



# Local Energy Matters



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# East of England energy news

## Essex County Council hopes to drive down solar installation costs

A partnership between Essex County Council and iChoosr has given Essex residents access to a new solar panel group buying scheme: Solar Together Essex, aimed at creating a greener and more sustainable future.

Through this, Essex County Council hopes to reduce prices for solar installations by gathering a large pool of consumers for installers. Essex joins Norwich and Suffolk councils, which are running similar schemes.

Registration applications are now closed and a supplier auction was held on 22 August where approved solar suppliers bid for the work.

All installations are expected to reach completion by the end of March 2019.

## Sustainable town planned in Cambridgeshire

In its proposal for a new sustainable town north of Waterbeach, South Cambridgeshire District Council has released a Supplementary Planning Document outlining the vision for the environmentally-aware development.

The document details how developers should ensure reduced energy consumption in buildings and active investigation into potential renewable energy generation within the development. Applications are likely to be more successful if the following is included:

- smart energy systems
- efficient heating, cooling or heat recovery systems, and
- incorporation of renewable energy technologies

Developers must also contribute funding towards road, public transport and cycle links as part of their applications.

## East Anglian cleantech companies come together

Low-carbon goods and services companies are set to come together at the University of East Anglia's Enterprise Centre on 3 September, to discuss and present their current developments and potential opportunities for clean technologies in Norfolk and Suffolk.

It is anticipated that the cleantech sector in Norfolk and Suffolk will grow much faster than the national average – achieving annual 11% growth by 2030. Imogen Shipperlee, Driving Clean Growth conference organiser, said: "Clean growth is becoming more and more important in the UK but with the strategy there is a lack of focus on how local government and businesses can further clean growth regionally. The conference will show how we can facilitate clean growth in Norfolk and Suffolk."





# Tariff headlines

## Price rises applied across the board

July saw widespread and significant price increases across suppliers of all sizes and across both fixed and variable tariffs. This was the highest number of price increases seen this year. The largest price increase was recorded from Together Energy on its one-year fixed tariff, which increased from £871/year to £1,079/year on average. Three other suppliers also applied price increases of over £100/year on average.

This rush of price rises has left only 14 suppliers offering dual fuel tariffs below £925/year, compared to 25 suppliers in June.

## Suppliers launch new bundled and green offerings

With competition on price representing a less attractive option in a climate of rising wholesale costs, suppliers are looking to differentiate their offerings in different ways. SSE and Green Star Energy both launched new bundled tariffs in July, with SSE providing Argos giftcards on a two-year fixed deal and Green Star Energy launching one-year and three-year fixed tariffs with a free Amazon Echo device.

In a similar vein, both British Gas and Robin Hood Energy launched green tariffs in July. British Gas relaunched its online-only green tariff that it first issued in May, priced at £1,135/year on average, representing a £10/year uplift on its other online-only tariff. Robin Hood Energy retracted its three existing fixed tariffs, replacing them with two green fixed tariff options. Both tariffs are fixed for 12 months, one with exit fees and one without.

This month has also seen several suppliers adjust their pricing such that multiyear contracts are priced much closer to their respective one-year contracts. This was most notable from SSE, Green Star Energy and iSupply Energy. In the example of SSE, its two-year and three-year fixed tariffs were priced equally, and at the same price as its standard variable tariff.

## IRESA customers transfer to Octopus Energy

Medium supplier IRESA crashed out of the market in July, following a period of fast growth driven by competitive pricing. Its customers were transferred to Octopus Energy by Ofgem, under the Supplier of Last Resort process.

Before removing its products from the market in March, both its standard variable and cheapest fixed tariffs were priced more than £100/year below the medium supplier average, and it had a reported 95,000 customers on its books when Ofgem revoked its supply licences on 31 July.

Energy prices vary by region due to variations in demand, predictions about demand and different charges imposed by the region's distribution network operator.

# East of England tariffs

This section provides information on the cheapest tariffs in the Eastern region for various consumers. Definitions of the the three main types of tariff are given in the inside margin.

The table below shows the best tariff deals in the Eastern region for each customer archetype, whereas Figure 1, overleaf, shows the range of annual cost of tariffs for the Eastern supply region, updated to August 2018. Customer archetypes are based on Ofgem's analysis of typical electricity and gas consumption values.

Across all archetypes in the Eastern region, the average saving between the most and least expensive deals is £362.

The average price of the lowest cost fixed tariff across all archetypes is £925 - £57 more expensive than the average lowest cost SVT. Smaller suppliers, such as Outfox the Market and Powershop, are offering fixed tariffs considerably lower than the rest of the suppliers in the market.

For PPM tariffs, maximum prices have continued to be significantly lower than those highest prices for standard variable and fixed tariffs. The most expensive PPM tariffs have, however, risen on previous months. Nevertheless, reductions in the lowest PPM prices were observed for archetypes A5 to A12 due to undercutting of the rest of the market by Our Power.

This undercutting from suppliers in the provision of SVT's and PPM's may be a strategy to make a small loss in the short term but gain a larger customer base as tariff prices continue to rise.

Best buys in Eastern region (July 2018)

A	SVTs			Fixed tariffs			PPM tariffs		
	Supplier	Tariff	£/year	Supplier	Tariff	£/year	Supplier	Tariff	£/year
1	Outfox the Market	Zappli July Tariff	746	Simplicity Energy	Rhubarb 18	787	RAM Energy	RAM Energy Prepay	895
2			1070			1094			1259
3			449	Avro Energy	Simple and Glory	475			535
4			604	Simplicity Energy	Rhubarb 18	642			722
5	Powershop	Top Shopper	603	Avro Energy	Simple and Glory	649	Our Power	Our Best	709
6			735	USIO	Home After 7pm Fixed Green 5.1	789			859
7			716			769			836
8			896			960			1039
9			952			1020			1099
10			1163			1244			1338
11			1119			1196			1282
12			1383			1477			1580

## Fixed tariff

A tariff which offers guaranteed standing charges and unit rates, usually until a defined end date.

## Standard variable tariff (SVT):

A supply contract with an indefinite length, which has variable prices that can go up and down with the market.

## Prepayment (PPM) tariff:

A tariff for customers with prepayment meters, which enables payment for energy in advance through 'topping-up' using prepay tokens, cards or a key.

## Non-mains gas households:

A1: Low-income electrically-heated

A2: All other electrically-heated

A3: Low-income non-metered fuel-heated

A4: All other non-metered fuel-heated

## Mains gas heated households:

A5: Low-income, out-of-work single adults in small 1-bed social rented flats

A6: Young working adults in rented flats

A7: Low-income single adults (lone parents or elderly) in social rented houses

A8: Younger working families in medium-sized rented houses

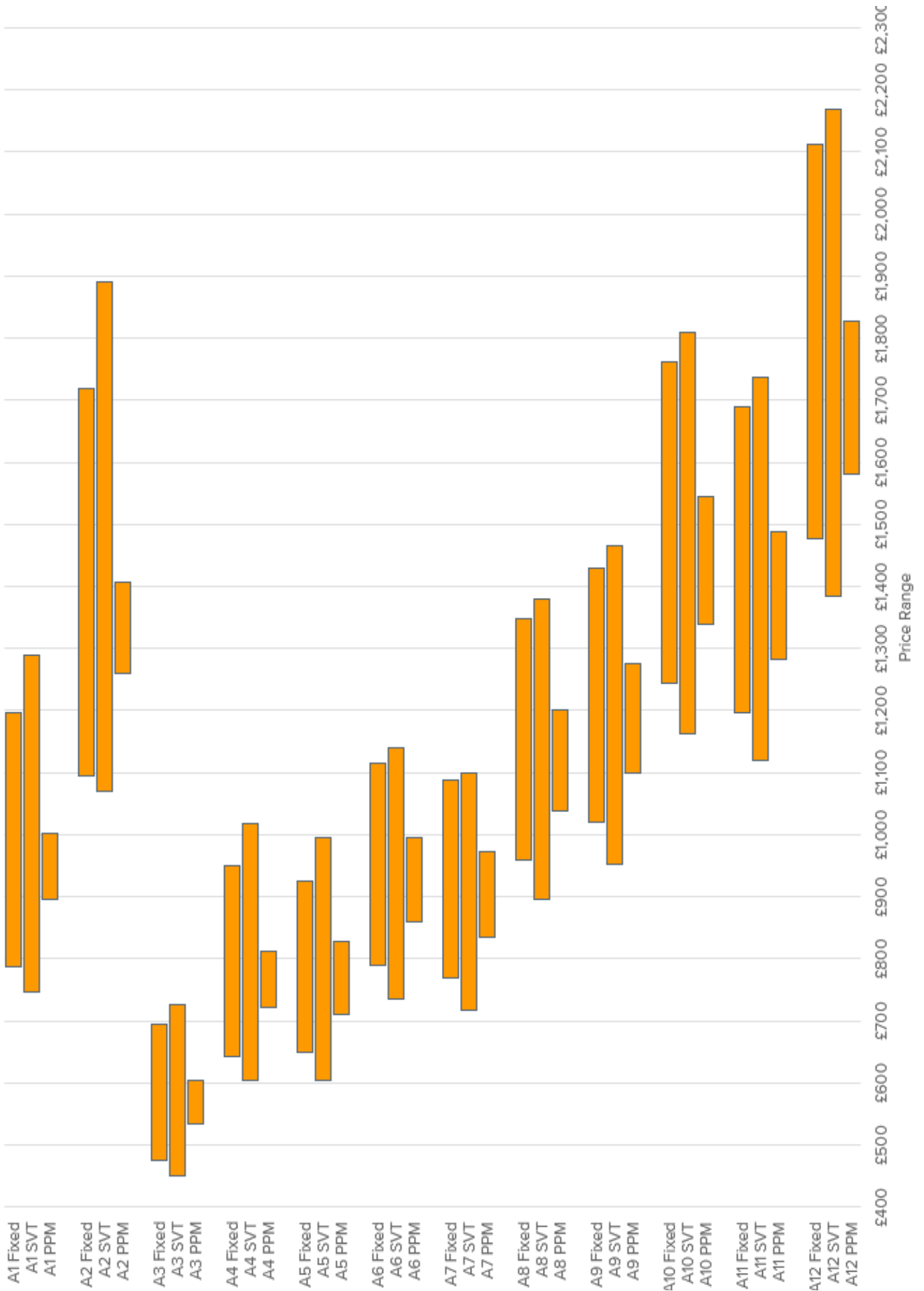
A9: "Average" mains gas-heated households

A10: Wealthy working families in 3-4 bed semis owned with mortgage

A11: Asset-rich, "empty-nesters" in detached houses in less urban areas

A12: Wealthy working families in larger detached houses in less urban areas

Figure 1: Annual tariff cost spread in the Eastern region at Ofgem medium typical consumption value (July 2018) by archetype



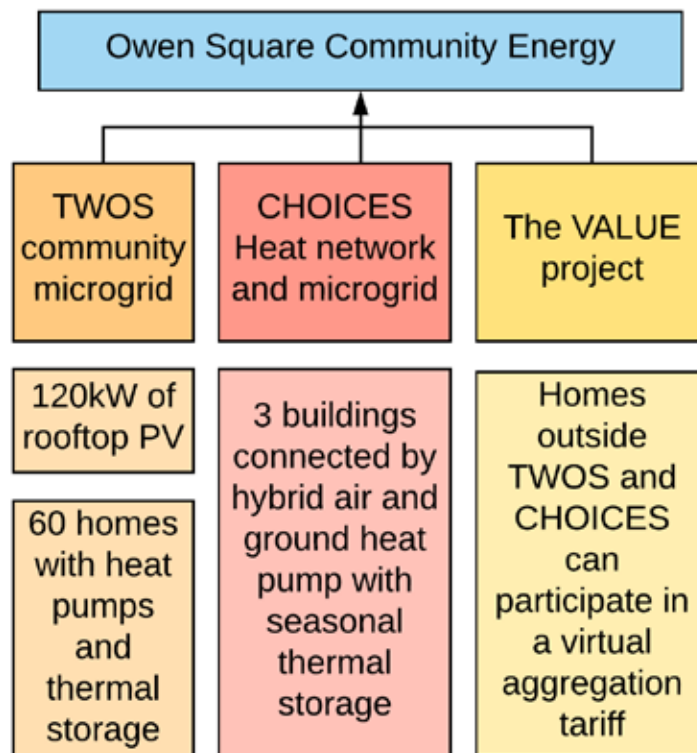
# Owen Square leads on district heating

Various energy efficiency schemes adopted by local authorities and businesses that are aiming to decarbonise. One way to achieve decarbonisation goals is to implement a district heat network that makes use of local assets. A new scheme that is leading the way in this regard is Bristol's Owen Square Community Energy (OSCE).

The OSCE project is an extensive district heat network that offers new ideas on how to decarbonise heat systems on a local and community level. A Small Business Research Initiative, the project is led by Owen Square Community Energy cooperative – a member-based local energy supply company.

Located at the Easton Community Centre in Bristol, the project is comprised of three smaller schemes: the TWOS streets of solar (TWOS) community micro-grid, the Community Heat Optimisation with Intelligent Control of Energy Storage (CHOICES) centre, and the VALUE project. Figure 2 gives a further breakdown of the three interconnected schemes under the project.

Figure 2: The three interconnected OSCE project schemes



The overall scheme is connected by a community battery and feeds into an 11kW substation. The project has managed to attract a range of partners with diverse sets of expertise including Clean Energy Prospector, Inter-seasonal Heat Transfer, Bath University's Centre for Sustainable Power Distribution, Eunomia environmental consultancy and energy management specialist MiniBEMS.





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The TWOS scheme services 60 homes across two streets. While the emphasis of the project is on community solar, with 120kWp of solar PV, the homes are also equipped with heat pumps and thermal storage, making this project more unique, particularly with regard to the latter.

The CHOICES scheme combines district solar thermal storage with inter-seasonal thermal storage. The centre where the scheme is based, between the buildings of three local businesses, uses a series of pipes to store heat underground during summer months, which is then extracted during winter months when needed most. This heat is fed into the system and extracted by a hybrid air and ground source heat pump, with a capacity of 140kW.

This is also part of a heat network, and storage of thermal energy makes all three buildings more energy efficient. There are plans to extend the heat network to homes, adding further capacity to the thermal storage system. The CHOICES energy system is anticipated to yield energy savings of 64% and annual carbon savings of up to 38%.

The VALUE project extends the previous two projects, as a wider neighbourhood around both projects can buy energy from both through a licensed supplier. This is achieved via a virtual aggregation tariff and is part of Ofgem's regulatory 'sandbox', which aims to test out how new ways of trading energy would affect existing regulatory systems. It offers residents a cheaper tariff and benefits producers of energy in the TWOS and CHOICES schemes by allowing export avenues.

In 2017, the OSCE initiative was awarded with a Regen Green Energy award for Best Sustainable Energy Scheme, acknowledging the innovative approach to decarbonisation of local heat systems.

Upon receipt of the award David Tugey, director at Easton Energy, said: "We have the opportunity to innovate and make a fairer, more democratic energy system for the benefit of everyone, as long as the government continues to support programmes and enable communities to participate".

The Engineering and Physical Sciences Research Council's Executive Chair Professor Philip Nelson also commented on the arrangements, saying: "As we move towards a low-carbon future we need to explore the fundamental science that can spark new technologies and systems as well as linking researchers to industry to meet their needs."

In all, The OSCE project is unusual in its design, not least because it is based around low-carbon heating rather than low-carbon electricity. In particular, the innovative usage of thermal storage in the CHOICES scheme has great potential for deployment in future schemes.

This kind of pioneering heating scheme would be a welcome addition in East Anglia, and we would recommend local authorities and other relevant bodies taking heed of the aspects that make OSCE a success.

# Anglian Water invests in Rolec EV charging points

Earlier this month, Anglian Water invested into electric vehicle (EV) charging with acquisition of Rolec charging points. The company agreed to install ten charging units across six of its sites, with anticipation of doubling this in the near future. Of the charging units installed, the range selected included AutoCharge, Quantum and SecuriCharge points, ranging from 7.2kW slow chargers to 22kW rapid chargers.

For an hour's charging time, 7.2kW chargers will charge an EV with enough electricity to travel 30 miles, whereas a 22kW rapid charger will give you 80 miles.

These installations will incorporate a user-dependent tariff system where by staff, visitors and fleet vehicles will be subject to different payment rates. Staff and visitors will be given access to the 7.2kW chargers, intended to charge vehicles over a longer duration of time. Fleet vehicles however will be able to access the 22kW rapid chargers in order to ensure quick charging times during more brief stays.

The charging points will also adopt Rolec's new management tool 'EV Charge Online'. This system will allow for users to log in via a phone, tablet or computer to pay for use of the charge point. Rolec believes this to be an advantage as it avoids additional fees and connection charges, as well as being a convenient way to pay quickly.

Stewart Lightbody, Anglian Water's Head of Fleet Services, said: "We are very pleased to announce this partnership with Rolec. We can now provide our fleet, and staff, with an affordable electric vehicle charging point to keep emissions as low as we possibly can. As a business, we're committed to reducing our carbon emissions and this is another fantastic example."

## Anglian Water to boost onsite solar potential

Energy storage company redT announced the sale of a 60kW/300kWh storage unit to Anglian Water on 20 August. The utility will use the system alongside onsite solar PV at a treatment works in Norfolk to enable it to store excess solar generated during the day and use it at other times, with the aim of reducing the site's reliance on the grid and decreasing its £77mn energy bill.

Key features of the investment include:

- increases in onsite solar generation



**Anglian Water  
has 17,789  
acres of land  
holdings  
across East  
Anglia,  
Lincolnshire  
and  
Northampton-  
shire**



- 
- revenue streams from UK grid services market, and
  - partnership with Open Energi

redT said that investing in the storage solution would allow Anglian Water to increase onsite solar generation by 80%, from 248kWp to 450kWp. With this, the amount of electricity extracted from the grid would be reduced, leading to an expected fall in electricity costs of 50% per year by 2040.

Anglian Water will also be able to use the battery to access UK grid revenue streams by delivering services to National Grid. redT also say that the system can be used for emergency site back-up, energy trading and behind-the-meter arbitrage.

Furthermore, through use of artificial intelligence software developed by Open Energi, the system will allow for optimisation of energy consumption and management of demand-side response. redT's CEO, Scott McGregor said: "Open Energi's intelligent software means these assets can be flexibly managed to deliver the best possible outcome for businesses, cutting costs, creating revenue and making the most of renewable power generated on-site."

With current wider emphasis on flexibility in energy management, Anglian Water's investment into the redT system may prove a smart decision with significant longevity. Jason Tucker, Director of Alliances and Integrated Supply Chain at Anglian Water, said: "The approach will enable us to develop future-proof solutions for managing energy more flexibly and efficiently, whilst increasing resilience". He went on to say: "this collaborative project will provide us with invaluable insight to support our future energy strategy, as one of the largest energy 'prosumers' in the East of England".

## Government urged by London Mayor to halt FiT phase out

The office of London Mayor Sadiq Khan has written to Energy and Clean Growth Minister Claire Perry urging her to rethink the closure of the Feed-in Tariff (FiT) scheme.

Shirley Rodrigues, London's Deputy Mayor for Environment and Energy, said: "We think the tariffs have been really helpful in increasing the take-up of solar". Referring to losses after government cuts to the FiT three years ago, Rodrigues added: "At the very least, the export tariff should be kept for two years while we work out an approach that doesn't result in installations dropping off and losing jobs [as] happened in 2015."

The newspaper said that the future of the mayor's Solar Together group-buying scheme was at risk, but it hopes to be able to process the recently closed second phase of applications before the FiT ends next March.

# London set for first emissions-based parking tariff

The City of London Corporation announced on 14 August that new emissions-based charges for on-street parking in the Square Mile will be introduced from 20 August.

Parking company RingGo's Emissions Based Parking product will be used to target high polluting transport with higher charges while rewarding drivers of low-emission vehicles with reduced tariffs. The City Corporation claimed that it will be the first use of a system to offer a range of charges dependent on the vehicle's fuel type in the city.

Planning and Transportation Committee Chairman at the City of London Corporation Chris Hayward said: "We have seen other areas of London penalise worst offenders such as diesel cars. We are taking this one step further by not only applying punitive measures for these worst offenders but by supporting and encouraging motorists to consider other modes of transport and switch to cleaner vehicles in the future."

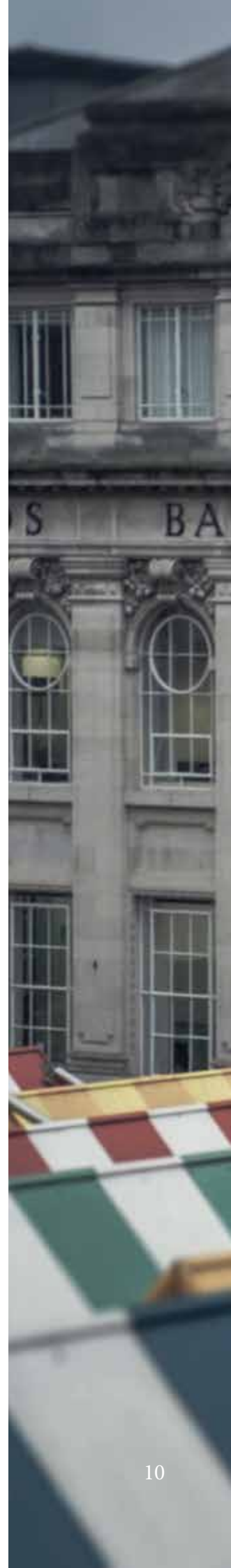
# Plans for UK's first carbon-negative business park


Westcott Venture Park in Buckinghamshire has announced plans to build a 15MW subsidy-free solar farm on its site, which it claims will make it the first "carbon-negative" business park in the county. Reported in The Business Magazine on 16 August, it is estimated that the solar development will generate more power than its tenants use each year. It will be connected to the local grid and will include provision for adding battery energy storage at a later date.

Director of Rockspring Property Investment Managers – which owns the business park – Rod Mordey said: "This pioneering scheme is the UK's first unsubsidised on-site solar power plant, proving Westcott Venture Park is the ideal location for forward-looking businesses. We are committed to creating an environmentally sustainable business park and this is one of the key initiatives to reduce our carbon footprint."

# Hackney Council investigates heat pump potential

On 22 August, Business Green reported that Hackney Council is to look at whether installing heat pumps in the borough's parks and green spaces could help provide clean heating for nearby buildings.





The project, being investigated by the council alongside charity 10:10 Climate Action and consultancy Scene, could also provide a potential revenue stream. If the plans go ahead, heat pumps could replace fossil fuel-based heating in council or third-party-owned buildings such as schools and homes.

Hackney Councillor Jon Burke said it was important for the council to "take the lead in proactively reducing our reliance on fossil fuels" and that the project could "unlock sustainable energy and save – or even generate – money for important council services".

## **UK's largest retail solar array success leads to potential energy storage investment**

The UK's largest commercial property developer, Landsec, has announced it is receiving 22% less import electricity for its White Rose shopping centre in Leeds since installing a 2,902-panel solar array.

Announced on 20 August, the company said that, since the system went live last August, it was able to generate enough renewable energy to power all the shopping centre's serviced areas for two weeks this summer. Cost savings have reportedly been passed on to tenants through a reduction in the utilities service charge. Currently, the White Rose solar array is the biggest PV system at a retail site in the UK and is reported to have generated 680MWh to date. This is enough to power around 170 households for a year.

Following these results, Landsec has hinted towards investment in energy storage solutions and that it "could soon see retail sites generating and storing enough energy in the summer months to

## **SNP reports surge in Scottish community energy projects**

The number of community renewable energy projects in Scotland has increased by 62% since 2011, according to an announcement by the SNP on 13 August. The party said that there are now more than 450 local communities with renewable energy initiatives.

The announcement said: "The SNP government has a strong track record on supporting community empowerment and helping communities take steps to develop new renewable energy projects – despite huge subsidy cuts from the Tory government at Westminster."

Initiatives such as the Community Empowerment Act and the Local Energy Challenge Fund were cited as drivers of the trend.

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# Pixie Energy update and energy market transformation discussion

In our upcoming Pixie event at Norwich Cathedral on the 10 September, we will be discussing the transformation of the energy market as well as presenting our current project developments. Among the projects to be discussed are our Norwich Virtual Energy Community, Energy Company Obligation (ECO) Switch and energy landscape mapping projects.

The Norwich Virtual Energy Community (NVEC) will demonstrate the benefits of allowing more than one supplier to sell energy to the same household. NVEC will initially deploy around 50kW of domestic solar panels and 30kW of domestic batteries on 10 sites across Norwich and North Norfolk. Energy generated by the solar arrays will be used by the host households or stored in the batteries. Other participants in the scheme will then have a chance to purchase this energy for their own use via a bulletin board.

In our ECO Switch project, we are developing an auction platform to support ECO delivery for energy suppliers and local authorities.

Pixie Energy is proposing to develop a tri-partite trading platform to make delivery of ECO measures more flexible, efficient and targeted. We propose a local pilot scheme initially based on part of East Anglia, but which could be replicated or scaled.

Another project with strong potential to be scaled is our exciting digital mapping project. It aims to give users a holistic view of the energy landscape to view and observe the interconnectivity between the different layers mapped.

One of our current focuses is mapping indices of multiple deprivation. This layer is powerful in that we have gained a much deeper understanding of the location of vulnerable customers and areas at risk of fuel poverty. This could be a valuable resource to social housing groups and in supporting other schemes such as the ECO Switch proposal.

Alex Jakeman, Innovation Project Lead at UK Power Networks (UKPN), will also feature, and give an overview of why and how UKPN is measuring up to the innovation and transformation challenge, whilst Paul Bourgeois from Cambridgeshire and Peterborough Combined Authority will be discussing the Greater South East Energy Hub.

**If you would like to attend Pixie Energy's event on 10 September, please contact Neil Mearns at [n.mearns@cornwall-insight.com](mailto:n.mearns@cornwall-insight.com) or call on 01603 604424.**

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