | 4        | REN-400531                     |                  |
| 10  | VarioSole+ Mounting rail 41 x 35 x 3300 mm BLACK                | 2        | REN-400524-B                   |                  |
| 11  | VarioSole+ Mounting rail 41 x 35 x 4400 mm BLACK                | 4        | REN-400525-B                   |                  |
| 12  | MC4 Pre terminated cable 2m (Pack of 2)                         | 1        | MC4-2M-2                       |                  |
| 13  | MC4 Connector Twin Pack ( Kit 1 ) 0014/0015                     | 2        | MC4-CONN14-2-PACK              |                  |
| 14  | 4mm2 single-core DC cable 50m - Black                           | 1        | CABLE4-1-50                    |                  |
| 15  | K&N Single Phase AC Switch Disconnecter 25A                     | 1        | KG20-T203-GBA294               |                  |
| 16  | Emlite 1-ph generation meter 100A (1000 pulse/kWh) incl. Cover  | 1        | EM-ECA2                        |                  |
| 17  | PV on Roof and Hazard Labels Pack                               | 1        | BOHAZARD-SET                   |                  |
| <b>Other Equipment</b>                      |   |          |                                |                  |
| 18  | Scaffolding, Packaging and Delivery                             |          |                                |                  |
| <b>Installation, Comission and Sign off</b> |   |          |                                |                  |
| 19  | Approximate Time: 2/3days for 2/3 people                        |          |                                |                  |
| 20  | MCS Certification & DNO Notification                            |          |                                |                  |
|   |   |          | <b>Total Net Cost</b>          | <b>£6,990.41</b> |
|   |   |          | <b>VAT @ 0%</b>                | <b>£0.00</b>     |
|   |   |          | <b>Total Cost with VAT @0%</b> | <b>£6,990.41</b> |



## Option 2 - Array Design & Production Summary

### 3.7kW JA Solar (10x370w) + Solar Edge – South 5°

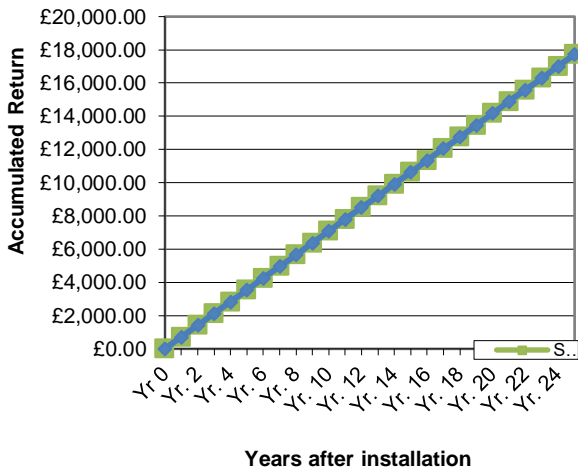
#### Estimated Production Level & Return

|                     |            |
|---------------------|------------|
| KWph PA             | 3589       |
| Total Return 20 Yrs | £17,719.13 |
| Av. Annual Return   | £708.77    |
| Annual R.O.I        | 8.03%      |
| Year of payback     | 12         |
| Cost (exc VAT)      | £8,822.44  |
| Cost (incl VAT)     | £8,822.44  |

#### System Details

|                      |          |
|----------------------|----------|
| System Size (Kw)     | 3.7      |
| Sq. M. of panel req. | 19.11    |
| Elevation            | 35°      |
| Orientation          | South 5° |
| Shading              | Little   |

#### Cumulative Annual Return



As MCS certified installers, the levels of production in our estimate are based on the 2005 SAP calculations as stated in the MCS documentation. This means that all systems of an identical size should have the same levels of output.

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 on the government's Standard Assessment Procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be taken as a guarantee of performance.

### Return Illustration

The illustrations above show the potential value of the electricity generated by your PV system under the terms of the Smart Export Guarantee which replaces the Feed-in tariff. Calculations are based on the following formula found in the SAP 2009 document "0.8 x kWp x S x Kpv" Where kWp is the size of the installed system, S is the radiation value and Kpv is the shading value.

#### System Size & Output

|                                     |          |
|-------------------------------------|----------|
| Installed system size               | *3.7kWp  |
| Estimated Annual system output (Gd) | *3589kWh |

#### Basic Payback Calculation

|   |  |
|---|--|
| Proportion of electricity generated exported to grid (Ex) : | *50%                                     |
| Standard import tariff at average unit price (It)           | *£0.34(unit price as at 1/10/22)         |
| Proposed export tariff4 (Et)                                | *£0.055                                  |
| Annual Value of feed in tariff                              | $V_f = G_d \times F_t$                   |
| Annual Value of electricity consumed                        | $V_c = G_d \times (100 - Ex) \times I_t$ |
| Annual value of electricity exported                        | $V_e = G_d \times Ex \times E_t$         |
| Total Value of electricity generated                        | $V_t = V_f + V_c + V_e$                  |
| Basic Payback   | $P_y = Cost / V_t$                       |



## Option 2 - Equipment Summary

### The Inverter

The SolarEdge inverters combine a sophisticated, digital control technology and a one stage, efficient power conversion architecture to achieve superior solar power harvesting and best-in-class reliability. The fixed-voltage technology ensures the solar inverter is always working at its optimal input voltage, regardless of the number of modules in a string or environmental conditions.

### The Optimisers

SolarEdge power optimisers maximise energy from each panel through constant tracking of Maximum Power Point per panel. Optimal efficiency is achieved by automatically maintaining a fixed string voltage and performance can be monitored via the SolarEdge monitoring portal. Each power optimiser is equipped with the unique SafeDC feature which automatically shuts down module voltage whenever inverter or grid power are shut down.

### The Monitoring

Monitoring is vital, especially when trying to promote green credentials but more importantly from a system verification point of view. The monitoring that we are suggesting would provide "live" real time feedback on how the system is operating, what it's producing, and whether it is operating correctly. Solar edge does this on a panel-by-panel basis making fault finding and shading obsolete. The system also allows you to view all the same data from your smartphone, tablet or laptop, meaning you can access your systems performance output from where ever you are in the world.

### The Panels

JA Solar modules reduce cell series resistance and stress between cell interconnectors improves module reliability and module conversion efficiency.

Features;

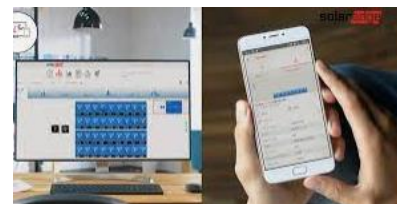
- High output power
- Less shading effect
- Lower temperature coefficient
- Better mechanical loading tolerance



|                      |                   |
|----------------------|-------------------|
| <b>Manufacturer:</b> | <b>Solar Edge</b> |
| <b>Rated Power:</b>  | <b>3,680W</b>     |
| <b>Weight:</b>       | <b>7.8kg</b>      |
| <b>Max DC Power:</b> | <b>7,360W</b>     |
| <b>Max AC Power:</b> | <b>3,680W</b>     |
| <b>Warranty:</b>     | <b>12yrs</b>      |



**Solar edge Full system & Free 3rd party Monitoring Including "live" via Monitor, PC, Laptop, or smartphone using WiFi or CAT5e**



JA SOLAR

|                         |                        |
|-------------------------|------------------------|
| <b>Manufacturer:</b>    | <b>JA Solar</b>        |
| <b>Watts per panel:</b> | <b>370w</b>            |
| <b>Cell Type:</b>       | <b>Monocrystalline</b> |
| <b>Efficiency:</b>      | <b>19%</b>             |
| <b>Warranty:</b>        | <b>12 yrs</b>          |
| <b>Dimensions mm:</b>   | <b>1052x1769x35</b>    |
| <b>Weight:</b>          | <b>18.7kg</b>          |

## Benefits of SolarEdge

SolarEdge is the World's #1 Home Solar Energy System.

### Why do most of the world's homeowners who are shopping for a solar energy system choose SolarEdge?

The answer is simple. SolarEdge systems deliver more of what you buy a solar energy system for – power. Each solar module (also called a solar panel) on your roof is connected to a SolarEdge Power Optimizer which transforms it into a smart module. Working together with our high efficiency inverters, they harvest the maximum amount of energy possible, regardless of shading, soiling, and other factors to provide your home with more electricity over the system's lifetime.

### Full Roof Utilisation

SolarEdge allows you to put more panels on the roof in a more aesthetic manner. Mix different orientations and panel types to maximize PV power production out of your roof space.

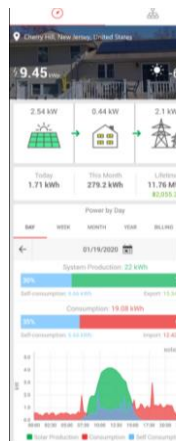


### More Energy

With traditional inverters, output of all panels is affected by the weakest panel and there are substantial energy losses due to unevenly dirty and shaded panels. Get maximum power out of each panel with the SolarEdge system.

### Maximum system uptime

A SolarEdge system not only lowers your electricity bills, it is also designed to meet your evolving energy needs and to protect your investment. Keeping track of your energy production and consumption is easy with your free\* mySolarEdge app. This intuitive application runs on your mobile device to give you a real-time dashboard of your energy production and consumption. Your installer gets their own application - the SolarEdge Monitoring Platform - which provides remote monitoring and maintenance down to the level of each individual solar panel. You can see your savings in real time!



### Superior Safety

Assets and people are protected through automatic shutdown of the high DC voltage during installation, maintenance and emergency.

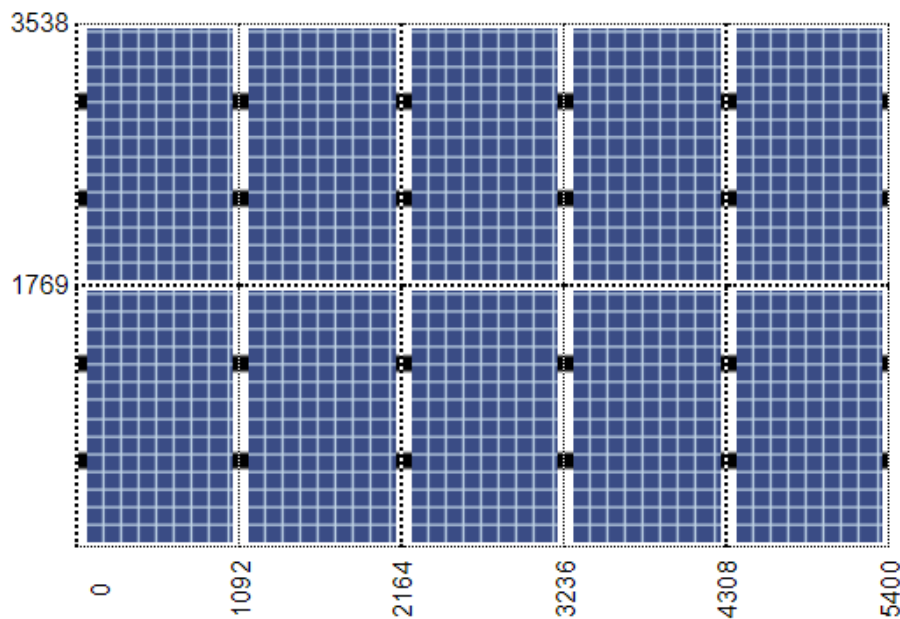


### In summary; Why SolarEdge?

- **Financially Strong** – SolarEdge is a bankable company, publicly traded on the Nasdaq and profitable.
- **Superior Service** – Local teams offer remote and onsite support.
- **High Quality Manufacturing** – production in Europe and China.
- **Warranty** – 25 years power optimiser warranty, 12 years inverter warranty.

## Option 2 - Equipment List

| Item #                                       | Description   | Quantity | Part Number                    |                  |
|--|---|----------|--------------------------------|------------------|
| <b>Solar &amp; Electrical Equipment</b>      |   |          |                                |                  |
| 1  | JA Solar 370W Mono MBB Percium Half-C All Black Short Frame MC4 | 10       | JAM60S-21-370-MR-AB-MC4        |                  |
| 2  | Solar Edge S440 Power Optimizer                                 | 10       | S440-MC4                       |                  |
| 3  | SolarEdge 3680W Single Phase HD Wave Inverter NO DISPLAY        | 1        | SE-3680H-APP                   |                  |
| 4  | Dektite Lead Multicable Solar Flashing (Tiled or Slate)         | 1        | DNLS10MB                       |                  |
| 5  | End Clamp+ 30 - 50mm Black                                      | 8        | REN-420081-B                   |                  |
| 6  | Middle Clamp+ 30 - 50mm Black                                   | 16       | REN-420082-B                   |                  |
| 7  | Wood screw slated tiles countersunk 6 x 80 (Pack of 21)         | 4        | REN-900013-21                  |                  |
| 8  | Roof hook UK Flexible (without wood screw)                      | 28       | REN-420182                     |                  |
| 9  | VarioSole + End Cap 41x35 rail Single - Black                   | 8        | REN-900245-B                   |                  |
| 10   | VarioSole+ Rail connector for rail 41 x 35 mm                   | 4        | REN-400531                     |                  |
| 11   | VarioSole+ Mounting rail 41 x 35 x 3300 mm BLACK                | 2        | REN-400524-B                   |                  |
| 12   | VarioSole+ Mounting rail 41 x 35 x 4400 mm BLACK                | 4        | REN-400525-B                   |                  |
| 13   | MC4 Pre terminated cable 2m (Pack of 2)                         | 1        | MC4-2M-2                       |                  |
| 14   | MC4 Connector Twin Pack (Kit 1) 0014/0015                       | 1        | MC4-CONN14-2-PACK              |                  |
| 15   | 4mm2 single-core DC cable 25m - Black                           | 1        | CABLE4-1-25                    |                  |
| 16   | K&N Single Phase AC Switch Disconnecter 25A                     | 1        | KG20-T203-GBA294               |                  |
| 17   | Emlite 1-ph generation meter 100A (1000 pulse/kWh) incl. Cover  | 1        | EM-ECA2                        |                  |
| 18   | PV on Roof and Hazard Labels Pack                               | 1        | BOHAZARD-SET                   |                  |
| 19   | SolarEdge Power Management package <100A grid supply            | 1        | SE-PM-WND-1PH-100A             |                  |
| <b>Other Equipment</b>                       |   |          |                                |                  |
| 20   | Scaffolding, Packaging and Delivery                             |          |                                |                  |
| <b>Installation, Commission and Sign off</b> |   |          |                                |                  |
| 21   | Approximate Time: 2/3days for 2 people                          |          |                                |                  |
| 22   | MCS Certification & DNO Notification                            |          |                                |                  |
|  |   |          | <b>Total Net Cost</b>          | <b>£8,822.44</b> |
|  |   |          | <b>VAT @ 0%</b>                | <b>£0.00</b>     |
|  |   |          | <b>Total Cost with VAT @0%</b> | <b>£8,822.44</b> |



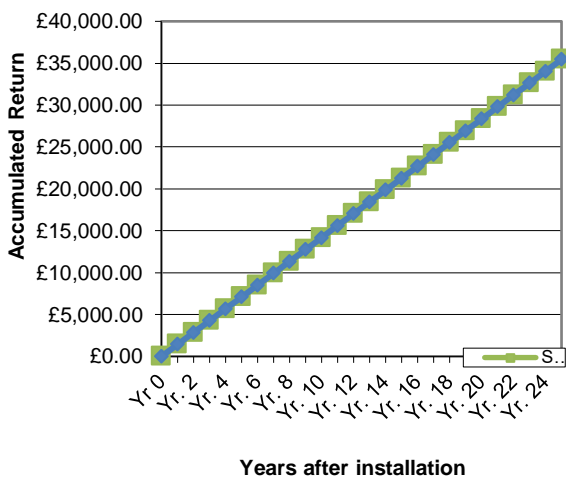


## Option 3 - Array Design & Production Summary

### 7.4kW JA Solar (20x370w) + Solis – South 5°

| Estimated Production Level & Return |            | System Details       |          |
|-------------------------------------|------------|----------------------|----------|
| KWph PA                             | 7178       | System Size (Kw)     | 7.4      |
| Total Return 20 Yrs                 | £35,442.30 | Sq. M. of panel req. | 38.07    |
| Av. Annual Return                   | £1,417.69  | Elevation            | 35°      |
| Annual R.O.I                        | 14.44%     | Orientation          | South 5° |
| Year of payback                     | 7          | Shading              | Little   |
| Cost (exc VAT)                      | £9,820.40  |                      |          |
| Cost (incl VAT)                     | £9,820.40  |                      |          |

#### Cumulative Annual Return



As MCS certified installers, the levels of production in our estimate are based on the 2005 SAP calculations as stated in the MCS documentation. This means that all systems of an identical size should have the same levels of output.

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 on the government's Standard Assessment Procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be taken as a guarantee of performance.

#### Return Illustration

The illustrations above show the potential value of the electricity generated by your PV system under the terms of the Smart Export Guarantee which replaces the Feed-in tariff. Calculations are based on the following formula found in the SAP 2009 document "0.8 x kWp x S x Kpv" Where kWp is the size of the installed system, S is the radiation value and Kpv is the shading value.

#### System Size & Output

Installed system size \*7.4kWp  
Estimated Annual system output (Gd) \*7178kWh

#### Basic Payback Calculation

Proportion of electricity generated exported to grid (Ex): \*50%  
Standard import tariff at average unit price (It) \*£0.34(unit price as at 1/10/22)  
Proposed export tariff4 (Et) \*£0.055

Annual Value of feed in tariff  $V_f = G_d \times F_t$   
Annual Value of electricity consumed  $V_c = G_d \times (100 - Ex) \times I_t$   
Annual value of electricity exported  $V_e = G_d \times Ex \times E_t$   
Total Value of electricity generated  $V_t = V_f + V_c + V_e$   
Basic Payback  $P_y = Cost / V_t$

## Option 3 - Equipment Summary

### The Inverter

Solis Inverters are a division of Ginlong Technologies, which has been manufacturing Solar and Wind Generator Inverters and Wind Generators for over 20 years. Ginlong prides itself on offering world class design and quality, while retaining competitive pricing. The Solis inverters represent a well-respected, value priced brand of inverters and come with a five-year warranty as standard with an optional 10-20-year upgrade.



|                      |               |
|----------------------|---------------|
| <b>Manufacturer:</b> | <b>Solis</b>  |
| <b>Rated Power:</b>  | <b>6,000W</b> |
| <b>Weight:</b>       | <b>12kg</b>   |
| <b>Max DC Power:</b> | <b>9,000W</b> |
| <b>Max AC Power:</b> | <b>6,000W</b> |
| <b>Warranty:</b>     | <b>5yrs</b>   |

### The Monitoring

We can also provide a Solis monitoring device with all the installation that allows remote monitoring of the production levels of the inverter and the system in its entirety to ensure that you are able to see how well your system is performing. (The monitoring is not included in the quote)



### The Panels

JA Solar modules reduce cell series resistance and stress between cell interconnectors improves module reliability and module conversion efficiency.

Features;

- High output power
- Less shading effect
- Lower temperature coefficient
- Better mechanical loading tolerance

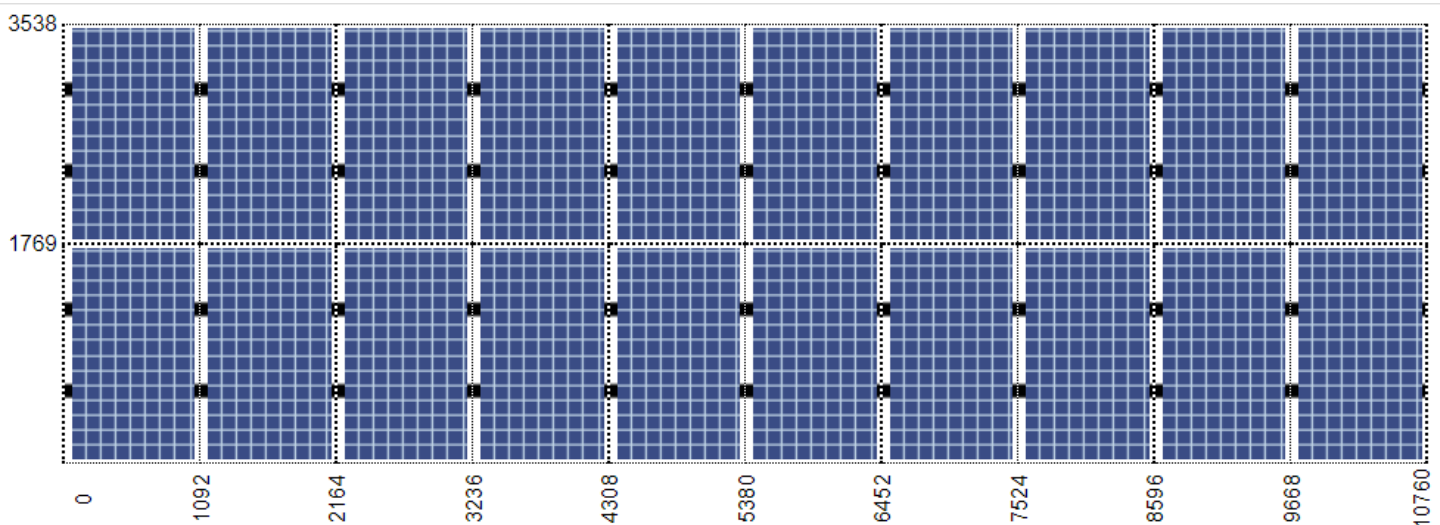


JA SOLAR

|                         |                        |
|-------------------------|------------------------|
| <b>Manufacturer:</b>    | <b>JA Solar</b>        |
| <b>Watts per panel:</b> | <b>370w</b>            |
| <b>Cell Type:</b>       | <b>Monocrystalline</b> |
| <b>Efficiency:</b>      | <b>19%</b>             |
| <b>Warranty:</b>        | <b>12 yrs</b>          |
| <b>Dimensions mm:</b>   | <b>1052x1769x35</b>    |
| <b>Weight:</b>          | <b>18.7kg</b>          |

## Option 3 - Equipment List

| Item #                                       | Description  | Quantity | Part Number       |                  |
|--|--|----------|-------------------|------------------|
| <b>Solar &amp; Electrical Equipment</b>      |  |          |                   |                  |
| 1  | JA Solar 370W Mono MBB Percium Half-Cell All Black Short Frame | 20       | JAM60S-21-370-MR  |                  |
| 2  | Solis 6kW S6 Dual MPPT - Single Phase with DC                  | 1        | SOL-6.0-S6-DT-DC  |                  |
| 3  | Dektite Lead Multicable Solar Flashing (Tiled or Slate)        | 1        | DNLS10MB          |                  |
| 4  | End Clamp+ 30 - 50mm Black                                     | 8        | REN-420081-B      |                  |
| 5  | Middle Clamp+ 30 - 50mm Black                                  | 36       | REN-420082-B      |                  |
| 6  | Wood screw pan head 6 x 80 SIT30 Single (900318) (Pack of 21)  | 8        | REN-900318-21     |                  |
| 7  | Roof hook UK Flexible (without wood screw)                     | 56       | REN-420182        |                  |
| 8  | VarioSole+ End Cap 41x35 rail Single - Black                   | 8        | REN-900245-B      |                  |
| 9  | VarioSole+ Rail connector for rail 41 x 35 mm                  | 8        | REN-400531        |                  |
| 10   | VarioSole+ Mounting rail 41 x 35 x 3300 mm BLACK               | 10       | REN-400524-B      |                  |
| 11   | VarioSole+ Mounting rail 41 x 35 x 4400 mm BLACK               | 4        | REN-400525-B      |                  |
| 12   | MC4 Pre terminated cable 2m (Pack of 2)                        | 1        | MC4-2M-2          |                  |
| 13   | MC4 Connector Twin Pack ( Kit 1 ) 0014/0015                    | 2        | MC4-CONN14-2-PACK |                  |
| 14   | 4mm2 single-core DC cable 50m - Black                          | 1        | CABLE4-1-50       |                  |
| 15   | K&N Single Phase AC Switch Disconnecter 25A                    | 1        | KG20-T203-GBA294  |                  |
| 16   | Emlite 1-ph generation meter 100A (1000 pulse/kWh) incl. Cover | 1        | EM-ECA2           |                  |
| 17   | PV on Roof and Hazard Labels Pack                              | 1        | BOHAZARD-SET      |                  |
| <b>Other Equipment</b>                       |  |          |                   |                  |
| 18   | Scaffolding, Packaging and Delivery                            |          |                   |                  |
| <b>Installation, Commission and Sign off</b> |  |          |                   |                  |
| 19   | Approximate Time: 2/3days for 2/3 people                       |          |                   |                  |
| 20   | MCS Certification & DNO Notification                           |          |                   |                  |
| <b>Total Net Cost</b>                        |  |          |                   | <b>£9,820.40</b> |
| <b>VAT @ 0%</b>                              |  |          |                   | <b>£0.00</b>     |
| <b>Total Cost with VAT @0%</b>               |  |          |                   | <b>£9,820.40</b> |



## Option 4 - Array Design & Production Summary

### 7.4kW JA Solar (20x370w) + Solar Edge – South 5°

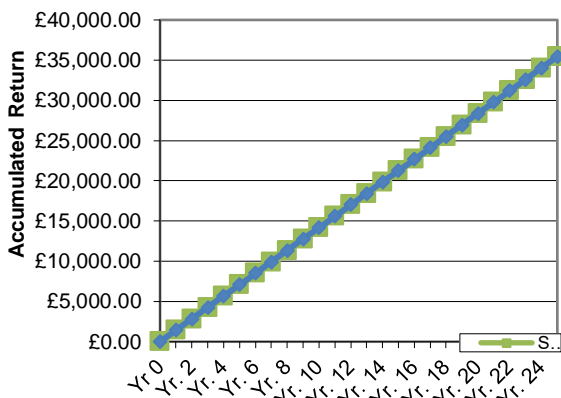
#### Estimated Production Level & Return

|                     |            |
|---------------------|------------|
| KWph PA             | 7178       |
| Total Return 20 Yrs | £35,442.30 |
| Av. Annual Return   | £1,417.69  |
| Annual R.O.I        | 11.62%     |
| Year of payback     | 9          |
| Cost (exc VAT)      | £12,203.58 |
| Cost (incl VAT)     | £12,203.58 |

#### System Details

|                      |          |
|----------------------|----------|
| System Size (Kw)     | 7.4      |
| Sq. M. of panel req. | 38.07    |
| Elevation            | 35°      |
| Orientation          | South 5° |
| Shading              | Little   |

#### Cumulative Annual Return



Years after installation

As MCS certified installers, the levels of production in our estimate are based on the 2005 SAP calculations as stated in the MCS documentation. This means that all systems of an identical size should have the same levels of output.

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 on the government's Standard Assessment Procedure for energy rating of buildings (SAP) and is given as guidance only. It should not be taken as a guarantee of performance.

## Return Illustration

The illustrations above show the potential value of the electricity generated by your PV system under the terms of the Smart Export Guarantee which replaces the Feed-in tariff. Calculations are based on the following formula found in the SAP 2009 document "0.8 x kWp x S x Kpv" Where kWp is the size of the installed system, S is the radiation value and Kpv is the shading value.

#### System Size & Output

|                                     |          |
|-------------------------------------|----------|
| Installed system size               | *7.4kWp  |
| Estimated Annual system output (Gd) | *7178kWh |

#### Basic Payback Calculation

|  |  |
|--|--|
| Proportion of electricity generated exported to grid (Ex): | *50%                                     |
| Standard import tariff at average unit price (It)          | *£0.34(unit price as at 1/10/22)         |
| Proposed export tariff4 (Et)                               | *£0.055                                  |
| Annual Value of feed in tariff                             | $V_f = G_d \times F_t$                   |
| Annual Value of electricity consumed                       | $V_c = G_d \times (100 - Ex) \times I_t$ |
| Annual value of electricity exported                       | $V_e = G_d \times Ex \times E_t$         |
| Total Value of electricity generated                       | $V_t = V_f + V_c + V_e$                  |
| Basic Payback  | $P_y = Cost / V_t$                       |



## Option 4 - Equipment Summary

### The Inverter

The SolarEdge inverters combine a sophisticated, digital control technology and a one stage, efficient power conversion architecture to achieve superior solar power harvesting and best-in-class reliability. The fixed-voltage technology ensures the solar inverter is always working at its optimal input voltage, regardless of the number of modules in a string or environmental conditions.



|                      |                   |
|----------------------|-------------------|
| <b>Manufacturer:</b> | <b>Solar Edge</b> |
| <b>Rated Power:</b>  | <b>5,000W</b>     |
| <b>Weight:</b>       | <b>10.6kg</b>     |
| <b>Max DC Power:</b> | <b>10,000W</b>    |
| <b>Max AC Power:</b> | <b>5,000W</b>     |
| <b>Warranty:</b>     | <b>12yrs</b>      |

### The Optimisers

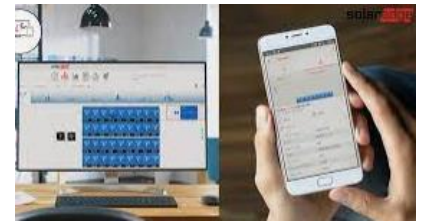
SolarEdge power optimisers maximise energy from each panel through constant tracking of Maximum Power Point per panel. Optimal efficiency is achieved by automatically maintaining a fixed string voltage and performance can be monitored via the SolarEdge monitoring portal. Each power optimiser is equipped with the unique SafeDC feature which automatically shuts down module voltage whenever inverter or grid power are shut down.



### The Monitoring

Monitoring is vital, especially when trying to promote green credentials but more importantly from a system verification point of view. The monitoring that we are suggesting would provide "live" real time feedback on how the system is operating, what it's producing, and whether it is operating correctly. Solar edge does this on a panel-by-panel basis making fault finding and shading obsolete. The system also allows you to view all the same data from your smartphone, tablet or laptop, meaning you can access your systems performance output from where ever you are in the world.

**Solar edge Full system & Free 3rd party Monitoring Including "live" via Monitor, PC, Laptop, or smartphone using WiFi or CAT5e**



### The Panels

JA Solar modules reduce cell series resistance and stress between cell interconnectors improves module reliability and module conversion efficiency.

Features;

- High output power
- Less shading effect
- Lower temperature coefficient
- Better mechanical loading tolerance

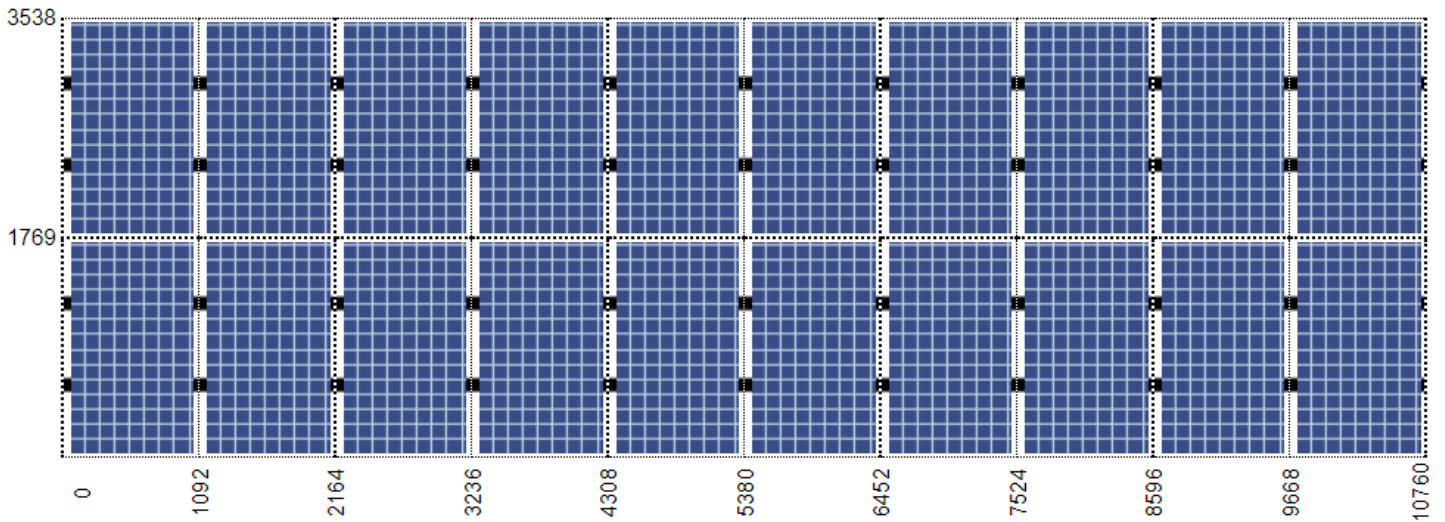


JA SOLAR

|                         |                        |
|-------------------------|------------------------|
| <b>Manufacturer:</b>    | <b>JA Solar</b>        |
| <b>Watts per panel:</b> | <b>370w</b>            |
| <b>Cell Type:</b>       | <b>Monocrystalline</b> |
| <b>Efficiency:</b>      | <b>19%</b>             |
| <b>Warranty:</b>        | <b>12 yrs</b>          |
| <b>Dimensions mm:</b>   | <b>1052x1769x35</b>    |
| <b>Weight:</b>          | <b>18.7kg</b>          |

## Option 4 - Equipment List

| Item #                                       | Description  | Quantity | Part Number             |                   |
|--|--|----------|-------------------------|-------------------|
| <b>Solar &amp; Electrical Equipment</b>      |  |          |                         |                   |
| 1  | JA Solar 370W Mono MBB Percium Half-Cell All Black Short Frame | 20       | JAM60S-21-370-MR-AB-MC4 |                   |
| 2  | Solar Edge S440 Power Optimizer                                | 20       | S440-MC4                |                   |
| 3  | SolarEdge 5000W Single Phase HD Wave Inverter NO DISPLAY       | 1        | SE-5000H-APP            |                   |
| 4  | Dektite Lead Multicable Solar Flashing (Tiled or Slate)        | 1        | DNLS10MB                |                   |
| 5  | End Clamp+ 30 - 50mm Black                                     | 8        | REN-420081-B            |                   |
| 6  | Middle Clamp+ 30 - 50mm Black                                  | 36       | REN-420082-B            |                   |
| 7  | Wood screw slated tiles countersunk 6 x 80 (Pack of 21)        | 8        | REN-900013-21           |                   |
| 8  | Roof hook UK Flexible (without wood screw)                     | 56       | REN-420182              |                   |
| 9  | VarioSole + End Cap 41x35 rail Single - Black                  | 8        | REN-900245-B            |                   |
| 10   | VarioSole+ Rail connector for rail 41 x 35 mm                  | 8        | REN-400531              |                   |
| 11   | VarioSole+ Mounting rail 41 x 35 x 3300 mm BLACK               | 6        | REN-400524-B            |                   |
| 12   | VarioSole+ Mounting rail 41 x 35 x 4400 mm BLACK               | 4        | REN-400525-B            |                   |
| 13   | MC4 Pre terminated cable 2m (Pack of 2)                        | 1        | MC4-2M-2                |                   |
| 14   | MC4 Connector Twin Pack (Kit 1) 0014/0015                      | 1        | MC4-CONN14-2-PACK       |                   |
| 15   | 4mm2 single-core DC cable 25m - Black                          | 1        | CABLE4-1-25             |                   |
| 16   | K&N Single Phase AC Switch Disconnecter 25A                    | 1        | KG20-T203-GBA294        |                   |
| 17   | Emlite 1-ph generation meter 100A (1000 pulse/kWh) incl. Cover | 1        | EM-ECA2                 |                   |
| 18   | PV on Roof and Hazard Labels Pack                              | 1        | BOHAZARD-SET            |                   |
| 19   | SolarEdge Power Management package <100A grid supply           | 1        | SE-PM-WND-1PH-100A      |                   |
| <b>Other Equipment</b>                       |  |          |                         |                   |
| 20   | Scaffolding, Packaging and Delivery                            |          |                         |                   |
| <b>Installation, Commission and Sign off</b> |  |          |                         |                   |
| 21   | Approximate Time: 2/3days for 2 people                         |          |                         |                   |
| 22   | MCS Certification & DNO Notification                           |          |                         |                   |
| <b>Solar PV Total Net Cost</b>               |  |          |                         | <b>£12,203.58</b> |
| <b>VAT @ 0%</b>                              |  |          |                         | <b>£0.00</b>      |
| <b>Total Cost with VAT @0%</b>               |  |          |                         | <b>£12,203.58</b> |



## Optional Upgrades – Immersion Diverters & Bird Protection

Solar Diverters are a great way to ensure that you're using the excess energy that you're generating. The diverter sends excess energy that isn't being used by your appliances to your immersion heater instead, helping to heat your water.

### SOLiC 200

The Award Winning SOLiC 200 from Earthwise. Simple to use and maintenance free, the SOLiC 200 is self-contained, easy to install and can save the homeowner hundreds of pounds over the course of a year. The SOLiC 200 includes a 10-year return to base guarantee\* has been built to last 25 years, and has been designed, constructed, and fully tested in Britain to the highest CE standards.

This could be installed for approx. **£350 plus VAT - Approx £250.00 as part of PV install**



### Solar iBoost+

Described as the world's bestselling PV immersion controller. The wireless feature as standard between the clamp and Solar iBoost+ makes installation quick and eliminates the need for messy wiring in the home. You can monitor your saving of kW hours on the digital display. At the press of a button, you can check Saved Today, Saved Yesterday, Saved Last 7 days, Saved Last 28 Days and Total Amount Saved. The Solar iBoost+ automatically heats up to 2 immersions. Has a built in Boost button for an instant boost of hot water.

This could be installed for approx. **£460 plus VAT – Approx £350.00 as part of PV install**



### My Energy Eddi

Eddi allows you to stop exporting energy back to the grid & saves you money on your energy bill. Internet connected & remote controllable option with the MyEnergy hub Works with heat pumps when used with optional Relay & Sensor Board

This could be installed for approx. **£610 plus VAT – Approx £500.00 as part of PV install**



### Solar Edge – Smart Energy Hot Water

Solar Edge Smart Energy Hot Water Designed to maximise self-consumption and reduce energy bills by automatically diverting and adjusting excess PV energy to hot water. Cost effective energy storage, Compatible with SolarEdge smart energy products, Integrated with SolarEdge monitoring platform, enables repetitive scheduled operation and remote ON/OFF functionality, includes built in hot water consumption metering.

This could be installed for approx. **£610 plus VAT – Approx £553.00 as part of PV install**



solarEDGE

### BB200 Reinforced BirdBlocker

BirdBlocker offers a 99% certainty that birds will not go underneath your array. With a new reinforced plastic, it's a very quick, lightweight and easy solution to install. I

This could be installed as part of a Sunlit Solar Installation for approx.

**£610 plus VAT**





## Battery Storage

### Tesla POWERWALL 2

Power your home and electric vehicle with renewable energy you control and reduce your reliance on the grid. Monitor what energy you produce and control your self-powered system with 24/7 access using the Tesla app.

The Tesla Powerwall is a more premium and expensive product but are actually the cheapest battery choice when it comes to pounds per watt as they are very large (capacity wise, very neat and slimline physically) and they are currently the only battery that allows you to go off-grid (or island) and continue to function even when there is a power cut, or the grid fails.

| Supply and Install Powerwall 2 With Back up Gateway  |                   |
|--|-------------------|
| 1 x Tesla Powerwall2 AC 13.5KWh Battery with Tesla built-in battery Inverter for AC Coupling G98/G99 & G100 Export | *£8,052.00        |
| 1 x Tesla Gateway 2 With Backup and any additional supporting hardware and electrical components.                  | £1,400.00         |
| Labour   | £1,440.00         |
| CT clamps & associated electrical sundries   | £73.22            |
| Delivery   | £300.00           |
| DNO Application, Certification etc   | £90.00            |
| Net Sub Total  | <b>£11,355.22</b> |
| <i>(VAT chargeable when not part of a solar installation) VAT @20%</i>   | £2,271.04         |
| Total  | <b>£13,626.26</b> |

\*Price to be confirmed

### Solar Edge Energy Bank 10kwh Battery

SolarEdge Energy Bank 10kWh Battery. Optimized for SolarEdge Storage with HD-Wave technology inverters. Integrates with the complete SolarEdge residential offering, providing a single point of contact for warranty, support, training, monitoring and simplified logistics.

- NMC 9.7kWh / 5kW Li-ion technology
- DC coupling
- Support up to 3 batteries per inverter for more power and capacity 100% depth of discharge
- Superior system efficiency (PV> Battery> Grid)
- Simple installation with plug & play:
- Floor mounting or wall mounting
- Automatic configuration with pre-defined settings
- All SolarEdge solutions are managed by a single APP to optimize production, consumption and stored energy.



solar<sup>EDGE</sup>

| Supply and Install SolarEdge 10kw Battery  |                   |
|--|-------------------|
| SolarEdge Energy Bank 10kWh Battery  | £7,048.80         |
| Labour   | £1,200.00         |
| CT clamps & associated electrical sundries   | £63.67            |
| Delivery   | £123.00           |
| DNO Application, Certification etc   | £90.00            |
| SolarEdge Energy Net for Setup inverter  | £65.22            |
| SolarEdge Energy Meter K2 with Modbus Connection*(This may have already been fitted) | £273.22           |
| Sub Total  | £8,863.91         |
| <i>(VAT chargeable when not part of a solar installation) VAT @20%</i>               | £1,772.78         |
| Total  | <b>£10,636.69</b> |

(Approx price as part of PV solar install at the time of installation £7,900.00 ex VAT)



## Your Solar Journey with Sunlit Solar

### Make an enquiry with Sunlit Solar

You have already taken the first step by completing our on-line form found at [sunlit-solar.co.uk](http://sunlit-solar.co.uk)

### Desk Top Survey

Now that you have seen some examples of our standard options and pricing, if you would like to take this further, the next step is for us to carry out a desk top survey tailored to your property, please can you send us;

- Your full address with post code
- A pin drop or indication on google maps which house is yours
- Any photos of your roof
- If it is easily available, your annual electricity usage in KWhr, (can usually be found on your electricity bills), which electricity provider you use, and how much you are currently paying per unit.

It can take up to 2-3 weeks for us to get back to you with a desk top survey, unlike a lot of other companies, we provide the estimate when we know we can secure the equipment and install within a matter of weeks so that we don't have a long waiting list.

### Site Survey

Following the desk top survey, the next stage of the process is for us to arrange a site survey and consultation with our Managing Director. We have had to introduce a fee of £90 for customers in our working area and £180.00 for customers not in our current working area for this service, but the **fee will be fully credited** following an instruction from yourself to Sunlit Solar to install. Following the site survey and payment of fee, a revised estimate will be sent. We like to think of ourselves as the premier installer in this area and with nearly 20 years of installing PV, Mike's experience and advice is usually invaluable.

### T&C's Deposit Invoice and Connection Permission

**T&Cs** - If you accept the revised estimate, we will then send T&Cs and a deposit invoice (deposits are fully returnable less any costs incurred up to the point of cancellation - e.g., site survey, DNO liaison, materials - should the job not go ahead). Deposit payments are registered with a third-party deposit protection scheme operated by IWA and fully guaranteed. Once the deposit invoice has been paid, the installation will be booked in, usually within 3-6 weeks dependent on permission below.

**Permission** - Any system that is over 3.68kw, needs to have pre-approval by the DNO via a G99 application. Sunlit Solar complete all of the paperwork and liaise with the DNO on your behalf, this can take between 4 to 12 weeks, this application will need to take place before the installation. For smaller systems, a G98 application can be made which takes place post installation.

### Installation & Completion

A typical installation takes a team of, usually 3 qualified installers and electricians up to 2 days. Scaffolding will have been erected by our trusted scaffolder around 1-3 days ahead of the installation date and the installation team will arrive between 9am & 11am on the day of installation to start. Following the installation, you are provided with all the instructions you need to monitor your array. On receipt of payment of final invoice (of which any survey fees will have been deducted), we send you the certificates and documentation required for you to apply to your electricity company for a SEG (Smart Export Guarantee)

Approx 2-6 weeks

Approx 1 week

Approx 1 week

Approx 2-5 week for G98 or 4-12 weeks for G99



Providing clean, green energy across the South West  
01458 834936 info@rogerselectricians.co.uk

Once you have confirmed the system with us, before ordering the system we will return and make an exact measurement of the roof where applicable, to make sure the system will fit without contravening Building Regulations and or snow loading or wind shear factor calculations.

A structural review can be provided from an independent company to ensure that the roof is sufficient to support the system that is specified. We will supply wind loading and snow loading calculations before work commences on the roof if required. A sun path diagram can be made available on request.

All works quoted for include all solar installation work up to the local isolation points and AC meters, an adequately sized armoured cable (and comms cable, cat 6 UTP) should be supplied from the inverter location back to the point of distribution upon where isolation points and correct sized breaker should be fitted and sufficient space in the distribution board should be left.

We have included G99 or G98 applications in the estimate, but any additional liaising with the DNO or witness testing (if necessary) is not included.

If you would like to make any other suggestion or amendments to my proposals, I would be only too pleased to discuss them with you. As we have already discussed, I would be available to carry out the work as soon as possible.

**All Payments must be received from the completion of installation, upon which time the MCS certificate is issued.**

Yours Sincerely

MJD Rogers

## Accreditation

To ensure that we meet high standards in all of our installations Sunlit are fully accredited for the Micro-Generation Certification Scheme (M.C.S.) that allows us to accredit installations. To protect our customers further we are also members of the RECC assurance scheme that is designed to ensure that consumers of renewable energy solutions are sold to and supplied under safe guidelines.

