Coventry's Solar Future

In association with the University of Warwick and Coventry University Students

The Headlines

The UK energy crisis is 'Wake up call' to accelerate switch to renewables

Study finds huge global potential for energy from rooftop solar panels

Farmers swap crops for energy as east of England solar farm proposals double

UK to offer £265m in subsidies for renewable energy developers

Ministers prepare for worst in gas price crisis - BBC

Will the pandemic trigger a boom in rooftop solar?

'The potential for solar is huge'

Guardian

Could Coventry be UK's first Solar city?

Most new wind and solar projects will be cheaper than coal, report finds – Guardian.

UK to offer £265m in subsidies for renewable energy developers

Brace for more energy price hikes in the spring - BBC

Benefits of Solar PV

Environmental

- Reduces CO_2 emissions and contributes to limiting global warming to 1.5°C
- Contributes to reducing UK emissions by 78% by 2035 and reach net zero by 2050
- Reduces local atmospheric pollution

Economic

- Reducing component costs
- Increased self-sufficiency
- Reduced long term costs for national electricity supply

Social

- Creates local installation and maintenance jobs
- Improved health outcomes
- Greater public and commercial awareness

Our Approach

1. Phased Review

Focus on dual use infrastructure: avoids open land with competing demands from housing, agriculture etc.

- Rooftop space
- Car parks
- Coventry Canal

2. Mapping

Model installations on clusters of sites using online tools to generate individual estimates for energy generation and system costs. Develop proposals breaking down potential environmental benefits and returns on investment.

3. Engagement

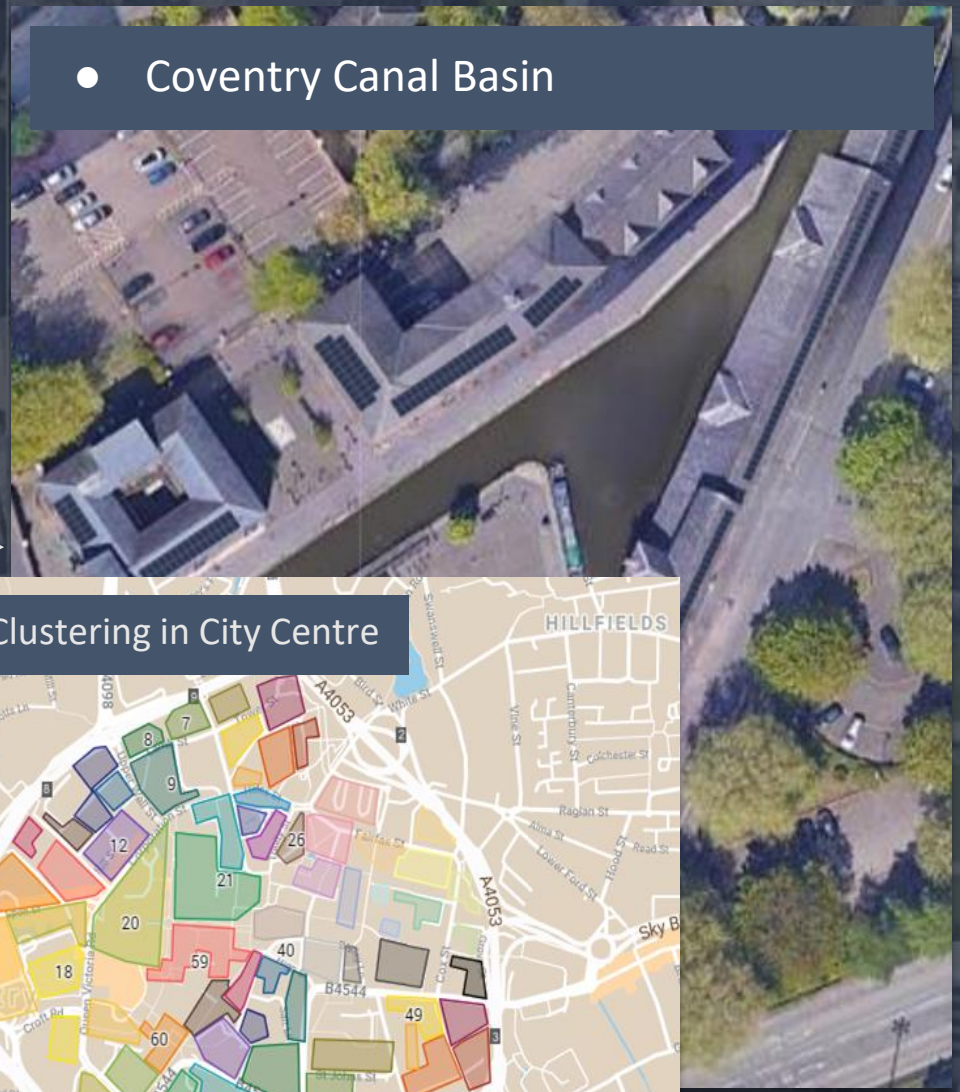
Macro: Showcase the potential for solar energy across Coventry and Warwickshire

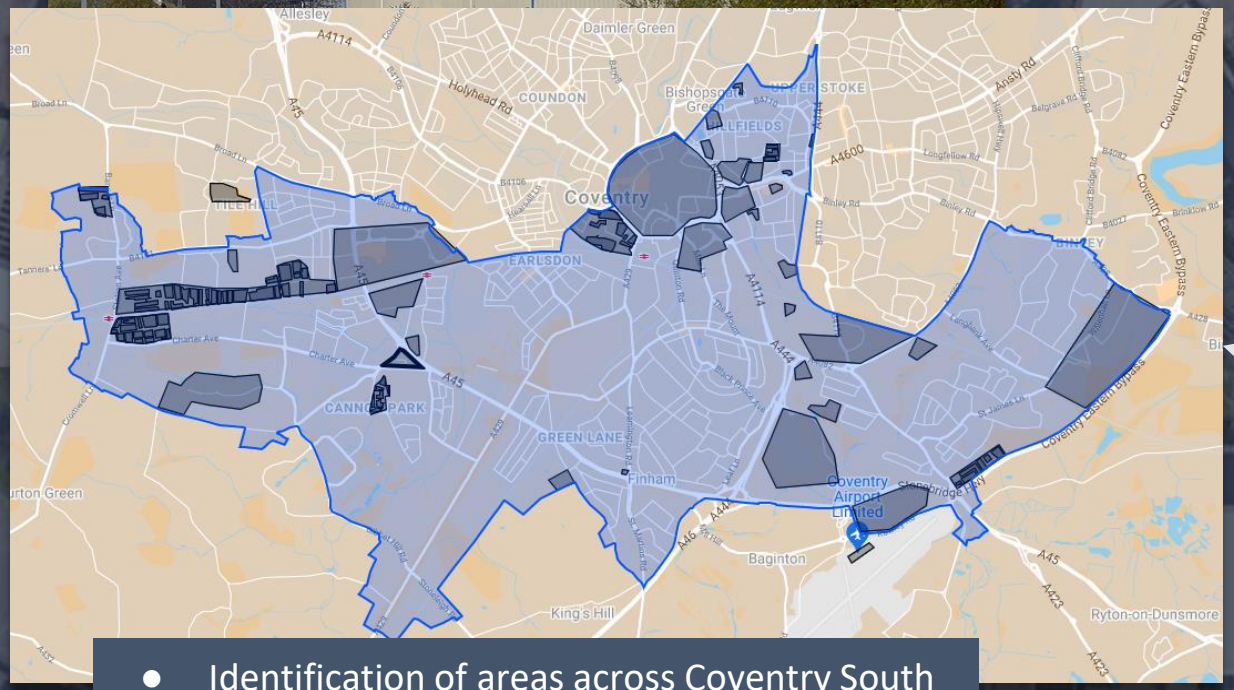
Individual: Engage with stakeholders to develop proposals and facilitate group buying schemes, reducing costs through economies of scale and improve efficiency through consumption at point of generation

Mapping

- Initial designs for Coventry Canal

- Coventry Canal Basin

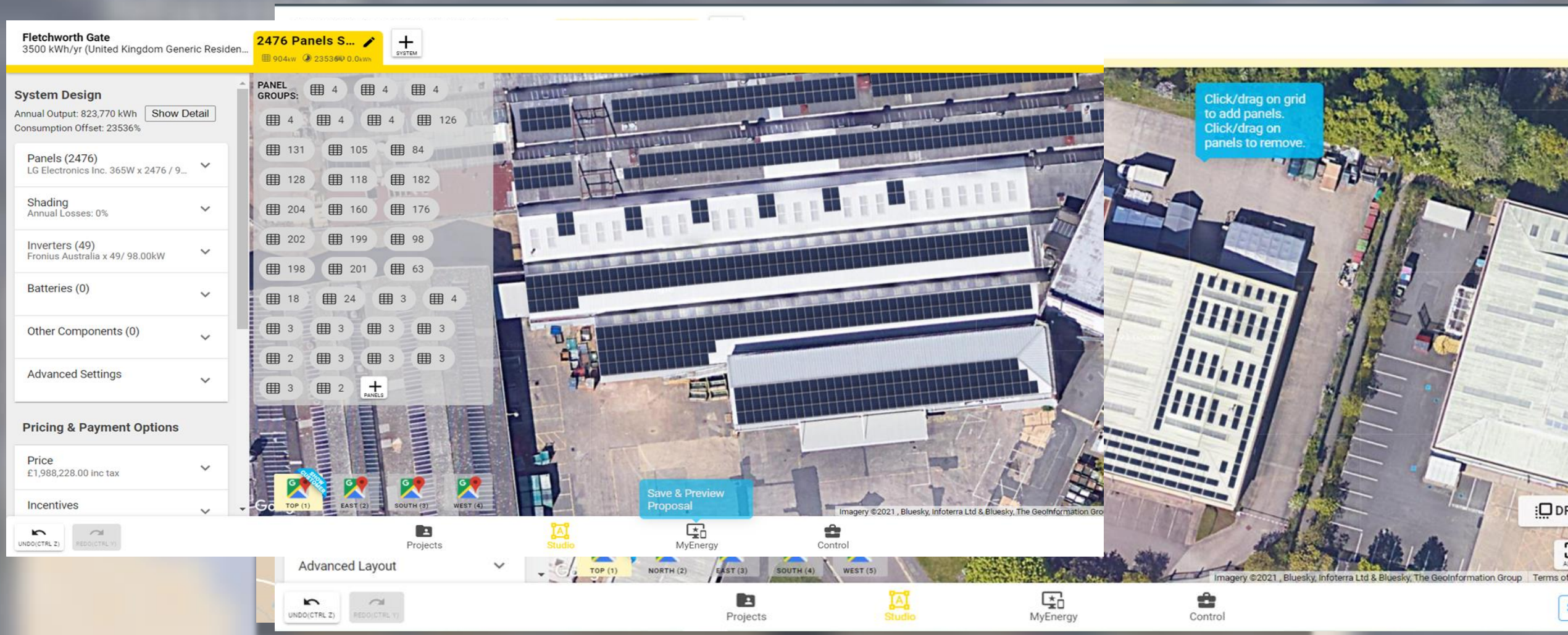




- Identification of areas across Coventry South

- Clustering in City Centre

Mapping Coventry South

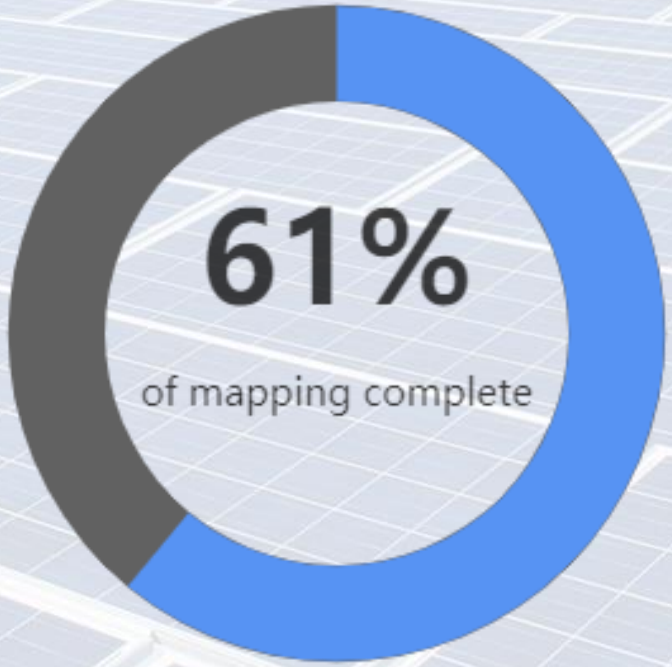


Findings: What is Coventry's Solar Potential?

259 sites

Currently mapped across a **3.9km²** area

- 218 rooftop clusters
- 17 canal installations
- 24 car parks



93,200 MWh/year

Total estimated annual output for all sites

Including 67,000 MWh/year in Coventry South with concentrations around the city centre and industrial estates near Canley

Further **2.4km²** identified to map across Coventry South

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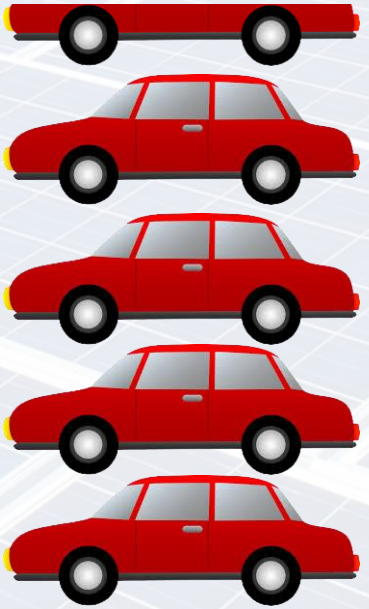
Annual CO_2e averted **44,700** tons

Equal to taking **45,131** cars off the road



Annual electricity supplies **29,200** households

Findings: What is Coventry's Solar Potential?

£663 million

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£21 million

93,200 MWh/year

Total estimated annual output for all sites

Including 67,000 MWh/year in Coventry South with concentrations around the city centre and industrial estates near Canley

Estimated utility bill savings in first year

Estimated savings over system lifetime

Estimated 30 year system lifetime

Next Steps..

- Complete the mapping of Coventry South.
- Demonstrate the capacity and opportunity for significant increase in Photovoltaic generation in Coventry to a wider audience.
- Engage with new stakeholders, building upon the work we've already done to implement our vision across Coventry.
- Produce proposal documents which can be customised for individual owners or clusters of companies or ESCOs, demonstrating the business case of environmental benefits of a solar PV.

The Future for Coventry?

So far, we've mapped over 288,000 panels across hundreds of buildings in Coventry.

If all those panels were arranged in a single flat array, it would be 912 metres wide and 545 metres long - nearly the size of Coventry city centre

Let's make Coventry the UK's first solar powered city!

Thank you!

Any Questions?

CLIMATE SOLUTIONS CHANGE

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