# GreenSCIES

**Location:** Islington, West Midlands and UK-wide
**Client:** InnovateUK-funded
**Dates of Involvement:** 2020 - 2022
**Project Partners:**

- London South Bank University
- Islington Council
- Transport for London
- E.ON
- Carbon Descent Projects
- Building Low Carbon Solutions
- Grid Edge
- Carbon Data Resources
- Repowering London
- Consortio
- Cullinan Studio
- Silver EMS
- Cenex
- Hangar 19
- West Midlands Combined Authority

*"GreenSCIES provides a brilliant opportunity to deliver low carbon energy in urban areas. This fantastic consortium will develop new systems and business models to provide fairer access to low cost and low carbon energy supply for local residents in inner cities – many of whom are fuel poor."* Graeme Maidment, London South Bank University

## Imagine if we could supply low cost, low carbon energy to everyone.

One way is to ensure buildings use less energy, and that the energy they do use is from renewable sources - to operate at net zero carbon. The uptake of renewables - not just to power buildings, but also for electric vehicles - is putting pressure on the energy grid, resulting in increased peak loads making the balancing of generation and demand more difficult.

GreenSCIES is an InnovateUK funded research project that when constructed will deliver low carbon heat, mobility and power to 33,000 residents and 70 local businesses in Islington. This community-based project will involve wide stakeholder engagement with local residents and businesses and with policy makers and replicators. We are helping to devise how this new technology can be integrated into our neighbourhoods through consultation with local people.

The smart energy grid works by sharing heating and cooling between buildings to ensure a balanced energy supply across the network. Waste heat is captured from secondary heat sources, including office buildings, data centres and the London Underground. The temperature of the waste heat is then raised or cooled using heat pumps, before being distributed to homes, businesses and communities all year round.

GreenSCIES will use artificial intelligence controls to connect flexible electricity demands from heat pumps and electric vehicles to intermittent renewable sources, including solar power – delivering clean, locally produced energy while reducing pollution and supporting a transition to low carbon transport.

GreenSCIES will help to reduce carbon emissions by an estimated 80% while addressing fuel poverty by providing a significant reduction on consumer bills, with a clear path for replication elsewhere in the UK.