

Policy & Accountability Committee

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Solar energy and net zero in H&F

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July 2023



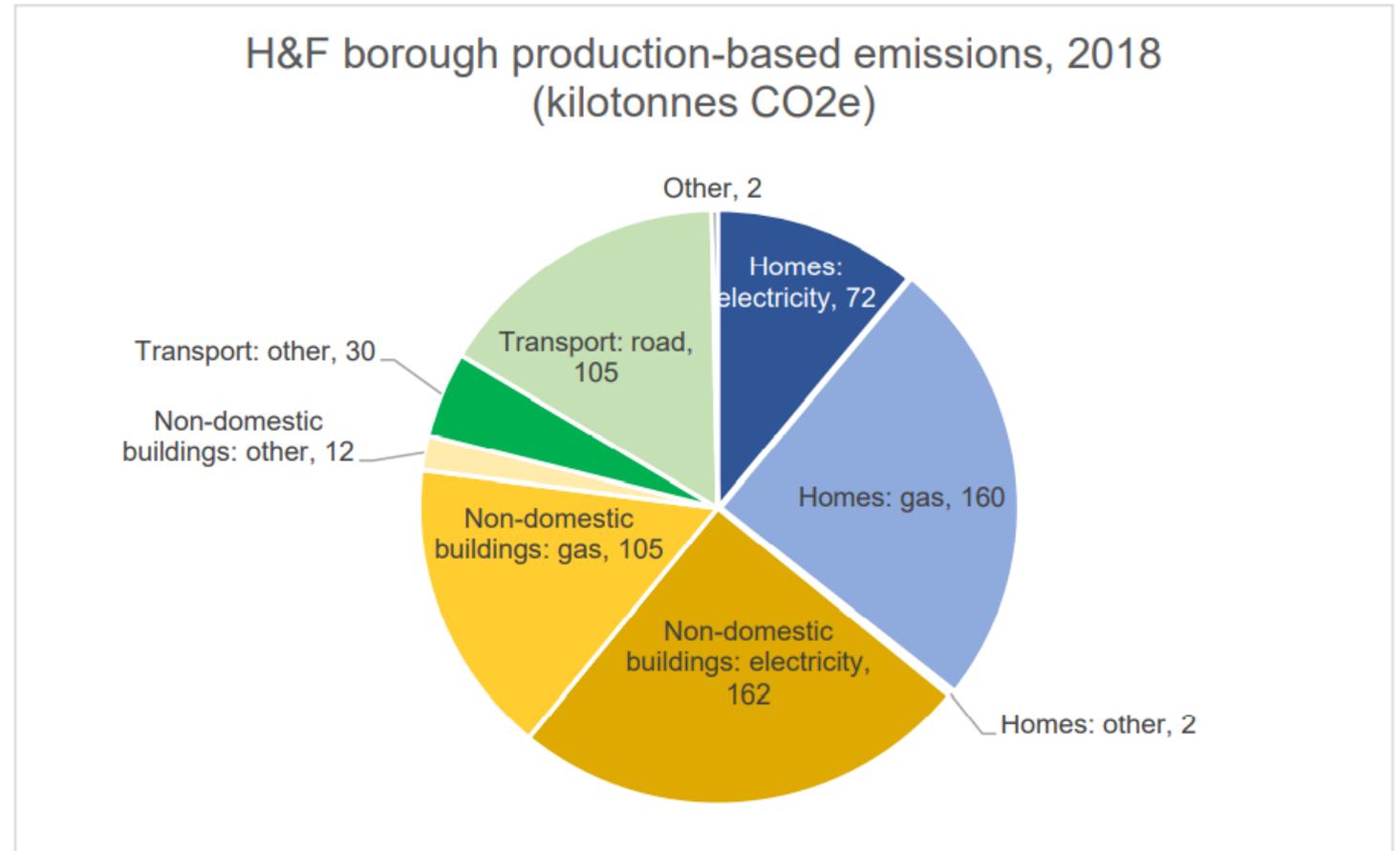
Image credit: Brian Thresh

Most emissions come from energy

About 80% of the borough's emissions comes from energy used in buildings. 90% of this is outside our direct control

Most businesses and households are on standard grid electricity tariffs

Most buildings are heated by gas boilers

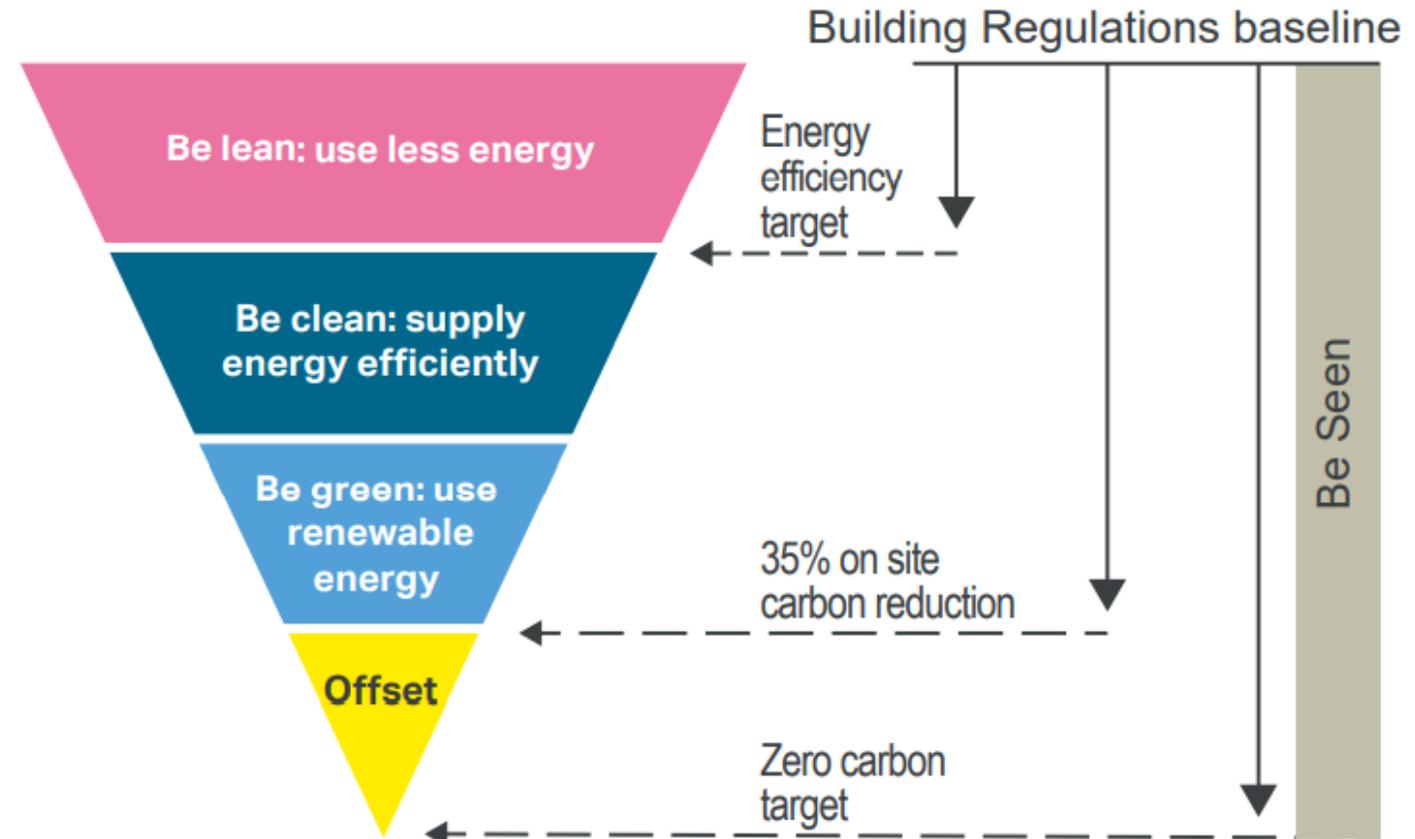


Net zero energy roadmap

Implement on H&F assets.

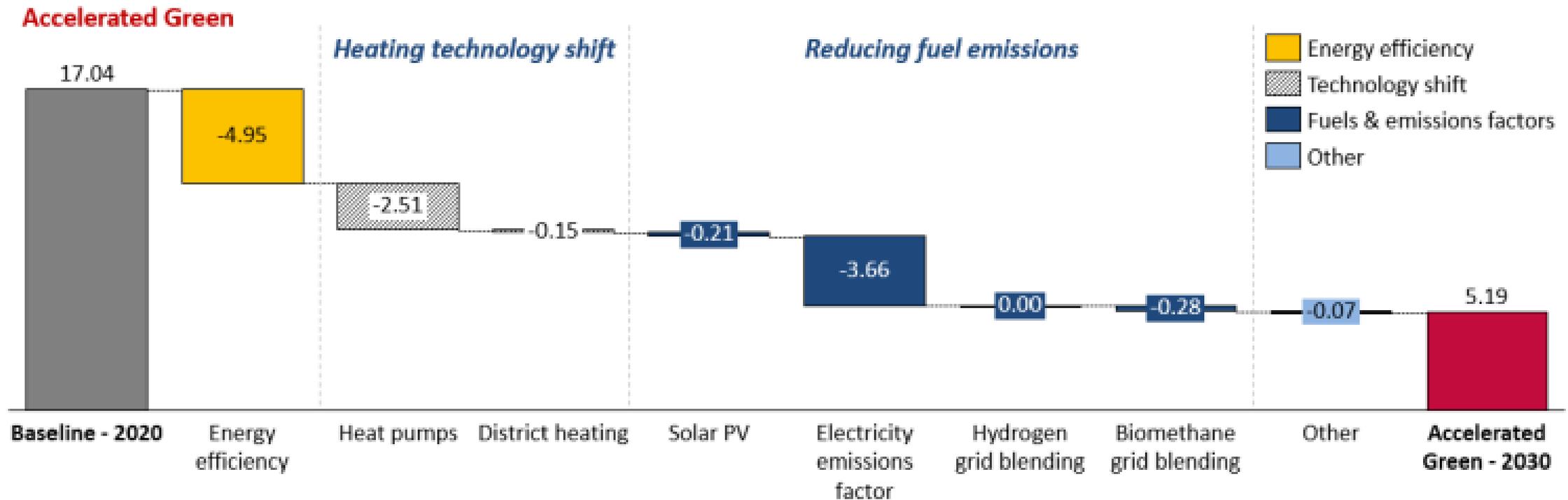
Catalyse and influence for wider borough.

- Retrofit of buildings – advice, grants, planning support
- Building-integrated renewables – households and businesses
- Deployment of heat pumps and heat networks
- Smart grid, EVs, energy storage
- Encourage residents to move to PPA backed renewable electricity tariffs (though fuel poverty)!



Source: Greater London Authority

Energy efficiency and heat are the biggest wins for net zero buildings



Source [nz2030_element_energy.pdf \(london.gov.uk\)](#)

Solar Photovoltaics (PV)

- Produce electricity - this is what people usually mean by 'solar energy'
- Different types available
- Consider roof size, angle, strength, exposure, maintenance
- Best for households that can self-consume electricity
 - heat pumps, EV, smart plugs, battery storage, hot water
- Cost £6k to £12k



Solar thermal

- ONLY produces heat
- Cheaper in general ~£5k
- Needs hot water tank with solar heating coil
- Again, different types of solar thermal panel!



Solar projects and policies in H&F



Image credit: Urban Partnership Group

Actions to grow solar energy within H&F

- Community energy projects:
 - GLA Community Energy Fund solar projects on Rosaline Hall and Edward Woods CC
 - Hammersmith and Fulham Community Energy to deliver solar on (initially) three schools, a fitness centre, a church – won LCEF grants to help with this.
- Solar Together London joint buying programme has led to over 100 installations in H&F – but scheme currently troubled



Solar on housing, corporate assets and schools

Solar surveys included in procurement of Asset+ retrofit contractor from the GLA REFIT framework – led by Economy

- £800k of opportunities identified on first 17 buildings and schools surveyed, 21 more in the near term pipeline
- Possible solar canopy over Bagleys Lane
- Finance via one or more of capital budget, MEEF, municipal bond issue, community energy.

Social housing retrofit strategy considering solar energy but potential limited as currently no mechanism to sell electricity to residents

- ~£29m of solar PV opportunities identified across H&F social housing



We are currently offering residents **free pre-planning advice** for retrofit measures and solar PV

Most domestic properties do not require planning permission



In development:
Solar re-use and
recycling

The context

- Solar farms are a business
 - PV modules are getting cheap
 - They last >25 years, degrading slowly
 - Five years ago: 18% efficiency
 - Today: 23% efficiency
- 000s of modules replaced early



The prompt

- Post-Grenfell fire risk assessment
- 900 panels had to go
- We found out they were scheduled for disposal.



What we did:

**We rescued and rehomed these
900 solar panels.**

- Ground-breaking step in sustainability
- Huge carbon emissions savings (63 tonnes)
- Laying the groundwork for a nationally important second-hand market

Challenges: no local re-use possible
swimming against the current

Next steps

- Celebrate: many of these have been shipped, with carbon offset, to support humanitarian efforts in Ukraine and will be setup at a hospital
 - Provision for recycling at end-of-life also included
- Develop a policy for new solar installations so that these include a plan for rehoming.

Credits / collaborators:

ReSolar (Matt Burnell)(Etta Dale); Energize Ukraine; Embassy of Canada

Community Energy

H&F Community Energy

Supported by Repowering London



Repowering London

Repowering London specialises in creating local energy projects. We work with communities to plan, build and fund their low carbon future. We believe that putting people at the heart of the energy system is key for addressing the climate emergency, building resilient communities, promoting technological innovation and creating a fair energy future.



1 Strategic vision

Creating local energy

2 Strategic mission

To create resilient, empowered communities across London with greater control and ownership of their energy generation and usage

3 Strategic goals

Decarbonise buildings Reduce demand and generate decentralised renewable energy	Local leadership Promote local leadership through mentoring and community ownership	Training & employment Provide training and employment opportunities for local people	Reduce fuel poverty Tackle fuel poverty through energy efficiency measures, advice and support, advocacy and trails	Social investment Provide opportunities for local and socially responsible investment
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H&F Community Energy

Delivering H&F2030 through Community Energy



H&F 2030: CLIMATE AND ECOLOGY STRATEGY



Addressing Challenge 1. Homes, building and energy

- Supplying local, efficient renewable energy (installing solar PV)
- Cost efficient access to renewable energy (sites receive a discount from their standard rate)
- Support all residents to live comfortably and affordably (community engagement focus on e.g. Warm & Well Workshops, Energy Saving Tips Workshops etc.)
- Working towards supplying cost efficient local energy to local people for local benefit (pioneering London Energy Local model)

H&F Community Energy

Delivering H&F2030 - wider benefits



Enabling through engagement, education and influence; finance and decision-making; green economy

- **Amplify community action** through low cost enabling decisions and actions e.g., unused roof space leased to H&FCE for peppercorn; dissemination and support
- **Championing under-represented voices** core Repowering mission with award winning model of community engagement (Community Leads)
- **Build collective knowledge** capacity building and empowerment key to our model
- **Create conditions for change** proactive facilitation at H&F => created enabling environment for H&FCE to establish and LCEF success
- **Attract funding** via Community Share offers, freeing up council capital whilst still decarbonising
- **Bring green economy jobs and skills to residents** through volunteer capacity building and youth training (potentially integrated with installations)
- **Support low-carbon pioneers** Community Energy pioneering model of transformation. Repowering London involved in innovation across the sector.

Repowering London - what is unique about us?

We put people at the heart of the energy system



Empower Communities

Through mentoring, volunteering, training, work experience and knowledge sharing.

Enabler

We act as an enabler / facilitator giving communities and local people the tools they need to build zero carbon future

Diversity

We work with diverse communities including BAME, young, female and disadvantaged, hardly reached people across London.

Inclusive and Fair

Our work and approaches ensure that everyone can participate and benefit from a zero-carbon future including the most vulnerable

Innovation

We are leading energy innovation through our local supply trials, adoption of new technology and social innovation.



Repowering London - our impact

London's community energy development body, founded in 2011
Repowering has established 8 energy coops across London



707 kWp

Total installed capacity



650 investors

Local community investors



779 tonnes

Carbon emissions avoided



£768,661 capital

Capital finance raised



£206,750 fund

Community Fund ringfenced



149 young people

Trained/paid work experience

2022 highlights:

- **37 kWp** of rooftop solar capacity installed in the City of London's first community energy project
- Ran/participated in **74 community activities**
- Reached **5,100+ people** on community energy topics
- Supported **60+ co-operative volunteers and directors** across 8 co-operatives
- Delivered **723 hours of paid training for 28 young people** on our Youth Training Programme - participants reported increased confidence and ability to influence decisions in their community
- Developed **public toolkit for whole building retrofit** in partnership with GLA and Future Climate
- Won the **Community Engagement and Inclusion award**, Community Energy England Awards 2022

Project Governance

Repowering acts as an enabler - development body

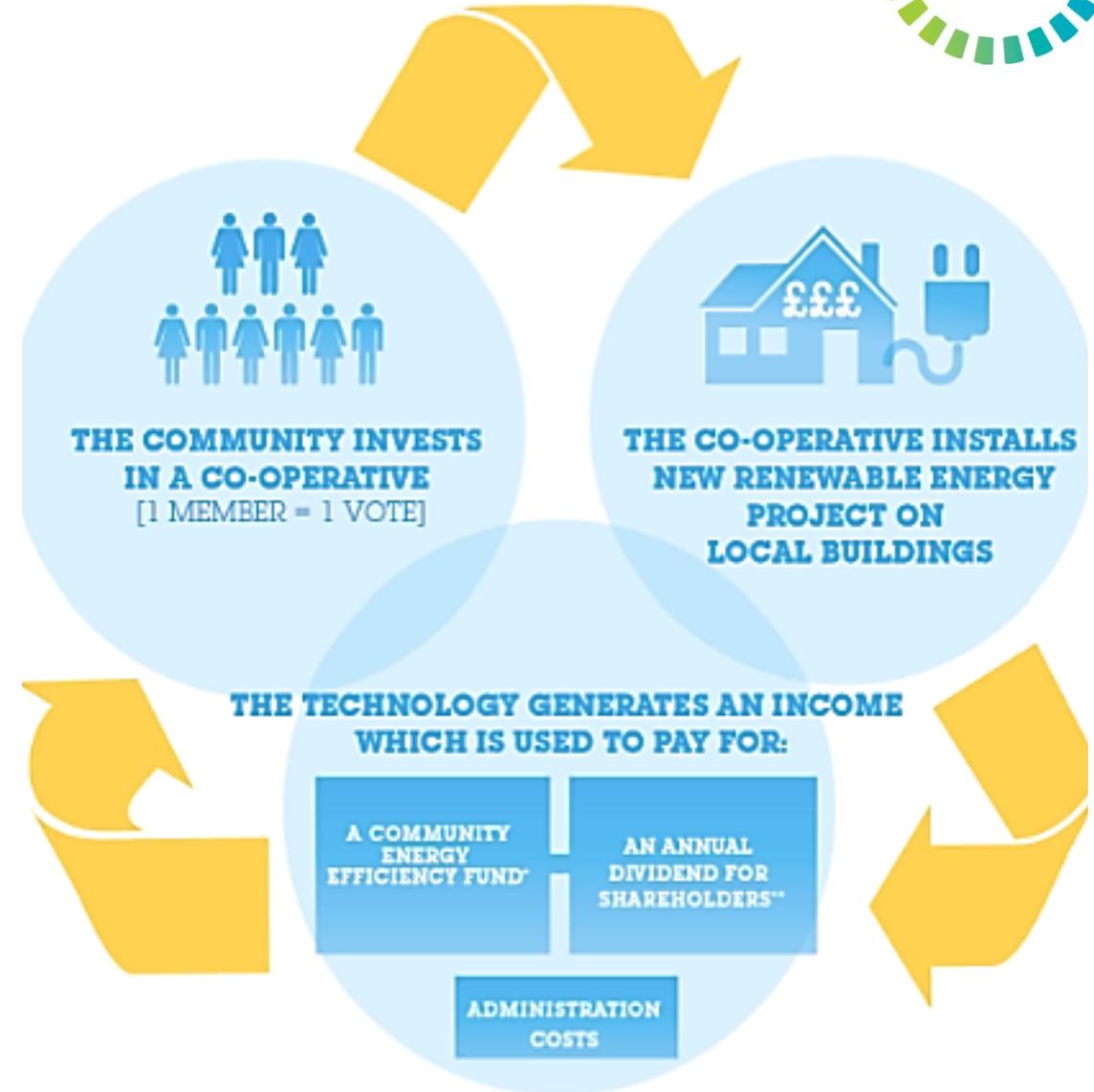


Each project is housed in an independent

Community Benefit Society

Core principles

- **Community** ownership, control and benefit
- **Democratic** - one member one vote
- **Inclusive** - local residents can join with a nominal £1 membership fee.
- **Community shares** - offer local green investment



People powered decarbonisation

Creating local energy in two forms



H&F Community Energy

So far...



Community energy is coming to
Hammersmith and Fulham!

Be part of creating

the FIRST



energy co-operative

in Hammersmith and Fulham

hfcommunityenergy@gmail.com

Community Engagement

- Mentoring H&FCE resident group
- Registered co-op
- *Climate Connects* sign-ups (mailing list ~50)
- Climate Café webinar
- Community Events led by volunteer directors

Feasibility

- Won GLA funding for 5 sites (technical & social feasibility)

H&F Community Energy

LCEF Funding



In partnership with **H&FCE** and supported by H&C Council, Repowering London have secured the Mayor of London's "**London Community Energy Fund**" for feasibility studies for **5** sites.

Repowering London **feasibility studies include**: in-depth solar capacity analysis; on site electricity usage analysis; structural survey; planning application and permission; a range of community engagement activities, ideally in partnership with H&F Council. At the end of the study, Repowering London deliver a report to the sites, Council and the GLA. There is no obligation to install solar panels at this point.

For the project to proceed, final approvals required are:

- 20-year rooftop lease (peppercorn rent for use of the roof)
- 20-year Power Purchase Agreement agreed (to purchase generated electricity)

Repowering London have a social impact funded financial vehicle (**Repowering Communities**) which enables us to install as soon as the above agreements are in place.

Appendix - Case Study

North Kensington Community Energy



- Partnership project between Repowering London and the Royal Borough of Kensington and Chelsea Council
- Community benefit society registered in 2018
- 224kWp of solar PV installed, saving 46t CO2 per annum
- Goal to install 1MW of solar PV across the borough
- 46 young people trained for the green economy
- Winner of Community Renewable Energy Project Award 2019 and Climate Coalition's Inspirational Community Project Award in 2020
- Employs a Community Lead dedicated to movement building and community cohesion in the borough
- Held two "Greener Living Days" bringing together local sustainability initiatives
- Currently developing London's first purpose made community energy project to reduce energy bills of residents in social housing

