

## **ACE Business Plan 2018-2023**

### **1 Introduction to ACE**

Avalon Community Energy Ltd (ACE) is a community benefit society established in February 2013. We are set up to generate renewable energy to raise income for community projects focussed on sustainability and energy efficiency.

ACE is run by a board of directors elected from the membership: Jon Cousins, Chair, Maddy Milnes, Company Secretary, Michael Penn, Juliet Yelverton, Stewart Crocker, Cara Naden and Graham Lucas is the Treasurer.

We have nearly 200 members who comprise of local community members and supporter investors.

### **2 Background to the Business Plan**

#### **2.1 Our achievements**

The feedback from community engagement activities we undertook when looking at what projects to undertake, was that people supported solar PV on roofs, particularly on public buildings. In response, ACE embarked on a programme to install roof top solar on buildings across Mid Somerset and recently completed our first successful installations on a commercial property in Evercreech and Brookside Academy in Street.

The experience of the first stage included: writing a business plan, commissioning a feasibility study, identifying and signing up potential projects, launching Community Share offers, completing funding applications, and using other fundraising methods e.g. crowdfunding websites. With the support of our professional advisers, we have also worked through all the legal and planning aspects of the projects, and submitted the formal Ofgem paperwork required to obtain the Feed-in Tariff.

#### **2.2 What are we learning?**

As a consequence of working through the first stage of our development, ACE is in an excellent position to understand the risks and opportunities of any potential project and have a template lease and power purchase agreement agreed with Somerset County Council, which will reduce potential legal fees. Although the Government's Feed-in Tariff (FITs) scheme is disappearing, the fall in the cost of solar panels means that there is still a good business case for solar PV on roofs – if the size, energy usage and location of the installation are right.

In particular we have learnt about the legal challenges of setting up lease agreements with private sector companies, who are supported by corporate lawyers not experienced at working with community benefit societies. We found that the culture within public sector organisations is far more amenable and positive about our aims. We do not anticipate that the legal side of installing solar PV will become any easier over time and will continue to present as a serious risk to the viability of any project.

From the initial feasibility work carried out by Communities for Renewables, we also have a comprehensive list of potential roof top solar sites to help us target our approaches for the Avalon area (including potential kW capacity).

## **2.4 Taking stock**

ACE is entering the second stage of its development and having reviewed the opportunities and recent learning and whilst bearing in mind the legal and political challenges that lie ahead, we are optimistic, it has an exciting role to play in the local energy economy. By striving forth and reducing our reliance on government surpluses it will create a more resilient organisation in the long run and will be in a better position to help our local community.

## **3 Revised over-arching statements and values**

### **Vision**

Our vision is of an energy landscape in Avalon in which renewable energy and high levels of energy efficiency are considered normal.

### **Mission - (ie: purpose)**

Our mission is to lead a movement that hastens the pace towards clean, safe, secure energy for Avalon.

### **Aim – (top level / strategic)**

To become recognized as the first choice for setting up renewable energy and energy efficiency installations, through offering unique value and excellent project management.

### **Values**

Social investor value: protecting the financial investment made into projects through good financial management;

Customer Care: building good relationships with our customers and projects; providing an efficient and considerate service which helps to bring down energy costs.

Community value: engaging and involving local people in our decision making processes and investing in projects resulting in local benefits.

Environmental stewardship: when making decisions to always consider the impact on the environment;

Health and Wellbeing: considerate of the health and well being of all those who work within ACE or on behalf of ACE.

## **4 Opportunities arising from the evolving context in which ACE is operating**

### **4.1 How is the evolving political environment likely to impact on the energy landscape?**

The Conservative Manifesto included - Zero emissions from most cars and vans by 2050; halt the spread of on shore wind; back expansion on new nuclear; support development of North Sea gas and oil; support shale gas (fracking).

As a consequence of this focus on nuclear and gas, support for the renewable energy industry has declined dramatically, leading to the cliff edge cut of the feed in tariff rate in 2015. We have seen the number of solar installations and drop dramatically and new on shore wind turbines have become very rare indeed, although single wind turbines are still possible. A government spokesperson from Department of Climate Change at the time said: "It's only fair that the costs on people's

energy bills to support solar projects should come down as the industry establishes itself and costs fall. Ultimately, we want a low carbon energy sector that can stand on its own two feet rather than relying on subsidies.”

Meanwhile, subsidies were wheeled out to support shale gas and we saw Hinkley receive the green light with an expected completion date of 2027.

Surveys carried out by YouGov and ACE have demonstrated there is significant support for renewables compared to fracking and nuclear. Government surveys have shown opposition to fracking in particular continues to outstrip support - particularly among those who know about the controversial process.

In our experience we find many people understand and approve of solar power. For some the visual aspect offends, but generally most people are supportive of PV panels on public buildings and industrial units.

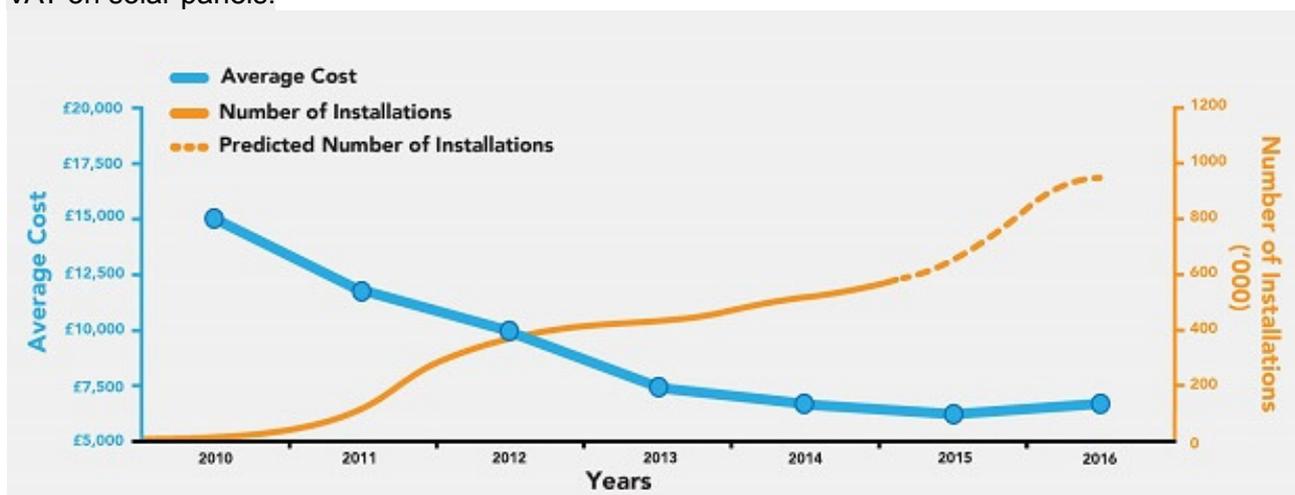
There is no doubt that the renewable energy industry was hit hard by the government’s energy policy and as a new renewable energy organisation, it seemed every possible obstacle was put in our way by government agencies to deter us. However, local support has continued and people are more determined than ever to see greater numbers of installations in place, such is the demand for clean, safe and secure energy. We recognise as we move forward we need to become less reliant and expectant of government support.

#### 4.2 How will the economics of energy supply affect the energy infrastructure?

Although we have misgivings about Hinkley, we can expect the Government will go to extraordinary lengths to ensure it’s delivered as it is one of the corner stones of their energy policy, and in this context, renewables must be self sufficient.

Solar panel costs are continuing to fall inline with Swanson law (20% decline for every doubling of shipped volume). This translates into a decline of 10% a year since 1980, and a 61% drop from 2010 prices. As a consequence a study carried out by Oxford University researchers (2016) has predicted that solar will meet 20% of global energy needs by 2027. Some countries are stating that solar is now already cheaper than coal.

The chart below shows the plummeting costs of a typical 4kW solar system over the last few years. From 2016, prices rose slightly due to an EU ruling meaning that installers have to pay the full 20% VAT on solar panels.



(Ref: <http://www.theecoexperts.co.uk/how-much-do-solar-panels-cost-uk>)

The pound has dropped almost a fifth since a majority of voters chose to leave the EU on 23 June 2016. The currency depreciation has fuelled rising power prices and thus creating a better economic environment for the solar industry, which is not so affected by rises in oil and gas prices.

NPower announced a 15% tariff increase to be implemented from March 2017 and other energy companies are expected to follow suit. EDF will also increase their electricity prices by 8.4% from March 2017.

Energy companies blame the increases in wholesale energy costs and the cost of delivering government policies such as smart meters and the renewables obligation. The wholesale cost of electricity has risen by 36% since last April.

The rising energy prices, the currency depreciation and continued fall in the cost of solar panels is creating a more favourable economic climate for ACE. It means we are more likely to be able to install solar PV and offer very competitive tariffs to our customers. Furthermore, we have the advantage that once installed, the electricity generated is not affected by other factors, apart from the sun, resulting in price stability at a time when the main suppliers dependent on energy from fossil fuels, are facing increasing and variable costs.

### **4.3 What opportunities are arising from new technologies?**

The technological advances in solar, smart energy software, batteries and electrical vehicles are showing enormous promise and present as possible opportunities for development into local projects.

Solar technologies have advanced considerably since their introduction in the 1960's and while they were once thought of as a technology for the future, recent advancements in improving their efficiency has the solar industry positioned for significant growth. New panels are coming on the market which are 8x more efficient than earlier models and using less expensive and less toxic materials.

We have also heard of new inventive sites for solar PV - solar roadways where solar panels are lining roads and deployed to generate energy for the grid. To address land use concerns, solar panels are also being erected on water, which may be appropriate in some parts of the Somerset levels.

The government wants energy suppliers to install smart meters in every home in England, Wales and Scotland. There are more than 26 million homes for the energy suppliers to get to, with the goal of every home having a smart meter by 2020.

Smart energy infrastructure and policies could save consumers up to £8bn a year by 2030 according to government advisers. The rollout of smart meters will provide consumers with greater information regarding their consumption of electricity. With this new knowledge householders will have greater awareness of how they use energy and we anticipate an increase in demand for information and support on how to install energy efficiency measures.

Cheap and clean forms of energy storage is nearly upon us, undermining the need to build 20th century power plants, never mind the nuclear white elephant such as Hinkley Point. This new technology is on the brink of overcoming the curse of 'intermittency' which long undermined the case for wind and solar. As the government struggles with the extortionate commitment to Hinkley Point, there is no question that the long term business case for Hinkley is undermined but crucially any delays in construction puts the commercial viability of the project into question.

Solar energy capacity and value can be increased by adding a battery storage system to our existing projects. Batteries store power generated during the middle of the day, when grid costs are highest. For use in the evening or at other times when there is no solar energy available.

The last three years have seen a remarkable surge in demand for electric vehicles in the UK – new registrations of plug-in cars increased from 3,500 in 2013 to more than 85,000 by March 2017. There will be many business opportunities to consider when supporting the development of the EV

infrastructure and is an area worthy of our attention, as a potential add on to existing and new projects.

#### **4.4 What are the opportunities arising from the public sector funding challenges?**

A day does not go by without news of some part of the public sector struggling with financial pressures. Education is facing £3billion cuts by 2020. The financial challenges faced by schools was published by the Association of School and College Leaders and the Secondary Heads Association and they reported on the cash situation facing schools in England with 49 out of every 50 schools, will see a real-term per pupil funding fall between now and 2020; some schools are set to lose up to 17% of their per pupil funding.

The NHS is struggling under the huge demands of a growing elderly population, and higher expectations placed on its services due to advances in medicine and drugs. Local services are also under pressure as local authorities struggle to make ends meet.

From our experience of working with Brookside we are aware of the value added softer benefits of solar PV projects, in terms of providing an on site installation for educational purposes. There are also similar benefits for NHS buildings where there is opportunity to foster the connection between clean energy, reducing pollution and measures to improve public health.

#### **4.5 What are the energy related social challenges in ACE's catchment area?**

The Avalon area is predominantly rural covering Glastonbury, Shepton Mallet, Street, Wells and surrounding villages, with a population of over 100,000. There are areas of high multiple deprivation within Glastonbury, Street, Shepton Mallet and Wells. In Somerset as a whole, 11.2% of the population suffer from fuel poverty (DECC 2013).

Improving energy efficiency and cutting fuel bills as well as improving the living conditions and also possibly the health of householders, also means less money leaving the local economy and more spent in local shops and businesses.

### **5 ACE's proposed strategy - in response to the above**

#### **5.1 Our approach is simultaneously**

- To engage and consult the local community at a variety of levels on the priorities in Avalon for renewable energy and energy efficiency, and to incorporate their views in our strategic thinking and planning;
- To create a community infrastructure that provides education, information and support that enables greater energy efficiency in homes and businesses in the Avalon area;
- To use technology that reduces or eliminates pollution to help preserve the global environment.
- To provide a good and reliable return for social investors.

#### **5.2 ACE's proposed role**

We think one of the roles of community energy groups is to give people hope by increasing the opportunities to create sustainable communities. People are seeing the rise of community organisations as providing solutions. Currently there are over 4000 community energy organisations in the UK. For some, there is frustration with the current political situation, and as people experience the impact of climate change themselves, we anticipate more will become galvanised to take action. As people realise that the government is too absorbed with Brexit to tackle climate change, it will

soon become clear that local initiatives are the way forward. We need to seek and create more opportunities to collaborate and work with others involved in sustainable practices to maximise our influence and scope, while realising the benefits of renewable energy wherever possible.

### **5.3 Strategic Aims 2018 - 2013**

#### Short term:

To replicate the successful Brookside model whilst also considering the feasibility of battery storage on existing and new projects.

- To utilise the skills of board members, and those associated with the board, to explore opportunities in new technology and particularly electric vehicles.
- Find matched funding, to extend some of ACE's capital in bank, to employ staff and/or consultants to enable the generation of income from new projects.
- To approach the membership with a 'wish list' of skills/experience needed for particular tasks or projects. A 'wish list' needs to be written plus the associated skills/experience required. Any offers of help would need to be assessed to ensure that any volunteers have the necessary qualities needed.

#### Long term

- To develop our movement and become a local leader; to develop a proper plan to build our movement. Build loyalty e.g. by using Facebook, Twitter, website more effectively; produce some myth busting messages; produce a short film about Brookside Academy.
- Explore opportunities to put solar panels on public buildings owned by Town and Parish councils.
- To address fuel poverty issues once we have enough income for a community fund.
- To start a campaign for an energy distribution network that is fit for purpose by galvanising the membership.
- To develop a Green directory for Somerset.

Our revised business plan confirms the need for expansion and concludes that we should expand with helping more Academies in our region. We have a precedent, complete with all the agreed legal paperwork templates and will help us move comparatively easily towards getting away from being dependent of Feed in Tariffs which is essential in the long term. In an effort to help our local education establishments and community the most we have created the following model which can be replicated as funds allow.

Date approved by AGM

Signed by:

Position:

Date of review: