

Fal Energy Partnership Business Plan 2017-2038



1st published:
July 2017



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Kabin and Paul Martin state that this work is derived in large part from “Community Power Cornwall Business Plan 2014-2034” and earlier editions of Community Power Cornwall’s Business Plan. We acknowledge and give credit to CPC and to Paul Martin who are the authors of the works from which this work was derived

Acknowledgments:

The Management Team, Board and Members of FEP especially those who contributed time, effort and thought to the development of FEP and those who workshopped the Vision, Mission, Aims and Objectives.

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Disclaimer:

This business plan was produced for FEP by Kabin and Paul Martin using inputs including dates, numbers, facts, expectations, beliefs, hopes and aspirations from FEP. The content of this plan is the responsibility of FEP. It is the responsibility of FEP to monitor and update the business plan as required.

Signed off by:

Charmian Larke for Fal Energy Partnership

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1 Executive Summary

Fal Energy Partnership (FEP) is a co-operative community energy enterprise established in 2012 to benefit the community by working to develop and implement an integrated sustainable energy action plan.

The geographic focus of our activities is the Fal Community Network Area, which includes the towns of Falmouth and Penryn and the surrounding villages of Perranarworthal, St. Gluvias, Mylor, Mabe, Budock Mawnan and Constantine.

This business plan is focused on our plans to develop in the first instance 50kWp community owned rooftop solar photovoltaics on the Dracaena Community Centre. It will deal with this development and with our core business as a community enterprise.

In 2012 FEP wrote “Energy Report 2012” funded by the Department of Energy and Climate Change (DECC) through its Local Energy Assessment Fund (LEAF). The report assessed potential actions for building sustainable local energy wealth and framed these potential actions in both a global and local context. This business plan is setting out how we will work to deliver some of these actions through community enterprise.

Our vision is a Fal Community Network Area that is collaborative, inclusive, resilient, energy efficient and sustainable with a thriving community enjoying and participating in a healthy low carbon economy that is community led and meets local needs and aspirations.

Our mission is to operate a community enterprise that works towards bringing our vision into being through community owned energy systems, re-localisation of the energy economy, energy efficiency measures, demand reduction, and alleviation of fuel poverty.

In order to put our mission into action we have a set of Specific, Measurable, Achievable, Realistic, Time-based (SMART) objectives.

The key things we will measure our work against are kWh from renewable sources, reduction in CO2 emissions, the proportion of our spend that we spend locally, and how many households in fuel poverty that we support.

We are a community benefit society that is a co-operative and is committed to adhering to co-operative values and principles as set out in the International Co-operative Alliance Statement on Co-operative Identity.

Our management team report on their delivery of the SMART objectives in this business plan at quarterly board meetings to our board who in turn report to our membership in general meeting at least annually.

The management team will conduct day to day management with oversight and supervision from the board who hold overall responsibility for policies and procedures, insurance, contractual matters, monitoring and evaluation, quality, and legal compliance.

FEP will earn an income from the total generation component of the Feed in Tariff, from kWh exported to the grid and from kWh used on site.

FEP will also provide a support service to households in fuel poverty using voluntary community action.

The energy market is fairly volatile and influenced by many factors. One of the major influences is the global price of fossil fuels, this itself is effected by a number of factors including; the state of national, regional and global economies, supply and demand, OPEC policies, energy security issues including politics, conflict and diplomacy. Broadly speaking the electricity supplied to the national grid is derived from fossil fuels, nuclear power and renewables. This energy mix is influenced by market forces and government aspirations, policy and legislation. We continue to monitor this changing energy landscape and hope to contribute positively through community action.

Whether we are talking to customers, members, investors, planning authorities, or partners our positioning will be informed by our values and principles, not least of which is honesty.

FEP is a community owned society with an environmental and social mission. We will engage in appropriate and targeted marketing emphasising key messages to key audiences, however this will be about being relevant, honest and succinct and we will never aim to mislead. Our position in terms of marketing ourselves to member investors is another matter. In short, our core message is that we represent an "ethical investment opportunity that aims to yield a blended return of environmental, social and financial benefits"

We seek long term member investors who share our social and environmental goals.

FEP regularly publicises its activities in the local press, including the local radio. It reports frequently to Falmouth Town Council and Penryn Town Council. It regularly takes part in local business forums. It is also a member of Community Energy England and Regen.

FEP currently has its own web presence www.falenergy.co.uk and we use social media & networking tools to enhance our online reach. FEP posts on Twitter as FalEnergyPartnership @FalEnergy and posts on Facebook as Fal Energy Partnership Ltd @falenergy.

We have forecast cash flow over 20 years. Future profit & loss and balance sheets derive from the forecasts. We expect to finance the build of our installation at The Dracaena Centre initially via a mix of grant and secured loan. We may consider an element of gift based crowdfunding if timing allows. We expect to swap out at least 15% of the secured loan for community shares within three years of drawdown. Each time we have had to make assumptions we have erred on the side of caution.

Member share capital and money lent to FEP is an at-risk investment.

We have analysed strengths, weakness, opportunities and threats so as to work against the negatives and maximise the positives. We have also analysed risks in order to mitigate against and manage known risks.

We are currently working to install one 50kW of roof mounted solar PV at the Dracaena Centre in Falmouth.

This document along with our financial projections set out and demonstrate the viability of our current operations and plans. This document together with our financial projections shows how our first installation will pay for itself and generate income to be used for the benefit of our community. Only when we can demonstrate success with this project will we consider future projects. We do believe that FEP could grow and develop. However we believe that it is most important to consolidate a stable enterprise rather than try to grow too fast. We intend to build upon stability and to grow carefully from a stable base. With a predictable income stream and a healthy balance sheet FEP should be in a position to develop other renewable technologies and work at a range of scales.

2 Introduction

Fal Energy Partnership (FEP) is a co-operative community energy enterprise established in 2012 to benefit the community by working to develop and implement an integrated sustainable energy action plan.

FEP is interested in enabling community ownership of renewable energy systems, increasing energy efficiency, reducing demand for energy, reducing fuel poverty and improving local money flows. We are interested in working towards a local energy system that meets local needs and is community led.

The geographic focus of our activities is the Fal Network Area, which includes the towns of Falmouth and Penryn and the surrounding villages of Perranarworthal, St. Gluvias, Mylor, Mabe, Budock Mawnan and Constantine.

This business plan is focused on our plans to develop in the first instance 50kWp community owned rooftop solar photovoltaics on the Dracaena Community Centre. It will deal with this development and with our core business as a community enterprise.

As the capital assets and the finance are long term we have prepared financial projections over 20 years. This plan is detailed and accurate with regards to the first installation and the viability thereof. It demonstrates that this installation will generate revenue which will enable us to invest in our community. This document should be read as our initial business plan that covers the start-up period. The management team will prepare a new business plan every 5 years, may revise each business plan every 2.5 years and will report against the business plan to the membership every year and quarterly to the board.

2.1 Background

Back in 2009 the community network area was a new development following local government re-organisation and the merging of the district and county councils. This led onto the new administrative boundaries which were not immediately familiar to local residents.

The Fal Network Area is, in our view, closer to being a natural “bio-region” than the previous district council area of Carrick, as it is mainly the two towns of Falmouth and Penryn with their surrounding parishes and is bounded by the sea, and two major river valleys, with only the western boundary on the high ground being not an obvious natural boundary.

In 2012 FEP wrote “Energy Report 2012” funded by the Department of Energy and Climate Change (DECC) through its Local Energy Assessment Fund (LEAF). The report assessed potential actions for building sustainable local energy wealth and framed these potential actions in both a global and local context:

“Energy Report 2012” – global context and local actions

“The world is facing several unprecedented challenges in many and varied forms. The largest challenges are those centred around the global issues of:

Climate change

Resource depletion

Financial system problems

These challenges are all interlinked and have very wide and serious implications, ranging from extreme weather events such as floods or drought and heat waves to high winds, and to energy supply disruptions and rapidly increasing prices. This is worsened by the lack of structural change in the international debt situation, since the financial crash of 2008.

Whilst there is some cause for optimism in the legal requirement to reduce our national emissions by 80% by 2050, compared to 1990 levels as required in the Climate Change Act, this does not cover world emissions cuts nor is the present course of UK government action appearing to support this aim.

It is also apparent that central governments around the world find it difficult to be open with their peoples about the threat of resource depletion and peak oil, and to develop policies to prepare for this inevitable occurrence, which is already in train.

There is a significant strand of academic literature on the collapse of societies in the past and five factors have been identified which contribute to collapse: Climate change, hostile neighbours, collapse of essential trading partners, environmental degradation, and failure to adapt to environmental issues: all made worse by overpopulation.

Several of these factors can be seen in action in the world today. Without being melodramatic, it is important for society to deal with these issues. Some of these factors have been in play for some time and as they lead to slow rates of change there is the problem of 'creeping normalcy'. This refers to the way a major change can be accepted as the normal situation if it happens slowly, in unnoticed increments, when it would be regarded as objectionable if it took place in a single step or short period. It is therefore important for local communities to start their own preparations.

Local actions include

- *Reductions of demands on the centralised systems, particularly for key daily needs such as food, water and energy.*
- *Increasing local supplies of food, water and energy*
- *Increasing installations of renewable energy supplies*
- *Developing local food production, processing and sales*
- *Increasing the local trading of local businesses*

All these actions have major local benefits including:-

- *Increasing local resilience*
- *Reduction of leakage from local economy*
- *Increasing local economic activity*
- *Reducing carbon emissions*
- *Increasing freshness of food*
- *Increasing local pride*
- *Increasing local employment*
- *Increasing quality of local jobs"*

"Energy Report 2012" - local context

"At present the Falmouth and Penryn Community Network Area has an energy bill of around £87million a year, which is nearly 20% of the local GDP."

"Total population 40,800, with high student numbers in Falmouth and Penryn. The main employment sectors and retail, tourism and manufacturing, with a cluster of marine industries around the Docks."

“The solar resource is large and a major programme of roof top installations could see potentially 90-150MW installed. This would produce up to the present level of electricity demand in the area. Equally a programme for PV arrays, which is focussed on up to 10% of lower grade agricultural land could see over 100% of the present electricity demand generated locally.”

“The Vision developed with the community as part of this Leaf project, suggests that the area target is to meet or better the present legal target of 80% carbon reduction by 2050, compared to 1990 levels. This requires an urgent and major programme to start very quickly.”

“For this area the targets could be met by a programme of one 2MW turbine a year and the installation of 5MW of rooftop and PV arrays, alongside a strong energy efficiency programme to cut demand by 1.2% a year and install a range of other renewable supplies, such as ground source heat pumps, unheated conservatories and biomass boilers and stoves.”

2.2 Vision

Our vision is a Falmouth and Penryn Community Network Area that is collaborative, inclusive, resilient, energy efficient and sustainable with a thriving community enjoying and participating in a healthy low carbon economy that is community led and meets local needs and aspirations.

2.3 Mission

Our mission is to operate a community enterprise that works to bring our vision into being through community owned energy systems, re-localisation of the energy economy, energy efficiency measures, demand reduction, and alleviation of fuel poverty.

2.4 Social Impact

As a Registered Society under the Co-operative and Community Benefit Societies Act 2014, we exist to benefit our community and not to maximise financial returns. We can pay interest to our shareholders sufficient to attract and retain sufficient capital to fulfil our objects.

We aim to achieve measurable positive impact on three fronts – environmental, social and economic.

Firstly we expect to produce a significant, measurable, environmental return. Every unit of electricity produced by renewables enables 0.41205 less CO₂ to be emitted from burning fossil fuels based on the coefficient for 2016 (combined emissions factor).

We will work to alleviate the negative impacts of fuel poverty and to reduce the number of households in fuel poverty by voluntary community action to support households at risk of and experiencing fuel poverty.

We will contribute a direct measurable economic benefit to the communities we serve. We will measure the proportion of our expenditure that is spent in a. Cornwall b. the South West and c. in the U.K.

2.5 Values and Principles and Definition of Co-operative

Co-op Definition

A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise.

Co-op Values

Co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility, and caring for others.

Co-op Principles

The co-operative principles are guidelines by which cooperatives put their values into practice.

First Principle: Voluntary and Open Membership

Co-operatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.

Second Principle: Democratic Member Control

Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary co-operatives members have equal voting rights (one member, one vote), and co-operatives at other levels are organized in a democratic manner.

Third Principle: Member Economic Participation

Members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. They usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any of all of the following purposes: developing the co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership.

Fourth Principle: Autonomy and Independence

Co-operatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy.

Fifth Principle: Education, Training and Information

Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public -- particularly young people and opinion leaders -- about the nature and benefits of co-operation.

Sixth Principle: Cooperation among Co-operatives

Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional, and international structures.

Seventh Principle: Concern for Community

While focusing on members' needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

Adopted in Manchester (UK) by the General Assembly of the International Cooperative Alliance (ICA). 23 September 1995, on the occasion of the Alliance's Centenary. The Statement was the product of a lengthy process of consultation involving thousands of cooperatives around the world.

2.6 Aims

FEP aims to improve our energy resilience in ways which reduce negative environmental impacts and that are locally achievable by:

1. Reducing greenhouse gas emissions.
2. Generating community owned renewable energy.
3. Reducing energy demand.
4. Improving energy efficiency.
5. Reducing fuel poverty.
6. Spending locally.

2.7 Objectives – Specific, Measurable, Achievable, Realistic, Time-based.

1. By the end of year five to have generated **264,500** units of electricity, thus saving a total of **109** tonnes of CO₂ (based on 2016 coefficient of 0.41205)
2. To support 20 of the households in fuel poverty in Falmouth and 10 in Penryn by the end of year five as defined in Section 4.3.
3. To similarly support 6 households in fuel poverty each year thereafter.
4. To contribute to local money flows by deliberately spending locally and to regularly measure and report on the percentage of our expenditure that is spent a. in Cornwall (75%) b. in the South West (85%) and c. in the U.K. (95%)

2.8 Highlights

The Fal Energy Partnership (FEP) draws together local organisations and interested individuals who care passionately about creating a low carbon future for Falmouth, Penryn and the surrounding area. The future work of FEP will build on the firm foundations of sustained support from local people and organisations and the enduring relationships that have been developed over time.

The future work of FEP will also build upon a good deal of investigation and consideration. FEP have conducted many open days, have organised all manner of events, have invited speakers with knowledge of different aspects of energy, we have conducted a feasibility study, produced reports and publications.

These two strands, people and energy, have intertwined through an ongoing open dialogue that we have facilitated within our community network area.

The highlights are that that FEP has a strong relationship with local people and organisations and a deep understanding of the local energy landscape. These are the legs upon which FEP can walk forward.

3 The Organisation

3.1 Legal Structure/Ownership

Fal Energy Partnership Limited (FEP) was established in 2012 with Community Benefit Society rules and is a Registered Society registered with the Financial Conduct Authority under The Co-operative and Community Benefit Societies Act 2014.

FEP is registered with the Financial Conduct Authority. Its registered number on the Mutuals Public Register is 3 1 6 8 7 R .

As a Registered Society FEP is democratic mutual society and operates on a "one member one vote" basis irrespective of the size of an individual's investment.

We determined that a Registered Society was a most suitable legal form for community ownership of energy assets as it is a legal form based on mutuality, democracy and common ownership and is well suited for a community enterprise with a social and environmental purpose.

3.2 Organisational Structure

3.2.1 Members

Our members will meet at least once annually to oversee the overall direction, consider the accounts, and decide whether to appoint auditors and to choose the board members.

3.2.2 Board

The board is responsible for the overall business of the society and must ensure that the society is properly managed.

The board is responsible to the membership and reports to the membership in general meeting.

The board will meet regularly and receive reports from the management committee and from elected officers. The board provide regular oversight of the management processes. The board represent the membership.

3.2.3 Management Team

Our management team is responsible for enacting and developing the business plan and other delivery plans and policy and procedure documents.

At present management team members are Charmian Larke (Chair), Robin Curtis (Treasurer), Rob Homewood, Caroline Robinson, Louise Allen (Society Secretary) and Lorely Lloyd (Membership Secretary).

Charmian Larke has over twenty five years' experience working in renewable energy project development including chp, wind, waste to energy, biomass and hydro. Her present work included photovoltaic systems, windfarms and low impact biomass/waste to energy and materials re-use for rural areas. Robin Curtis has worked for GeoScience Ltd since 1985 in the areas of deep geothermal and hot dry rock and for over 20 years has specialized in ground source heat pumps. He is also a Director of Community Power Cornwall. Rob Homewood is an architect with particular experience in historic buildings and energy conservation and environmental sustainability. Caroline Robinson is a social media and digital design and mapping specialist and founder of Clear Mapping. She is on the board of the local Federation of Small Businesses. Louise Allen is a researcher and project manager for several charities, with a particular interest in sustainability and energy democracy. Lorely Lloyd is a passionate member of the community who specialises in health and healing. She has been a Falmouth Town Councillor, a member of Falmouth Town Forum and is a core member of Transition Falmouth.

The management team reports to the board, who themselves are responsible to the membership.

We have implemented appropriate governance and operational structures that are as clear and simple as possible and appropriate to the scale of operations.

During a period when FEP has relatively small operations it would be inappropriate and counter-productive to put overly complex structures in place. The governance and management structures and policies will be scalable to the size of operations.

3.2.3.1 Management Team Gaps

It will be the ongoing responsibility of the Board to identify any gaps and respond appropriately.

3.2.4 Personnel

All members of FEP, including the management team and Board of Directors, are volunteers. Any member who volunteers to undertake a role within FEP will receive appropriate support from the management team.

New volunteers will undergo a comprehensive induction programme. They will be provided with a manual which includes descriptions of specified roles and all of the policies and procedures.

3.3 Operations

3.3.1 Policies and Procedures

We will have the following policies in place:

1. Environmental policy (including procurement policy)
2. Equal Opportunities Policy
3. Health and Safety Policy
4. Volunteer support, induction and training policy
5. Anti-bribery policy

3.3.2 Contractual

All volunteers will have a job description outlining terms and roles

We will have maintenance contracts in place as appropriate.

We will use a lease option with new landowners based around a development option, on-site PPA and a fair access agreement.

At new sites we will as appropriate have a contract with a utility company who will act as a Feed in Tariff (FiT) Provider unless an unsubsidised project is being developed. At present we have a short list of potential Licenced electricity suppliers suitable for a FiT contract.

We hope to raise a significant amount of capital through share issue, however we also raise capital through loans and private grants. Loans will be secured on the panels (a fixed charge), the leases (a fixed charge) and the business assets of FEP (a floating charge). The lenders take a charge on these assets. We expect to finance the first installation through a secured loan and grants. We expect to swap out at least 15% of the secured loan for community shares within three years of taking the loan.

3.3.3 Insurance

We will have appropriate insurance cover on all installations.

3.3.4 Monitoring and Evaluation

Our objectives are SMART (Specific, Measurable, Achievable, Realistic and Time-based). Our operational targets are derived directly from our objectives which are themselves designed to achieve our aims. These objectives form our key monitoring data set.

In short we will capture data on:

1. Energy generated;
2. CO2 saved;

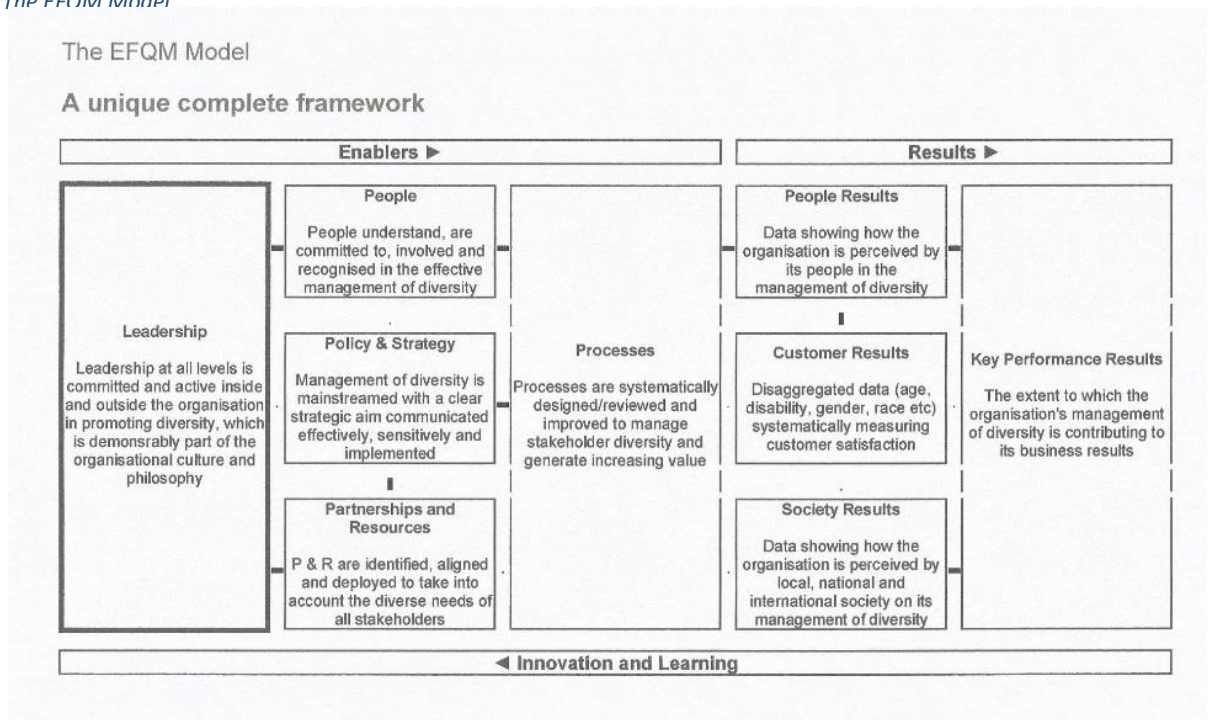
3. Money retained & spent locally;
4. Households in fuel poverty supported;

We will regularly evaluate our progress using this data. This evaluation will inform future delivery and planning.

3.3.5 Quality

FEP will use the 'C3Perform' diagnostic tool and other methods as appropriate. The C3Perform tools are built upon the EFQM Excellence Model, but have been developed for the third sector to diagnose equalities issues, social and environmental responsibility and social outcomes, as illustrated in Figure 1¹.

Figure 1 The FFOM Model



¹ The C3Perform tools are built upon the EFQM Excellence Model, but have been developed for the third sector to diagnose equalities issues, social and environmental responsibility and social outcomes www.voscur.org/improvement

4 Products (Goods and Services)

During the period that this plan focuses on we will have one main income generating product, electricity. There are three sources of income for FEP from these sales. One is by selling direct to the user under the proposed rooftops, another income source is that any excess would be exported via the grid to a licensed electricity supplier, which sells on to its customer base. Projects can also be sized to be able to sell direct to the nearby end user via a private wire arrangement, which is occurring more frequently for community energy groups.

FEP also plans to provide a volunteer based service supporting households in fuel poverty.

4.1 Electricity used on site through a Power Purchase Agreement (PPA)

We plan to earn income from selling units of electricity to on-site consumers through an on-site Power Purchase Agreement (PPA). Depending on a number of variables including the economics of each installation, we expect to sell electricity at a price between 7p/kWh and 9p/kWh.

The key issue for customers is that they should make a saving on their electricity bill. This makes the economics for FEP more difficult where the host company/organisation is a large electricity user as their cost of electricity is likely to be lower in p/kWh terms than a small user. The customer will pay for the units used according to verifiable meter readings. Payments may either be monthly or quarterly depending on the organisation buying.

4.2 Electricity exported via the grid including export tariff payments

FEP will sell exported units of electricity to electricity wholesalers such as Good Energy, Co-operative Energy, Green Energy, Ecotricity, and others, which as licensed electricity suppliers, are bound to purchase an agreed percentage of their electricity sales from renewable electricity supplies. Given choices in the licensed electricity suppliers we could reach agreements with, we prefer to do business with the following types of electricity companies:-

1. companies which only purchase renewable based electricity
2. companies where their management philosophy is in line with our values, principles and social and environmental goals
3. Member investors local to FEP project could chose to buy their electricity from the same company that we sell to, which could feel like "using the energy that WE generated."

This approach projects the right image to investors and other stakeholders and so makes good business sense.

4.2.1 Feed in Tariffs

In April 2010 the government launched the 'Feed In Tariffs' (FITs) for renewable electricity generation. The Tariff includes two components, both of which are indexed linked – a statutory 'export tariff' (which is now 4.91p/kWh), and a 'generation tariff'. The generation tariff is dependent on the scale and type of the technology proposed. The Generation Tariff is set when the project receives accreditation and lasts for twenty years.

Whilst there is a recognised system for applying for FIT accreditation, hostile government decisions since the election of 2015 have now made the procedure exceedingly difficult for applicants in terms of knowing and understanding the FIT rate which would be received. This is because of the

new system of regression which kicks in for PV for each quarter if above a specified MW is registered. As the MW available in each quarter are limited it becomes risky to bid in for a PV project as it will not be known what FIT rate would be received.

There is also political uncertainty which compounds risks on the slim financial margins presently available.

How we price a unit could be influenced in a downward direction by our on-site customer (who will often be our landlord) assisting us to reduce our cost of capital. In the case of a commercial business this could be by way of a competitive loan. In the case of a community facility this could be by using their network to help us crowdfund and thereby introduce a portion of “free” capital.

In the current circumstances, with specific reference to The Dracaena Centre, we would be comfortable seeking grants and crowdsourced gifts where this results in our being able to provide lower cost energy to a community facility thereby furthering both their and our social purposes. This introduction of capital without an interest charge further improves the viability of our community enterprise and helps mitigate against the risks resented by the hostile political and policy environment.

4.3 Service supporting households in fuel poverty

4.3.1 Fuel Poverty in the Fal area

Four Lower Layer Super Output Areas (LSOAs) in the Fal area are listed as some of the most deprived areas in Cornwall in Cornwall Council’s Index of Multiple Deprivation 2010². Penwerris Ward North (Old Hill) in Falmouth is one of the 10% most deprived in England. The most recent estimate of the number of households in fuel poverty is shown in Table 1.

Table 1 Estimate of number of households in fuel poverty.

LSOA Number	Description	Estimated number of households	Estimated number of fuel poor households	Proportion of households fuel poor (%)
E01018836	Penryn South	794	140	17.6
E01018838	Falmouth Penwerris Central	658	102	15.5
E01018841	Falmouth Penwerris North (Old Hill)	613	97	15.8
E01018860	Falmouth Trescobas	868	112	12.9

Source:³

4.3.2 Working with the Dracaena Centre

The Dracaena Centre is located in the Penwerris area of Falmouth and serves that community. Volunteer action to identify and support these households will be undertaken in partnership with the staff at the Dracaena Centre. FEP will coordinate the funding and organisation of an ‘energy team’ made up initially of volunteers, who would work with local households to improve their fuel situation. Potential projects, for which additional grant funding will be sought, could include fuel

² <http://www.cornwall.gov.uk/media/3631358/imd2010cartogram.pdf>

³ Sub-regional Fuel Poverty England 2017 (2015 data)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/623138/Sub-regional_fuel_poverty_data_2017.xlsx

debt advice, energy saving advice, help with switching suppliers, draught exclusion, LED lighting and ventilation.

5 The Market

The energy market is fairly volatile and influenced by many factors. One of the major influences is the global price of fossil fuels, this itself is effected by a number of factors including; the state of national, regional and global economies, supply and demand, OPEC policies, energy security issues including politics, conflict and diplomacy.

Broadly speaking the electricity supplied to the national grid is derived from fossil fuels, nuclear power and renewables. This energy mix is influenced by market forces and government aspirations, policy and legislation.

The UK has signed up to the EU Renewable Energy Directive which includes a UK Target of 15% of energy from renewables by 2020. According to the UK Renewable Energy Strategy (2009) only 5.5% of our electricity at that time derived from renewable sources, so this would be a significant increase. Since then there has been a dramatic increase in renewable electricity installations, such that recently the National Grid company reported that renewables and nuclear contributed over 50% to daily demand. This is without counting the large amount of smaller installations of wind and PV which are "embedded" and hence count as "reduced demand" from the national grid transmission point of view.

There is still some way to go for the UK to meet the RE Directive as electricity is under 20% of energy consumption⁴ and the Directive target is 15% of energy demand. Electricity will have to make a much higher percentage contribution to the target as heating and particularly transport energy demands are much more difficult to supply from renewables.

Global energy demand is not now projected to increase much in the next few decades as it correlates directly with economic growth, which has slowed worldwide and seems less likely to increase in the near future. The depletion of North Sea oil and gas and the rapidly increasing import requirements for these fuels from potentially volatile regions such as the Middle East and Russia reduce energy resilience in the UK, showing that we need to re-think our approach to sourcing and using energy. Turning more rapidly to renewables will help the UK recover some of its energy self-sufficiency, and reduce exposure to volatile world markets.

The Paris Agreement of 2015 as ratified by the UK government in 2016, has an Indicative Nationally Determined Contribution in line with the EU target of reducing greenhouse gas emissions by 40% by 2030. This should be seen in the context of recent government increases in fossil fuel subsidies above the present multi billion pounds per annum, having pledged in G20 to phase out fossil fuel subsidies. This suggests that although the present government remains committed to meeting the Climate Change Act 2008 targets that it may be difficult to do so. This means that local community renewable energy, or the power of individual and community action is vital.

5.1 Positioning Statement

Whether we are talking to customers, members, investors, planning authorities, or partners our positioning will be informed by our values and principles, not least of which is honesty.

5.2 Selling ourselves to member investors

Our position in terms of marketing ourselves to member investors is another matter. In short, our core message is that we represent an "ethical investment opportunity that aims to yield a blended return of environmental, social and financial benefits"

⁴ <https://www.gov.uk/government/statistics/energy-trends-september-2016>

We seek long term member investors who share our social and environmental goals.

6 Marketing

FEP is a community owned society with an environmental and social mission. We will engage in appropriate and targeted marketing emphasising key messages to key audiences, however this will be about being relevant, honest and succinct and we will never aim to mislead.

6.1 Audiences

The key audiences and the messages FEP intends to convey to them are shown in Table 2.

Table 2 Key audiences and their intended marketing message.

KEY AUDIENCE	KEY MESSAGE
Members of FEP	We are delivering on our aims and working to achieve our vision. We are taking action. You can own this.
People within sight of an installation	You can own this. This is helping you and your neighbours in a variety of ways.
People in the same village / parish / area / settlement / town as an installation	You can own this. Your community can benefit from this.
People in Cornwall	We are working for the Cornish community.
Cornish diaspora	We are working to benefit the people of Cornwall
People outside Cornwall within a community of interest (environmentalists, conservationists, social enterprise, co-operatives, members of transition groups)	Emphasise overlap in missions (social and environmental goals)
Ethical investors	Social and environmental returns
General investors	Social, environmental and financial returns
Institutional investors, intermediaries, banks, building societies	The business case
Other Co-operative and Community Benefit Societies	Potential for mutual societies to re-invest in each other. Especially co-operatives supporting each other.
Charities	Overlap in mission. Blended returns.
Companies	Corporate Social Responsibility
Public sector funders	Overlap in mission. Achieving targets.
Other funders	Social and environmental goals.
Potential NIMBYs	Scale. Community-owned. Shared benefits.

6.2 Branding

The FEP logo is shown in Figure 1.

Figure 2 FEP logo and strap line



6.3 PR and Publicity

FEP regularly publicises its activities in the local press, including the local radio station Source FM. It reports frequently to Falmouth Town Council and Penryn Town Council. It regularly takes part in local business forums such as the Federation for Small Business and Falmouth Business Breakfast Club. It is also a member of Community Energy England and Regen.

6.5 Online Presence

FEP currently has its own web presence www.falenergy.co.uk

In addition partner organisations such as the Dracaena Centre and Transition Falmouth will be able to market FEP via their websites and networks. We already use social media & networking tools to enhance our online reach. FEP posts on Twitter as FalEnergyPartnership @FalEnergy and posts on Facebook as Fal Energy Partnership Ltd @falenergy.

7 Finances

We have forecast cash flow in the project models over 20 years. Future profit & loss and balance sheets derive from the forecasts.

Member share capital is an at-risk investment.

We expect to finance the build of our installation at The Dracaena Centre initially via a mix of grant and secured loan. We may consider an element of gift based crowdfunding if timing allows. We expect to swap out at least 15% of the secured loan for community shares within three years of drawdown.

7.1 Financial Assumptions

Each time we have had to make assumptions we have erred on the side of caution.

7.2 Analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT)

The SWOT analysis is shown in Table 3.

Table 3 SWOT analysis of FEP financial position.

Strengths	Weaknesses
High long term demand for electricity	Lack of mainstream sub £1m project finance for renewables
Viability and stability of community ownership model	Scepticism regarding community ownership
High demand for renewable technologies from parts of the community	Long lead times involved with project planning and financing
Retention of money in local economy	Difficulty of communicating "blended returns"
Aligned with Cornwall Council strategy "Cornwall's Energy Future" ⁵	Narrow margins
	Uncertainty regarding long term operating and maintenance costs

⁵ <https://www.cornwall.gov.uk/council-and-democracy/council-news-room/media-releases/news-from-2017/news-from-january-2017/cornwall-council-sets-new-ambitions-for-cornwall-s-energy-future/>

Opportunities	Threats
<p>Reduction in cost of solar panels</p> <p>Government commitment to 15% renewables by 2020</p> <p>Growing awareness of climate change</p> <p>Growing awareness of finite resources</p> <p>Growing desire to support community action</p> <p>Economic uncertainty and low interest rates could encourage investment in more stable community owned enterprises.</p>	<p>Economic uncertainty could put off investors.</p> <p>Government policies and current political instability</p> <p>Government adjustments to FIT could cause less confidence in the long term FIT policy</p> <p>Uncertainty about FIT rate at time of commissioning</p>

7.3 Risk Analysis

A risk analysis of the financial position is shown in Table 4. Weaknesses and threats are analysed in terms of; 1) how likely they are to occur, 2) How severely they would affect FEP and its mission, 3) How high a financial risk they represent, 4) The potential worst case and 5) How we would minimise and manage the risk and reduce the harm should the risk occur.

Table 4 Risk analysis of FEP financial position

Risk	Probability	Severity	Comments
Lack of mainstream sub £1m project finance for renewables	High	High	We are anticipating that mainstream finance could be very difficult to access and too expensive to give any margin on projects.
Scepticism regarding community ownership	Moderate	High	Evidence from similar local projects suggests that people are willing to invest and support this approach. Where important potential allies don't "get it", we will provide details of the many successful community renewable co-operatives and give the pros and cons of the different potential models, governance and legal structures
Long lead times for project planning and financing	High	Moderate	Impacts are medium as operations will not start until planning done and finance is in place.
Difficulty of communicating 'blended returns'	Medium	High	Other's experience of similar projects has shown that sufficient people do understand the concept of social, environmental and financial returns.
Lack of finance/under capitalisation	Low-Medium	High	Evidence from other community share issues suggests that we have good reasons for optimism. Similarly grant funding is available for projects of this kind.

Rising costs, particularly operation and maintenance.	High	Moderate	We will seek favourable contracts with local suppliers to moderate this risk.
Falling Feed in Tariffs	Medium	High	The general scale of FITs is known and can be applied to financial modelling.
Uncertainty about what FIT rate will be at time of commissioning.	Medium	Moderate	Even small changes in FIT could impact the return.
Mechanical Failure	Low	Moderate	We will have appropriate insurance, warranties and maintenance contracts.
Raising finance too early and having to service capital that is not invested in income generating operations.	Low	High	We will not borrow unless we have agreed in principle the timing of staged payments to installers and agreed in principle to draw down any necessary debt in tranches timed accordingly. Similarly, we will hold payments from applying members and/or investors in trust until the capital is needed at which point shares will be issued and the capital moved into the current account from where from where it will be invested in income generating operations.

8 Development Plan

We are currently working to install one 50kW of roof mounted solar PV at the Dracaena Centre in Falmouth. We have conducted community consultations in the Fal Community Network Area so as to ascertain whether the local community wants the proposed installation, including an online survey. We have received enthusiastic support and no objections.

A strategy of built in redundancy is a deliberate characteristic of our development plan. Our feasibility study, funded by RCEF, identified 23 potential sites. We then narrowed this down to 6 favourable sites. We then identified only 1 site with the potential to access to grant finance, namely the Dracaena Centre. We wish, plan and are working to fully develop further sites in subsequent rounds. We have identified three additional low-risk sites that we wish to develop but that would not necessarily be eligible for grant funding. However, having established viable and positive community benefit with the Dracaena Centre project, it is feasible that these projects would become more attractive to both funders and investors. Each round of development will involve consulting and applying for permission at more sites than will be developed in that round. Should permissions be granted for more installations than are developed in that round then those locations could be the first to be developed in the next round.

In the first instance, we plan to finance the new roof mounted solar PV at the Dracaena Centre through a mix of private grant funding and a loan. It is also our intention to pursue crowd funding and special purpose member shares to reduce the loan funding required.

The generation potential of solar PV is well understood and relatively predictable and will generate a modest revenue stream for the community after all investment and operational costs have been allocated. As a not-for-profit organisation, the intention is that this revenue stream will be used to facilitate a range of community benefits.

As a community energy organisation we are committed to the concept of energy democracy, so that members of our community can not only generate their own energy but directly benefit from the profits available from renewables. A key part of our plan is to engender involvement. We wish to offer involvement in the benefits, such as working together to improve energy efficiency and reduce fuel poverty, and improving the facilities at the Dracaena Centre. We also wish to offer ownership to as many local people as possible.

9 Future Development

This business plan is deliberately cautious. We have developed financial projections over 20 years; however there are many possibilities in the medium and long term. What we have sought to be definite about is our ability to maintain a viable sustainable enterprise that will achieve modest growth whilst servicing its debt and making returns to shareholders sufficient to attract and retain capital. FEP has primarily social and environmental goals and does not exist purely to generate financial returns. That said we do expect to generate good financial, social and environmental returns that will be attractive enough to secure the investment necessary to achieve our mission.

This document along with our financial projections set out and demonstrate the viability of our current operations and plans. This document together with our financial projections shows how our first installation will pay for itself and generate income to be used for the benefit of our community. Only when we can demonstrate success with this project will we consider future projects.

We do believe that FEP could grow and develop. However we believe that it is most important to consolidate a stable enterprise rather than try to grow too fast. We intend to build upon stability and to grow carefully from a stable base.

With a predictable income stream and a healthy balance sheet FEP should be in a position to develop other renewable technologies and work at a range of scales.



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Kabin and Paul Martin state that this work is derived in large part from “Community Power Cornwall Business Plan 2014-2034” and earlier editions of Community Power Cornwall’s Business Plan. We acknowledge and give credit to CPC and to Paul Martin who are the authors of the works from which this work was derived.