



Hammersmith & Fulham Community
Energy

Community-owned solar panels at Jack Tizard School

Business Plan

This business plan has been prepared by Repowering London and reviewed by the Hammersmith & Fulham Community Energy Directors.

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Executive Summary

Hammersmith & Fulham Community Energy (HFCE) Ltd is an asset locked Community Benefit Society, with a mission to develop community-owned and democratically led sustainable energy projects in the London Borough of Hammersmith & Fulham.

We are supported by Repowering London, a social enterprise specialized in co-creating and supporting community energy projects. Repowering London has a successful track record of setting up and supporting over ten energy co-operatives across London.

For this first phase, 119 kWp of solar energy was installed on the roof of Jack Tizard School, for which we are now seeking to raise £106,500 from the local community, bringing the project into community ownership.

The installation was financed by Repowering Finance, an asset locked Community Benefit Society created to increase the speed and scale at which community-owned solar power can be installed across London, on behalf of HFCE. The solar assets are held in trust by Repowering Finance until HFCE is able to raise the capital required to purchase the assets, which is the purpose of this share offer.

The electricity generated by the solar panels is sold to Jack Tizard School at a 10% discount off the market rate, who operates the building, through a Power Purchase Agreement, and any surplus electricity will be sold to the national grid. We will use this income to repay our investors with a return on their investment and create a Community Fund for the benefit of the local community.

Since its installation, the solar panels have already been generating an income. Over its lifetime, the project will save up to 445.7 tonnes of carbon emissions, is expected to contribute an estimated £10,500 to a Community Fund and will save the school approximately £2,000 on electricity bills.

For this first project, we are raising £106,500 to cover the cost of the installation. Financial modelling confirms that this installation is viable. The site included in this project is an essential part of Hammersmith & Fulham Community Energy's long-term strategy.

About Hammersmith & Fulham Community Energy

Hammersmith & Fulham Community Energy (HFCE) is the first and only community energy co-operative in the London Borough of Hammersmith & Fulham. HFCE was created by a group of local climate activists that regularly to make their community more resilient and enter the renewables revolution.

Our mission is to develop community-owned and democratically led sustainable energy projects that empower the local community and reduce carbon emissions, and to build a clean, local and affordable energy future for everyone in Hammersmith & Fulham.

Background

In 2022, a group of H&F climate activist neighbours got together with the vision of Hammersmith & Fulham Community Energy. With the support of Repowering London, the group established as a Community Benefit Society in 2023 and began telling their neighbours about the project. Repowering London's work in Hammersmith & Fulham has been supported by the Climate team at H&F Council from the outset, providing a strong foundation for social engagement around community energy and developing a pipeline of sites that are suitable for solar.

In the following years, HFCE and Repowering London focused on building local relationships and developing a wide community network, while conducting feasibility studies on rooftops across the borough. In the summer of 2023, after establishing on-the-ground relationships with local residents, the first team of locally-based directors and volunteers came together to bring HFCE to life. They meet regularly at the Lyric Hammersmith Theatre to prepare the launch of their first community share offer.

In August 2024, after surveying the site, solar panels were installed on the roof of Jack Tizard School, and HFCE is now working to raise the funds to purchase the assets and bring them to community ownership.

Legal Structure

Hammersmith & Fulham Community Energy Ltd is a Community Benefit Society (CBS), registered on the 31st of July 2023 under the Co-operative and Community Benefit Societies Act 2014 (Registered with the Financial Conduct Authority, registration no. 9106).

The purpose of a CBS is to serve the broader interests of the community, in contrast to co-operative societies that serve the interests of their members. As CBS, we can issue community shares, which are non-transferable, withdrawable shares. This allows us to raise funding at a low cost compared to a commercial loan. It also provides the local community with a socially and environmentally responsible investment opportunity.

We have an asset lock as part of our rules. This means that our assets – our solar panels and our profits – are protected for the benefit of the community. If our Society is wound up (or sold to another entity), and all members' share capital has been refunded, residual assets cannot be distributed to members. In fact, the residuals assets can only be transferred to another asset locked body. The governing rules of the society can be found at www.repowering.org.uk/invest-hfce/.

Governance

HFCE is run by a board of volunteer Directors, who administrate and manage the CBS with the support of Repowering London. Repowering London provides a range of support services to HFCE, from asset management and maintenance, financial and accounting oversight, as well as the administration and management of the member registry. No Director receives remuneration for their role, nor will be involved in decision making where they have a direct interest outside of their role. Co-operatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions ([The Community Shares Handbook](#)).

Community benefit

HFCE will retain ownership of the solar panels for 15 years and sell energy to the site at a lower price than grid providers, while making sufficient income to pay a return to investors. This model creates community benefits in several ways:

- **Investor members** benefit from an annual return on investment for the first 15 years of the project, have an equal say in the decisions of the CBS regardless of shareholding, and get access to events and training opportunities as part of the Repowering London family of co-ops.

- **Community buildings**, such as the school, benefit from a long-term secure renewable energy supply at a discounted rate. They also have the option, should they decide to accept, to take over ownership of the solar panels at the end of the project.
- **London Borough of Hammersmith & Fulham** is supported in achieving its decarbonising goals.
- **A Community Fund** from any surplus income will support local initiatives.

Our network

Hammersmith & Fulham Community Energy is part of the Repowering London Family of co-ops. Repowering London is a not-for-profit community energy development organisation that puts people at the heart of the energy system, acting as a bridge between the energy sector and local communities, prioritising work with diverse communities and working in ways that ensure everyone can participate and benefit from the transition to a low-carbon future.

HFCE is also a member of Community Energy London and Community Energy England, which provide HFCE the support needed to accomplish its mission and impact.

HFCE works closely with Hammersmith & Fulham Council, which has supported the project since the start and is committed to decarbonising the borough and creating an energy system that is resilient, equitable and not dependent on fossil fuels.

Directors

The HFCE Board of Directors works closely with the Repowering London team and volunteers. They monitor the co-operative's performance and operation, and determine its mission, vision and strategic direction.

- **Nikita Crocker** is involved with community projects situated in the borough, including English classes for migrants, an edible garden and HFCE. She is passionate about forging relationships between sustainable initiatives and local communities.
- **Wilf Macdonald-Brown** is an English teacher and climate activist who has lived in Shepherd's Bush for many years and is a big believer in grassroots community action to tackle the climate, ecological and other crises of our time. Wilf is also HFCE's Secretary.

- **Hamish Reid** is a Change and Communications Director, dad of three, and local climate activist. He was born in Hammersmith and lives in Shepherd's Bush. Hamish is passionate about climate action, innovation, community and social justice.
- **David Wilkins** has lived in the borough for 40 years, now retired after teaching. He is interested in local communities being involved in decisions about their environments and very excited to see HFCE become a reality – so many opportunities.

Business Model

The community energy sector

National context

According to Community Energy England's 2024 *State of the Sector* report, there are 583 community energy organisations in the UK, which account for a total of 398 MW of community-owned renewable electricity capacity.

In 2023, community energy projects generated 617 GWh of low carbon electricity, equivalent to the annual electricity demand of 228,530 UK homes and reducing greenhouse gas emissions by 165,980 tonnes of carbon emissions, a 129% increase since 2017.

Local context

While there has been little or no support from National Government, the Mayor of London's London Community Energy Fund (LCEF) programme has supported the development of a total 175 projects in London through seven rounds of funding since 2018. HFCE is one of them and has received support for the feasibility studies of five sites. Groups within London are closely linked through Community Energy London, a network of community energy practitioners operating in London. Community Energy London has worked closely with the Greater London Authority (GLA) to support the sector.

Market opportunities and challenges

HFCE is the first and only green energy co-op in Hammersmith & Fulham, and we developed a strong partnership with the local Council, which is committed to decarbonising the borough and creating an energy system that is resilient, equitable and not dependent on fossil fuels. This partnership has and will continue to allow us to access a wider number of roofs to install solar panels across the borough. HFCE also benefits from Repowering London's support, which has an excellent reputation and experience in raising community shares, with 10 successful share offers across 9 different London-based co-ops ran to date.

White city, the area where our project is in, is a diverse community where residents face a high rate of poverty and unemployment, which leads to unjust inequalities within the borough. This will make fundraising a challenge and, whilst a strong focus will be made on

promoting investor membership from within the borough, the share offer is open nationwide, which will help overcome this challenge. Notwithstanding, our minimum investment of £50 for H&F residents and the option for residents to become a Community Member for only £1, will guarantee that the HFCE membership will still be well represented by local people.

Our long-term goals

Our objects are to carry on any business for the benefit of the community by:

developing and operating community-owned and democratically led sustainable energy projects, and promoting environmentally, societally and economically sustainable practices across the London Borough of Hammersmith & Fulham.

Our long-term ambition is to support the transition to a low carbon future that benefits those who live, work and study in Hammersmith & Fulham. For this, we aim to develop further community-owned solar projects that put people at its core, with the support of Repowering London and in collaboration with H&F Council.

In the medium term, Repowering London has secured funding from the Just Transition Fund of Ofgem's Energy Redress scheme to explore the solar potential of four further sites in the borough, with the view to continuing the expansion of installed capacity in the borough whilst also continuing engaging the community. Repowering London will continue to actively work with H&F Council, who has remained strongly supportive and proactive in facilitating the growth of HFCE, to find new sites that are suitable for solar.

Any future projects will be communicated to members and will only be pursued provided they will not negatively impact the interests of existing members.

Business activities

To achieve our long-term goals outlined above, we are going to:

- Expand our solar pipeline of sites in the borough, with the support of Hammersmith & Fulham Council and other partner organisations
- Expand into other low carbon technologies
- Strive to become a financially viable and independent organisation that tackles the issues we are addressing

- Grow our membership through community share offers, and strive to provide value to our members
- Deliver engagement activities in the borough, such as school energy workshops, youth training programmes, creative energy clubs and more
- Provide a platform for communities and individuals to engage in renewables
- Strengthen links with local stakeholders and businesses.

Marketing and community engagement

The HFCE Directors and volunteers, together with the Repowering London team working in the borough, have been promoting the project and the share offer via online promotion through a mailing list of more than 280 local contacts and social media, as well as flyering and word-of-mouth at volunteer meetings and pop-up events across the borough in different community hubs, such as libraries, community gardens and schools. Partner organisations and community groups have also helped spread the word about HFCE across the borough and beyond.

HFCE is rooted in its community, and throughout its lifetime, it will seek to keep its grassroots strong. As part of the 'Repowering London family of co-ops', HFCE members will have access to a range of opportunities, including community events, an annual training programme, research opportunities and clean technology trials. Members will also be invited to all-co-ops meetings and gatherings, where they will have the opportunity to connect with members of the other Repowering co-ops and partner organisations, from other parts of London and the UK. HFCE will continue to share regular updates with members through its newsletter, social media and monthly volunteer meetings.

Capital requirements

Hammersmith & Fulham Community Energy will raise the capital to purchase the solar assets through Community Shares. Community shares are a flexible, effective and inclusive way to raise finance, and are withdrawable and non-transferable share capital, a form of equity that is uniquely available to co-operatives and community benefit societies.

The capital HFCE needs to raise in order to purchase the solar assets at Jack Tizard School is £106,500. Below is a breakdown of the costs.

Item	Cost
Assets installation costs	£96,391.85
Fundraising costs	£9,787.68
Total capital cost to purchase assets	£106,179.53

Fundraising strategy

In the months leading up to the launch of the share offer, the HFCE and Repowering London teams have been actively preparing and building momentum through a coordinated outreach and engagement campaign. Key activities have included:

- **Weekly planning meetings** at the Lyric Theatre to shape the communications strategy and coordinate campaign efforts
- A **dedicated pledge period**, allowing individuals to register their interest in investing ahead of the official share offer launch
- Active **participation in local community events** to raise awareness of HFCE and build relationships with potential investors
- **Ongoing community events** scheduled throughout the share offer period to maintain visibility and encourage participation from the local community
- **Digital outreach** via HFCE's mailing list and social media platforms to keep supporters informed and engaged.

This multi-channel approach is designed to ensure strong community involvement and maximise the success of the share offer.

Financial Analysis

Financial projections of Jack Tizard School

General assumptions:

- Inflation rate is based on the UK Office for Budget Responsibility, Economic and Fiscal Outlook (EFO) from November 2023
- System degradation 0.4% a year
- Price charged to the site per unit is approximately £0.23/kWh, which has been calculated with a 10% discount off the market rate of £0.26/kWh
- Export price per unit is £0.06/kWh
- 93% of the electricity is used on site (based on billing data and demand profile)
- The financial year of the co-op starts on the 1st of August and ends on the 31st of July of the following year
- Year 1 starts when the transfer of ownership of the solar panels from Repowering Finance to HFCE occurs, expected on 1 September 2025, and ends on 31 July 2026. This shorter financial period explains the reduced income in the first year
- Shareholder interest and capital repayment are accrued in year n but paid in year $n+1$.

Project and Loss forecast

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10	Year 15	Total over 15 years
Income								
Sale of energy (on-site)	£12,129	£16,251	£16,024	£15,413	£15,195	£13,466	£13,246	£213,144
Export of energy (grid)	£323	£431	£438	£445	£452	£489	£483	£7,040
Total income	£12,452	£16,682	£16,462	£15,858	£15,647	£13,955	£13,728	£220,185
Operating expenses								
Generation meter charges	£33	£40	£41	£42	£43	£47	£52	£678
Export sub meter charges	£33	£40	£41	£42	£43	£47	£52	£678
Export meter charges	£417	£505	£515	£525	£536	£591	£653	£8,478
Insurance charges	£487	£590	£601	£613	£626	£691	£762	£9,902
Asset operations and maintenance	£782	£947	£966	£985	£1,541	£1,702	£1,879	£17,915
Billing costs	£731	£886	£903	£921	£940	£1,038	£1,146	£14,878

Provision for inverter replacements	£1,293	£1,552	£1,552	£1,552	£1,552	£0	£0	£13,707
Provision decommissioning costs	£0	£0	£0	£0	£0	£0	£2,023	£3,878
Bad debt contingency	£220	£45	£0	£0	£0	£0	£0	£264
Contingency fund	£94	£114	£115	£117	£132	£103	£164	£1,753
Co-op administration fees	£4,791	£5,804	£5,918	£6,036	£6,157	£6,798	£7,505	£97,472
RPL management discount*	-£4,072	-£4,934	-£5,030	-£5,131	-£5,234	-£5,778	-£6,379	-£82,851
RPL value added payment	£0	£0	£0	£0	£0	£0	£0	£0
Member administration costs	£478	£579	£590	£602	£614	£678	£748	£9,716
Total operating expenses	£5,286	£6,168	£6,212	£6,304	£6,949	£5,916	£8,605	£96,468
EBITDA**	£7,166	£10,514	£10,250	£9,553	£8,698	£8,039	£5,123	£123,716
Depreciation	£4,939	£5,926	£5,926	£5,926	£5,926	£5,926	£5,926	£87,907
EBIT***	£2,227	£4,588	£4,324	£3,627	£2,772	£2,113	£803	£35,809
Interest payable	£0	£2,654	£3,006	£2,792	£2,577	£1,503	£429	£24,988
Bank interest receivable	£3	£12	£21	£29	£38	£7	£24	£400
Profit before tax	£2,231	£1,946	£1,338	£865	£233	£617	£1,208	£11,221
Corporation tax	£0	£0	£0	£0	£0	£0	£0	£0
Business rates	£0	£0	£0	£0	£0	£109	£218	£1,196
Profit after tax	£2,231	£1,946	£1,338	£865	£233	£508	£1,426	£10,025

*Repowering London management discount represents the discount applied by Repowering London regarding the costs for the services it provides to HFCE (including, but not limited to, asset and co-op management, administration and governance)

**EBITDA: Earnings before interest, taxes, depreciation and amortisation

***EBIT: Earnings before interest and taxes

Cash flow forecast

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10	Year 15
EBITDA	£7,166	£10,514	£10,250	£9,553	£8,698	£8,039	£5,123
Interest payable	£0	£2,654	£3,006	£2,792	£2,577	£1,503	£429
Capital payable	£0	£5,965	£7,158	£7,158	£7,158	£7,158	£7,158
Corporate tax	£0	£0	£0	£0	£0	£0	£0
Business rates	£0	£0	£0	£0	£0	£109	£218

Add back inverter provision	£1,293	£1,552	£1,552	£1,552	£1,552	£0	£0
Inverter replacement payout	£0	£0	£0	£0	£0	£0	£0
Add back decommission provision	£0	£0	£0	£0	£0	£0	£2,023
Decommissioning payments	£0	£0	£0	£0	£0	£0	£0
Add back contingency	£0	£0	£0	£0	£0	£0	£0
Community Fund	£0	£350	£350	£350	£350	£0	£0
Net Cashflow	£8,459	£3,096	£1,287	£805	£165	(£731)	(£659)
Balance Brought Forward	£0	£8,459	£11,556	£12,843	£13,648	£2,168	£597
Balance Carried Forward	£8,459	£11,556	£12,843	£13,648	£13,813	£1,437	(£62)

Balance sheet forecast

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10	Year 15
Fixed assets							
Costs	£106,180	£101,241	£95,315	£89,388	£83,462	£53,831	£24,199
Less depreciation	£4,939	£5,926	£5,926	£5,926	£5,926	£5,926	£5,926
Total	£101,241	£95,315	£89,388	£83,462	£77,536	£47,904	£18,273
Current assets							
Bank accounts	£11,117	£14,928	£16,021	£16,641	£16,629	£16,880	£1,749
Debtors	£0	£0	£0	£0	£0	£0	£0
Total	£11,117	£14,928	£16,021	£16,641	£16,629	£16,880	£1,749
Current liabilities							
Interest due to shareholders	£2,654	£3,006	£2,792	£2,577	£2,362	£1,288	£215
Community Fund contributions	£0	£350	£350	£350	£350	£0	£0
Provisions for inverters	£1,293	£2,845	£4,397	£5,948	£7,500	£13,707	£0
Provision for decommissioning	£0	£0	£0	£0	£0	£0	£3,878
Other Creditors	£0	£0	£0	£0	£0	£0	£0
Total	£3,948	£6,201	£7,538	£8,875	£10,212	£14,995	£4,092
Net current assets	£7,169	£8,727	£8,483	£7,766	£6,417	£1,885	(£2,344)
Net assets	£108,410	£104,041	£97,871	£91,228	£83,952	£49,789	£15,929
Represented by:							

Share capital	£106,180	£100,214	£93,056	£85,898	£78,740	£42,949	£7,158
Reserves	£2,231	£3,827	£4,815	£5,330	£5,212	£6,840	£8,771
Total	£108,410	£104,041	£97,871	£91,228	£83,952	£49,789	£15,929

Operations

Lease and Power Purchase Agreement

Repowering Finance is leasing the school roofs from the Hammersmith & Fulham Council, the freeholder of Jack Tizard School. Repowering Finance has Power Purchase Agreement (PPA) arrangements in place with the school, which will transfer to Hammersmith & Fulham Community Energy on the purchase of the solar assets.

Equipment

The equipment installed at Jack Tizard School includes the following:

Jack Tizard School
274 x Phono 435 Bi-facial 435W Panels
2 x Solis Three Phase Inverters
1 x Generator Meter
1 x Export Meter

Installation and generation

We received planning permission from H&F Council in April 2024 for the Jack Tizard School installation (application reference 2024/00164/FUL). The panels installed at the school were paid by Repowering Finance in August 2024.

The solar panels are wired to inverters within the building which convert the low voltage DC output from the panels into AC power, the type of electricity we use in our homes. This electricity will feed into the main electrical distribution point for the sites, where it will be used in the first instance.

We expect the school to use 93% of the electricity generated. The electricity will be sold under the Power Purchase Agreement between Jack Tizard School, the building operator, and Hammersmith & Fulham Community Energy. The surplus of electricity will be exported to the national grid.

We estimate that a 119 kilo Watt peak (kWp) solar array will generate approximately 95,323 kilo Watt hours (kWh) of electricity in the first year. In average UK weather conditions, it is expected 1kWp of panels to generate between 700 and 900 kWh of electricity per year. We are using estimates of 886 W/m² (P90) and 973 W/m² (P50) generation per 1 kWp for our model.

These estimates are generated by the software used to develop the solar installation plan, PVSol, and are based on climate data from [MeteoNorm](#), a very large database of historical weather data that predicts future weather at different probabilities. This estimates how much the sun will shine (solar irradiation). In our financial calculations, we use the two estimates: very conservative value from P90; and the less conservative estimate P50. We do this to “hope for the best but plan for the worst” and make our model robust.

Operations and maintenance

Solar photovoltaic panels are solid-state technology with no moving parts. As such, they tend to be robust and reliable, requiring a minimum of maintenance once installed and commissioned. They can remain operational for decades although their efficiency and output declines over the years. In our financial model, we have allowed for 0.40% drop in output per year, which is a conservative estimate compared to the industry standard.

Repowering London has been contracted by HFCE to deliver the asset management and maintenance of installations. Repowering London will charge an average annual fee of £1,053 for asset management and maintenance. The service agreement has an initial term of five years, when it will automatically renew, and the parties will review the annual fee amount at each renewal.

The inverters have a shorter lifetime and generally need to be replaced every 10 to 15 years. Putting money aside to cover the cost of replacing the inverters at these times has been included in the running costs for the project. Warranty of the equipment and its installation will be provided by the manufacturers and the installers, respectively.

Insurance is included in the annual running costs. The roof is being leased to HFCE by Hammersmith & Fulham Council for a peppercorn rent (i.e. nothing). HFCE will remain the owner of the panels throughout the life of the project, after which the panels can be donated to the school, if they would like to receive them. If not, money is put aside under this financial model for the panels to be removed and properly disposed of.

Workforce

Hammersmith & Fulham Community Energy Ltd has no paid workforce, but it is supported by Repowering Ltd.

Equalities and diversity

HFCE is committed to inclusion and equal opportunities. We operate in a borough with high diversity, and we want this diversity to be reflected in our membership and volunteers' group. We will work on promoting our minimum investment and Community Membership for H&F residents for this purpose.

Risk analysis and mitigation

In the Risk factors section of our share offer document, we have detailed the risks related to the project (policy, technical, financial, operations). Not all risks can be mitigated ('Acts of God') but we have planned some mitigation strategies detailed below.

Lower revenues than expected

- Our forecasts use conservative figures, such as the yield rate and inflation rate. In order to forecast future electricity consumption of the sites, we have analysed the sites' historical consumption data.
- We will monitor the solar panels' performance regularly to make sure any issues are quickly dealt with.
- The installation will be fully insured for risks such as accidental and malicious damage.
- Our business model will be generating surpluses to cover any unforeseen expenses.

Reliance on Power Purchase Agreement with Jack Tizard School

The project income is heavily reliant on the Power Purchase Agreement (PPA) with Jack Tizard School. The lease and PPA are coterminous, which means that if the school cancels the PPA, the lease ends as well. However, should this occur, Hammersmith & Fulham Community Energy will receive a compensation from the Council of the amount of the capital owed to investors.