

“Catalyst Commercial are a national company with commercial customers across the country. Our vision is to provide organisations in the UK with affordable and reliable energy solutions. In pursuing this objective, we have established partnerships with suppliers, architects, installers, builders and contractors and over the years we have helped many businesses across the UK to choose and implement the right solution for them. We can also help you.

We provide independent and down-to-earth advice on a variety of renewable energy technologies for use in domestic, commercial and public sector buildings. Cut your energy costs, protect your business from future energy cost rises and reduce your impact on the environment-- Catalyst Commercial will take control of the process from beginning to end, working with you to identify aspirations, match your budget and provide you with the best solution for your business.”



The Advantages of Solar PV for Your Business

- Save money by reducing the amount of electricity you buy from the grid
- Earn money from the electricity you generate, and sell surplus electricity into the national grid
- Access to capital allowance tax relief on your investment
- Cut your carbon footprint and contribute towards the UK's move towards a low carbon economy
- Enjoy free, clean electricity that produces no greenhouse gases
- Proven technology
- Very low maintenance
- Long warranties on both the installation and the products
- Panels supplied with minimum 25 year performance warranty
- Protect your business against future energy price hikes

Solar PV Basics

Money Matters

Our Approach

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Solar PV in the UK

It is a complete myth that there is insufficient sunlight for Solar PV systems to work effectively in the UK. Solar PV panels work with direct and indirect (diffused) sunlight, so they can generate electricity even on cloudy days. The UK receives around 60% of the solar radiation found in the Equator, a similar amount of sunlight to that in Germany – a world leader in Solar PV installations.



What is Solar PV?



How does Solar PV work?



Could Solar PV work for your business?

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What is Solar PV?

Solar Photovoltaic (PV) or solar electricity systems convert the energy from daylight into electrical energy. The electricity generated by the PV panels is converted into a standard mains voltage to be used in buildings for lights and appliances.

Solar PV systems work in parallel with the existing electricity connection at your property so that any surplus power is automatically fed back into the national grid, and when you are using more than you are generating, power is drawn from the grid in the normal way to 'top up' your supply.

Solar PV electricity is free, clean and abundant. As the energy generated is mostly used within your building, it is incredibly efficient – the short journey from the source to the point of supply means there are only very small losses when compared to the losses in conventional electricity supply through a power station and transmission/distribution systems.



What is Solar PV?



How does Solar PV work?



Could Solar PV work for your business?

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How Does Solar PV Work?



What is Solar PV?



How does Solar PV work?

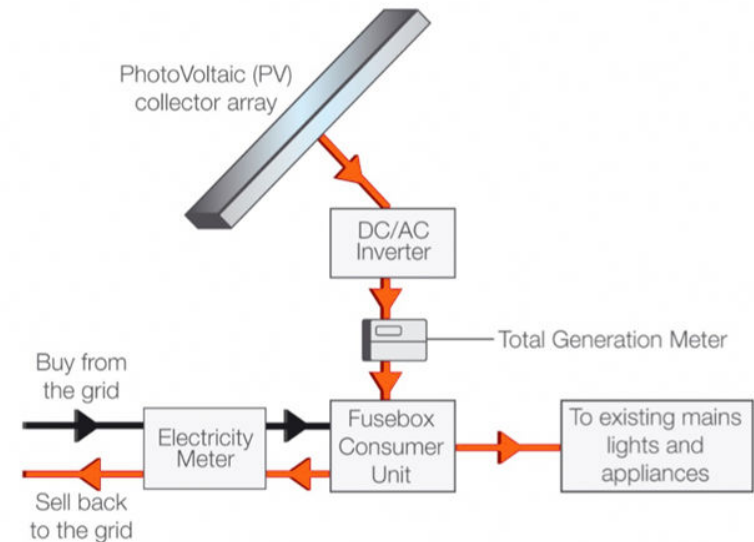


Could Solar PV work for your business?

Solar PV cells are made of a high-efficiency, abundant semi-conductor material – silicon. This semi-conductor material is processed and made into thin wafers less than 1mm thick.

Two layers of these silicon wafers are used in PV panels – one is positively charged and the other is negatively charged. When light falls onto the layers a small current flows between the layers, and as the light intensity increases the amount of current also increases.

Many small cells are then interconnected, framed and encapsulated to make the PV panels that would be used in your installation. The panels are then wired to an Inverter, which converts the DC electricity produced by the panels into standard AC which is used to power lights and appliances around your building. The diagram below shows a typical Solar PV connection arrangement.



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Could Solar Electricity Work for Your Business?



What is Solar PV?



How does Solar PV work?



Could Solar PV work for your business?

Solar panels work most effectively when facing due south, but panels facing anywhere between East and West can also work extremely well. It is also possible to fit a ground mounted system on a suitable area of land near your building. Whilst shading from objects on or near the roof can reduce the amount of electricity generated by a Solar PV system, most shadows will only be present for certain parts of the day and the effect on the system is often negligible.

Solar PV systems are not particularly heavy and are suitable for most types of commercial rooftops, however the roof will need to be assessed to ensure that the surface the panels are fixed to is structurally sound and in good condition.



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The time to act is now.

The Feed-in Tariff scheme was introduced to the UK in April 2010. The scheme is a financial incentive, which pays owners of PV systems for the electricity that their system generates, even if you use it yourself. You will also be paid for any surplus electricity that your system exports to the grid. On top of this, you'll also save money on your electricity bills, because you'll be using your own energy.



Tariff Rates



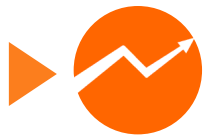
Costs



ROI

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The tariff rate will never increase, so there is no benefit in delaying a decision to have a Solar PV system installed.



Tariff Rates



Costs



Return On Investment (ROI)

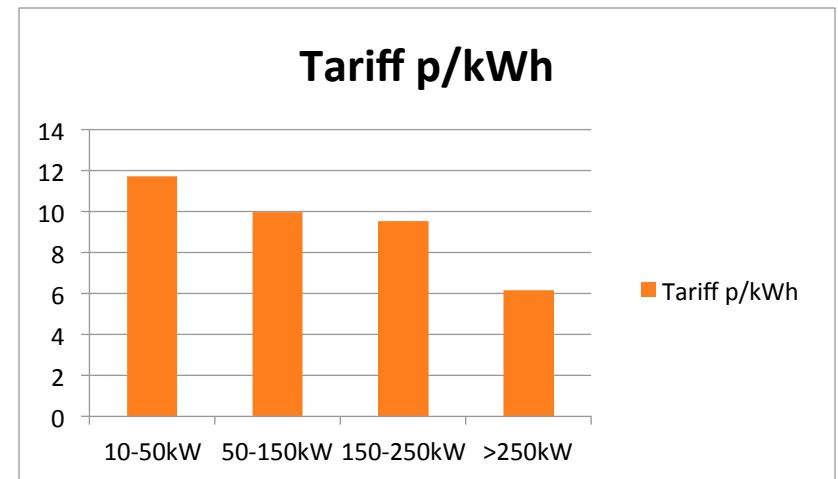
Tariff Rates

The amount you can receive for generating electricity is fixed for **20 years** at the rate agreed when your installation is completed.

The export tariff, paid for any electricity generated by your system and exported to the grid, is currently: **4.85/ kWh**.

The tariff rates for new installations are reviewed on a quarterly basis and, depending on the take-up of PV in the previous quarter, the rate may be reduced.

The current feed-in tariff rates are as follows:



**Tariff rates valid until 1st July 2015*

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Our aim is to save your business money, and to this end we will generate proposals for you that provide the best savings and the highest ROI possible.



Tariff Rates



Costs



Return On Investment (ROI)

Costs

There are various factors that will impact the size and, therefore, cost:

- Amount of power required for your building
- Available roof space
- Budget

The more panels installed the more electricity that can be generated. Each system will be designed to suit the exact requirements of your particular building and needs. We will carry out an assessment of your energy usage and site visit and can then provide you with the various options available and the related costs.

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“...in addition to a great return, the income is tax free, index-linked (to the Retail Price Index) and guaranteed for 20 years.”



Tariff Rates



Costs

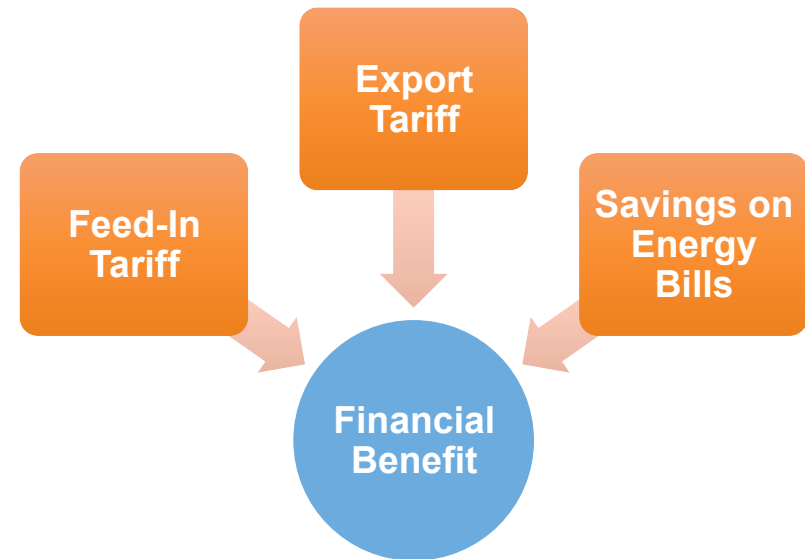


Return On Investment (ROI)

Return On Investment (ROI)

The Feed-in Tariff incentive means the combined income and savings on a typical Solar PV system is between 12 and 16%, dependent on the size of the system installed and your energy usage. This sounds impressive when compared to your average savings account and, in addition to a great return, the income is tax free, index-linked (to the Retail Price Index) and guaranteed for 20 years.

Solar PV systems improve the energy rating of your building and in doing so, increases the value of the property. As you will be saving money on your energy bills, the value of your business will also increase and you will be receiving an additional stream of income, at a guaranteed rate for the next 20 years.



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Why Catalyst Commercial?

- ▶ Experienced sustainability and energy experts
- ▶ Bespoke solutions for home and business
- ▶ Technical expertise combined with commercial ingenuity
- ▶ Dedicated to saving businesses money
- ▶ Innovative and cost effective solutions

Working with Catalyst Commercial

We have a wealth of experience to guide us as we help you to build a strategy and manage the implementation of renewable and sustainable technologies in your business. The technologies we recommend can deliver not only significant financial benefits, but are good for the environment as well.

At Catalyst Commercial we pride ourselves on being technology agnostic, to ensure we provide you with the best technology and solution for your business. Projects have included: solar photovoltaic and solar thermal panels, heat recovery, anaerobic digestion, combined heat and power, and biomass.

Our renewable energy consultancy services include:

- Feasibility studies
- Integration of low and zero carbon with existing services
- Installation and project management
- Financing and finance support
- Planning, compliance verification and auditing

See more details on our customer approach:

[>> Pre-Installation](#) [>> Post-Installation](#)

Solar PV Basics | Money Matters | **Our Approach**

[Pre-Installation](#)

[See: Post-Installation >>](#)

Our customer satisfaction strategy is two-fold:

1. Planning

Catalyst Commercial can, if required, take away the stress of the planning process by submitting an application on your behalf. We can call upon experts and planning professionals to undertake the application process, preparing all the necessary plans, forms and supporting statements required. Please contact us for more information.

2. High quality products and installation

As a long term investment, it is essential that the critical components of your system (panels, inverters, mounting system) are sourced from tier 1, well-capitalised companies that have the reliability of supply, world-leading designs, quality production control and the financial ability to honour long term warranties.

For large, commercial Solar PV installations, we work closely with Proinso. Proinso supply around 500MW of equipment per year worldwide and have undertaken 1000s of PV projects of all types and sizes.

A global leader in the PV industry, Proinso have delivered bankable utility and commercial projects across the globe, building a strong reputation for providing high-quality, long-lasting products.

In partnership with Proinso, Catalyst Commercial provide total solution packages including engineering and electrical design, performance modelling, procurement and supply of all system components, industry-leading monitoring services and O&M contracts to ensure that the system continues to operate at full capacity for the life of the project.

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Post-installation Customer Support

[See: Pre-installation >>](#)

We recognise that Solar PV is an important investment for your business, and as such we provide expert post-installation support to ensure that your project is as beneficial as possible. Our post-installation services include:

- Assistance with applying for grants and incentives
- Monitoring systems to ensure that the PV array is fully operational, thereby maximizing the yield
- Alerts to highlight any system faults
- Monthly reporting
- Service and maintenance contracts
- Insurance for the system, including loss of yield due to breakdown
- Long term product and installation warranties

Warranties

Fitting a Solar PV system is an important and complex decision. To underline the dependability of our process, we offer industry-leading warranties on all aspects of our work.

The panels themselves have a 25-year performance warranty providing you with long-term confidence that the panels will continue to generate efficiently over many years. Other products we use have a warranty against faulty workmanship as well.

In addition, any installation work carries a separate warranty to assure you that a high degree of quality and care is exercised in performing the installation.

Maintenance

The systems we provide are effectively maintenance-free and should run for many years without any further work. We would recommend, however, that a periodic safety inspection is undertaken to ensure that:

- the panels are clean
- the cabling hasn't been damaged or dislodged
- safety measures are still in place
- the system is continuing to work at maximum efficiency

Monitoring

There are a variety of monitoring systems that can be supplied as part of the overall installation. Catalyst Commercial will provide you with a bespoke solution dependent on your system and your requirements.

As part of the initial design process, the cost and effectiveness of the best monitoring system for your installation will be highlighted. Such a system will enable you to keep track of the electricity generated and see how your investment is performing. It will also enable early identification of any faults or problems on the system.