

# COVENTRY & WARWICKSHIRE GREEN BUSINESS PROGRAMME



**European Union**

European Regional  
Development Fund

## Denise Osborne Green Business Programme

024 7683 2040 [www.coventry.gov.uk/greenbusiness](http://www.coventry.gov.uk/greenbusiness)

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## What is it?

- A support funded programme for SMEs and organisations in Coventry and Warwickshire to help business become more energy/resource efficient and make the most low carbon opportunities

## Who?

- All small to medium size businesses (SMEs) in Coventry and Warwickshire
  - Employ fewer than 250 employees
  - Have an annual turnover of not exceeding €50 million and/or an annual balance sheet not exceeding €43million
  - Have at least 50% of sales through business to business

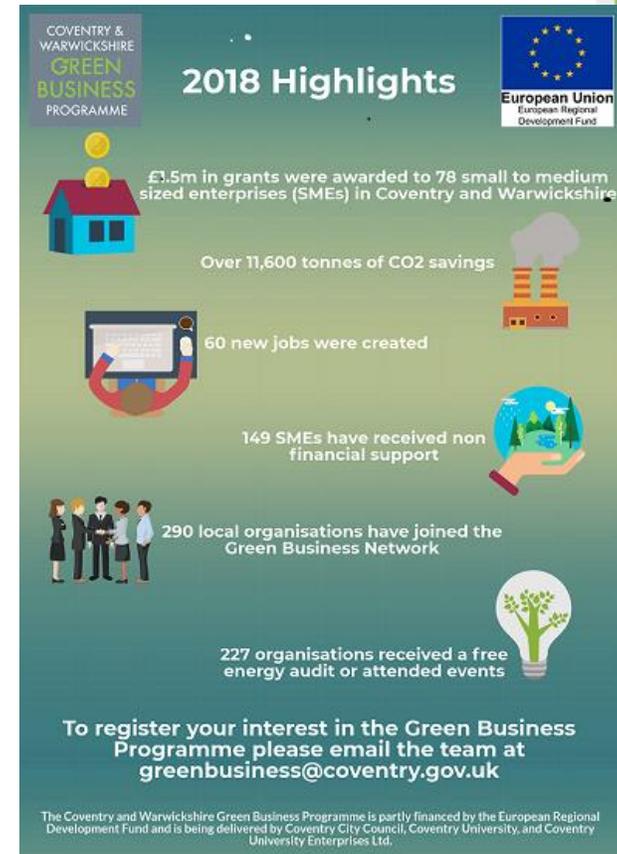


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## Highlights of Phase 1 Programme (2016-2018)

- £1.5m in grants were awarded to 73 small to medium sized enterprises (SMEs)
- There have been over 11,600 tonnes of CO2 savings
- 60 new jobs were created
- 88 SMEs received non financial support
- 300 local organisations joined the Green Business Network



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## Green Business Programme (2019-2021)

- Energy and resource efficiency grants - £1k-£50k (with 40% intervention)
- Free energy and resource efficiency audits to help identify energy, water and waste savings
- Continued free membership to the Green Business Network with new benefits
- Access to other specialist support to enable growth and innovation
- Free events, workshops and 1:1 support



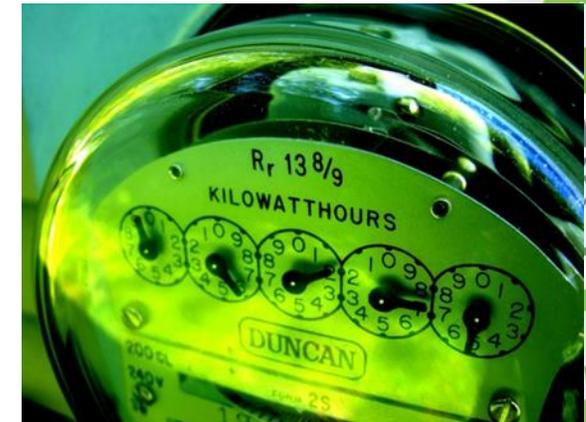
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## Energy/Resource Efficiency Audits

Identify potential energy/resource efficiency measures

- Audit looks at: Building fabric, energy bills, heating, lighting, equipment, process, water, waste, behavioural
- Includes estimated capital costs, energy savings & payback periods – used to provide a business case
- Energy/resource efficiency report



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- Energy/resource efficiency grants
  - Capital grants to improve energy/resource efficiency (Min £1K up to £50k)
  - Grants of 40%
  - Must save approx. 5 tonnes+ of CO<sub>2</sub> per year.
- What can be supported?
  - Measures that save carbon
  - Typical measures include lighting - LED, heating, energy efficient equipment, transformers, power factor correction, renewable technologies, ventilation, refrigeration, recycling and waste - compactors, balers and crushers
- Eligibility:
  - >50% B2B
  - Match funding can't be via another public sector grant etc.



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## Sarginsons

### Aluminium Diecasting

- Were spending £370,000 per annum electricity and gas
- £26,000 energy efficiency grant
  - 2 recuperation gas furnaces
  - Variable speed air compressors and drying equipment
  - LED lighting throughout
  - Power Factor Correction
- Payback – 1.5 year
- 335 Tonnes CO2 saving/ annum
- Saving £50k per annum in energy bills



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## Green Business Network

Membership is free and offers a range of benefits:

- Events and workshops
- Monthly newsletter – news, events new legislation, case studies
- Membership certificate
- Expert advice
- Enhance green credentials to secure new business
- Networking and supply chain opportunities (Inclusion in Green Business Directory)
- Currently have 760 other organisations you can network with

COVENTRY &  
WARWICKSHIRE  
GREEN  
BUSINESS  
NETWORK



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## ➤ Coventry's Climate Change Strategy

- UK Government announced its net-zero commitment by 2050
- Coventry's current strategy published in 2012 set a target to reduce carbon dioxide emissions by 27.5% by the year 2020. Coventry achieved this in 2014 (6 years early)
- Now working on our new Climate Change Strategy for Coventry



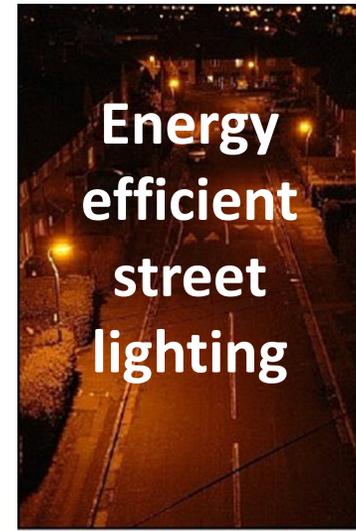
# Reducing our emissions across the City



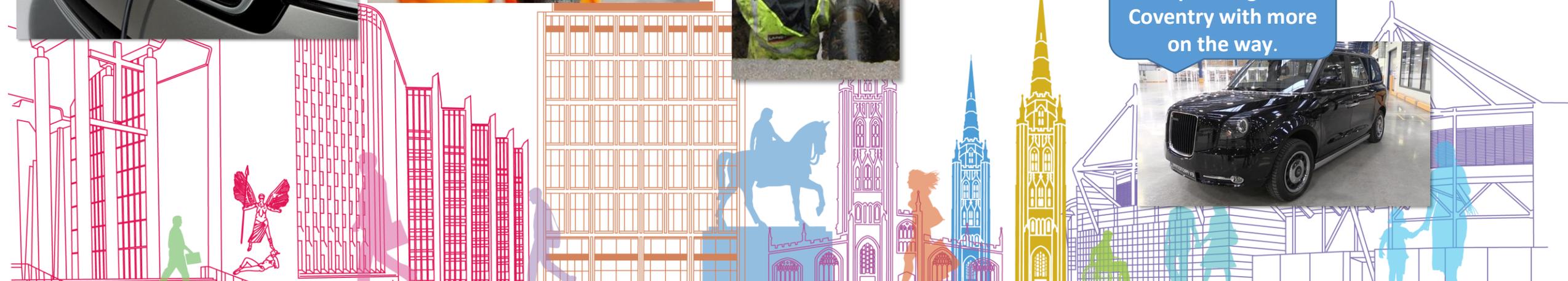
143 EV charge points have been installed with more planned.



Heatline – energy shipped from waste plant via 6.6km pipelines to major City Centre buildings.



11 electric taxis operating in Coventry with more on the way.



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## Green Business Programme

### Contact us

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Website: [www.coventry.gov.uk/greenbusiness](http://www.coventry.gov.uk/greenbusiness)

Twitter: [@cwgreenbusiness](https://twitter.com/cwgreenbusiness)

Join our LinkedIn group

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## Low Carbon Innovation Grants

Support development of Low Carbon and Energy efficient products and services

GRANT FUNDING – 40% Funded	
Revenue (£10K)	Capital (£20K)
IP Protection	Manufacturing Equipment
Prototypes	Test Equipment
Accreditations	Development Equipment
Energy Efficient Processes	

### SECTORS SUPPORTED

Low Carbon transport



Low Carbon heat & electricity



Waste to Energy, processing and recycling



Energy efficient and sustainable products, buildings and materials



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## Low Carbon Innovation Grants: Case Studies

### Low Carbon Heat & Electricity

#### NDE Clarke Pitchline Ltd

- £20K Grant to purchase of specialist gear grinding CNC machine
- Supports manufacture and refurbishment of wind turbine and hydroelectric gearings
- Enables SME to diversify into higher added value renewable energy sector



### Low Carbon Transport

#### Microcab Industries Ltd

- £10K Grant to support development of hydrogen fuel cell vehicle
- Prototype design, tooling and manufacture
- Enabled SME to develop prototype to address European market (left hand drive)



### Waste Processing & Recycling

#### Bush Haulage

- £20K Grant supported purchase of equipment to launch new recycling service
- New service to recycle hard-core material from demolition sites
- Large reduction in GHG through recycling of concrete based materials



### Sustainable Buildings

#### Just Solutions

- £9K Grant to support development of sustainable modular housing
- Protection of IP (Design Rights)
- BOPAS Accreditation and Lloyds Register
- First models delivered and installed



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## Research Collaborations

- Development of Research Clusters with CU Academics
- Supporting SMEs interested in developing Innovative and low carbon initiatives
  - Support SMEs to deliver energy efficient building refurbishments
  - Support SMEs to bring to market innovative products, processes or services
  - Support collaboration between SMEs, supply chain and other key stakeholders
- Research Clusters will conduct research and build collaborative networks with SMEs
- Will deliver energy efficient technique and processes with Academic expertise and knowledge

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- Will be focused on selected and specific areas
- Expertise from the Built and Natural Environment at Coventry University used in the Research Clusters
- Areas of interest:
  - **Digital Construction x 2**
    - **BIM and digital construction Fundamentals**
    - **Advanced processes on digital construction and BIM**
  - **Achieving Long Term Sustainable Development Goals**
  - **Construction Materials – Concrete and Cementitious Materials**
  - Circular Economy and Material Efficiency
  - Indoor Environmental Quality and Climate Change Impact
  - Energy Efficient Buildings and Construction
  - **Waste Heat Integration**
  - Ground Stabilization
  - Sustainable Drainage

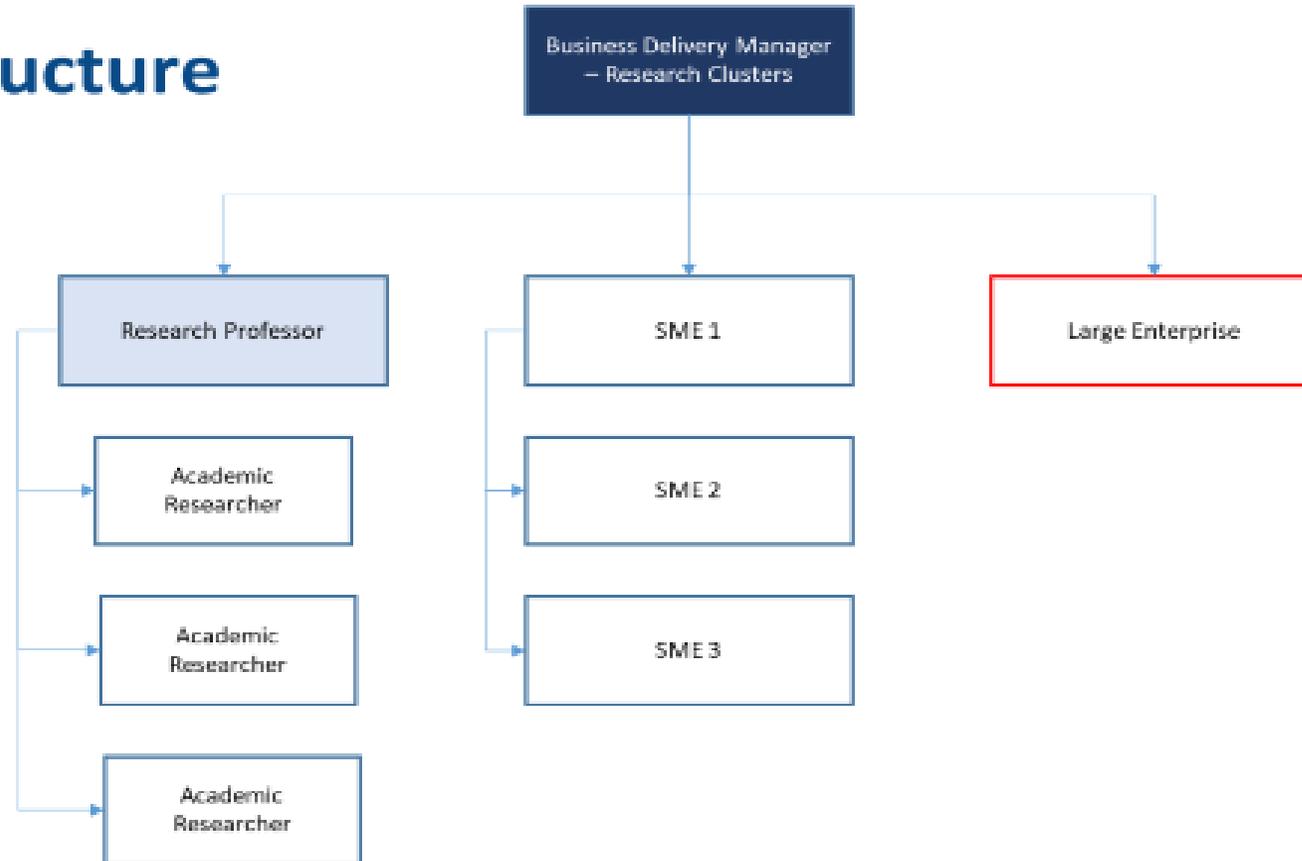
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## Research Clusters Structure



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## Digital Construction Cluster Example

### Objectives of the Collaboration

The objective of the project is to understand SME requirements and support the implementation of BIM and Digital Construction Technologies from a base level for business and financial models. Aims include:

1. Investigate the challenges and business opportunities relating to Digital Technologies for SMEs in Coventry and Warwickshire
2. Design and deliver round table discussions and seminar series on digital construction standard and policies
3. Design and deliver roundtable discussions and seminars on digital technologies and tools for building life cycle management;
4. Identify and disseminate local, national and international innovation funding for SME
5. Support SMEs in the development and implementation of business and financial models relating to Digital Construction technologies

### Outputs from the Collaboration

The main output of the project aims to develop the BIM implementation for SMEs with their current workflows and optimising their current processes in terms of information management.

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## Digital Construction Cluster Example

Deliverable	Responsible	Deadline
SME support requirements on BIM and Digital Construction and Technologies	CU/SME	Month 1
Roundtable discussion/seminars series based on Digital Construction Standards and Policies	CU/SME	Month 3
Organise seminar series of Digital technologies and tools for Life of Cycle Management of buildings	CU	Month 6
Support SMEs to develop business and financial models for BIM implementation and application of Digital Construction Technologies	SME/CU	Month 9
Providing guidance on sources and process of applying for further development funding local, national and international funding	CUE/CU	Month 12

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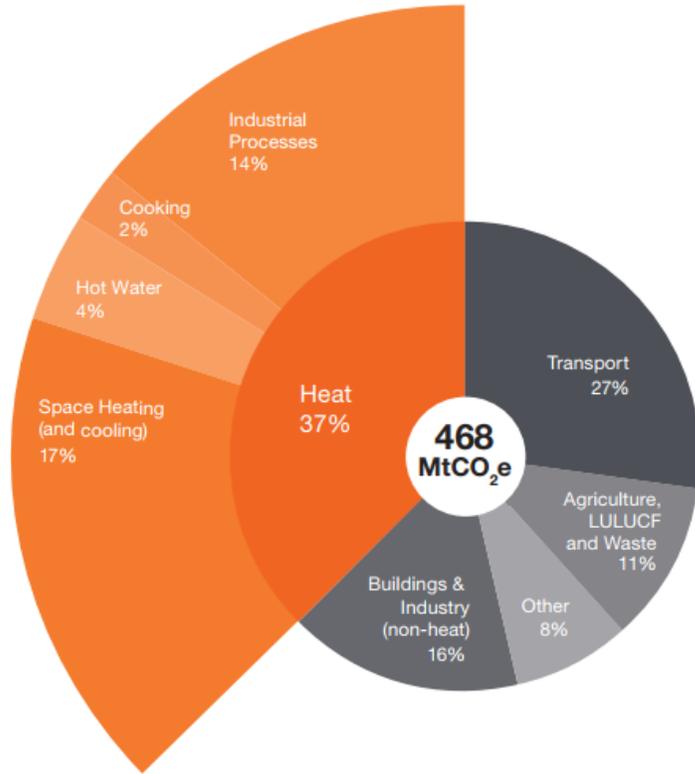
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# Heat and Future Energy Opportunities for the City

Dr Lowell Lewis

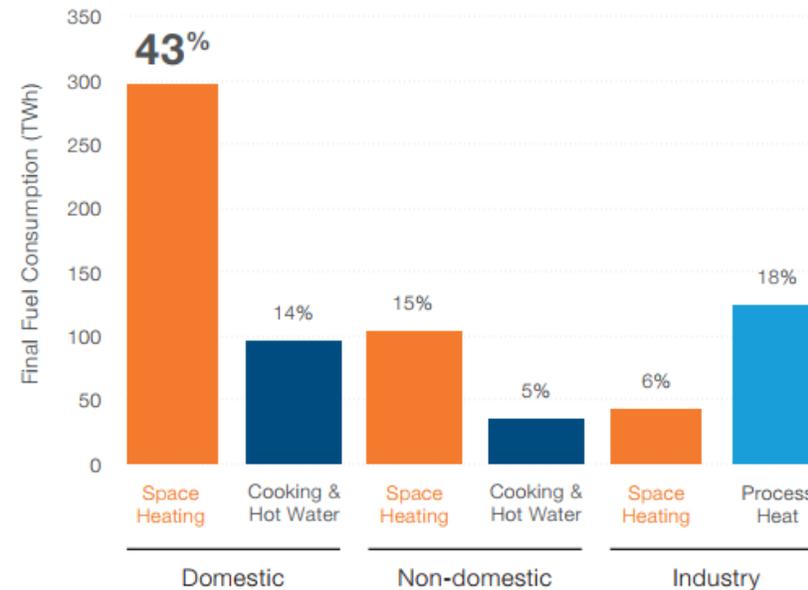
SHEQ Manager, Coventry City Council

# The Heat Decarbonisation Challenge



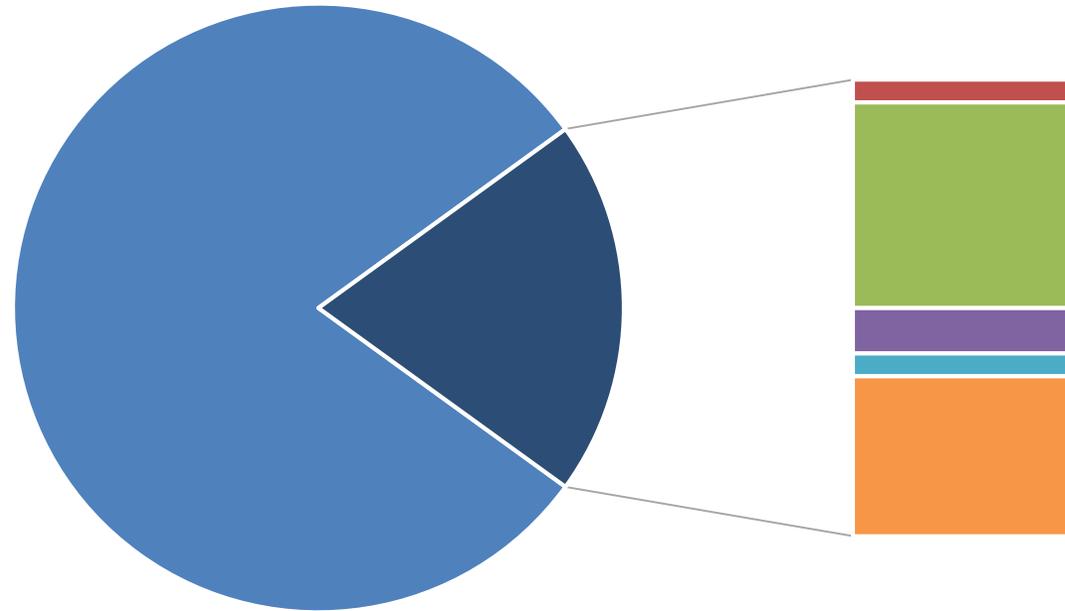
UK Emissions in 2016 by Sector  
Clean Growth – Transforming Heating 2018

Heat demand is the largest single source of UK emissions



# The Heat Decarbonisation Challenge

Natural Gas is the dominant source of heat

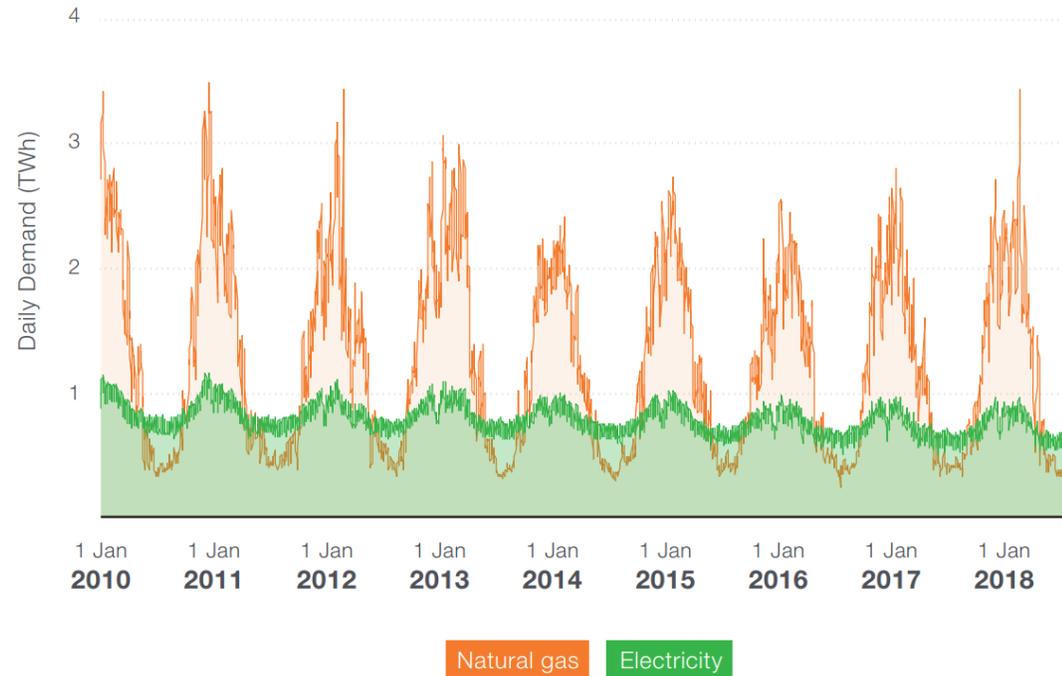


■ Natural Gas ■ Coal ■ Oil Products ■ Biofuels & Waste ■ District Heating ■ Electricity

## UK Heat Fuel Sources

Clean Growth – Transforming Heating 2018

# The Heat Decarbonisation Challenge



Heat demand is extremely variable

UK Fuel Demand Profile  
Clean Growth – Transforming Heating 2018

# Low Carbon Heating – Coventry's Transition



Energy From Waste plant  
supplied heat to Peugeot  
factory from 1980s to 2006

# The Launch of Heatline



- Plan to bring low carbon heat to the city centre
- Scheme approved in 2012
- System went live in 2015

# The Heatline Network Today



# The Heat Line Network Today

- 8,349 MWh of Heat Delivered in 2018
- 1,172 tCO<sub>2</sub>e of carbon emissions saved in 2018
- Up to 89% reduction compared to Natural Gas alternative



# The Future of Heatline

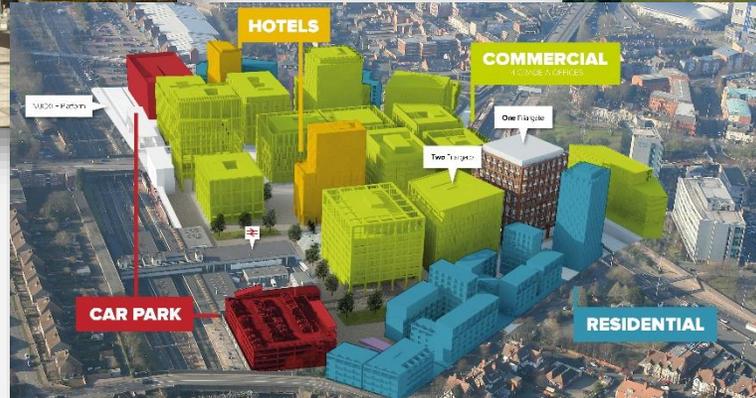
- 77MW of total plant thermal capacity
- Potential savings of up to 25,000 tCO<sub>2</sub>e/yr at full capacity



City Centre South

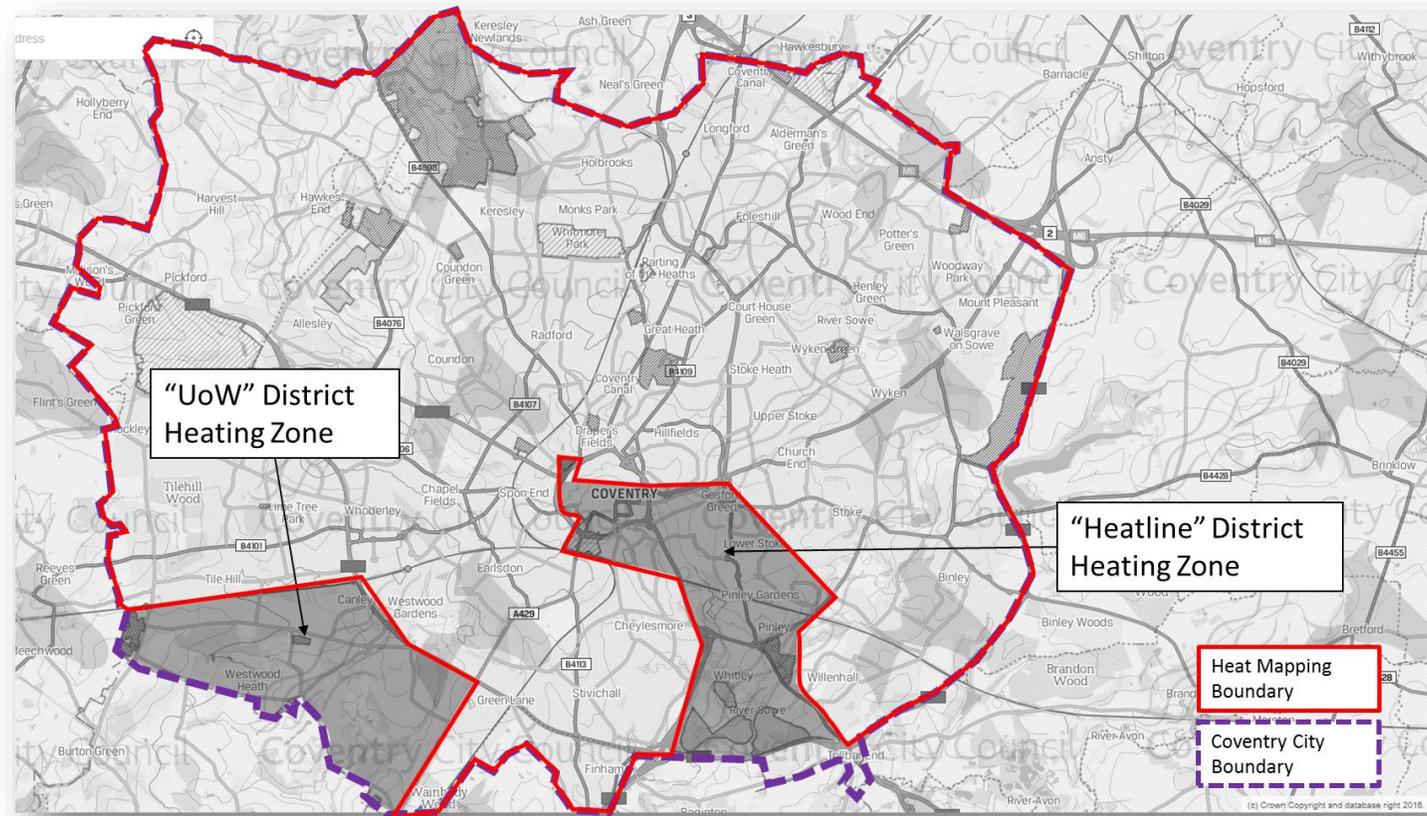


Whitley South



Friargate

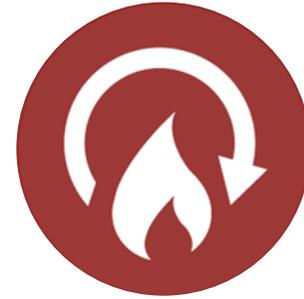
# Coventry's Transition - Beyond Heatline



# Renewable Heat Opportunities



**Green Gas & Hydrogen**



**Industrial Heat Recovery**



**Sewer Heat Reclaim**



**Electrical Smart Grid Reinforcement**



**Mine Water Heat Reclaim & Storage**

# The Role of the Local Authority



- Business Support
  - Green Business Programme
- Innovation Support
  - Energy Innovation Zone
- Networking Facilitation
  - Green Business Network
- Climate Strategy and Master Planning

# Thank You

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**Green Initiatives for Business**  
**Future Energy Platforms 29th October 2019**



# Green Initiatives for Business

- Solar PV
- Energy Storage – Batteries
- EV Charging

# Solar PV

## Requirements for Solar:

- Unshaded clear roof
- Ground location
- High daytime energy user
- Desire to reduce energy consumption

# Green Initiatives for Business

## Case Study – Solar PV 22.08kWp

- Client used circa 60,000kWh of energy per annum
- Similar daily energy profile
- Large unshaded flat roof
- [Live system](#)

### Results

- High self-consumption of Solar – 79%
- 35% reduction in energy bill YTD 2019



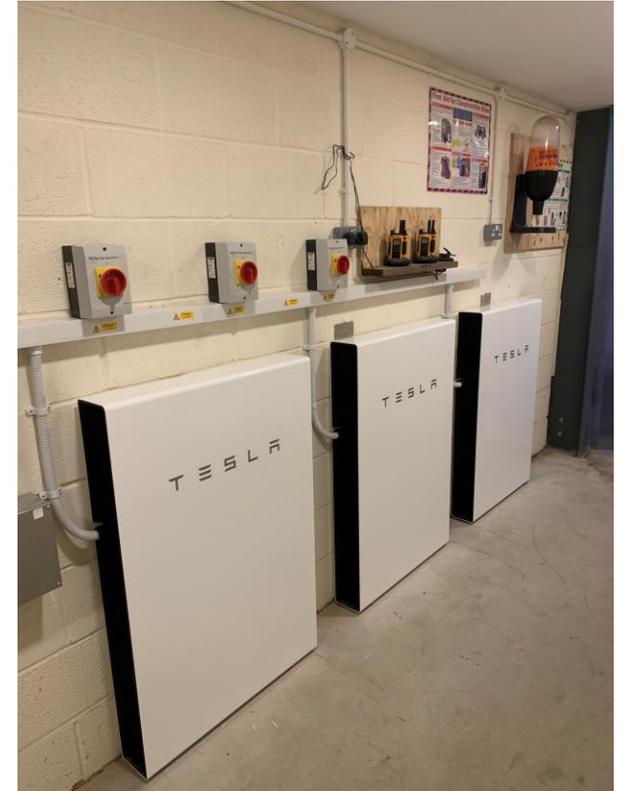
# Green Initiatives for Business

## Case Study – 49.70kWp Solar PV & 40.5kWh Energy Storage

- Client used circa 60,000kWh of energy per annum
- Constantly changing daily energy profile
- Large unshaded roof
- [Live system](#)

### Results

- High self-consumption of Solar – 68%
- 74% reduction in energy bill YTD 2019



# Green Initiatives for Business

## Workplace Electric Vehicle Charging – Calor Gas HQ, Warwick

- 6 x 7kW Smart EV Charging
- Fully monitored
- Load managed
- £500 per socket grant - £3,000
- Upto Maximum grant of £10,000



# Green Initiatives for Business

## EV Charging for Coventry Businesses with Plug in Coventry Initiative

- Coventry City Council initiative with EO Charging
- Dedicated website
- Stratford Energy Solutions installation partner
- Make use of workplace charging grants
- Funded option with chargers from £1.99 per day



# Green Initiatives for Business

## EV Charging for Coventry City Council Case Study

- 18 x EV Chargers Salt Lane Car Park
- Tap & Go Charging with
- App Based & contactless payments



# Green Initiatives for Business

## What we offer

- Locally based to serve Coventry & Warwickshire
- MCS accredited installers
- Fully EV trained & employed engineers
- NICEIC Approved Electrical Contractor
- OLEV Accredited for HomeCharge & WorkPlace Grants
- Over 5 years of EV Charging & 10 years of Solar experience

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# Thank you.

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