



COP26 Policy Brief: Reduce, Reuse, Reunite: Creating Net-Zero Energy Communities

A unique project at the Trent Basin Housing Development in Nottingham makes the future of fully-fledged community energy bubbles a promising reality

KEY POLICY RECOMMENDATION:

Bring together stakeholders in the building ecosystem to increase investments in community energy bubbles towards a net-zero environment.

Background

Nearly 40% of global energy related CO2 emissions stem from the use or construction of buildings. Unsurprising, given the amount of time we spend in them; particularly during pandemics. In addition, the electrical infrastructure connecting our buildings is changing. Solar panels, heat pumps and electric cars are becoming more ubiquitous, and need to be integrated into our aging electricity network, if we want to meet our net-zero ambition by 2050.

Research at Nottingham

The [Trent Basin housing development](#) in Nottingham, UK is demonstrating how to solve energy issues in building in an innovative way. Instead of tackling challenges one house at a time, it is demonstrating how to solve them simultaneously for for whole neighbourhood 'energy bubbles', using three key principles:

- Reduce electricity consumption through informing and empowering residents with smart heating and access to a range of data on their individual power use. This saves one household about £20 a month on their electricity bill, and the overall setup incentivizes individuals to be environmentally responsible while fostering the creation of a community spirit.
- Reuse locally generated electricity, as this makes for a more efficient and capital-effective system. At Trent Basin, community-owned solar panels, battery storage and enabling infrastructure were installed at the construction stage, keeping the capital costs low.
- Reunite electricity markets and end users to keep a balance between demand and supply, through offering time-based pricing which is more cost-effective to the user, and profitable to the supplier.



Implications for Climate Change

The future of sustainable buildings is reliant on local communities coming together to make a change- and indeed, reliant on the global community to follow suit because buildings don't use energy; people do.

Further Reading

Read the [full research](#)

Read the [COP26 blog](#)

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