

Community Energy Merseyside

Five Year Business Plan

2016-2021



Community Energy Merseyside

The Story So Far

Community Energy Merseyside [CEM] has been formed as a not-for-profit community energy co-operative in Liverpool by local community environmental activists. Aware of the need to tackle climate change, reduce carbon emissions, increase energy security and the need for a rapid transition to low carbon energy sources, we have formed CEM as a vehicle for locally-focussed action. We have been inspired by the rapid growth in the past five years of what have collectively become known as 'energy co-ops'. Energy co-ops are organisations formed by members of the community that identify suitable locations and install renewable generation facilities, raising finance for the installations through community share finance. Pioneering initiatives in many parts of the country have demonstrated that community initiatives can create opportunities for renewable energy projects that could not be undertaken by the commercial sector.

Geographical Focus

Community Energy Merseyside will focus its work within the five boroughs of Merseyside, Liverpool, Sefton, Wirral, Knowsley and Halton but will also work in nearby areas to promote community energy such as St Helens, Warrington and Widnes as opportunities arise. We know these areas very well and have good community connections and access to community networks across this area.

One Purpose, One Vision

A common vision for the energy future of communities on Merseyside brought the founder members together, based on five years of work to promote the idea of communities taking action to build and energy secure future. That vision is of a sustainable energy future where energy is generated from renewable sources and used efficiently. A future where everyone has access to the energy they need at an affordable price, and has a voice in how it is produced.

Our Mission

We believe communities, regardless of financial resources, should have access to the benefits of affordable low carbon technologies. We work with local residents, businesses and organisations to reduce fuel poverty, and develop financially, socially and environmentally sustainable projects which increase energy efficiency, produce local renewable energy, and accelerate the transition to a low carbon energy generation system.

Our Objects

1. Promoting renewable energy generation, and developing, installing and operating renewable energy systems
2. Promoting sustainable use of energy, and reductions in carbon emissions through the provision of advice on energy efficiency, and the supply of energy-efficient products and services
3. Developing practical measures to combat energy insecurity in our communities through the generation of sustainable energy; and
4. Promoting public awareness of environmental issues, supporting educational initiatives related to renewable energy and sustainability.

Our Aims

- To generate renewable and affordable energy on Merseyside that will accelerate the transition to zero-carbon decentralised electricity systems.
- To build an economically sustainable business model that has a core focus on social responsibility and affordable energy provision.
- To provide tangible improvements to the energy security and financial situation of community organisations and others on Merseyside
- To give organisations that provide valued community services access to affordable, renewable energy - thereby reducing the burden of escalating energy costs.

Our Business Objectives

We will measure our success against the following five year business objectives:

- To acquire 40kWp and install 100kWp of solar electricity in our first trading year, and to raise the finance for this through a community share offer
- For core functions of the organisation to be funded by income from renewables projects
- To provide seed funding for further projects that focuses on renewable generation
- To provide tangible improvements to the energy security of communities across Merseyside
- To reduce the energy costs of 30 community buildings over five years by installing systems and giving energy advice.

Further Information and Case Studies

<http://lowcarbonlymm.org.uk/category/lymm-community-energy/>

<http://lcr.coop>

<http://www.morerenewables.co.uk>

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/275169/20140126Community_Energy_Strategy.pdf

Our Legal Structure

Community Energy Merseyside [CEM] is the trading name of Community Energy Merseyside Limited which is registered as a Community Benefit Society under the Cooperatives and Community Benefit Society Act 2014 (Society number 7195). The rules of the society are based on the Community Finance rules available from Cooperatives UK. You can find a copy of our rules on our website. This legal framework is best suited to the needs of a trading entity that will generate a financial surplus whilst undertaking work that benefits the community in accordance with our mission and aims. CEM will operate in accordance with the seven cooperative principals agreed by the International Cooperative Alliance: <http://ica.coop/en/whats-co-op/co-operative-identity-valuesprinciples>

The Team

The founder members of CEM bring with them a range of professional experience and give their time voluntarily. The founder members have formed the Board of Directors. However, at our first Annual General Meeting a new Board of Directors will be elected.

Martin Conroy BA, MSc

Martin Conroy has worked in the field of community energy and community sustainability and wellbeing for around 10 years. He is also technically qualified and experienced and undertakes design analysis, roof loading calculations, Solar PV systems design and other technical tasks.

Stuart McBain

Stuart McBain is a chartered accountant with a background in community environmental projects, he chiefly provides financial and regulatory regime advice. He is a director of Tesla Energy Services Ltd, Regenus Tesla and the Northern Social Investment Group. Stuart McBain Ltd is a registered and approved access to finance coach and growth coach for the GrowthAccelerator program, providing expert tailored advice to help ambitious businesses achieve rapid, sustainable growth.

Mark Shooter

Mark Shooter is a long-time environmental activist and is a leading member of (for instance) Transition South Liverpool, Dingle Growers and Dingle Community Learning Partnership. He undertakes promotion, web design, community engagement and client liaison. He is City & Guilds qualified in heating and ventilation installation and domestic energy-saving installations.

Jerry Spencer, BA, MA

Jerry Spencer has been involved in community energy promotion and delivery since 2010. He has been professionally involved in community regeneration and economic development for over 20 years and between 1990 and 1996 was a co-operative development worker in different parts of the country. He has experience of setting up and managing social enterprises and community promotion and

engagement. He has been a long-standing member of the Liverpool Green Partnership and Project Dirt. He is a graduate of the School for Social Entrepreneurs.

Jerry, Mark and Martin are also directors of Good Neighbour Community Energy, a not-for-profit social enterprise which installed and has operated one of the largest single domestic solar pv arrays in the north of England, a 40kWp system in Liverpool

CEM has also been assisted with a grant from the Urban Community Energy Fund and with advice and expertise from MORE Renewables, Good Neighbour Community Energy Limited, Pure Leapfrog, Sharenergy and Co-operatives UK.

Organisation & Governance

Currently four voluntary directors provide strategic leadership though we plan to increase this number during 2016 and early 2016. These directors bring a range of professional experience. Our initial share offer will provide the opportunity for anyone that supports the objects of the society and who has paid the agreed minimum shareholding to become a member of the society. In keeping with co-operative principles, governance operates on the basis of one member one vote regardless of the size of shareholding. Members of the Society have the opportunity to elect directors of the Society, to accept or reject proposals of the Board of Directors and to determine the rules and affairs of the Society.

Asset Lock

The assets of the Society are protected by an asset lock which ensures that the assets of the society are used to support the aims of the society in perpetuity. This prevents disposal of assets for the sole purpose of private gain of any shareholder. The directors work day to day basis on management functions on a voluntary basis. It is intended that this continue with the addition of other voluntary working around administration and promotion during the first two years of the Society's operations.

Track Record

Three of the members of CEM have been working in the field of community energy for more than five years and were involved in the design and installation of one of the biggest single domestic solar pv arrays in the north of England, a 40kWp system in Liverpool. They have also been involved in a number of funded projects including a Local Energy Action Fund project to explore responses to fuel poverty and the feasibility of community energy technologies in urban settings. These projects were completed successfully and reported back with full evidence of outcomes and expenditure.

Internal Management & Reporting

The board will be presented with a financial report at the end of each quarter based on a simple system of book keeping done by a volunteer co-ordinator and reviewed independently by the directors. All payments will be based on a purchase order that is approved by the co-ordinator and countersigned by the second signatory to the account. All expenditure above £500 will go to the board for approval. Directors will also receive information on a) system performance versus predictions; b) proposals for new projects; c) promotional and educational activities; and d) fundraising and income-generation.

Business Model

Our business model is based on one that has been used successfully by a number of energy co-operatives in the UK. The two core products that CEM will deliver are: (a) solar photovoltaic (PV) installations on local buildings; and (b) education and empowerment interventions targeting those in, or at risk of fuel poverty.

Solar PV Installations

Partners (schools and community centres) lease the use of their roof space to CEM at no cost. CEM will organise the installation of the solar PV installation. The solar PV installations will be owned, operated and maintained by CEM for a period of 20 years, after which time ownership of the PV installation will be transferred to the partner organisation hosting the panels. The electricity

generated by the solar array will principally be used by the schools or community venues hosting the array. That which is not needed and used, will be exported to the national grid to be used elsewhere. The proportion of the electricity used as opposed to being exported to the national grid will depend on the needs and electricity usage patterns of the building. An information meter will monitor usage on-site. CEM will claim the Export Tariff for all proposed installations.

The income to CEM will be from three sources:

- A 'Generation' Feed in Tariff, currently 11.3p per kWh
- An 'Export' Feed in Tariff, currently 4.77p per kWh
- A per kWh charge

The Feed in Tariff (FiT) is a government mandated subsidy for renewable energy generation that is paid by energy companies for a period of 20 years following the install date. The Generation Tariff is paid for every unit (kWh) of electricity that is generated by the solar arrays regardless of whether it is used or exported. An additional Export Tariff is paid for every unit of electricity that is exported to the grid. A minimum Export Tariff is set by Ofgem but this electricity can also be auctioned to achieve a somewhat higher rate for exported electricity. The Feed in Tariff rate is set by government and it is usually determined by the date of install. The Feed in Tariff rate 'digresses' every quarter. To date, the rate of digression has been determined by the national rate of deployment of particular renewable technologies.

The partner organisations will pay CEM a rate for each kWh of generated electricity used by the building. In our first share offer, this rate is less than half of what they currently pay for electricity from their current electricity supplier, leading to a reduction in electricity bills. For example, the schools participating in our first share offer pay an average of 12.3p per kWh for electricity from their electricity suppliers. CEM will ask for a payment of between 6p-8p per kWh.

Financial Benefit To Partners

Predicted savings for partners in our first share offer range from £210,468 to £242,980 over 20 years. Our per kWh charge will remain constant in real terms, only rising with RPI over the 20 year period while we expect that the price of electricity from mainstream suppliers will rise by at least 4% per annum. Our partner organisations will be selected not merely because they are keen to participate but because the money that each of these institutions will save on electricity bills will be redirected to increase service provision that will benefit the community..

Legal Issues

A 20 year lease agreement that specifies the terms and conditions of our relationship with the freeholder of buildings will be signed prior to installation. In the case of the community schools, the freeholder is the local authority. The lease agreement not only covers issues such as insurance, repairs, access, obstructions to the panels, but also specifies a break clause that can be exercised after 3 years that enables the landlord to either purchase the solar array from CEM or to transfer the Lease to a new owner of the building. A Power Purchase Agreement (PPA) is in place with the occupier of the building (in all cases this is the school) that specifies the terms and conditions for purchase of electricity from CEM. In negotiating these, CEM has been represented by Linder Myers LLP.

Financing the Installations

Finance to cover the capital and installation costs will be raised through a community share offer: members of the public will be invited to become members of the society by investing any amount between £250 and £20,000. We hope that many of the members will come from the local area - thus creating a connection between members of the community and the schools. Withdrawable share capital can be withdrawn by members subject to conditions laid down by the society. According to our rules, members must provide three months' notice before withdrawing shares and withdrawals cannot be made until three years after the initial share offer.

Due to the effects of inflation, much of the income used to repay investors initial capital will be earned in

the later years of the project. As a result, shares will only be able to be withdrawn early where enough income has been earned to do so, and approval to allow withdrawals will be at the directors' discretion. This kind of share cannot be transferred. It is best viewed as a long term investment in the community whose dividends are principally social rather than financial.

Financial Return On Investment

Whilst the principle returns will be social, each project will provide a return to investors above the capital that they invest. Our first project aims to provide 3%-5% interest per annum on an ongoing basis in addition to returning capital upon request.

Investors may also be able to claim tax relief on their investment via the Enterprise Investment Scheme ("EIS") which allows them to offset 30% of their investment against income tax that would otherwise be owed. For those members who are eligible this could increase the effective rate of return to investors. HM Revenue and Customs is being consulted regarding our ability to issue shares that are eligible for EIS.

Social Return

As well as financial returns to investors, income must also cover costs associated with the operation and maintenance of the solar panels, insurance, administration costs, and also a contribution to our proposed Community Sustainability Fund. Almost all project costs are retained in the local economy: what partners save on fuel bills will be spent on increased service provision. The Community Sustainability Fund will be used to fund work in the local area employing local people, and since contribution to the local economy is one of the criteria being used to select solar installation services, much of the costs of the installations will be retained in the local economy.

This business model allows us to meet our organisational aims of generating renewable energy that will mitigate climate change, whilst reducing the energy costs of schools providing a valued community service. It also funds work that will provide tangible improvements to the sustainability of local communities using a business model that has a core focus on social responsibility and affordable energy provision.

Our First Share Offer

In our first share offer we are seeking to raise £148,000 in order to acquire an existing 40kWp system from local social enterprise Good Neighbour Community Energy installed in March 2013 and to install a further 100kWp solar photovoltaic panels on one school and three community buildings in Liverpool as follows:

An existing 40kWp solar photovoltaic systems installed in Liverpool in March 2013, generating a proven 35,000kWh per year

15.6kWp solar photovoltaic system at the Kuumba Imani Millenium Centre in Liverpool L8
<http://www.kuumbaimani.org.uk/>

29.5kWp solar photovoltaic system at Norman Pannell CP School in Netherley, Liverpool
<http://www.normanpannell.com/25kWp> solar photovoltaic system at Walton Cornerstone, Walton, Liverpool
<http://www.waltoncornerstone.co.uk/>

29kWp solar photovoltaic system at Francis de Sales, Everton, Liverpool, the new home for Positive Futures North Liverpool. <http://www.positivefuturesnorthliverpool.co.uk/>

The solar PV installation will be carried out by Feed It Green Ltd who were selected on the basis of a competitive tender model. The company has extensive experience of installation at the 25-50kWp undertaking 3-4 projects of this size per month. They are a Liverpool-based MCS registered company that comply with RECC (Renewable Energy Consumer Code).

Taken together these solar arrays will generate 112,000 kilowatt-hour (kWh) of clean solar electricity, and save approximately 101 metric tonnes of CO₂ emissions each year. Moreover, the organisations involved will save an estimated £243k in electricity costs over 25 years and

direct more funds to meeting the needs of the communities that they serve.

Market Opportunities In Renewable Generation and Demand Reduction

The Feed in Tariff constitutes a significant portion of the revenue stream for our community financed solar PV projects. On 27th Aug the Department of Energy and Climate Change announced the government's intention to review the Feed in Tariff scheme. The reductions in the Feed in Tariff proposed are drastic. For example, they propose a reduction in the Feed in Tariff for schemes between 10 and 50kWp from the current 11.71p per kWh to a mere 3.69p/kwh. Prices of solar PV equipment are at a bit of a plateau and they are unlikely to fall. Since this announcement we have revised our plans with an intention to only undertake one further large-scale PV installation after which the business model would be revised.

There are a number of viable alternative business models that we intend to explore. These include:

- * **Installing Community Financed Renewable Heat**
We will explore the possibility of installing technologies such as solar thermal or biomass boilers in community buildings such as schools and community centres, and financing this through a community share offer. The Renewable Heat Incentive (a subsidy for projects that use renewable technologies to provide space heating) is still in place. This would provide a revenue stream allowing us to repay investors.
- * **Low Energy Lighting Projects**
LED lighting provides much lower cost lighting than lighting based on incandescent or even CFL lightbulbs. We intend to explore the use of a business model whereby we install LED lightbulb in schools or community venues and financing this through a community share offer. The school or community venue would pay for light (at a rate that is lower than their existing lighting costs) providing a revenue stream.
- * **Anaerobic Digestion**
Using Waste materials from breweries is also an interesting avenue to explore particularly in relation to providing fuel for gas powered vehicles or for local heating or micro heat-distribution networks.

Our Marketing Strategy

We will attract 400 investors with an average investment of £375 per member and a median investment of £1200. In terms of promoting our first solar project:

- We will use our website, e-newsletters, twitter feed, Facebook page and Project Dirt/Community Energy Hub page to announce our share offer making use of a video to explain our business model.
- We have produced a leaflet advertising our share offer and this will be distributed in community centres, health food shops, community cafes, libraries and emailed to all the local community organisations with whom we have a relationship in order to circulate it amongst their own membership
- We will host a share offer launch event (and photo opportunity) at one of the solar partner schools to which the local press will be invited.
- We have drafted a press release and assembled a press list for all local media.
- We will host to “Q&A” targeted at investors: one in Liverpool and one on the Wirral to take place in the first two weeks following our share offer launch.

For our first share offer, we intend to use the Microgenius investment platform which only hosts those share offers that have attained the Standard Mark accreditation and will thus provide investors with confidence in the quality of the investment offer.

We are actively developing new business models in anticipation of the reduction in Feed In Tariffs. Regardless of the product or service that we intend to offer the marketing plan will entail:

- The production of a high-quality electronic leaflet that can be circulated to the community sector organisations with which we have a relationship.
- The production of a high quality brochure that clearly explains the product or the service that we are intending to provide and the terms and conditions under which we intend to provide that service.
- Widespread use of environmental and social groups and networks to spread the word
- Use of social media and channels to raise awareness and the profile and reach of the offer
- A traditional media campaign aimed at local press and radio stations
- A launch event
- Engaging with intermediary organisations with which we have a relationship
- Word of mouth, personal contacts and recommendations

The marketing and communications strategy is somewhat different for each group.

Our Marketing Strategy For Key Stakeholders

The community energy sector cannot be considered a homogenous group. We have identified three key stakeholder groups; these are:

- Our shareholder members / potential shareholder members;
- Partners and potential partners (Community venues that may wish to partner with us on renewable generation or energy efficiency projects);
- Commissioners, funders and beneficiaries of fuel poverty alleviation programmes.

The Typical Shareholder

Our offer is most attractive to investors in their forties with a middle-band income and interests in social and/or environmental issues. Much of this profile has been reinforced by recent research by Nesta (National Endowment for Science, Technology and the Arts) and the University of Cambridge. The joint project attempted to define the rapidly expanding alternative finance market and its subsequent report,

Understanding Alternative Finance claims to be the largest study of this market to date. Although the report did not make a gender separation, it did throw up some useful indicators. These included the findings that:

- investors in community shares tend to be in the older age bracket with 39% aged between 35-54 and 56% aged 55 or over.
- the annual income of funders is spread fairly evenly across income bands with the largest segment being in the £25,000-£35,000 band (26%).
- 55% of all online investors are based in the South East and 14% are based in London.
- the prospect of a financial return was only 'important' or 'very important' to just under a quarter of investors. The key factors identified as being most important were 'doing social or environmental good', 'feeling their money is making a difference' and that, 'the organisation or projects invested in will create a stronger community'.

We are also aware that there is significant potential to gain investors and champions (who spread the word) from among the parents of children who attend the schools that have become our 'solar partners'.

Our Unique Selling Points for Shareholders (USPs)

The community shares market is growing quickly: according to the Nesta/University of Cambridge report, last year the community shares market doubled from £15m in 2013 to £33.6m in 2014. The minimum investment for community energy projects is typically £250-£500.

With the recent downturn still taking its toll and a lack of general awareness about the advantages of 'community share offers', there is considerable fundraising competition from other energy cooperatives or social enterprises. The question is, how do we persuade potential investors that our project and vision is appealing enough to buy into? One of the key attractions of our business model is that it provides a virtuous circle whereby everyone involved in our projects benefits in some way:

- our partners get cheaper electricity bills;
- our members get a decent rate of interest on their investment; and CEM gets the feed-in-tariffs which, in turn, provide a better foundation to raise future funds for its work on reducing energy insecurity and creating more sustainable neighbourhoods in Liverpool.

This model not only provides a financial incentive but a strong 'feel-good' factor. Becoming a CEM member is not just about investment, it's about involvement. Alongside these initial incentives, with solar PV installation there is the tangible benefit of members being able to physically see the solar panels that have been bought with their money and to connect with the children that are benefitting from cheaper electricity bills and therefore more cash for resources that they really need. Underlining these incentives is the fact that CEM is uniquely committed to channelling future funding and surplus into increasing community sustainability.

Our Marketing Strategy For Partners & Other Stakeholders

Our primary marketing strategy will be based around the idea of creating sustainable neighbourhoods, anchor community organisations and through energy demand reduction work in the future, sustainable households. This will occur through personal contact, issuing regular press releases and good news stories and promoting awareness of the potential savings and social benefits from supporting CEM.

Our Unique Selling Points

CEM can provide no-stress installation of solar PV and a cheaper energy deal than many commercial 'rent-a-roof' installers. Our model does not contain any 'hidden extras,' and the solar panels are of a higher quality than most rent-a-roof company offerings. Any future offerings for renewables installation will be equally transparent. Most of our solar partners are based in areas of high fuel poverty and insecurity and this provides us with an ideal opportunity to promote community sustainability and low carbon communities while training 'energy champions' to continue this work in local neighbourhoods.

Financial Plan

The cost of all preparation work will be financed by Good Neighbour Community Energy, our sister company, and through a UCEF grant made to Good Neighbour Community Energy.. Approximately £10,000 is available for this work. For further information about GNCE, please see its website www.gnce.co.uk and www.gnce.co.uk/shareoffer where you will find our Share Offer, Application Forms, Business Plan, selected Financial Projections and CEM's Rules.

Financial Plan for First Solar PV Installation Project

Financial modelling and sensitivity analysis has been undertaken to assess the financial viability of the project. The financial model is reliant upon various assumptions which are listed below. If over time, these assumptions prove to be incorrect then returns to investors may be affected.

Development Costs

To date all development costs of the project have been met by Good Neighbour Community Energy. These can broadly be divided into the following categories:

- organisational set up costs (e.g. registration)
- early-stage feasibility costs (e.g. public consultation, site assessment, DNO registration, legal fees); and
- later-stage feasibility costs (e.g., structural surveys and EPC assessments).

The Urban Community Energy Fund provided funds to cover many of the costs inherent in establishing the feasibility of the project. GNCE has covered later stage feasibility costs. Installation management and contingency costs will be covered within the share offer.

Members of the boards of GNCE and CEM have collectively made a substantial in-kind contribution that amounts to well over 1200 hours of skilled volunteering time.

Income

The project primarily receives income from three sources:

1. Feed in Tariff ("FIT") – The FIT rate received varies between sites and ranges from 11.71-12.32p/kWh. This is guaranteed for 20 years by primary legislation and increases with the Retail Price Index ("RPI").
2. Export Tariff – The export tariff is a payment for the electricity exported to the grid. This is the power generated minus any power used on-site. The current export tariff is 4.77p/kWh and is also linked to RPI. Where possible we may seek to sell this electricity to a third party through a Power Purchase Agreement ("PPA") if a higher price can be achieved.
3. The per kWh Electricity Charge – Our partners will pay for the electricity they use onsite, starting at 7p per kWh and rising annually by the Retail Price Index. .

Expenditures

There are a number of expenditures throughout the course of the project. These include:

1. Interest and principal repayment to members – As detailed above in "Financial Benefits" section.
2. Operations and Maintenance ("O&M") – O&M costs for solar photovoltaic equipment are generally low and there are multiple providers who cover the Liverpool area. Initially we expect that these services will be provided by the installer, and will total less than £300 per site per annum.
3. Insurance – To minimise risk to our members we will acquire comprehensive insurance policies to cover damage to the installations and loss of income arising from damage to the systems.
4. We will also purchase extensions to the inverter warranties after the initial five year period..
5. Project Management and Administration – This will include preparing accounts, managing the ongoing contracts, administering payments to suppliers and shareholders, etc.

Assumptions

Our financial model uses assumptions to calculate future incomes and expenditures as follows:

- Retail Price Index – We assume that RPI will average 2.5% over the next 20 years. Although the current rate of RPI is 1% the average for the past 20 years is 2.5%. When assessing the project's overall viability we have also assessed cases of 1.5% and 3.5% long run RPI.
- Panel Degradation – This is the rate at which the panels become less productive. We use 0.8% which is an industry standard however also model 0.9% and 0.7%.
- Inverter Life – Our inverters will be under warranty to last at least 10 years however we have budgetted to extend warranty life in five year periods every five years from 2021.
- Administration Costs – Our administration cost assumptions are based upon figures supplied by other similar organisations and our own assessments of the ongoing needs of the project.
- Generation – Our solar engineer and installer have worked together to estimate the productivity (kWh/kWp) of the sites over a typical year in accordance with standard industry methodology.

Financial Forecast

Based upon our financial model, using the assumptions above, we forecast that in our base case we will be able to provide a 4% interest rate to members, full capital repayment in Year 20, and generate a Community Sustainability Fund of £85,000 over a 20 year period. The following section provides financial projections for a 20 year period. This does not include any income from grants for community sustainability work.

Community Energy Merseyside
Cash Flow

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	0	16853.69	26730.58	38860.45	46428.99	54354.15	62142.28	71314.3	80983.04	90641.58	101270.8	111376.4	122952.4	134992.8	146991.8	160958.9	174279.4	189323.3	201985.4	214261.9
<i>Cash in</i>																				
Loans																				
Share capital	147201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liverpool Solar 1	3625	4355	4433	4508	4584	4661	4739	4819	4900	4982	5066	5151	5237	5325	5415	5506	5598	5694	5791	5889
Walton Comerstones	2917	3677	4477	4676	4755	4834	4916	4998	5082	5168	5254	5343	5432	5524	5617	5711	5807	5904	6004	6104
St Frances de Sales	3285	4122	4227	4298	4371	4444	4519	4595	4672	4750	4830	4911	4994	5078	5163	5250	5338	5428	5519	5611
Norman Pannell School	3728	4677	4796	4877	4959	5042	5127	5213	5301	5390	5480	5572	5666	5761	5858	5956	6056	6158	6262	6367
Kuumba Imani Centre	1971	2474	4663	4741	4821	4902	4984	5068	5153	5239	5327	5417	5508	5600	5694	5790	5887	5986	6087	6189
VAT on sales of electricity (assume 20% charged)	867	803	818	831	845	859	874	889	904	919	934	950	966	982	998	1015	1032	1050	1067	1085
Total cash in	163594	20109	23414	23932	24334	24742	25158	25581	26010	26447	26892	27344	27803	28270	28745	29228	29719	25797	25014	25357
<i>Cash out</i>																				
Fixed asset purchases	135722																			
VAT on fixed assets	27144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VAT due to HMRC	-26277	803	818	831	845	859	874	889	904	919	934	950	966	982	998	1015	1032	1050	1067	1085
Start up costs and Project management	7479	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administration, fees, etc	1472	1509	1547	1585	1625	1665	1707	1750	1794	1838	1884	1931	1980	2029	2080	2132	2185	1783	1672	1714
Maintenance	0	250	306	914	1084	1111	1139	1168	1697	1239	1270	1302	1334	1868	387	397	272	279	286	148
Insurance	1200	1230	1261	1292	1325	1358	1392	1426	1462	1499	1536	1575	1614	1654	1696	1738	1781	1552	1497	1535
Extension of inverter warranties	0	0	0	0	0	1100	0	0	0	1250	0	0	0	0	1400	0	0	0	0	0
Share interest	0	5152	5152	5152	4997	4848	4702	4561	4424	4292	4163	4038	3917	3799	3685	3575	3467	3363	3263	3165
Community benefit payments	0	1288	1288	1288	1249	1212	1176	1140	1106	1073	1041	1009	979	950	921	894	867	841	816	791
Return of share capital	0	0	0	4416	4284	4155	4030	3909	3792	3678	3568	3461	3357	3256	3159	3064	2972	2883	2796	2713
Corporation tax	0	0	913	884	999	646	966	1069	1174	1281	1140	1502	1616	1732	1851	1693	2097	1383	1340	1449
Total cash out	146740	10232	11284	16363	16408	16954	15986	15912	16352	15818	16786	15768	15763	16271	14778	15907	14675	13135	12737	12599
Closing balance	16854	26731	38860	46429	54354	62142	71314	80983	90642	101271	111376	122952	134993	146992	160959	174279	189323	201985	214262	227020
debtors	15946	2548	2715	2761	2807	2854	2902	2951	3001	3051	3102	3154	3207	3261	3316	3372	3428	2706	2674	2719

15% of income for a year assumed to be received the following year

Community Energy Merseyside Liverpool Solar Communities Financial Forecast
Profit and Loss Projections

	Includes 2015 share offer costs																			Total		
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034		2035	
Income																						
Liverpool Solar 1	4264	4371	4444	4519	4595	4672	4751	4831	4912	4994	5078	5163	5250	5338	5428	5519	5612	505	0	0	84247	
Walton Cornerstones	3431	3721	4610	4688	4766	4846	4928	5011	5095	5180	5268	5356	5446	5537	5630	5725	5821	5919	6019	6120	103118	
St Frances de Sales	3865	4168	4238	4309	4381	4455	4530	4606	4683	4762	4842	4923	5006	5090	5176	5263	5351	5441	5532	5625	96248	
Norman Pannell School	4385	4729	4808	4889	4971	5055	5140	5226	5314	5403	5494	5586	5680	5775	5872	5971	6071	6173	6277	6383	109205	
Kuumba Imani Centre	2319	2501	2543	2586	2629	2673	2718	2764	2810	2858	2906	2954	3004	3054	3106	3158	3211	3265	3320	3376	57755	
Total Operating Income	15946	16988	18101	18405	18714	19029	19348	19673	20004	20340	20682	21029	21382	21742	22107	22478	22856	18038	17828	18128	392818	
Expenditure																						
Start up costs and project management	7479																					
Administration, fees, etc	1472	1509	1547	1585	1625	1665	1707	1750	1794	1838	1884	1931	1980	2029	2080	2132	2185	1783	1672	1714	35882	
Maintenance	0	0	0	0	0	1200	1230	1261	1292	1325	1358	1392	1426	1462	1499	1536	1575	1311	1241	1272	20378	
Insurance	1200	1230	1261	1292	1325	1358	1392	1426	1462	1499	1536	1575	1614	1654	1696	1738	1781	1552	1497	1535	29622	
Extension of inverter warranties (3)						1100					1250					1400					3750	
Total operating expenditure	10151	2739	2807	2877	2949	5323	4329	4437	4548	4662	6028	4898	5020	5145	5274	6806	5541	4647	4410	4520	97111	
Operating surplus	5795	14250	15294	15528	15765	13705	15020	15236	15456	15678	14654	16132	16362	16596	16833	15672	17315	13391	13418	13607		
Other income																						
interest received (4)	136	422	619	832	976	1120	1264	1420	1588	1769	1963	2169	2388	2621	2866	3126	3398	3648	3305	3563	39192	
Total other income	136	422	619	832	976	1120	1264	1420	1588	1769	1963	2169	2388	2621	2866	3126	3398	3648	3305	3563	39192	
Other expenditure																						
Depreciation	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	6786	135722
share interest (5)	0	5152	5152	5152	4997	4848	4702	4561	4424	4292	4163	4038	3917	3799	3685	3575	3467	3363	3263	3165	79715	
Total other expenditure	6786	11938	11938	11938	11784	11634	11488	11347	11210	11078	10949	10824	10703	10585	10471	10361	10254	10150	10049	9951	215437	
Net surplus/loss	-854	2733	3975	4421	4957	3192	4795	5309	5834	6370	5667	7476	8048	8631	9228	8437	10459	6890	6675	7220	119462	
Profit/loss carried forward	-854	1879	5853	10275	15232	18423	23218	28527	34361	40730	46398	53874	61922	70553	79781	88218	98678	105568	112242	119462	1014340	
Community Benefit Payment (6)	0	1288	1288	1288	1249	1212	1176	1140	1106	1073	1041	1009	979	950	921	894	867	841	816	791	19929	
Profit/loss carried forward	-854	-264	4565	8987	13982	17212	22043	27387	33255	39658	45357	52865	60943	69604	78860	87324	97811	104727	111427	118671		
Corporation Tax (7)	0	0	913	884	999	646	966	1069	1174	1281	1140	1502	1616	1732	1851	1693	2097	1383	1340	1449		

Notes

- (1) All income is inflation-linked (to RPI). RPI is assumed to be: 2.50%
- (3) Extension of 5-year warranties for inverters to 20 years, at the end of the initial warranty period.
- (4) Interest rate assumed : 1.75%
- (5) Share interest payments 3.50%
- (6) Community benefit payments a quarter of the amount paid out in share interest
- (7) Liability depends on whether community benefit payments are made to a charity

Risks, Contingencies and Plans

Your investment is fully at risk. If the business fails, you may lose some, or all, of the money you have invested. Whilst we firmly believe that the business will be profitable, it is important to note that there are associated risks.

Prolonged equipment failure is always a possibility but is calculated to be an extremely low risk. The technology being used is well-developed with a long life expectancy. Electricity generation is spread over six sites. In addition, the installer has given us a performance warranty of 20 years.

Obviously climate change is an issue, with the increased possibility of unusual weather conditions, variations in seasonal weather and extreme weather events. In the latter case, all installations will be low level avoiding the risk of wind-related damage. The long-range predictions of climate change science is for longer periods of more intense insolation interspersed with periods of unseasonal cooler and wetter weather.

In terms of equipment failure, the main risk is the failure of inverters which usually occurs from ten years onwards. We will put in place extended warranties after the first five years

Delays during construction due to bad weather or a main supplier or contractor going bankrupt are unlikely and we believe there is enough slack in our schedule to accommodate delays. We have chosen standard, widely-available equipment to minimize risks in this area. Installation is expected to take no more than 12-14 weeks.

The Society will insure all equipment and will purchase insurance to cover interruption to trade. It will hold adequate public liability insurance.

There is a risk that the Feed In Tariff level could collapse over the next few years. Our strategy is to install generating equipment in 2016 and 2017 to provide a platform for much larger installations in which generating levels and economies of scale offset any further reductions in FiT levels. Revenue from power purchase agreements for installations planned for 2017 and beyond will be reviewed to cope with reductions in FiT income.

In addition, CEM will use its pool of members to carry out grant-funded projects and professional consultancy delivered on a pro bono basis in order to generate income for social purposes. We project income of around £20,000 a year (one or two projects a year).

It is important for members to understand that the value of their shares will not increase and may be written down by the Directors if warranted by the financial position of the company. The only financial benefit for members is from the share interest that is paid. This proposal is not regulated by the Financial Services and Markets Act 2000 because the shares in the Society are not 'securities' for the purpose of those regulations. It is therefore not authorised by the Financial Conduct Authority. If the business fails investors have no right of complaint to the Financial Ombudsman or the Financial Services Compensation Scheme.

RISKS & MITIGATION STRATEGY	
Risk	Mitigation
Failure to install by December 31st 2015. If installation is not complete by this date and registered with the MCS scheme a substantially reduced Feed in Tariff rate is likely to apply making the project financially more difficult.	Feed It Green are confident that each school can be completed over the course of one weekend. Allowing a weekend contingency for each school they have allocated the following dates: Trinity: 21/22 and 28/29 November Norman Pannell: 5/6th and 12/13th December
Failure to enter into lease agreements	Lease negotiations have commenced and are ongoing. Agreement is needed from multiple departments rather than any failure to reach agreement in particular issues. Nonetheless, there is a risk that lease negotiations cannot be concluded satisfactorily. Our solicitor will continue to work closely with the legal teams of all sites to conclude lease negotiations over the coming weeks
The installer goes out of business causing difficulties should there be a failure of equipment during the warranty period.	FiG hold deposit insurance and independent warranty insurance to safeguard the continuation of the warranty in the event that they go bust. Similarly our own insurance policy protects provides warranty insurance
Weather variation	Solar PV relies upon the sun to generate electricity. Whilst the level of solar irradiance is largely predictable an extended period of very low solar irradiance would reduce CEM's income.
Failure or breakdown of the inverters. Inverters are typically more prone to breakdown than the panels themselves. If this were to occur it could reduce CEMs income.	We will install remote monitoring systems to provide alerts if the systems are not working properly. we will also purchase five year extensions to the warranty every five years
Theft and damage. The installations may become damaged through vandalism or accidental damage or may be stolen.	Inverters will be covered by extended warranties and insurance will be in place to cover damage and losses from any interruption to generation.
Changes to regulatory regime. If the Feed-in Tariff is altered or scrapped retrospectively or any additional charges taxes or levies are applied then this may reduce CEM's income.	The Feed in Tariff is guaranteed at a fixed level for 20 years under primary legislation
Mismanagement. If CEM becomes liable for fines or other penalties due to being out of compliance with any applicable laws or regulations then this may reduce CEMs ability to pay interest or repay share capital. Similarly if CEM becomes insolvent due to financial mismanagement then this may also affect its ability to pay interest or repay share capital.	CEM will issue regular reports of operations to members and will create sub-committees of members to scrutinize financial and other decisions and information. This will ensure the organisation remain transparent and is well-managed

Risk	Mitigation
Should there be unresolved disputes between one or more directors, staff or volunteers, this represents a risk to the organisation	Board decisions are made by consensus and disputes should be few. We will host regular team building events for directors, advisors and volunteers. We will develop a grievance and disciplinary policy for staff and volunteers and dispute resolution for directors.
Worse economic conditions and performance	CEM will exercise tight financial controls, maintain low levels of spending on administration and seek to build a reserve fund quickly to cope with any difficulties that might arise
Should CEM fail to retain an adequate number of skilled committed directors this represents a risk to the organisation.	CEM rules specify that a third of directors to stand down or stand for re-election at every AGM. This will encourage new directors to come forward. We will also allow people interested in becoming directors to shadow existing directors.
Long-run inflation is lower than predicted, reducing income	CEM will continue to pay interest at agreed rate of return at the time but may need to reduce interest paid to members