



MONARCH PARTNERSHIP

Utilities simplified

A GREENER FUTURE

FOR THE EDUCATION SECTOR

MAY 2021

A guide to renewable energy - how can the education sector benefit?

During Covid-19, teachers and students have been forced to adapt to difficult and trying situations. On top of this, schools, colleges and universities continue to face tight budgets and heavy workloads. But are still expected to deliver a high-class education. Juggling all these monumental responsibilities leaves little time or resources for efficient energy management.

Earlier this year the UK government announced a new Industrial Decarbonisation Strategy. This plan highlighted the integral role the education system plays in the country reaching its net zero target by 2050. So, as part of the £1 billion governmental scheme, schools across the country will receive upgrades and maintenance for low carbon systems. This will require a deeper understanding of clean energy and efficiency methods in schools, colleges and universities.

At Monarch, we are dedicated to helping our clients reach their green goals. We believe that environmental sustainability is no longer an option, but the only way forward. Schools generate just over 2% of the UK's greenhouse gas emissions, and 15% of the country's total public sector emissions. Though seemingly inconsequential, this means that schools can play a significant role in the UK's net zero journey. Especially considering the educational elements of a sustainable strategy that prepare pupils for a green future and inspire environmental aspirations.

Our aim is to offer customers energy efficient solutions that are advantageous for both them and the environment. In this guide, we look at the financial and environmental benefits clean energy and renewables can have on the education sector.



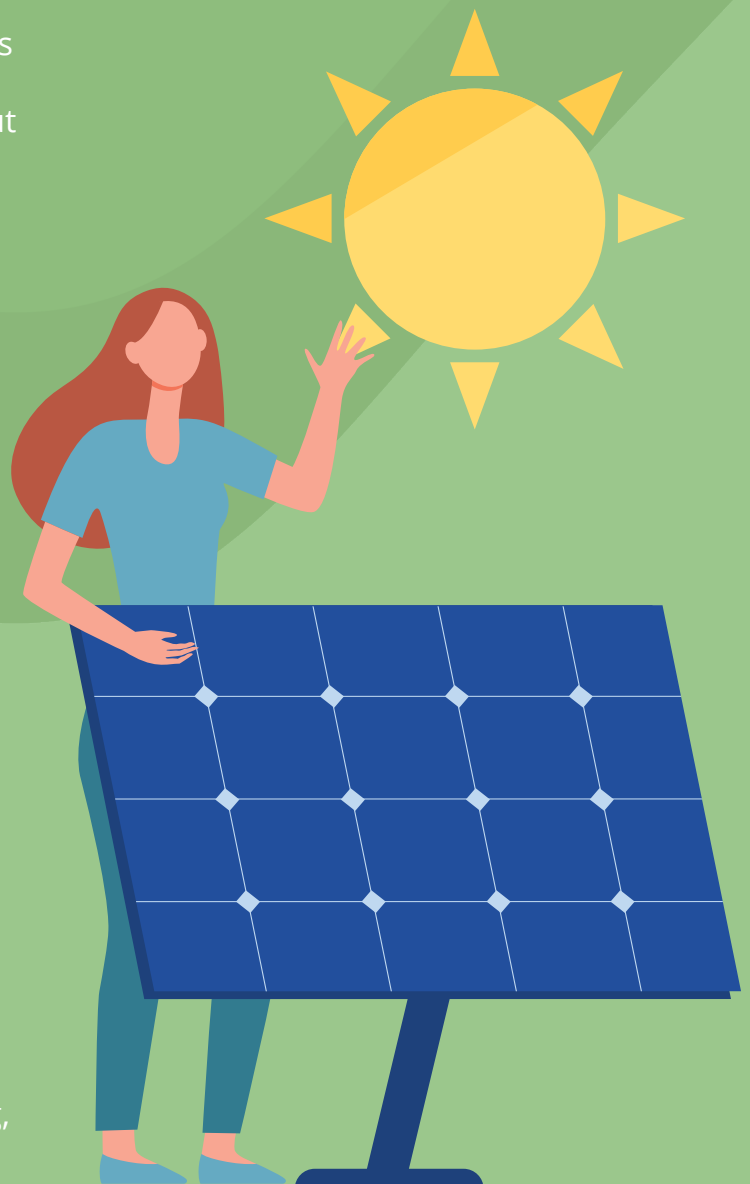
A renewable future

If Covid-19 has taught us anything, it is that our impact on the world around us is staggering. Whilst we were confined to our homes, the natural world began to repair itself. But, as we start to return to work and school, carbon emission levels are already much higher levels than before the pandemic. This distressing reality has only further amplified our need for renewable energy. The UK's education sector is intrinsic in the country's plan to reach net zero emissions by 2050. This is due to its substantial impact on the country's greenhouse gas emissions. To fast track the sectors eco-friendly future, a focus must be put on the use of renewables, clean energy and retrofitting.

Solar: Solar energy brings with it a number of benefits for the education sector. Solar panels generate energy for up to 25 years and need minimal upkeep, providing substantial cost savings. An on-site solar installation also helps to reduce dependence on outsourced fossil fuels, slash greenhouse gas emissions, and promotes clean energy through engagement and education

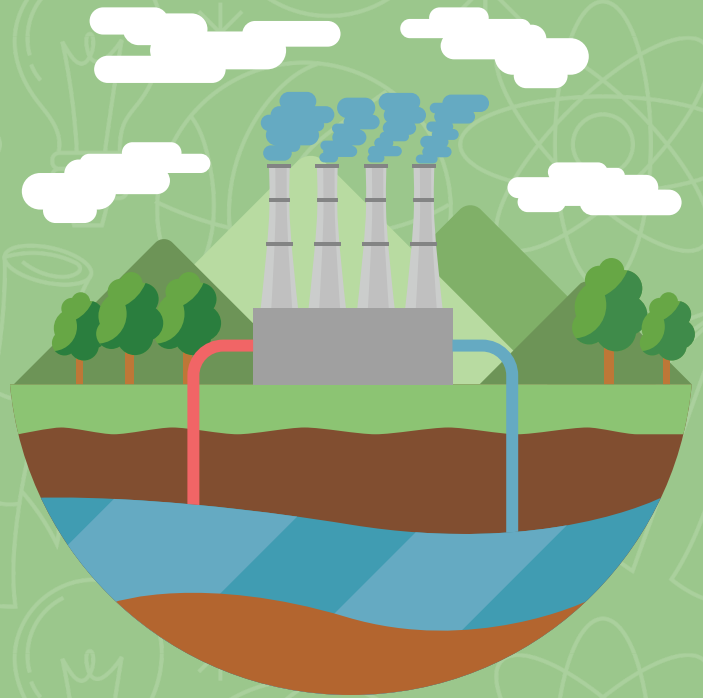


Low carbon tech: Switching to low carbon devices is a simple and effective way of reducing harmful emissions. A study released by The Carbon Trust revealed that UK schools collectively spend around £543 million on energy every year. By switching to LED lighting, energy efficiency is increased and over £100 million + could be saved each year.



Biomass: The most effective way of utilising biomass is through boiler upgrades. Switching to biomass boilers can reduce a school's oil consumption drastically. By switching from fossil fuel-based heating systems to renewable versions, schools save on costs, lower their environmental impact and benefit from the Renewable Heating Incentive (RHI).

Geothermal: Geothermal energy can generate a diverse range of energy while also reducing costs and environmental impact. Used mainly for heating and cooling systems, geothermal energy can also generate electricity by using underground heat pumps.



You must take action. You must do the impossible. Because giving up is never an option.

Greta Thunberg

The future is clean

The prioritisation of clean energy is vital in the fight against climate change. It is also crucial that we focus on generating clean energy in an environmentally responsible way. Finding green solutions allows educational institutions the chance to have more say on their consumption, waste and impact on the environment.

Green procurement: Sustainable procurement allows suppliers to promise to match all or some of your electricity use with renewable energy. So even if the energy you are using is not direct from a renewable source, you are paying for green energy to be pumped back in to the system. Certain tariffs will allow you to purchase energy from a specific renewable source.

One form of green procurement is Power Purchasing Agreements (PPAs). PPAs give customers the opportunity to buy direct from a renewable source. There are different types of PPAs, including on-site which allows customers to purchase energy straight from a physical source, meaning you can avoid non-commodity charges. Whereas off-site agreements mean purchasing from a specific source, but receiving the energy through the grid.

On-site generation: On-site generation is possibly the most sustainable form of energy. This solution usually involves wind or solar power. Used to offset energy imported from the grid, on-site generation provides users with stable, reliable energy. This means users avoid non-commodity charges, and are also able to sell surplus energy back to the grid. Generating a profit on otherwise wasted power.

Battery storage: Using battery storage helps schools, colleges and universities to become self-sufficient with their energy. Being able to buy electricity off peak for use during opening hours gives the education sector more control over their own energy. This means reduced waste and lowered costs.



Sharing is caring

Working together is vital if we are to advance towards a sustainable future. And certain universities have already proved that they are one step ahead. In 2019, twenty of the UK's top universities came together to strike a £50 million deal to purchase energy direct from British wind farms. This is the first time that a deal like this has been made within the education sector.

PPAs or collaborative clean energy deals allow multiple institutions to secure fixed energy deals, whilst also reducing their impact on the environment. Sharing energy means that universities are able to group together to purchase directly from renewable energy sources that may have otherwise been unattainable. This landmark deal has inspired many other

schools, colleges and universities to use collaborative energy programmes.

The group of campuses, including Newcastle University and the University of Exeter have been able to pay an upfront cost for this energy. This means they have cut out any unnecessary expenses, reduced emissions and allowed the wind farm to secure a reliable market for its power.

The government has also recently awarded contracts for 6GW offshore wind power plants. This focus on renewables is very encouraging for the public sector, educational institutions in particular.



Green procurement case study

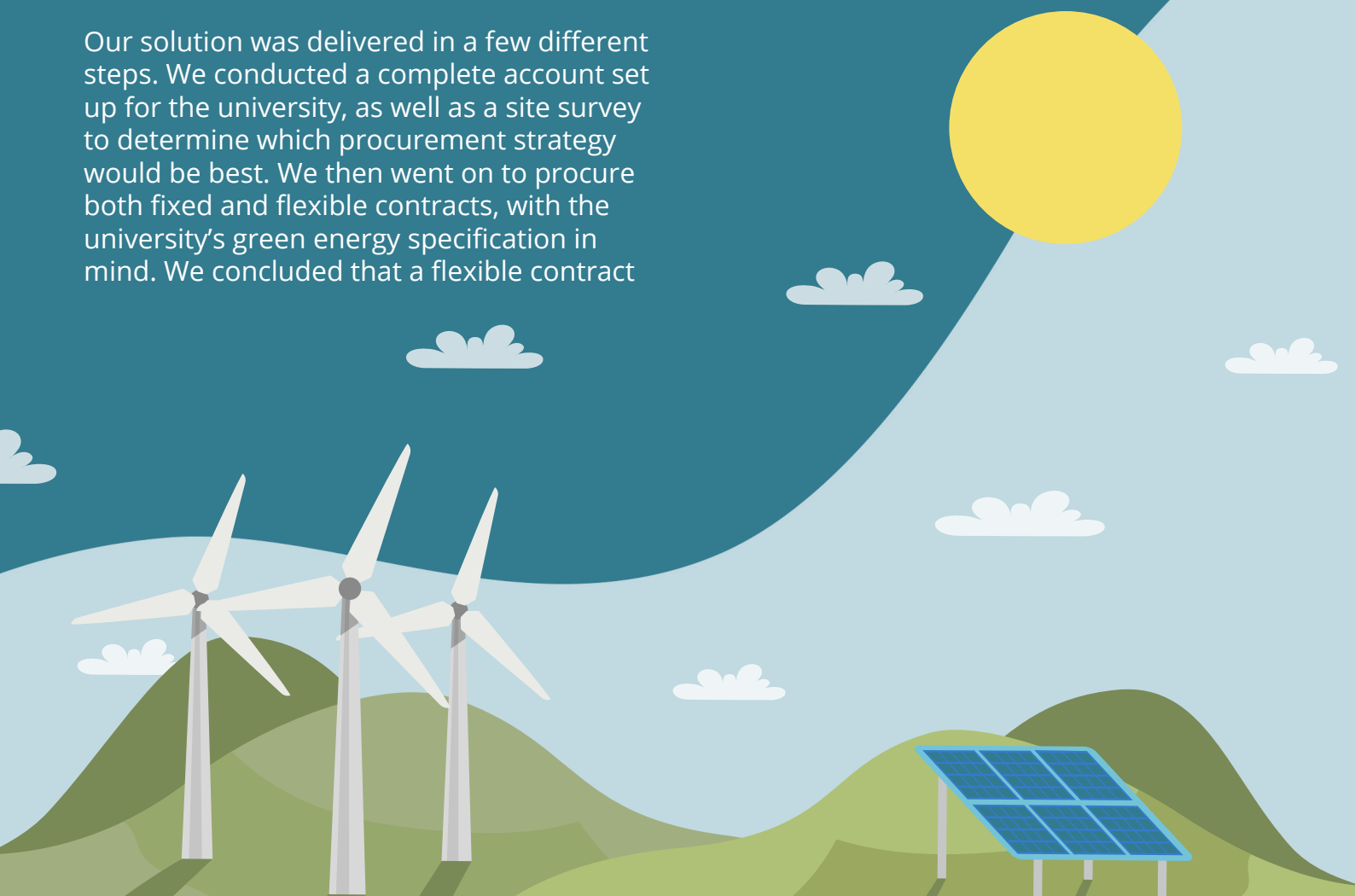
Green procurement allows for a long list of benefits, including more efficient and effective use of natural resources. By securing a higher percentage of energy from on-site generation and renewable sources, we are able to increase cost efficiency whilst lowering environmental impact. Using green procurement, Monarch was able to substantially benefit one of the UK's leading Russell Group Universities.

The second largest of its city, this university was established over 100 years ago and serves 4 facilities over 17 sites. The customer requested all their sites be managed together, both their gas and electricity contracts reviewed and tendered, and for their energy contracts to be 100% renewable.

Our solution was delivered in a few different steps. We conducted a complete account set up for the university, as well as a site survey to determine which procurement strategy would be best. We then went on to procure both fixed and flexible contracts, with the university's green energy specification in mind. We concluded that a flexible contract

would be more financially beneficial. Finally, we generated online reports so the university could better plan their financials and forecast their energy costs more effectively.

Since Monarch took over the management of the university's procurement in 2019, we have made them average **savings of £254,778 on electricity and £35,554 on gas** (per 12-month contract). This was following their switch to a flexible trading contract and reduced supply margins removing some embedded risk premiums. We also satisfied their request to **procure 100% renewable energy contracts**, which we do with Engie.



Green initiatives and environmental studies

Young people have been tackling climate change for many years, but this generation has made their voice louder than ever. With the help of social media and the elevation of young activists such as Greta Thunberg, children and teenagers across the world are encouraging their peers to join the fight for climate action. Green initiatives across the country are also working to further educate children, teenagers and young adults on the significance of climate change.

Schools are also discovering cost saving solutions whilst engaging staff

and students with their surroundings. The Eco-Schools programme has been incorporated into 20,000 schools around the country and is working in 68 other countries across the world. The programme guides, empowers and motivates pupils to take an active role in preserving the world around them.

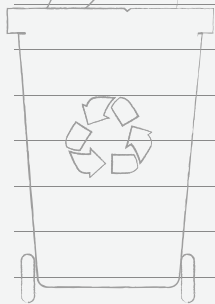
Bringing environmental studies into syllabuses allows young people to have a hands-on approach to climate action. While sustainable solutions make a considerable impact on climate change, educating the next generation is crucial in securing and maintaining a green future.



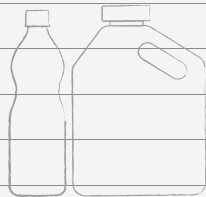


Power to the pupils – checklist

TAKE SHORTER SHOWERS AND
DON'T LEAVE TAPS RUNNING

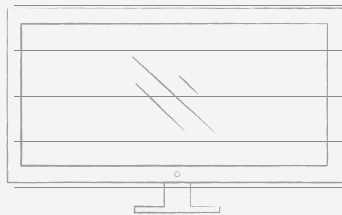
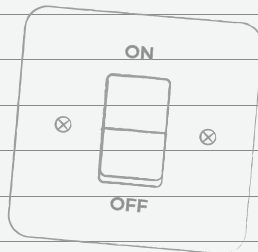


RECYCLE WHEN
YOU CAN



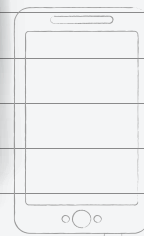
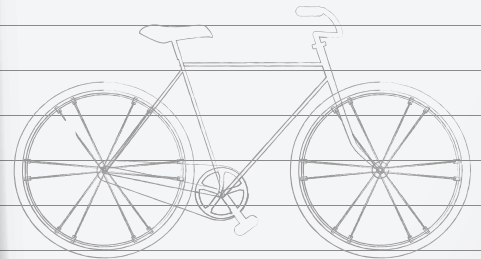
USE REUSABLE
BOTTLES AND FOOD
CONTAINERS

TURN OFF THE LIGHTS WHEN
YOU LEAVE A ROOM



SHUT OFF COMPUTERS AND
TV'S WHEN THEY ARE ON
STAND-BY

CYCLE OR WALK TO SCHOOL/
COLLEGE/UNIVERSITY



UNPLUG PHONE
CHARGERS
WHEN NOT IN
USE

Fennies Day Nurseries

case study

Fennies Day Nurseries have seen considerable results in their energy management since commencing work with Monarch in 2017. The procurement services we provided to the nurseries saw them achieve substantial savings, and we were able to seamlessly transfer sites from other suppliers. We were also able to answer any possible queries surrounding energy suppliers and find them the perfect fit for their needs.

By directly supporting renewable energy through green procurement, Fennies is helping to create a more sustainable future for their children. In this process, Monarch helped to guide them through the energy landscape, procuring clean energy options at the lowest cost.

We were also able to assist Fennies Day Nurseries with invoice validations. Understanding consumption through billings can be a complex and time consuming process. Fortunately, our expert team were able to simplify these energy costs, enabling the company to fully understand their outgoings. This also allowed them to cut out any overheads by seeing where energy use can be reduced.



Fennies Day Nurseries have been a customer of Monarch's since 2017 and are very happy with the service they have provided the last four years.

In this time the procurement exercise has delivered excellent savings and the transfer from other suppliers have been seamless.

Fennies have been very impressed by the knowledge, responsiveness and support provided by Monarch. They have met our expectations and we would have no hesitation in recommending their services to other prospective clients.

Terrie Steppel – Fennies Day Nurseries Finance Manager

WHY CHOOSE MONARCH?

At Monarch, we are committed to aiding a sustainable future. We understand that transparency is key, and for schools to reduce their energy waste they must first understand their consumption fully.

Our holistic approach to energy management allows us to find the most cost effective and environmentally friendly option for each institution. Armed with 30+ years of experience and an expert team, we are on hand to help lift the energy-related workload of schools, colleges and universities.

Using our efficient cost management plan, we are able to help you understand your assets and how best to utilise them. Our range of services, including thorough audits and sustainable procurement, allows you to do just this. A clear understanding of an institutions assets is needed to kick start the education sectors journey to sustainability. Our comprehensive list of energy management services starts educational institutions on the road to a greener future.

Get in touch TODAY

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Free audit service:

To start your sustainability journey, you must first have a clear understanding of consumption, waste and overheads. Our free audit service helps to start your sustainability plan off the right way.

Intelligent green procurement:

Our team of procurement specialists use their expertise to find the best contract for business gains, as well as ethical and sustainable benefits.

On-site generation:

To find the most sustainable form of energy generation, we are able to find the perfect on-site solution for you. We are also on hand to manage the installation to help you on your flying start to a green future.

Sustainable energy management plan:

We keep track of both the energy market and sustainable options to strike when the iron is hot, so that you don't have to. Our sustainable management plan allows us to keep you updated on key policies and actions surrounding the energy market and contracts.

Water efficiency:

Water has huge untapped potentials for cost savings. At Monarch, we offer a number of services including a free water audit and intelligent water procurement. So, schools can rest assured their water overheads will reduce.

Optimised waste efficiency:

After a thorough investigation into the waste habits of an institution, we are able to create an effective plan. This will allow schools to save money and reduce their impact on the environment with the promise that their waste is being disposed of responsibly.

Insightful and transparent carbon reporting:

Our comprehensive range of carbon reporting services keeps institutions compliant, lowers CO2 emissions and boosts Corporate Social Responsibility credentials.



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