

Share Offer

**Become a member of
Grannell Community Energy
and co-own a wind turbine
in Ceredigion**

**Share launch: 1st June 2018
Share target: £700,000**



**Grannell Community Energy
is a Community Benefit Society,
registered with the Financial Conduct Authority no. 7447**

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Message from the Directors of Grannell Community Energy

We are really excited to share this document with you. It has been three years of hard work and taken an enormous amount of help from a wide variety of people and organisations. Now, we have come to the point where we are asking members of our community, local people as well as people interested in renewable energy, to join in this project with us. Sharing is an important part of what makes us human, it is natural, and it is what helps a community thrive.

In this document you'll find out exactly how you too can become a member of Grannell Community Energy. We sincerely hope you will join. It shows you care about the planet, about your children and grandchildren, and about strengthening one small West Wales local community that stands to benefit from this project. We are offering an anticipated return of 5% to make it possible for you to invest your funds with us for some years.

We wish to thank the following for getting us to this stage. First of all, the Evans family, Dai, Ann and Barry, for their enormous patience. Next, our constant reliable props, Andy, Paul, Miles, Geraint, Stephen, Gareth, Steve, Jeremy and the Sharenergy team. We also wish to extend our thanks to our own families who have put up with our absences and our occasional outbursts of frustration and elation while we have volunteered our time and energy to make this one turbine happen!

The road to success is not always a smooth one but the end of this one is in sight and we feel justifiably proud of our achievement. We want to share with you this sense of pride, that we have put all this effort into creating a worthwhile project of which we think the whole community can be proud.

We look forward to your membership.

This share offer document replaces a previous document and extends the deadline to 14th December 2018. This still gives us plenty of time to build before our FIT deadline of December 2019, but we are now planning to carry out the construction in Spring 2019 rather than Autumn 2018. Our projections remain much the same, the main change being that we now have assurances from Ceredigion County Council that we will be eligible for business rate relief, which means that we can still project a 5% return for shareholders even though commissioning is now slightly later. This really is the last chance we now have to raise the money we need to erect this turbine and save over 600 tonnes of carbon dioxide per year, so please do share with your friends and relatives, and we hope you choose to join us.

Thank you



Lindsay Thomas



Jane O'Brien



Guy Hopwood



Leila Kiersch



Brian Mark

Board of Grannell Community Energy Limited grannellcoop.org.uk



Summary

This is a share offer to raise capital for a community owned wind turbine near Lampeter, in Ceredigion, West Wales. This offer aims to raise £700,000 towards the construction costs. The balance of £535,000 has been obtained as a loan from the Development Bank of Wales. Once the turbine is commissioned, this loan will be refinanced by the launch of a second share or bond offer.

The share offer is for shares in Grannell Community Energy (GCE), a community benefit society based in Ceredigion whose mission is to support a vibrant local community in and around Cribyn, Lampeter and to help the community reduce their contribution to climate change.

The share offer opened on 1st June 2018 and will close when the target is reached. If the target is not reached by 14th December, and the board have not been able to meet the shortfall from any other source of capital that preserves the projected returns to members, the share offer will be closed and the turbine will not be built. The board are exploring alternative sources of funding that could be meet such as shortfall but this provision cannot be guaranteed. Construction will not go ahead until all capital required for the construction is in place, and if construction does not go ahead, share monies will be returned in full to applicants.

The shares will be offered at £1 each. The minimum number of shares that you can apply for is 100 if you reside within Ceredigion or the postcode areas SA40 and SY23, and 250 if you live outside these postcode areas. The maximum is 100,000 shares.



GCE will pay interest on shares, projected to average 5% across 20 years. More detail about the projected profile of the interest is provided on page 11.

In addition to interest payments, members will be entitled to the return of their capital, and it is anticipated that all members will have had their capital returned by the end of 20 years. Members can request to withdraw their capital at any point before the end of the project. Early withdrawal is at the discretion of the board but will be permitted where funds and cashflow allow.

GCE operates on a one member one vote basis and welcomes members to take an active involvement in the running of GCE, including the opportunity for all members age 18 or over to stand for election to the board.

We are planning to distribute funds of at least £5,000 per year (indexed with RPI) into good causes in the local community - see page 4 for more detail.



If you are interested in investing, you should do so only after reading this document in full and taking appropriate financial and other advice. This share offer is not covered by the Financial Ombudsman Service or the Financial Services Compensation Scheme. You could lose some or all of your money.

Our Community

This is a community energy project that is being developed by a community benefit society.

The project came about because of the passion of a group of local individuals to do something to raise funds to support dwindling local services. We also wanted to help address climate change and make the rural economy more resilient. A site with planning consent for a wind turbine was offered and we formed a new community benefit society so that the project could be progressed.

One of our major objectives for the construction of the turbine is to strengthen the rural community close to the turbine by improving community facilities. GCE will create a community fund which will be spent within the communities of Llanwnnen, Llanfihangel Ystrad, and Lampeter.



We think of our community as including all those people who want to build a better society, who support renewable energy and who care about climate change. We hope that people from the wider community will support our project by buying shares – it will be tough to raise £700,000 from this sparsely populated area of Mid Wales, one of the most rurally deprived areas of the UK, and we will depend on many of you from across Wales and the UK who support our ideas to also support our share offer.



A recently commissioned "Community Energy, State of the Sector" report (<https://communityenergyengland.org>) commissioned by Community Energy England identifies 137 community energy projects like ours that have been constructed across the UK since 1997, providing a total capacity of 121 MW. These organisations have a total membership of about 30,000 including 1700 active volunteers. These projects have raised about £190 million between them in funding, of which £63 million is from community shares.



Community Benefits

The community fund

We hope to make available a sum of at least £5,000 per year over 20 years (subject to turbine performance) to put into a community fund for Llanwnnen, Llanfihangel Ystrad, and Lampeter.

The board will invite suggestions from the local communities for how this fund should be allocated and spent. The board will make the final decision about the distribution of the fund but will give preference to projects which help local people / places reduce their fuel bills or improve local public transport. Members of GCE will be encouraged to stand for the board and hence take part in this decision making process. Where possible, the view of members will be sought at the AGM to assist the decision making process.

Carbon Reductions

According to the studies commissioned from Digital Engineering, the turbine is projected on this site to generate approximately 1,743 MWh of electricity each year (under the P50 scenario). The official government grid carbon intensity for grid electricity in 2017 was 351g/kWh which means that this turbine should reduce UK CO₂ emissions by about 613 tonnes per year.

Our generation of 1743 MWh of electricity would supply on average about 1060 people in the UK with their domestic electricity consumption, or 446 average UK homes (half the Llanfihangel Ystrad ward).

£5000 community fund

613 tonnes of CO₂ saved

**Enough electricity
to supply 446 homes**

The Society



The turbine will be owned by and the shares will be issued by Grannell Community Energy Limited (GCE). This is a community benefit society which was set up specifically for the purpose of developing and operating this community based wind turbine. The society is based on model rules developed by Co-operatives UK.

A community benefit society is a form of registered society with rules registered with the Financial Conduct Authority. A Community Benefit Society (CBS) is the best organisation structure for a project such as this. The main reasons for this are as follows:

The rules of a CBS require the organisation to operate the highest standards of democracy, equality, transparency and fairness, giving members the maximum opportunity to get involved with how GCE is run. One example of this is the "one member one vote" rule ensuring that all members have a say irrespective of the size of their shareholding.

The ability to raise public share capital. Society legislation permits registered societies to raise capital from members of the public by sale of "community shares" without having to comply with the Financial Promotion Order 2005 which is a requirement of public share offers in companies. Community shares (technically known as "withdrawable shares") do differ from shares in listed companies. See "Share Offer" section on page 14.

Grannell Community Energy was registered on 9th November 2016 by the Financial Conduct Authority and the registration number is 7447. The registered office is Pandy, Cribyn, Lampeter, SA48 7QH.

A copy of the rules can be downloaded from the website www.grannellcoop.org.uk. Some important inclusions in the rules are as follows:

The rules include the provision of an asset lock. This ensures that if GCE is wound up at any stage and once all outstanding bills are paid, shareholders are entitled to receive the value of any remaining share capital they have in GCE, but any additional monies liquidated by the winding-up would pass to another asset locked social enterprise with similar objects, and not to shareholders.

The rules also control the formation and operation of the board of 3 or more directors. Any member aged 18 or over can stand for election to the board. Other than payment of expenses, board members are unpaid volunteers.

Society Membership

The only way to become a member of GCE is to buy shares in GCE. A shareholder automatically becomes a member of GCE.

The rules include more detail on the rights and responsibilities of members. Membership is open to anyone age 16 or over or any incorporated organisation. Anyone or any incorporated organisation that has bought shares becomes a member.

The rules also specify (as with all registered societies) that each member has equal voting rights in member meetings irrespective of the number of shares held ("One member one vote"). Payment of interest however is in proportion to the number of shares held.

The society will be run democratically using one member one vote decision making

Members are encouraged to take an active interest in the running of GCE and optimising the benefits that arise from operating the turbine. Each year there will be an AGM where important decisions will be discussed and if necessary voted on.

At each AGM, one third of the existing board (those longest in office since their election) are required to stand down and may seek re-election. All members aged 18 or over are eligible to stand for election to the board.

The Founding Board

At present, we have five founding and co-opted directors. At the first AGM, this founding board will stand down and its members will stand to be re-elected by the members, any of whom is invited to stand as a new director.

Leila Kiersch

Leila is a long-term supporter of renewable energy generation and rural communities. She moved to Wales nearly 20 years ago to study and has raised her family here as well as attempting to learn the language and be a useful member of the community.

In her professional career she has worked in the wind energy sector, in community energy, and managing a local charity. She brings a wealth of experience to the board and intends to play a large part in ensuring the project is a success.

Guy Hopwood

Guy is a renewable energy consultant who lives and works in Wales and has lived in Ceredigion since 1972.

He has been involved in the development of a range of renewable energy schemes since 2010 including a 500kW wind turbine in Ceredigion and another in Carmarthenshire and is also an investor in two community wind projects in Wales.

Guy joined the GCE board towards the end of 2017 to provide additional support to the three founding directors and to try to ensure that Ceredigion has a successful community wind project.

Jane O'Brien

Jane has worked within the sustainability sector for over 25 years, turning ideas into realistic projects and helping 30+ communities on projects as diverse as wind turbine development, food growing and health and well being.

She sees energy efficiency at the core of sustainability, has an MSc in Energy & Conservation and has worked at the forefront of renewable initiatives with many successful funding bids. She is a RENEW Coordinator, an Energy Local advisor and a voluntary director of Community Energy Pembrokeshire

Jane and her husband own a small eco-tourism business offering traditional camping and off grid quirky units.

Brian Mark

Brian lives off grid near Aberteifi and is a retired commercial building services engineer. He was a founding partner of Fulcrum Consulting, a sustainable engineering consultancy with 200 staff.

Brian is an expert on low energy building and city design including integrated renewable energy and has served on the UK government's Renewables Advisory Board, advising on how to achieve renewable energy targets.

Brian is a keen supporter of community ownership including energy generation and has experience of successful delivery, for instance as a director for several years of the successful community organisation 4CG based in Aberteifi.

Lindsay Thomas

Lindsay moved to Wales over 30 years ago, and her 4 daughters have been born and raised here.

Previously running a publishing business and small press in Ceredigion and developing the county office to help families with children with additional needs, she currently promotes this unique and unspoilt corner of Wales through her holiday cottages.

She is determined to make GCE work for the environment, her local community, and to help fund local environmental initiatives. She wants to see more projects like this come to fruition, locally produced energy for local communities, safeguarding precious resources for future generations.



Board practices

Directors are unpaid and beyond reimbursement of expenses, there are no other benefits for directors. Day-to-day operations will be managed by the board.

Conflicts of interest

Leila Kiersch has received payment from GCE in the early stages of the project in her role as a professional in the community energy sector (when she was a paid employee of Sharenergy), and more recently, for managing the tendering process for construction contracts for the project Board through her company naet-Co Ltd. Leila did not take part in the discussion about the commissioning of this work and her invitation onto the board was in part to bring her expertise into GCE rather than GCE being reliant on using paid advisors throughout.

Legal proceedings

There have been no governmental, legal or arbitration proceedings relating to GCE and none are pending or threatened which could have a significant effect on the financial position or profitability of GCE.

Disclosure

None of the directors of GCE have, for at least the past five years, received any convictions (for any fraudulent offence or otherwise), or been involved in any bankruptcies or receiverships, or received any public reprimand or sanction by a statutory or regulatory authority or designated professional body, or been disqualified from any function by any court.

The Business Model

The business of GCE is to generate and sell renewable energy and to use its surplus for community benefit.

The Ffrwd Farm site

Ffrwd Farm is located about 2.6 miles west of Lampeter, and the turbine site is on a west facing hillside above the farm.

Seren Energy, a wind turbine site developer, obtained the consents and licences that are necessary for the site. This includes planning permission for an Enercon E48 turbine, a lease option with the landowners for a term of 25 years and an electricity grid connection offer from the local DNO Western Power Distribution. GCE has acquired all rights to develop the site, including the lease and all consents and licences from Seren Energy by purchase from Seren Energy of the Special Purpose Vehicle company (SPV) that these rights all reside within.

The turbine

The turbine identified for the site is an Enercon E48. This is an 800kW turbine with a blade diameter of 48m. On our site the centre of the blades will be 50m above ground level. Due to grid constraints, the turbine will operate at a maximum of 500kW when installed at Ffrwd.

Enercon is a German company and in 2016 they took 26% market share of the European turbine market¹. Enercon are regarded by many as market leaders. Their turbines are direct drive (i.e. do not require a gearbox) which improves reliability and reduces frictional losses.

The turbine GCE have purchased was originally installed on a windfarm in 2005 in Holland and was decommissioned in April 2018 as part of a programme of repowering the site with larger machines. The turbine has been serviced from new by Enercon under their full service and maintenance contract. Independent technical reports show it to be in an excellent condition with many years of operation remaining; some refurbishment will be completed while the turbine is in storage.

¹ <https://www.enercon.de/en/company/market-share/>

Our Enercon E48 turbine is predicted to generate 1,743,000 kWh of electricity per year



Income

During the first 20 years of operation, GCE will obtain income from the Feed-in Tariff and from selling the electricity into the grid.

The turbine has qualified for a Feed-in Tariff of 1.92p/kWh, which will be increased by RPI through the 20 years. GCE will be eligible for this tariff as long as the turbine is commissioned by end of December 2019.

For information about how the Feed-in Tariff works please consult the Ofgem website at www.ofgem.gov.uk.

The turbine will also be able to sell electricity to the grid. GCE can decide whether to accept the Ofgem export tariff (currently 5.24p/kWh) or whether to negotiate a PPA (power purchase agreement) from an electricity supplier. For a wind turbine of this scale, historically it has been possible to find a buyer for the electricity through a PPA (power purchase agreement) at a price that is higher than the Ofgem export tariff.

Critical to the financial projections is the estimate used for the price that the electricity will be sold for in future years. Over the past 5 years this export price has fluctuated and this is likely to continue and will be influenced by fossil fuel costs and by government policy on environmental regulations and energy strategy.

Our financial model assumes we accept the Ofgem guaranteed export tariff, but GCE feels this is conservative and if a higher value can be obtained in the future for the sale of electricity, this will feed into a higher community fund.

Wind speed assessment

One of the most critical elements in the calculation of income is the wind speed at the site. During the development stage, an assessment of the wind speed was commissioned from Digital Engineering, a consultancy that has a great deal of experience in forecasting wind speeds for wind turbine sites.

Their report provides two key results. These are the "central" estimate of what the average wind speed will be (the so called P50 estimate) and a "pessimistic" scenario of an average speed that they are 90% confident that the site will exceed (the so called P90 estimate). These two scenarios form the basis for our financial modelling.

The wind speed survey concluded that the P50 average wind speed at 50m hub height is 7.1 m/s and the P90 wind speed is 6.6 m/s.

The assessment carried out by Digital Engineering includes both the wind speed projections and the yield of energy from a particular wind turbine based on the machine's power curve provided by the turbine manufacturer. These are adjusted to take account of maintenance downtime and electrical losses, to form a realistic estimate of saleable electricity. Digital Engineering calculated that a 500kW Enercon turbine on the site would produce 1,743 MWh per year in the P50 scenario and 1,522 MWh per year in the P90 scenario.

An additional reduction of 2% has also been included in our projections to allow for the fact that the turbine is refurbished.

Operating expenditure

GCE will be responsible for all running costs of the turbine. These will include:

Maintenance costs GCE will take out a contact with a service provider to provide prompt preventative and corrective maintenance on the turbine. Quotations for maintenance contracts have been obtained from suitably qualified providers. We have budgeted in the long term for maintenance costs at the same level as the contract that Enercon charges on new turbines, but are confident that by using qualified third party service companies that we should be able to purchase this for under this budget cost.

Insurance Before any work is commenced on site, GCE will take out and will continue to hold third party public liability insurance, and during the life of the turbine GCE will hold operational insurance to cover damage not covered by the maintenance warranty.

Rent and Rates GCE will be responsible for payment of rent and rates. The formula for calculation of rent is defined in the lease for the whole 25 years. The lease also requires a fund to be set up to decommission the site at the end of the project. GCE have received assurances from Ceredigion County Council that GCE would be granted 100% discretionary charitable rate relief.

Administration GCE have budgeted for costs of society administration to include bookkeeping, annual accounts and regulatory compliance, communication with members and management of the membership, metering and administration of the FIT and sale of electricity.

Monitoring and Metering We have a budget for maintenance and communications for the metering and monitoring systems.

The construction and operational budgets includes a contingency allowance to cover unanticipated costs. In addition to these operating costs, a reserve will be created to enable GCE to pay back share capital by the end of the 20 years of FIT payments.

Planning constraints

Our planning consent only includes one condition that could affect the operation and yield of the turbine, this is a constraint on operation to prevent harm to bats. The only mitigation action required is that the turbine would be turned off for 24 hours following any grass cutting within 50m of the turbine. The effect of this is expected to be minimal.

Application of surplus

After deduction of running costs and asset depreciation from income, interest payments will be made to members. The remaining surplus will be used for community benefit.

Our target is to pay a community fund of at least £5,000 per year (indexed with RPI) and to pay shareholders interest payments, according to the profile on page 13, that would equate to a return of 5% IRR across 20 years (based on the central - P50 - windspeed estimate).

See page 13 for more detail on the payment of interest to shareholders and payment of the community fund.

Corporation tax

Corporation tax will be payable on any retained profit after payment of member interest and after any gift of surplus to charitable organisations.

GCE will aim to gift most retained profit to qualifying charitable organisations, but where a gift is made to an organisation that is not a registered charity, this may create a corporation tax liability. Any community fund giving will need to take this into account and the amounts available will be reduced by the amount of corporation tax that GCE is liable to pay.

Project end of life

At the end of 20 years, our projections are that all shareholders will have had their capital returned in addition to the annual interest paid.

Assuming the turbine remains economically serviceable, we will continue to operate the turbine until the lease and planning permission expire in year 25, with all surplus profit from this turbine after year 20 going to the community fund. At that point GCE will decide whether to seek a new lease and turbine replacement or to decommission the turbine. A decommissioning fund will be accrued from income during the operational life of the turbine to pay for decommissioning if required.

Development of additional sites

GCE does not currently have any plans to develop any other projects, however this is not ruled out. Any future projects would be subject to approval by members at a general meeting of members.

Accounts

GCE was incorporated on 9th November 2016. Its financial year-end is 31st December. At the time of this share issue GCE has not issued shares other than one share to each founding director, and has not traded electricity. The only transactions carried out by GCE so far are in relation to development costs for the Ffrwd Farm turbine which have been paid for by grants and by the loan from the Development Bank of Wales.

Financial

Budget

The total project budget costs are £1.2M.
The breakdown of this budget is as follows:

	(,000s)
Development costs (legal costs, site purchase, share offer, financing costs, project management, marketing)	£141
Grid connection	£180
Construction costs (turbine purchase, refurbishment, transport, erection, foundations, access track, other electrical works, engineering support)	£803
Contingency	£52
Total	£1,176

Notes on budget breakdown:

- Construction of the turbine has not yet started. Where possible the budget is based on competitive quotations. However, it is not possible to anticipate all variations that might occur. A contingency fund of just over £50,000 has been included in the budget.
- These figures do not include VAT. VAT was payable on most items except the turbine, and VAT cashflow will be managed by spreading payments over several VAT quarters so that VAT on early invoices is recovered before the requirement to pay later invoices.

Sources of capital

The total capital requirement for the project is just under £1,2M as per the table above.

£535,000 of this has been obtained via a loan from the Development Bank of Wales. This loan will be used to cover costs that need to be incurred before the share offer is complete and share monies can be used. The costs to be covered by the loan include purchase of the second hand turbine, storage and transport costs, grid connection fee and the cost of building the access track.

In addition, a series of grants amounting to £77,000 were obtained from the Welsh Government Ynni Lleol scheme to cover early stage costs. The board have verified that this grant does not affect our eligibility for FIT.

The remainder of the capital costs will be raised from this share offer.

Total cost (in thousands)	£1,176
Development Bank of Wales loan	-£535
Ynni Lleol grant	-£77
Contingency for management of VAT (payments that will be reclaimed from HMRC)	+£100
Balance of finance required	£664

The balance of finance required is therefore just under £700,000. This includes a contingency to cover VAT as we will be required to pay VAT on much of our expenditure. This will ultimately be reclaimed from HMRC but we need to have sufficient cash to pay for this in the interim.

The target for the share offer is therefore fixed at £700,000. Once the VAT has been reclaimed from HMRC, this and any other surplus will be used to pay off some of the Development Bank of Wales loan.

Once construction is complete, the remaining loan will be refinanced by future share or bond offers; priority on future bonds or shares is likely to be given to existing members.

Financial projections

Two financial projections have been modelled, using different assumptions for turbine energy production. These scenarios are:

Central scenario – based on raising the full £1.2M from shares and the central forecast of wind speed (the so-called P50 wind speed).

Low yield scenario – based on full £1.2M from shares, but a pessimistic energy yield based on the so-called P90 wind speed.

The financial projections use the anticipated expenditure listed in the business model section above.

Scenario 1: P50 (central estimate of yield)

The table below illustrates the income, expenditure and cashflow for GCE over the 20 years that the Feed-in Tariff would be received based on our modelling assumptions.

(in thousands)

Profit and loss	Dec '19	Dec '20 (year 1)	Dec '21 (year 2)	Dec '22 (year 3)	Dec '23 (year 4)	Dec '24 (year 5)	years 6-10	years 11-20
Total income		126	130	134	138	142	775	1,940
Expenses								
Operating expenses		40	41	42	43	44	274	733
Loan interest		32	0	0	0	0	0	0
Total expenses		72	41	42	43	44	274	733
Operating surplus		54	89	92	94	97	501	1,207
Depreciation		-55	-55	-55	-55	-55	-275	-549
Bank interest earned		1	0	0	0	0	2	3
Community fund		-5	-5	-6	-6	-6	-48	-119
Surplus		-5	29	32	34	37	181	542
Surplus (losses carried forward)		0	23	32	34	37	181	542
Distributions								
Member interest payments		0	23	32	34	37	181	542
Total distributions		0	23	32	34	37	181	542
Retained funds		-5	5	0	0	0	0	0
Cashflow								
Capital expenditure less grants received	-1,099	0	0	0	0	0	0	0
Retained funds	0	-5	5	0	0	0	0	0
Add back depreciation	0	55	55	55	55	55	275	549
Member share capital	700	380	-35	-54	-54	-54	-270	-540
Loan capital	535	-535	0	0	0	0	0	0
Cash in bank	136	31	56	57	58	59		
Member IRR		5.0%						

With these assumptions members will achieve a 5% IRR return on their shares. The projected cashflow profile for a member buying 1000 shares in this scenario is as follows:

Date	Apr '19	Oct '19	Apr '21	Apr '22	Apr '23	Mar '24	Mar '25	Mar '26	Mar '27
Capital	-1,000	0	50	50	50	50	50	50	50
Interest		0	0	33	29	32	34	29	31
Total	-1,000	0	50	83	79	82	84	79	81

Date	Mar '28	Mar '29	Mar '30	Mar '31	Mar '32	Mar '33	Mar '34	Mar '35	Mar '36
Capital	50	50	50	50	50	50	50	50	50
Interest	33	36	39	37	40	39	37	40	43
Total	83	86	89	87	90	89	87	90	93

Date	Mar '37	Mar '38	Mar '39	Mar '40	Mar '41	Mar '42	Mar '43	Total	IRR
Capital	50	50	50	50	50	50	50	1,000	
Interest	46	48	51	54	58	61	64	798	
Total	96	98	101	104	108	111	114	1,798	5.0%

Note that actual energy production and costs will fluctuate year on year so this cashflow profile is only representative.

In addition to member interest and capital repayment, the projections also indicate that the community fund will amount to approximately £5,000 per year initially and the total community fund across 20 years will amount to about £140,000.

Scenario 2: P90 yield (90% confident that yield will be better than this)

In this scenario, the financial projections indicate that members will receive a 3.1% return on their shares and the community fund will reduce to £2,000 per year. Note that this is a 90% confidence scenario, i.e. statistically we are 90% likely to do better than this and 10% likely to do worse than this.

Summary of financial projections

The central projections indicate that members will receive a return of 5% and the community fund will achieve a level of £5,000 p.a. as long as the output from the turbine achieves at least 95% (on average) of the modelled output. There is a risk if the turbine does not perform as expected that member returns will drop below 5%.

Note that the returns quoted are averages across the 20 years of the Feed-in Tariff (as measured by IRR or Internal Rate of Return). The interest rate will start lower and rise through the life of the project. This is typical of the returns on community energy shares and reflect the profile of income and expenditure typical of renewable energy installations.

Share Offer

Interest payments to members and community fund payments

At the end of each financial year, accounts will be prepared and surplus calculated. At the AGM following the year end, the board will recommend to members how much should be paid in interest and how much should be allocated to the community fund, and following any decision at the AGM, the amount of interest decided will be paid by GCE to members shortly after the AGM. The cumulative interest payments to members will be monitored by GCE to ensure that cumulative interest to members will meet the 5% target if possible.

Taxation

This share offer is not eligible for EIS or SISR tax reliefs (Enterprise Investment Scheme or Social Investment Tax Relief).

Interest from these shares may be tax free under the Personal Savings Allowance. Under this, standard rate tax payers can earn up to £1000 and high rate tax payers can earn up to £500 of savings interest, tax free. For more information, see www.gov.uk/government/publications/personal-savings-allowance-factsheet

Shares in a society can be passed on free of Inheritance Tax.

The target for this share offer is to raise £700,000 by sale of 700,000 withdrawable shares to be issued each with a par value of £1 on acceptance of a valid application on the Terms and Conditions of this Offer Document. The share offer will be closed to new applications as soon as this target is reached. If the target is not reached by 14th December 2018 the offer may be terminated and share monies returned to share applicants but the board retain the discretion to extend the offer or to put in place alternative finance if this can be arranged.

Withdrawable shares

Withdrawable shares are created under the Co-operative and Community Benefit Societies Act 2014 and are different to the "transferable shares" normally issued for companies. The principal differences are:

The shares cannot be transferred to another individual and can only be sold back to GCE. The value of the shares will never rise higher than the issue price (£1). The shares are not traded on any stock exchange.

There is a legal maximum amount than any individual can purchase of £100,000. This limit does not apply to other registered societies which can purchase an unlimited number of shares.

Purpose of the share offer

The proceeds of the share offer will be used to finance the construction of a wind turbine at Ffrwd Farm, Ceredigion.

Minimum and maximum individual application

Applicants living within Ceredigion and postcode areas SA40 and SY23 can apply for a minimum of 100 shares, and 250 shares if outside this area. The maximum number of shares that can be owned by any member is 100,000. The price of each share is £1.

Multiple subscriptions will be admitted providing that they do not result in a Member holding more than the maximum.

Buying shares on behalf of children

You may name one or more children to whom you would like some of your shares to pass when they reach the age of membership. GCE agrees to withdraw shares from your share account and to issue new shares to the child on their 16th birthday. When this birthday is reached, you will receive a new share certificate in the name of the child and the child would become a member. Please note this is an administrative arrangement and not a legally binding nomination and you may revoke it at any time. The child does not have to be a relative of the member. For each child please indicate name, date of birth and number of shares when filling in the application form.

Share offer deadlines

The minimum amount of finance required for the turbine construction to go ahead is £700,000. Applications will only be converted into shares, and monies spent, when this target is reached from share applications or other sources of finance.

The share offer opened on 1st June 2018 and will close when the target is reached. If the target is not reached by 14th December, and the board have not been able to meet the shortfall from any other source of capital that preserves the projected returns to members, the share offer will be closed and the turbine will not be built. The board are exploring alternative sources of funding that could be meet such as shortfall but this provision cannot be guaranteed.

Construction will only be started once all the necessary finance is in place for the project to be completed, otherwise construction will not proceed and all monies will be returned to share applicants.

Share allocation

Shares will be allocated on a first come first served basis. Successful applicants will receive share certificates and their details and holdings will be recorded in a share register to be kept by GCE.

There is no geographical restriction- we welcome applications from the UK and beyond. To incentivise as much uptake from the nearby community as possible, we are carrying out promotional events at the towns and villages closest to the site and have set a lower minimum application level for local applications.

Membership

Each person or organisation issued with Shares becomes a Member of GCE, with membership rights defined in the Rules. The principal rights are:

- Each Member has one vote, regardless of the number of Shares held
- The right to receive a proportionate annual interest payment as a return on the investment in shares (subject to available surplus).
- The right to the return of share capital at the end of the life of the Installation (subject to available surplus assets and any new business of GCE).
- As a Member, eligibility for election to the board (once the member reaches the age of 18)

Share redemption provisions

Redemption of Shares may take place in accordance with the Rules. Members do not have the right to withdraw share capital but the board of GCE has the power to permit Shares in GCE to be withdrawn by agreement between the board and the Member. Requests for withdrawal may be for all or part of the shares held by a Member and the board has the discretion to agree to the requested withdrawal in whole or in part. In addition, the board has the power to return share capital to Members at its discretion.

**You can apply for shares online at
www.grannellcoop.org.uk
and pay by bank transfer or by card**

Interest payments

All Members are entitled to share interest subject to annual surplus, such payments to be divided equally between the total Shares in issue. This means that a Member with 10,000 shares has a single vote but will receive interest on all 10,000 shares.

All interest payments are paid annually after the AGM. Share Interest will be paid on the balance of each Member's account at rates reflecting annual financial performance. Interest payments will be at the rates shown on page 13 unless members at the AGM vote for this to be revised based on the financial performance of GCE.

Taxation on interest payments

Interest payments will be made gross and subscribers will be responsible for declaring this income on their tax returns and for being aware of their position around any exemptions due to Personal Savings Allowance or any similar scheme.

Provisions on death of a member

In accordance with GCE's rules, on the death of a member of GCE, their personal representative can apply for withdrawal of the share capital or for transfer of the shares to another person. Return of share capital under this provision will be prioritised by the board over any other return of Members' capital but will be subject to affordability in line with any other withdrawal application.

Eligibility

Membership is open either to any individual (at least 16 years of age) or to any incorporated organisation (i.e. any registered company, registered society or registered charity).

Where an incorporated organisation applies to become a member, the application needs to include the name of a nominated representative, but the nominated representative can be changed in the future by appropriate notification to GCE by the member organisation.

There is no provision for joint membership or for membership of un-incorporated organisations.

Application procedure

Shares shall be applied for using either the Application Form at the end of this document or the online application form on the website.

By making an Application an Applicant offers to subscribe, on these Terms and Conditions, for the number of Shares specified, or such lesser number as may be allocated.

An Applicant who receives Shares agrees to automatic membership of GCE and to be bound by its Rules.

An application once made cannot be withdrawn.

Before completing an Application you should consider taking appropriate financial and other advice. In signing the Application Form you are making an irrevocable offer to enter into a contract with GCE. Under Money Laundering Regulations, you may be required to produce satisfactory evidence of your identity and it is a condition of the Offer that you do so as requested. Non-UK residents must take responsibility for ensuring that there are no laws or regulations in their own country that would prevent them from investing in or receiving income from a UK Society.

The offer timetable

The Offer opened on 1st June 2018 and will remain open until fully subscribed or until 14th December 2018 at which point if insufficient capital is raised and no alternative funding options have been put in place the board will close the offer and return applicant monies. None of GCE, its directors or advisors will be responsible for loss of interest or any other benefit suffered by Applicants during the period the monies are held by GCE.

Procedures on application receipt

Any cheques/bankers' drafts will be presented on receipt and may be rejected if they do not clear.

Surplus Application Monies may be retained pending clearance of cheques.

Applications may be rejected in whole, or in part, or be scaled down. Monies in respect of any rejected or scaled-down applications shall be returned no later than one month after the end of the Offer.

No interest is payable on submitted application monies which become returnable. Application monies will be held in a dedicated bank account and will not be used for any purpose until either converted into shares or returned to the applicant.

Incomplete or inaccurate Application Forms may be accepted as if complete and accurate.

Pricing, trading and dealing arrangements

Shares are offered at their par value of £1. The underlying asset value of each Share cannot exceed £1 and would only be reduced in the case of very poor project performance. Shares are not tradable or transferable.

Payment

If applying using the paper form, please attach a cheque or bankers draft, drawn on a UK bank or building society, for the exact amount shown in the box under 'total amount'. You may also pay by bank transfer (detail on the application form). There are payment options of cheque, bank transfer, direct debit, credit card or debit card via the online application form.

Timetable

Our projected timetable for the share offer and for the construction schedule is as follows:

1st June 2018	Share offer launch
June 2018	First society AGM
1 st July 2018	Turbine queued to receive Preliminary Accreditation for Feed-in Tariff by Ofgem
14th December 2018	Share offer close and issue of shares
Feb 2019	Construction begins
June 2019	Construction ends, Commissioning of the turbine
June 2019	Second society AGM
31 st December 2019	Feed-in Tariff deadline (deadline for commissioning)
June 2020	Third society AGM reporting results of first full year of operation (2019), first allocation of community fund – no share interest anticipated.
June 2021	Fourth society AGM – allocation of community fund and first distribution of member share interest.

Risks

All commercial activities carry risk – and community energy projects are no exception.

If GCE has a bad year, you may receive less interest than projected. If something goes wrong on a longer-term basis, then your capital may be at risk.

Our shares are withdrawable shares - meaning they can't be traded but you can apply to withdraw at any point if you need to. We've made a substantial provision to cover this but ability to withdraw cannot be guaranteed.

We have made every effort to minimise risks to our shareholders. Below, we summarise key assumptions and risks, along with measures we have taken to minimise them.

Financial assumptions

We assume an inflation rate of 3% on electricity prices and all costs, and interest on long-term bank deposits of 0.5%. Lower inflation rates would reduce performance (although they would also be likely to reduce returns from alternative investments). We have used conservative figures reflecting current low values with a small adjustment for historic trends on the 20-year timescale.

Likelihood: Low; Impact: Low. Overall risk: Low

Mitigation: The financial projections are based on figures which have been repeatedly scrutinised by external, independent bodies, including our lenders Banc of Wales, their engineers and solicitors, by Sharenergy, and separately again by a Chartered Surveyor.

Share offer not raising enough capital

Construction will not go ahead until the target of £700,000 is reached. Share monies will not be spent unless GCE has sufficient money to complete the construction and commission the turbine in time for the FIT deadline. In the unlikely event that the total is not reached with sufficient time for the turbine to be installed, applications for shares and the funds attached will be returned to applicants.

Likelihood: Low; Impact: High. Overall risk: Medium.

Mitigation: GCE are using a professional team to help market the share offer and are following in the footsteps of numerous other projects which have successfully raised the full amount.

Wind speed

Wind projections and projections on yield are based on computer modelling by Digital Engineering www.digital-engineering-ltd.com which is both 'bankable' and rigorously tested. The wind speed at the site will vary from day to day and year to year, so projections are based on an average wind speed for the site. Lower average wind speeds in the long term would affect overall performance. The lowest likely average wind speed over the long term has been modelled and is shown to return Members their initial capital but little or no interest.

Likelihood: Low; Impact: Low to High.
Overall risk: Medium

Mitigation: There is little which can be done to mitigate risk; GCE chose a turbine which is known to perform well at sites with both lower and high wind speeds means that there it is likely to generate well, even if wind speed is lower than modelled.

Feed-in tariff

If the FiT is reduced, income reduces accordingly. However successive Governments have affirmed commitment to retaining FiT at levels contracted, despite any reduction for subsequent projects joining the scheme. Our FiT is pre-accredited: guaranteed by Ofgem to be at the rate modelled (1.92p/kWh) as long as the turbine is commissioned by 31st December 2019.

The biggest risk to the project around FiT is a delay in raising funds or delays during construction meaning that the Feed-in Tariff deadline is missed.

Likelihood: Very Low; Impact: High.
Overall risk: Low

Mitigation: The raising of funds and planning of install are very advanced compared to the Feed-in Tariff deadline. Construction itself will take 4-6 weeks so there is an extensive period to raise funds. In addition, the main source of funds to the project are from electricity sales under a power purchase agreement rather than FiT.

Electricity price. The projections assume electricity is sold at a price of 5.24p via the OFGEM export tariff which is guaranteed. It may be possible to exceed this if a PPA at a higher rate can be obtained, but this assumption of using the OFGEM tariff is the guaranteed lowest price that would be obtained.

Excessive down-time

The energy yields in our projections assume that the turbine maintains a modest level of operational availability (95%). Although our turbine is refurbished and not new, we have full service records that show that it has been maintained continuously under the manufacturers service cover and has had an operational availability of 97%.

Likelihood: Medium; Impact: Medium. Overall risk: Medium

Mitigation: We will be taking out a preventive maintenance contract with a suitable Operation and Maintenance supplier to ensure that the turbine is maintained in good repair and that minor faults can be dealt with remotely whenever possible.

Spare parts or experienced servicing engineers becoming unavailable in the future

If large or unusual spare parts are needed, there is a chance that the turbine could be unable to generate for a long period of time while spare parts are secured. The machine itself is very simple in design and has few components which are known to be common sources of failure (it is a gearbox-less machine).

Likelihood: High; Impact: High. Overall risk: High

Mitigation: Across the UK and Europe there are large numbers of Enercon E48 turbines and Enercon have a significant financial and reputational advantage in making sure that these turbines continue to operate for their projected lifetimes.

Companies bidding for provision of Operation and Maintenance contracts are required to either show that they have access to Enercon parts or, where they do not, to work with GCE to ensure a smooth ordering process for parts via GCE which has been provisionally offered by Enercon.

Because there are a large number of Enercon turbines operating in the UK, there will be significant commercial demand for experienced engineers to offer maintenance services for these turbines and we expect many companies to offer maintenance services for the foreseeable future.

There are also increasing numbers of websites and dealers in Europe which specialise in sourcing and exchanging wind turbine parts to service to growing second-hand turbine market.

Revised risk - Likelihood: Low; Impact: High. Overall risk: Medium

Operational costs

Higher costs for servicing / services, administration, insurance and rates would reduce performance. It is clearly difficult to model prices for 10 or even 15 years from now, so the figures are based on today's prices with an allowance for inflation. Some prices are quoted for but not yet fully fixed, including the cost of operational insurance and the operation and maintenance contract – this is so that GCE has enough time to be certain that they are getting the best option available for the project.

Likelihood: Medium; Impact: Low. Overall risk: Low

Mitigation: The financial projections on operational costs are as far as possible, based on fully known costs (signed contracts, clear quotes, or known costs from other very similar projects) and allow for an increase in costs in-line with inflation. Additional funding to cover an increase in costs, particularly around operation and maintenance, has also been allowed for from year six onwards. In addition, there is a modest contingency fund allowed for each year to cover fluctuations in costs and to contribute to a larger pot in the event of a major downtime or change in prices.

Cost of auditing accounts

GCE acquired the development rights to the Ffrwd Farm site by purchasing from Seren Energy the entire shareholding of the special purpose vehicle (SPV) company that owned the permits and consents required. The fact that GCE thereby owns a subsidiary company means that under the Cooperatives and Community Benefit Societies Act 2014 we cannot claim the exemption from the requirement for a full accounting audit, which incurs additional overhead costs. Our intention is that the permits and consents and all other legal arrangements will be transferred to the parent organisation (GCE), and the subsidiary company will be closed down and hence this overhead for audited accounts will only be required for the first two years. We think it is unlikely there should be any issues but if it does not prove possible there may be on ongoing additional overhead cost for annual audited accounts and this will reduce returns.

Application Form

(please note you can also apply online - see links on our website grannellcoop.org.uk)

I wish to buy a total amount of shares in Grannell Community Energy at £1 per share.
 (Minimum of 100 shares if within Ceredigion, or SA40 and SY23 postcodes, otherwise 250. Maximum of 100,000 shares)

Title (Mr/Mrs/Ms/other): Forenames: Surname:

Email:

Please do provide your email address if at all possible to keep help us keep admin costs down

Postal Address:

Post code: Day-time Telephone:.....

If you wish to buy shares on behalf of children

On the 16th birthday of each child listed below, I wish to withdraw the number of shares indicated in the table below from the shares I hold at that time and for this number of new shares to be issued in the name of the child.

Full name of child	Date of birth	Number of shares

If more than 2 children please use a separate piece of paper. We will contact you shortly before the child's birthday to confirm the instruction and obtain additional details to register for the child.

If applying on behalf of an incorporated organisation please also provide:

Organisation name: Type of organisation

Organisation address:

Registration number: Registered with: Companies House / FCA/ Charities commission

Your Position within Org.:.....

You must be authorised to sign on behalf of the organisation. Please supply notification of this appointment by the governing body with this application form

Please tick both boxes below to confirm:

<input type="checkbox"/> (required)	I have read the Share Offer Document and am not relying on any other source of information about the Society. I am over 16 and eligible to apply for shares. I have considered whether I need to take financial advice or other advice. I authorise the Society to make enquiries to confirm the eligibility of this Application if required. I understand that this application may be withdrawn if a supplementary offer document is issued, but not otherwise and if and when accepted by the Society forms a contract in law on the Terms and Conditions of the offer document.
<input type="checkbox"/> (optional)	I would like to receive the Shareenergy Newsletter with information about other Community Energy projects (no more than one email per month)

Signature: Date:

CHEQUE. If paying by cheque make payable to Grannell Community Energy Limited and cross a/c Payee.

TRANSFER. If paying by transfer please use these details: Sort code: **30-94-85** Account no.: **18605360**

Please use the Applicant initials and postcode as the reference if paying by bank transfer to help us identify your payment.

Send this completed form to Grannell Community Energy, The Pump House, Coton Hill, Shrewsbury, SY12DP or sign, scan and email to admin@shareenergy.coop

Our Partners

The deadlines for this project were very tight due the need to commission in time to meet the terms of our Feed-in Tariff preliminary accreditation. These deadlines were only met because of the enthusiasm and cooperation of our partner organisations.



Development Bank of Wales

Loans have been obtained from the Development Bank of Wales that allow us to proceed before reaching the full construction cost from the share offer.



Ynni Lleol

The GCE scheme has received support, loan financing and grant funding from the Welsh Government through its Local Energy service. The Welsh Government's Local Energy service provides financial and technical support to help social enterprises and SMEs across Wales to develop their own renewable energy schemes.



Shareenergy Co-operative

Shareenergy helps community groups across the UK to set up and own their own renewable energy generators. Shareenergy has supported over 40 successful community share offers and provides administrative services to over 30 community energy groups.

We are also grateful to the following for their support and work to date:

Our Footprints – Owners Engineer and Project Manager.

naet-Co Ltd – Tendering support and risk advice to board.

Second Wind – Support with overseas turbine inspection, purchase, and logistics.

MFG Solicitors – Legal advice and negotiations.

The Evans Family – without whom we would not have a project at all, but most of all for their support, patience, and hard-work in helping us reach this point.

Many local councillors and community groups – too numerous to mention but who have shown in their own way that they can see the benefit that this project will bring to this corner of Ceredigion.

Contact us:

**For all enquiries contact
Sharenergy on 0800 043 4133
or via grannellcoop.org.uk**

**Our website can be found at
grannellcoop.org.uk**

**Grannell Community Energy
is a Community Benefit Society,
registered with the Financial Conduct Authority no. 7447**

