

Managing Energy Costs – Smart Procurement, Smart Systems, Smart Use

Sustainable Business Network, 4 March 2022



Agenda

09:30 Welcome & Legal Briefing - Dr Wendy Buckley, Chair SBN North Hants

09:45 Energy Markets & Procurement – What’s really Driving them and how to buy smart - Energy Intelligence Centre - John Palmer & John Dawson

10:05 – Case Study – Portals - Sharon Ball

10:25 Funding for low energy technology - Low Carbon Across the South East (LoCASE) – Alison Marsh & James Traynor

10:35 Q&A

11:00 Close

Legislation & Market Trends

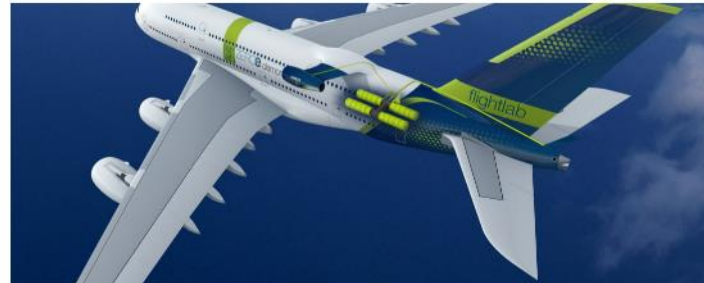
Dr Wendy Buckley
Carbon Footprint Ltd
01256 592599
wendy.buckley@carbonfootprint.com





Airbus to test hydrogen-fueled engine on A380 jet

Toronto (Reuters) - Airbus is planning to test a hydrogen-fueled engine on an A380 jet, the world's largest passenger plane, in the coming months.



New method for rapid, efficient hydrogen generation from water

By AMIT MALHOTRA | FEBRUARY 26, 2022 | EMERGING TECH

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UK petrol price jumps above £1.50 as oil costs rise

1 day ago | Comments



NEWS

HyPoint opens new hydrogen fuel cell research facility in the UK

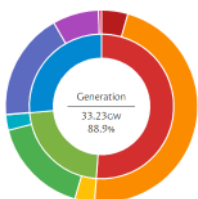
Wednesday February 9, 2022

National Grid: Live Status (3:00pm 03/03/2022)

The National Grid is Great Britain's electricity transmission network, distributing the electrical power generated in England, Scotland, and Wales, and transferring energy between Great Britain and Ireland, France, the Netherlands, Belgium, and Norway. Most data comes from the [Balancing Mechanism Reporting System](#) and is updated at five minute intervals. Solar data comes from [Sheffield Solar](#) and is updated at half hour intervals.

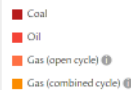
37.4GW demand

Generation:

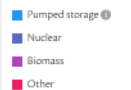


Note: this pie chart shows generation only, and excludes interconnectors

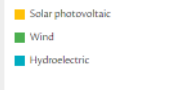
45.5% fossil fuels



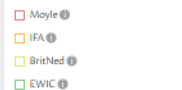
23.5% other energy



19.9% renewable energy



11.1% interconnectors



<https://grid.iamkate.com/>

South-east Queensland residents brace for more storms just days after severe flooding



Government's Net Zero Strategy – No clear plan for funding says Public Accounts Committee



Key Goals

- **Decarbonised grid by 2035**
- **More offshore wind**, low-carbon hydrogen, carbon capture, heat pumps, energy efficiency, tree planting ... over the next 15 years.
- Scaling up private investment

So far

- Committed £25+ billion up to 2025
- **No clear answers** for delivery policy or replacing income from current taxes
- Risk of disconnected initiatives not delivering overall results

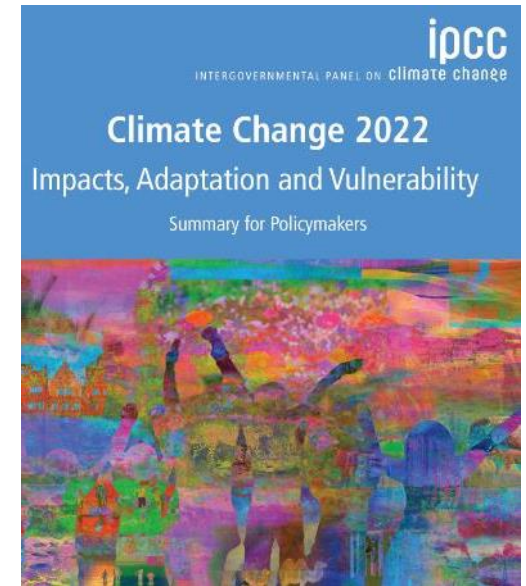


Report available at:

<https://publications.parliament.uk/pa/cm5802/cmselect/cmpubacc/642/report.html>

IPCC Sixth Assessment Report

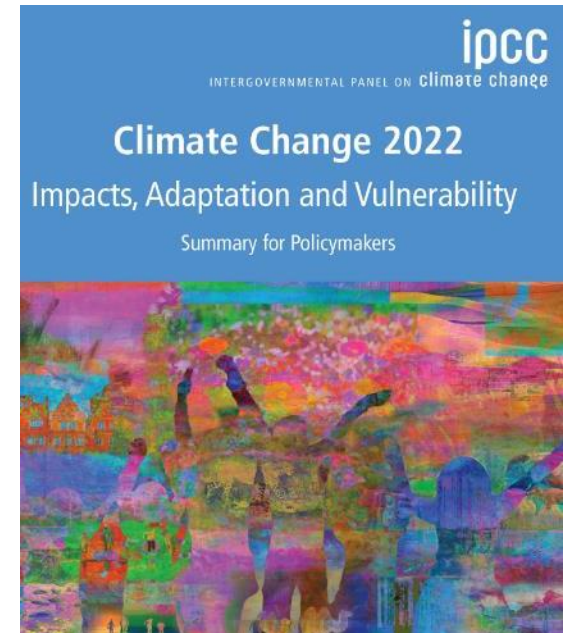
- **Projected overall decline in crop yields across Europe** – irrigation options hindered by water stress
- **Damage from coastal flooding to increase by 2100** – (1 billion people to be exposed) conservative estimates assuming adaptation and mitigation
- **Africa contributes least** to GHG emissions but has widespread damages (biodiversity loss, water shortages, lower crop yields, life loss, reduced economic growth)
- **Wildfires generate 1/3 of ecosystem carbon emissions**



Report available:
<https://www.ipcc.ch/report/ar6/wg2/>

IPCC Sixth Assessment Report

- **Increasing extinctions in Australasia** – due to sea-level rise, storm surges + extensive coral bleaching and loss of kelp forests due to ocean warming and marine heatwaves. Financial and emotional stress in farming households and rural communities.
- **Glacier outbursts will threaten local and downstream communities** in mountainous areas of Asia
- North America – Trump legacy misinformation and politicization of climate science
- **Green built environment will work**
- **Mental health mentioned for first time** – trauma from extreme events, loss of livelihoods and culture.



Report available:

<https://www.ipcc.ch/report/ar6/wg2/>

Strengthening the Energy Savings Opportunity Scheme (ESOS) – Consultation closed – results awaited



Aim: improve the uptake of energy efficiency measures and increase benefits for businesses.

Looked at:

- **Improved audit quality** through standardisation of reporting requirements
- **Inclusion of net zero carbon** element to audits
- **Requiring public disclosure** of high-level recommendations

Plus...

- Extending the **scope to include medium sized businesses**
- **Mandating action** on audit recommendations

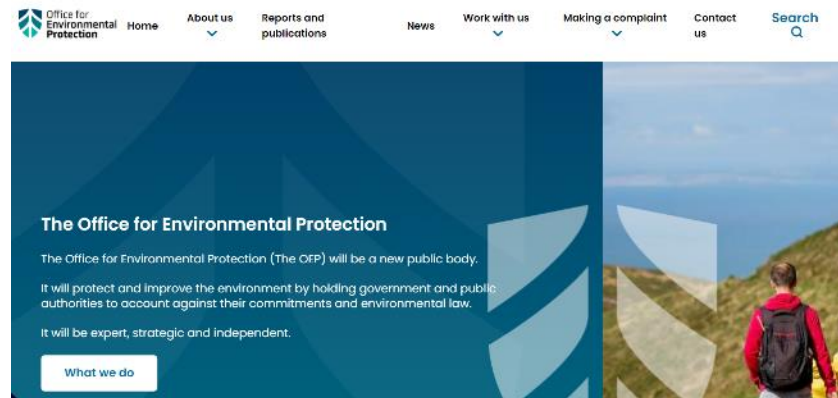


Image courtesy of Inhabitat

Payback periods improve with grid energy cost rising

Environment Act 2021 now passed (9th Nov)

- **Long-term and interim targets for priority areas:**
 - **Air Quality** (inc. PM_{2.5} target)
 - **Water**
 - **Biodiversity** (interim to be 31st Dec 2030)
 - **Resource efficiency and waste reduction**
- Draft statutory instrument for targets by 31st October 2022
- 1st review by 31st Jan 2023
- Subsequent reviews at least every 5 years



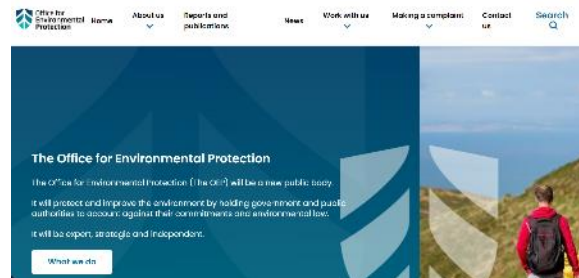
Images - Defra

Environment Act 2021 now passed (9th Nov)

- Establishment of The Office of Environmental Protection (the OEP)
 - Monitor progress of env improvement plans + targets
 - Annual reports on progress
 - Advise on changes to env law
 - Take complaints + investigate public authority compliance failures (env law)
- Creation of Conservation Covenants

Also... updates to Waste and Resource Efficiency, Air Quality, Water, Nature & Biodiversity legislation.

<https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>



Images - Defra

More Fines for Water Companies...

- **Thames Water - £4 million** after 30 hour waterfall of sewage discharge
 - **Accrued £32.4m** in fines since 2017 for 11 cases of water pollution
- **EA and Ofwat launch major investigation** into sewage treatment works
 - Will involve 2000+ treatment works
 - Fines can be up to 10% of annual turnover (civil cases) or unlimited (criminal proceedings)
 - EA asks companies to fit new monitors at sewage works (many companies say they may not compliant following this request) - **part of new monitoring programmes following the Environment Act 2021.**
 - **Environment Act 2021** introduces clear new duties to legally require water companies to make progressive reductions in adverse impacts of storm overflows
- **Northumbrian Water - £165,000** to Tyne Rivers Trust following unauthorised discharge from treatment works

...High Fines for Waste and Custodial Sentences

- **Auckland Environmental Services Ltd** – MD receives a **15 month + 12 month custodial sentence**, suspended for 2 years (+ 200 hours unpaid work) following consent to unlawful deposits of hazardous waste and false documentation.
- **Trafalgar Scientific Ltd** – failed to register as a packaging producer – **£17,600** payment to Bradgate Park Trust's Jubilee Woodland project + standard EA fines



References / Useful Links

- [Zero-E Tech: The UK's New Hydrogen Fuel Cell Facility \(simpleflying.com\)](https://simpleflying.com/zero-emission-airbus-a380-hydrogen-engine/)
- [New method for rapid, efficient hydrogen generation from water - Inceptive Mind](https://www.inceptionmind.com/new-method-for-rapid-efficient-hydrogen-generation-from-water/)
- [Airbus to use A380 to test hydrogen-fueled engine | CNN Travel](https://www.cnn.com/Travel/airbus-a380-hydrogen-engine/index.html)
- [ZEROe - Zero emission – Airbus](https://www.airbus.com/en/zero-emission)
- [UK petrol price jumps above £1.50 as oil costs rise - BBC News](https://www.bbc.com/news/business-57484444)
- [Why The UK Is Becoming The Center Of Hydrogen Aviation Innovation \(simpleflying.com\)](https://simpleflying.com/why-the-uk-is-becoming-the-center-of-hydrogen-aviation-innovation/)
- [HyPoint opens new hydrogen fuel cell research facility in the UK - evtol.com](https://www.evtol.com/hy-point-opens-new-hydrogen-fuel-cell-research-facility-in-the-uk/)
- <https://www.independent.co.uk/climate-change/news/ipcc-un-report-ten-findings-b2024549.html>
- <https://www.gov.uk/government/news/thames-water-fined-4-million-after-30-hour-waterfall-of-sewage-discharge>
- <https://inhabitat.com/new-photovoltaic-solar-technology-boosts-efficiency-to-50/solar-panels-stock-photo/>
- <https://www.gov.uk/government/news/water-companies-could-face-legal-action-after-investigation-launched-into-sewage-treatment-works>
- <https://www.gov.uk/government/news/north-east-charity-gets-boost-as-water-company-pays-for-pollution>
- <https://www.gov.uk/government/news/stockton-waste-boss-ordered-to-repay-800000>
- <https://www.legislation.gov.uk/ukpga/2021/30/contents>
- [United Kingdom gasoline prices, 28-Feb-2022 | GlobalPetrolPrices.com](https://www.globalpetrolprices.com/United_Kingdom/gasoline/prices/)
- [National Grid: Live Status \(iamkate.com\)](https://www.iamkate.com/national-grid-live-status/)
- [UK Net Zero 2050: Government “without answers to key questions” on costs or funding target set in law - Committees - UK Parliament](https://www.parliament.uk/business/committees/committees-a-z/commons-select/energy-and-climate/)
- <https://www.trafalgarscientific.co.uk/>

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10:35 Q&A

11:00 Close



Join us Again Soon....



Action on Carbon and Scope 3 Carbon Footprint



Thursday 17 March, 09:00-10:30 Virtual Event

Free - Register for Live Event/To Get the Recording

carbonfootprint.com - Sustainable Business Network Workshop



Your Feedback & Our Thanks To....



Basingstoke
and Deane



RUSHMOOR
BOROUGH COUNCIL



Energy Markets & Procurement – What's Really Driving Them and How to Buy Smart



John Palmer
Director of Flexible Procurement
E: john.palmer@eic.co.uk
T: 01527 511 726

John Dawson
Trading and Market Intelligence Manager
E: john.dawson@eic.co.uk
T: 01284 718 119



Sustainable Business Network

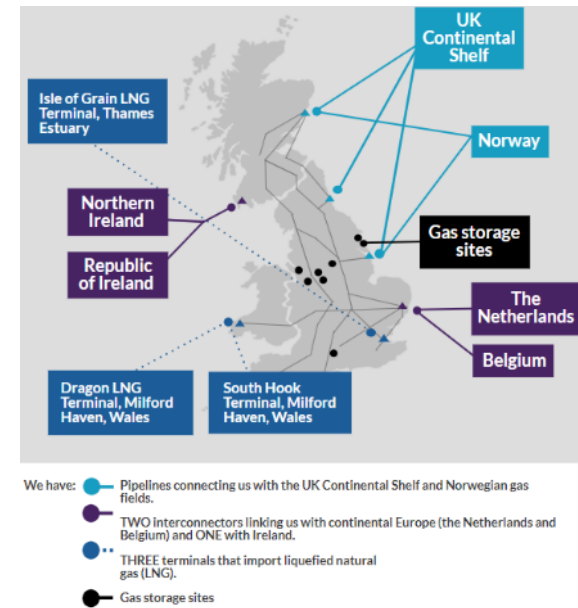
Welcome to Portals

Sharon Ball

portalspaper.com

Our gas supplies – a brief look or Why have gas prices increased so much?

- In 2021, Rough gas storage site closed.
- Its closure was not expected to impact security of supply, however
 - lower than expected renewables supply
 - higher than expected gas demand
 - Coupled with less available storage
 - led to higher than expected costs for supply.

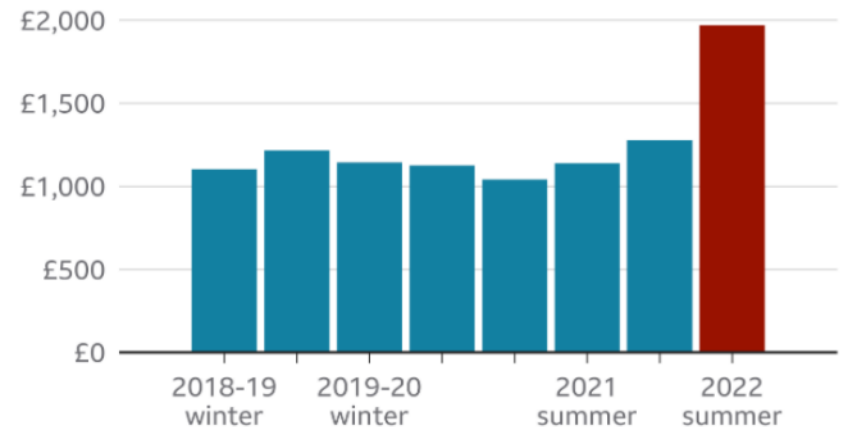


How do I protect my business from these significant increases in gas prices?

- Change when you need gas (for heating, drying?)
- Insulate or conserve what heat you have
- Reduce the amount of heat needed to complete the job?
- Long term, can heat be provided with a different fuel supply?

The energy price cap has risen by nearly £700

Annual bill for a typical household on a price capped dual-fuel tariff paying by direct debit

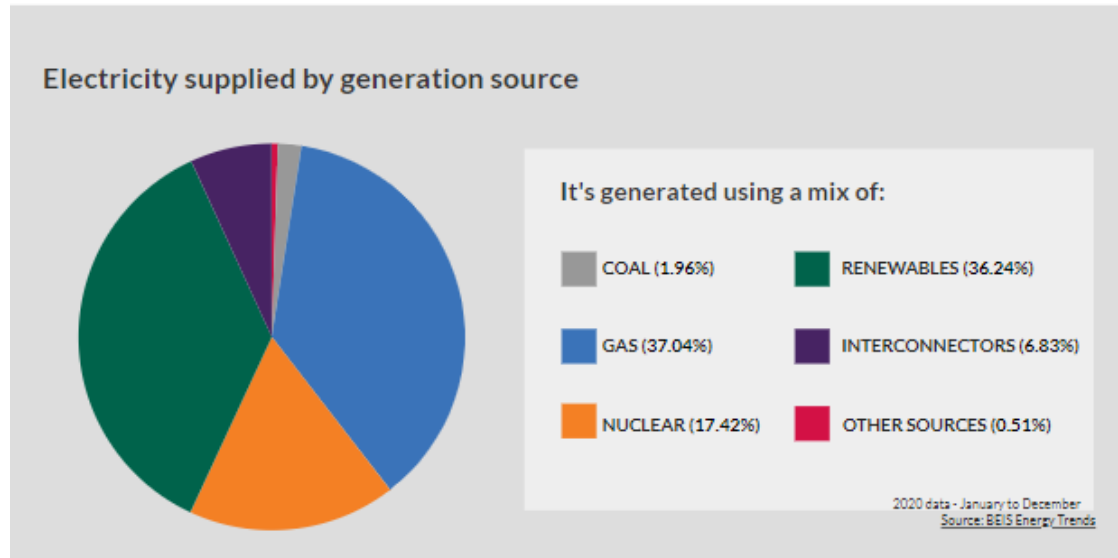


Source: Ofgem

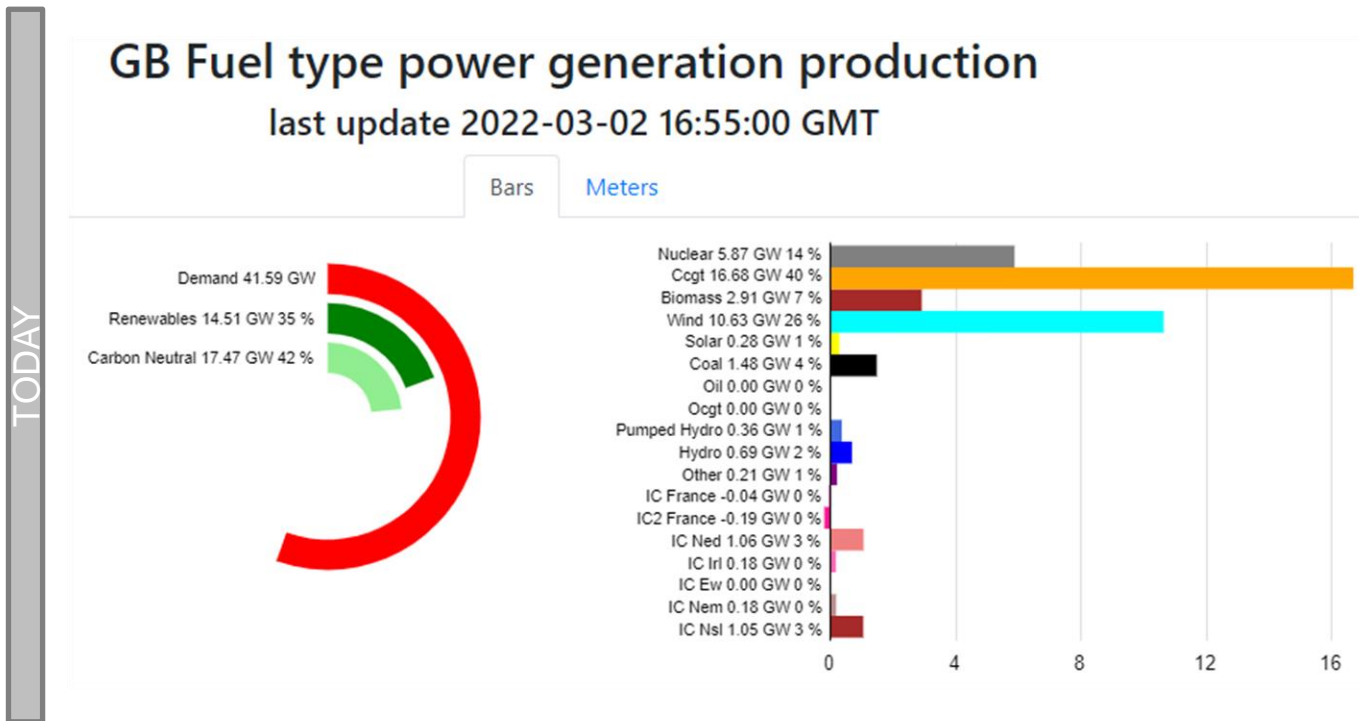
BBC

Electricity Supply

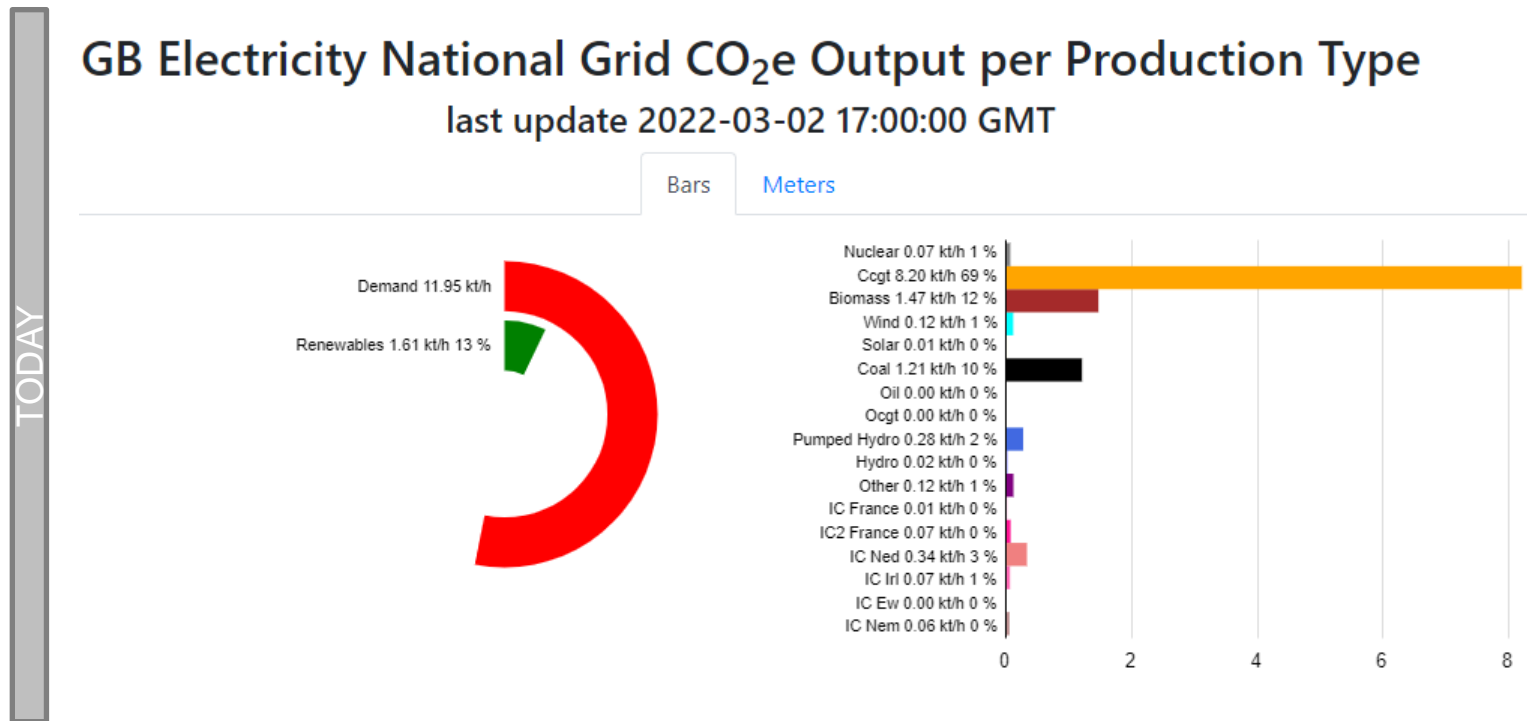
What supplies Britain's electricity?



National Grid Electricity by Source, and CO₂ emitted



National Grid Electricity by Source, and CO₂ emitted



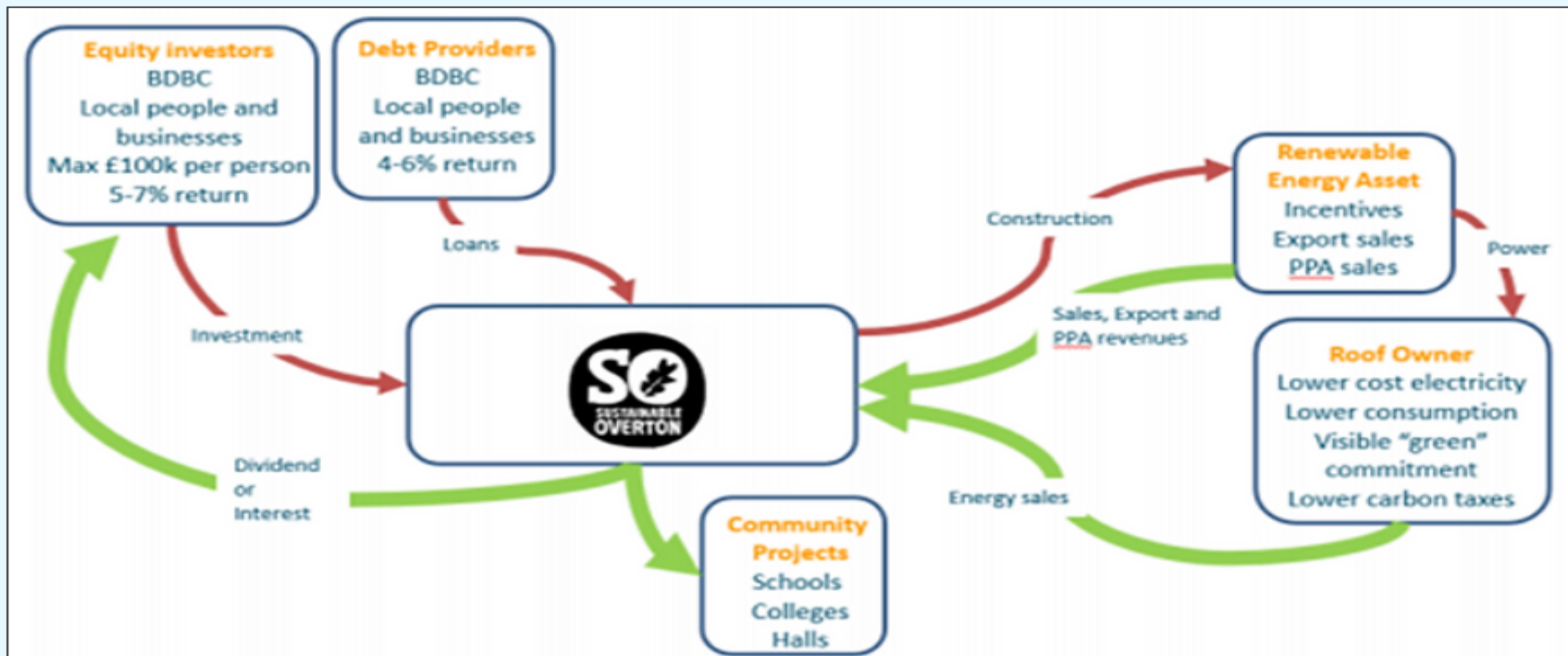
How can I protect my business from being impacted by the current fuel crisis?

- Fuels: Switch fuels – is switching from gas to electricity an option that is cost effective and greener/cleaner?
- Electricity: Switch electricity suppliers who can provide a greener/cleaner portfolio
- Direct supply: Go for renewables – solar pv direct supply
- Community hub?

How can I protect my business from the current situation?

- Costs:
 - Hedging contract?
 - Lower your demand when on higher tariffs? Allow the supplier to lower your power supply (with notice) when in high demand to then return it when low cost. Could your business be flexible with supply?
 - Battery storage options?

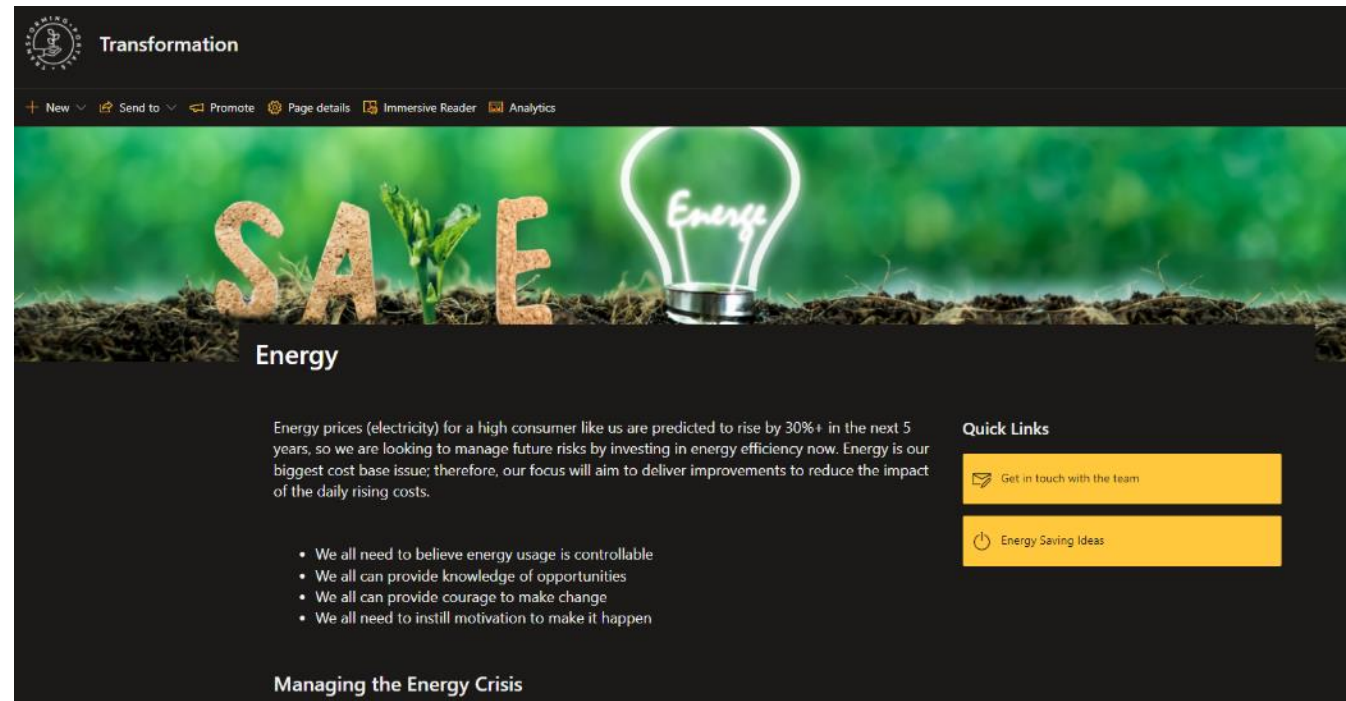
HOW COMMUNITY ENERGY CAN WORK FOR SUSTAINABLE OVERTON



With thanks to Martin Heath from Basingstoke Energy Services for providing this diagram.

How do we communicate and engage people to do more, do better?

- A hub with links to news items on what we are doing
- A suggestion scheme
- A place to go to find out more – links with the community, sector, region?



What keeps you up at night?



- Resources:

www.ofgem.gov.uk

[Energy trends - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

www.gridwatch.co.uk

[Sustainability | Sustainable Overton | Climate Change](#)

[Home - Portals \(portalsinternational.com\)](http://portalsinternational.com)

Thank you for your time

Questions?



LoCASE

The **L**ow **C**arbon **A**cross the **S**outh and
East programme

Alison Marsh & James Traynor
LoCASE Project Team

Introduction to LoCASE | 4 March 2022



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LOCASE
LOW CARBON ACROSS
THE SOUTH AND EAST

What this presentation contains

- What is LoCASE?
- Who's delivering it?
- How does it support SMEs?
- What does it fund?
- Who's eligible for support?
- What does it look like (case studies)?
- How long will it last?
- How do I apply?

What is LoCASE?

- An EU-funded business support programme that **supports the shift toward a low carbon economy:**

**Stimulating
Demand**

**Supporting
Supply**

**Encouraging
Innovation**

- Adoption of low carbon solutions to improve energy efficiency
- Development of supply chains for low carbon goods and services
- Innovation and collaboration with knowledge partners/universities



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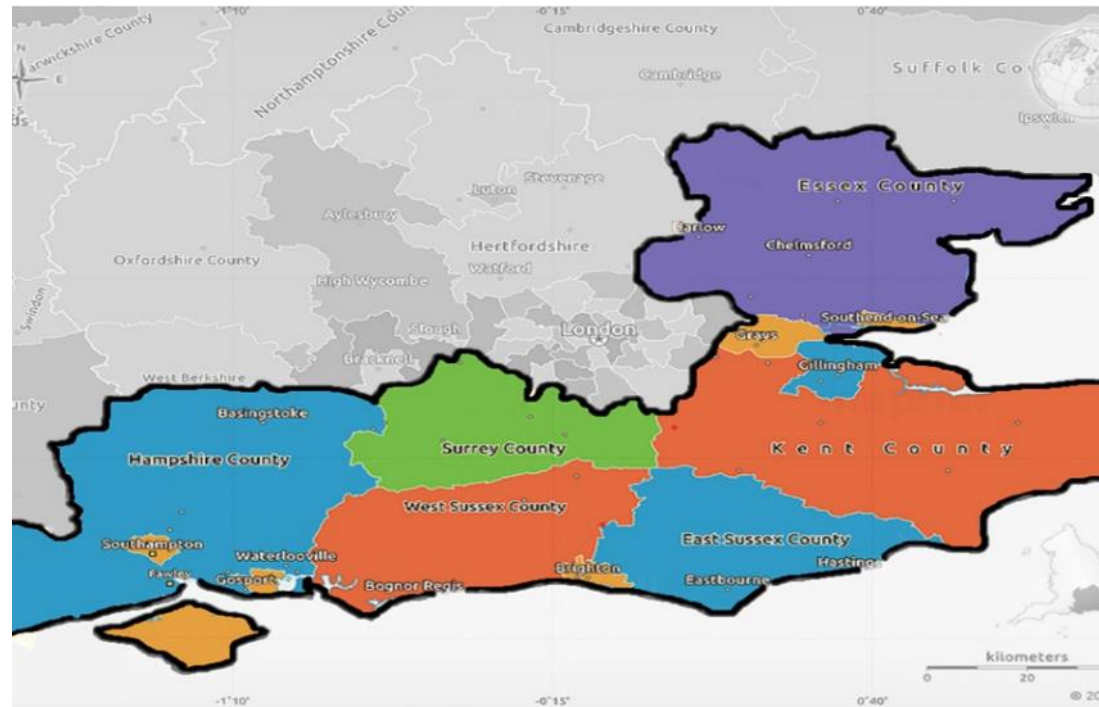
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LOCASE
LOW CARBON ACROSS
THE SOUTH AND EAST

Where does LoCASE cover?

LoCASE works in 4 Local Enterprise Partnership areas in the South and East.

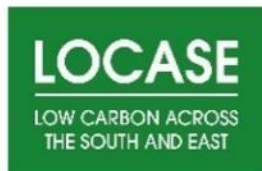
1. EM3
2. Solent
3. C2C
4. SELEP



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Who are LoCASE in Enterprise M3?



Kent County Council
Lead Partner – Accountable Body



Basingstoke & Deane Borough Council
Project Partner



Rushmoor Borough Council
Project Partner



Southampton City Council
Project Partner & Business Support Lead



Surrey County Council
Project Partner & Business Support Lead



Test Valley Borough Council
Project Partner



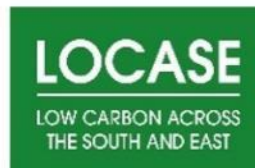
Winchester City Council
Project Partner



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Who are LoCASE in the Solent area?



Kent County Council
Lead Partner – Accountable Body



Isle of Wight Council
Project Partner



Portsmouth City Council
Project Partner



Southampton City Council
Project Partner & Business Support Lead



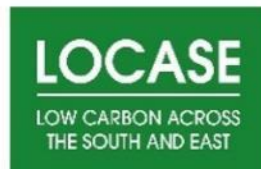
University of Portsmouth
Project Partner & Innovation Lead



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Who are LoCASE in the Coast to Capital area?



Kent County Council
Lead Partner – Accountable Body



Surrey County Council
Project Partner & Business Support Lead



University of Brighton
Project Partner & Business Support Lead



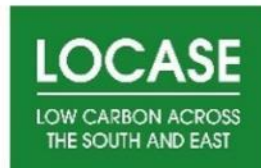
West Sussex Council
Project Partner



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Who are LoCASE in the SELEP area?



Kent County Council
Lead Partner – Accountable Body



East Sussex County Council
Project Partner



Essex County Council
Project Partner



Southend-on-Sea Borough Council
Project Partner



Thurrock Council
Project Partner



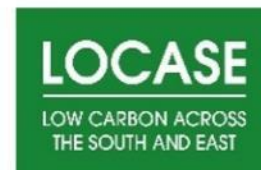
University of Brighton
Project Partner and Innovation Lead



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Types of Support

Financial support

- SME grants awarded at an intervention rate of **40%** (ERDF) and 60% (private sector)
- **£10,000** cap on grants (and minimum grant of **£1,000**)

Non-Financial support

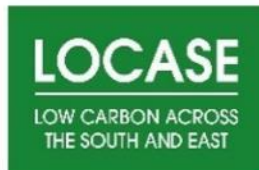
- Needs assessments/energy audits for SMEs
- Sector-based business engagement and networking events
- Access to training programmes - Steps To Environmental Management (STEM)
- 1:1 business support to develop the renewable sector



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What can LoCAsE fund?

Funding from LoCAsE (40% of eligible project costs) may be used to cover the following types of expenditure for SMEs:

- **Energy Efficiency Measures:** including energy efficient heating, lighting, insulation, refrigeration, investment in renewables, machinery upgrades.
- **Transport Efficiency:** including second-hand Ultra Low Emission Vehicles (ULEVs), sustainable travel planning and fleet management software.

For businesses offering low carbon/environmental goods and services:

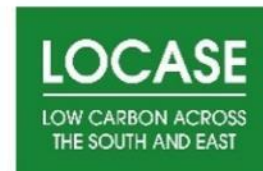
- **Development Costs:** including marketing, new IT hardware and systems, materials for R&D, website development, certification and accreditation.
- **Plant and Machinery:** re-tooling and installation of new or replacement machinery and hardware upgrades.
- **Consultancy Costs:** such as marketing and business planning consultancy



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Are you Eligible?

To be eligible for a grant, businesses must:

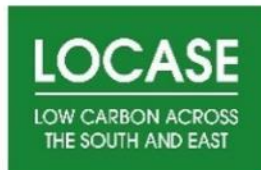
- Meet **SME criteria**: employ less than 250 people; annual turnover less than €50 million; balance sheet less than €43m.
- Spend the grant fully on a project taking place **within the LEP area**.
- Secure 60% of the costs of the project in cash from **private sector sources**.
- Not be engaged in a **restricted sector** (detail on next slide)
- Not exceed the *de minimis* **state aid limit** (€200,000 over three years) - or be in a position to exceed this once approved.



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Restricted sectors

The organisation must not be part of the following sectors:

- Fishery and aquaculture
- Primary production, processing and marketing of agricultural products
- Coal, steel and shipbuilding sectors
- Synthetic fibres sector
- Establishments providing generalised (school age) education
- Banking and insurance companies.

Example case studies



LED lighting: Thanet Indoor Bowls



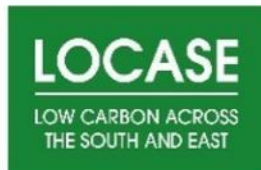
Solar-powered access system



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How long have we got?



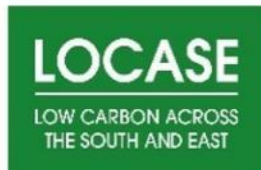
**The LoCASE programme runs until June 2023
ACT NOW AND BE PART OF IT!**



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The LoCASE Partnership

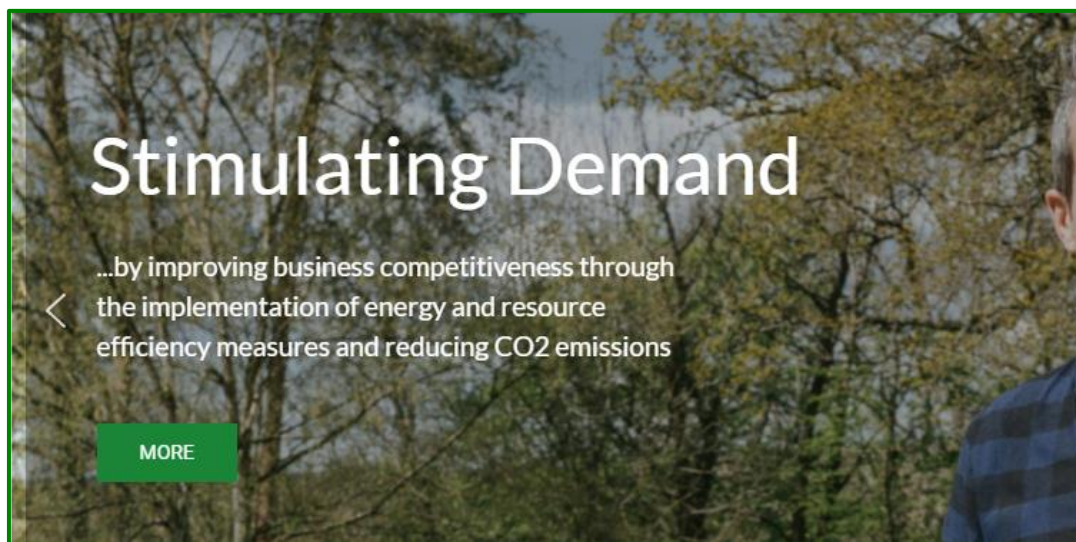
The Low Carbon Across the South and East Programme has been funded by the European Regional Development Fund 2014-20.

**It is a partnership between the:
Kent County Council, Basingstoke & Deane Borough Council,
East Sussex County Council, Essex County Council,
Isle of Wight Council, Portsmouth City Council,
Rushmoor Borough Council, Southampton City Council,
Southend-on-Sea Borough Council, Surrey County Council,
Test Valley Borough Council, Thurrock Council,
the University of Brighton, the University of Portsmouth,
West Sussex County Council, and Winchester City Council.**

If you want to learn more...

Visit the Low Carbon Across the South and East website:

www.locase.co.uk



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LOCASE

LOW CARBON ACROSS
THE SOUTH AND EAST

Q&As Session

www.locase.co.uk



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