

The logo for Chester Community Energy features a stylized, black-outlined silhouette of a city skyline with various buildings and spires. Below the skyline, the text "Chester Community Energy" is written in a clean, sans-serif font.

Chester Community Energy

Business Plan

LED lighting for Community Buildings in West Cheshire

September 2019



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1. Chester Community Energy

1.1 Overview

Chester Community Energy Ltd (CCEL) aims to develop, own and facilitate renewable energy installations for the benefit of the community of Chester and the surrounding area. We are registered as a Community Benefit Society (no. 7272) with the Financial Conduct Authority under the Co-operative and Community Benefit Societies Act 2014. Our registered office is Dove Cottage, Church Road, Dodleston, Chester, CH4 9NG.

We aim to:

- a) Reduce the community's carbon footprint;
- b) Secure more sustainable sources of renewable energy for the community's use; and
- c) Promote environmental awareness and energy efficiency.

Ultimately, we want to increase the City's resilience to climate change, promote environmental awareness and resource efficiency.

We will raise the funds we need by inviting the public to invest in the Society, and aim to return each member's investment to them over the lifetime of the project with interest (up to 4% per year). We also aim to raise funds by applying for grants. CCEL is led by volunteers and any surplus funds we generate over and above our costs and interest to our members will be used to support community and environmental projects.

CCEL is a sustainable, self-funding community-owned business. We are developing the skills and resources to deliver many more projects in Chester and the surrounding area.

Objectives:

- CCEL aims to develop, own and/or facilitate 200kW in total of renewable energy systems by the end of 2020 (aspiring to an average of installing one 50kW project a year);
- CCEL aims to attract, and generate a return for, at least 60 members from its projects;
- CCEL will generate a community fund that will recycle surplus funds back into projects addressing, for example, energy efficiency, sustainable transport or local food initiatives;
- CCEL will strengthen local supply chains and support local businesses wherever possible;
- CCEL will establish itself as a key strategic partner in Chester and surrounding area for energy efficiency, low carbon initiatives and renewable energy.

1.2 Development of the Society

CCEL was created as an off-shoot from Transition Chester in 2015. Transition Chester was formed in 2008 and has in the region of 200 members with an active

working group of around five people. It aims to promote more sustainable ways of living, promoting resource efficiency and environmental awareness in all aspects of life: transport, energy, food, education etc. Six members of Transition Chester set up Chester Community Energy Ltd in October 2015; the society was registered in January 2016.

CCEL currently own and operate a 50 kWp (kilowatt peak) solar PV installation on the roof of the Northgate Arena Leisure Centre in Chester. This installation generates approx. 40,000 kWh of energy per year and provides an income to CCEL of approx. £8,500 per year. The Northgate installation has proven reliable and has so far generated more power than the original estimates.

1.3 Our Ambitions

We are not-for-profit organisation and all of our Directors are volunteers. Any surplus funds we generate, over and above interest paid to our members, by owning and operating renewable energy installations will be re-invested back into community and environmental projects. Within the first four years we aim to install at least four renewable energy schemes.

1.4 Community Purpose

Just over 330,000 people live in Cheshire West and Chester, which is forecast to increase by 5% over the next ten years. We aim to provide benefits to our community in two ways:

- Funding the local generation of renewable energy to reduce carbon emissions, while at the same time offering lower cost energy to our host sites, with a focus on community buildings; and
- Using any surplus to help increase environmental awareness, energy efficiency, conservation and reduction.

2. Opportunities in Community Energy

Community Energy became very popular following the governments introduction of the FIT in 2010. It enjoyed several years of growth up to 2015 when the government announced that FITs would be withdrawn before its planned closure in 2020 and the tariffs would be reduced with immediate effect. Since 2015 the renewable energy sector has experienced difficult trading conditions with government support being withdrawn and investment confidence compromised. Since March this year, community energy is operating subsidy free. To mitigate these changes to the reduction in FITs, solar PV modules continue to cost less per kW and installers operate in a more competitive market and installation costs continue to come down.

In the future community energy will have to adapt to constantly changing government policy and market forces. New opportunities are opening up with technological developments such as battery storage, smart management systems and peer to peer trading to name just three. Alternative business models are bound to emerge and CCEL are in a good position to take advantage of these developments for future schemes.

There are opportunities for business models to be developed in installing energy efficiency measures in buildings. Such retrofit projects are always more expensive than building in the same measures during construction and have not generally lent themselves to viable business models for community groups to engage in. In this business plan we explain why CCEL is installing LED lighting as an energy efficiency project and how it can work as a business proposition.

3. Organisation and Governance

3.1 Community Benefit Societies

A Community Benefit Society is run primarily for the benefit of the community at large, rather than just for members of the society. This means that it must have an overarching community purpose that reaches beyond its membership and a special reason for being a Community Benefit Society rather than a company, such as wanting to have democratic decision-making built into its structure. They are expected to have members who hold shares, and should be run on a democratic one-member-one-vote basis.

Although a Community Benefit Society has the power to pay interest on members' share capital, it cannot distribute surpluses to members in the form of dividends. It must only use its assets for the benefit of the community. If a Community Benefit Society is sold, converted, or amalgamated with another legal entity, its assets must continue to be used for the benefit of the community and must not be distributed to members.

Further information on Community Benefit Societies is available on the Community Shares Unit website:

<http://communityshares.org.uk/resources/handbook/community-benefit-societies>

3.2 Chester Community Energy Ltd

The registered Objects of the Society are "to carry on any activity for the benefit of the community by development and/or facilitation of renewable energy sources for the community of Chester and surrounding area, to help to reduce the community's carbon footprint and secure a more sustainable future source of electricity and to promote environmental awareness and energy efficiency, conservation and reduction."

A full copy of our Rules is available on our website:

<http://www.chestercommunityenergy.org.uk>

3.3 Membership

Membership is open to individuals aged 16 and over, corporate bodies or nominees of unincorporated associations. You do not have to live in the Chester area to be a member; just have a wish to support our community and own at least 250 shares. All members of CCEL have one vote regardless of how many shares they hold.

No member may hold more than 20% of the total shares issued by CCEL, unless the member is another Industrial and Provident Society.

Under the Industrial and Provident Societies Act 1965 the liability of members is limited to their shareholding.

All members must agree to participate in general meetings and take an active interest in the operation and development of the Society and its business. Members have a duty to respect the confidential nature of the business decisions of the Society.

3.4 Directors

Chester Community Energy Ltd. has three founding Directors: Graham Booth, Francesca Moore and Stephen Savory. Matt Clegg became a director in 2018. Jennifer Barnett is the Society's Secretary. They are all residents of Chester or surrounding villages, either working professionals or retired and are all active members of the community.

The current Directors and Secretary bring the following skills to the Society:

Graham Booth (Director)

Graham is a retired Civil Engineer who is now active in a number of local environmental and voluntary groups. He worked for forty years as a site engineer and an estimator. He is a qualified counsellor and the chairman of his housing association. He is an ex. chairman of Transition Chester which is a community group with 200 members aiming to reduce the carbon footprint of Chester and to make it a more sustainable and more energy efficient city. He brings project management, technical and financial expertise to the group.

Stephen Savory (Director)

Stephen is a retired Architect with experience of energy-efficient housing projects and a University carbon reduction programme. He is a former member of the Royal Institute of British Architects and the Association for Project Management and was a director on the board of New Charter Housing Association's building company. He brings project management, technical and financial expertise to the group

Francesca Moore (Director)

Francesca is an Environmental Economist providing technical expertise to the Environment Agency, water companies, renewable energy developers and Government departments. Her work is about promoting benefits for society including: reducing flood risk, improving water quality and resilience to climate change. She is passionate about finding innovative and efficient ways to increase the City's resilience to climate change. She brings project management, stakeholder engagement, funding and marketing expertise to the group.

Matt Clegg (Director)

Matt is Environment Director at Black & Veatch working across various different sectors including water, flood risk management and renewable energy. He is passionate about addressing long-standing environmental challenges with sustainable, innovative solutions. He brings project management and technical expertise to the team.

Jennifer Barnett (Secretary)

Jennifer Barnett is a solicitor who has always had a personal interest in combatting climate change. Professionally she has advised clients on energy agreements, including long-term CHP projects and solar installations. She brings project management and legal expertise to the group.

3.5 Working with Our Community

We will set aside annually at least one third of the amount we allocate to members as share interest into our community benefit fund. This will then support community projects which provide an environmental or social benefit to people within the Cheshire West and Chester area. Members may also choose to gift a proportion of their allocated share interest into the community benefit fund.

We will also set aside capital reserves at intervals over the lifetime of the project to:

- Invest in further renewable energy schemes, prioritising those on buildings which have a community function, while ensuring that each scheme is economically viable. This will enable us to build a portfolio of projects which can collectively provide a much greater level of community benefit funding than the single Northgate project we presently own.
- Add to our community benefit fund for distribution to local projects.

The split between investment in new renewable projects and community benefit projects will be determined annually by members at the Annual General Meeting, or by calling an Extraordinary General Meeting if required.

Our community fund will support projects that go some way to achieve our aims: to promote energy efficiency, low carbon initiatives and renewable energy. This could include projects helping households to improve their energy efficiency, sustainable transport or local food initiatives.

4. The Project

4.1 The Business Model

The business model we are proposing is a simple repayment arrangement between CCEL and a Client community organisation whereby CCEL provide a complete service including finance to install contemporary LED lighting in community/public buildings and the Client organisation pays back the capital invested over a number of years from savings in the cost of electricity. We eventually intend to investigate the wider replication of this model into other areas such as schools, social housing (particularly for communal areas), homeowners and small businesses. The service is to be offered to qualifying organisations in the unitary borough of Chester and West Cheshire.

4.2 Raising Capital Investment

We propose raising capital using our status as a community benefit society to offer shares to our existing members and new investors. We will do this in separate share issues that will provide enough finance to install lighting in 5 community buildings at a time. From the survey work carried out in the R & D phase the average cost of an LED installation could be in the range £2000 – £3000. The share offer will be advertised on our website, on social media, in the local press and disseminated using the networking organisations we are affiliated to. Applicants will be invited to purchase shares within a 6 weeks window, starting on the 14 October 2019 and ending on the 22 November. If the target amount is not reached, we will extend the application period or reduce the number of lighting installations we undertake. CCEL will investigate other sources of funding such as commercial loans, but at present considers that a community share offer is the best option to provide both a viable project and a means to promote ownership and increased engagement with our community.

4.3 Market Research

We have already engaged an intern student to research the business model we are proposing. From that research we already know that it is difficult to make the model viable at the scale of a typical community building. The intern's research looked at LED lighting replacement in a multi-story car park and a community centre. The research concluded that the private car park could pay back the capital cost within 2 years (but the owners were not interested) and the community centre had the potential to pay back capital costs in 5 years.

We also have evidence that there is a need for lighting to be updated in community buildings from the applications we have received from local community organisations who have applied for our Community Benefit Fund.

When we start our programme of installation work, we are confident that more community organisations would make enquiries for their community buildings.

4.4 New Generation Funding

We have secured grant funding from the charity Power to Change to cover revenue costs for training, feasibility, professional advice and project management. The project management will be carried out by CCEL directors and all the reimbursement for director's time will be paid into the society bank account and used for community benefit or future projects.

4.5 Lighting Surveys and viability checking

A survey of the existing lighting will be carried out by volunteers to establish the financial viability of installing new lighting for each building that has previously been identified as potentially viable in the R & D phase. The survey will record the existing lighting for each room and each day and each lamp identified in order to provide its power rating. Data required for other energy/cost saving measures could be recorded at this time and advice provided to help reduce energy use in the building.

Calculations would be made to provide an accurate estimate of the cost saving of electrical power and the total cost of the new lighting installation. From these two estimates the time to repay the capital cost can be calculated and the project viability established. We consider that a repayment period of up to five years would be acceptable to a Client and if this condition is satisfied the project would move on to the next stage. All the calculations would be done on a bespoke spreadsheet which has been checked by an independent qualified consultant.

4.6 Contract signing, installation and maintenance

Once a building had been assessed as technically and financially viable, a proposal document would be drawn up clearly stating all the information that the Client requires in order to make a decision to proceed or not. If the Client is satisfied with the proposal, it would be signed by both parties. The date for the installation work would be fixed to suit the Client's requirements and the contractor's workload.

An installation would typically take between 1 and 3 days. The contractor would establish times of work to cause as little disruption as possible to the running of the building.

During the maintenance period the electrical contractor will be contracted to replace defective materials for the various lamps and equipment within their respective warranty periods and workmanship for the period stated in the electrical contractor's quotation, all as stated in the Form of Agreement.

5. Project Benefits

5.1 Benefits to our Community.

The community benefits will be created by improvements to community buildings. These buildings are often the only space where community groups can meet and are an essential focal point and facility for any community. By improving the lighting in these buildings we are helping to make the building user's experience more enjoyable. We are also reducing the running costs of the buildings which could release funds for other user benefits.

The benefits for the buildings are to:

- Improve the lighting initially in 5 community buildings without the owners having to provide capital or spend more than they would be doing with their existing lighting
- Reduce their carbon footprint and reduce their electricity bills beyond their repayment period (max. 5 years)
- Reduce the maintenance costs of their lighting
- Create the opportunity to introduce smart control technology to reduce wasting energy.
- Create the opportunity to change the lighting effects for different rooms and uses

Benefits to the wider community are to:

- Create work for a local electrician and possibly provide work experience for an apprentice electrician.

5.2 Benefits for CCEL

An ambitious project as described in this plan would provide multiple benefits to:

- Increase our turnover and grow the business
- Attract more members
- Save between 15 and 20 mWh of electricity per year per 5 buildings
- Directly engage with key people in communities who manage and use community buildings
- Take our activities into a wider area than we previously have done to become more visible in our area of benefit.
- To widen our area of interest into energy efficiency measures
- Learn more about community buildings and their energy efficiency issues

There are areas in West Cheshire that suffer from economic and social deprivation, notably in Ellesmere Port, Northwich and Winsford. CCEL would like to prioritise these areas where possible. In these urban areas the community buildings are more likely to be owned by the borough council and are suffering from lack of funding. We have already surveyed five council owned buildings in Ellesmere Port and found that underuse of the buildings renders them unviable for our business model. We will try to find ways of installing new lighting in the most deprived areas through a combination of reducing costs and finding new financial support.

6. Risks

6.1 The key risks for LED Replacement

Risk	Impact/cost of risk	Considerations/Mitigation
Community building does not make sufficient savings in the cost of electricity to make the business model viable	Work does not commence.	No contract signed until viability is established We would not undertake to do work in any building if the calculations showed it to be inviable. We propose to have an independent check on our calculations In marginal cases of viability a small capital contribution could be made by CCEL, the Client or grant funding. We can be flexible about installing complete new fittings, retrofit lamps or a combination of both
Client reports that actual savings are less than the repayments	Client demands reimbursement of over-payments. Potential loss of community benefit.	The client has an opportunity to check all data on which the theoretical savings are made before signing a contract. Client is advised to read the proposal form and agreement, including appendices, before signing.
Share capital target not reached or delayed	This would have no adverse consequential effects other than reducing the number of installations or delaying installation work.	Emphasis on good share issue advertising with adequate budget and widespread dissemination of share offer in our target area.
Installation price increases	Risk to project not delivering predicted community benefit.	Installation contract on a fixed price bases with get out clause if fixed price period expires.
Client defaults on repayments	Potentially a serious loss of revenue	Basic due diligence required on the Client's organization. Provision in the contract to recover equipment
Client's building closes during repayment period	Potentially a serious loss of revenue	Provision in the contract to recover outstanding repayments.
Electricity costs go down during repayment period	No impact. The Client's repayments will be fixed for the repayment period.	A predicted inflation rate will be applied to the initial electricity unit rate and it will not be adjusted for actual inflation figures.
Incorrect	Potential loss of revenue	Spreadsheet independently

calculations	which would reduce community benefit	checked. Calculations reviewed by 2 directors
Problems with the new lighting installation	Faults falling outside the equipment and workmanship guarantees would create extra unforeseen expenditure to CCEL.	Existing lighting system is tested to fully comply with current electrical standards All new materials to be of high quality and purchased from reputable manufacturers e.g. Philips, Osram Equipment to be guaranteed for at least 3 years and preferably 5 years. The terms of the warranty to be thoroughly checked by a director to make sure the terms can be complied with. Electrical contractor to provide a warranty on workmanship. Electrical contractor to share any uncovered risk with CCEL

6.2 General risks of investment in Chester Community Energy Ltd

Risk	Impact/cost of risk	Considerations/Mitigation
Administrative, insurance and maintenance costs rise faster than anticipated as a result, for example, of changes to legislation.	Increased operating costs will reduce returns to members.	Directors will closely monitor ongoing costs and the membership may be able to play a role in minimizing on-going administrative costs e.g. by receiving communications electronically.
CCEL does not have sufficient funds available to repay shares on request.	Shares cannot be repaid when members request.	CCEL is not obliged to repay shares on request but will make every effort to do so. To provide funds for those who wish to withdraw shares (over and above that put aside to be repaid each year), CCEL may re-open this share offer to allow existing members to increase their shareholding, or to allow new people to become members by buying shares. CCEL could also borrow money from its members or from a bank to repay shares.
Directors mismanage the organisation.	Financial mismanagement allows expenditure to exceed income and CCEL gets into	Members review accounts and hold directors to account at the AGM and can elect different directors.

	financial difficulties.	
Unable to attract new directors to manage the organization.	As voluntary roles, there is the possibility that as the current directors resign, no others come forward to take over. In this case the organization would need to be wound up and assets transferred to another organization with a similar asset lock.	Members will be encouraged to become actively involved in the organization and the directors will plan their retirement and seek replacements in sufficient time. We aim to continue to develop new projects and thus keep the organization active.

6.3 Risks from Future Projects

We will not invest in future schemes which increase the financial risk to our Members or affect our ability to provide our community benefit, without the prior agreement of our Members.

Appendix – Expenditure & Income Forecasts

Cash Forecast for 5 LED Lighting Projects

YEAR	1	2	3	4	5	Totals
Balance at start of year	(13,250)	(11,109)	(8,492)	(5,771)	(2,940)	
Expenditure						
Initial testing of system	(375)					(375)
Installation costs excl. VAT =	(13,250)					(13,250)
						-
Interest on outstanding balance	(496)	(395)	(290)	(181)	(68.)	(1,432)
Community Benefit	(250)	(250)	(250)	(250)	(250)	(1,250)
Income						
Cash injection	-					-
Payments from Client	3,262	3,262	3,262	3,262	3,262	16,310
Balance at the year end	(11,109)	(8,492)	(5,771)	(2,940)	2	