

# **SUNDANCE RENEWABLES (SUSTAINABLE ENERGY CO-OPERATIVE) LTD**



**.. a worker owned co-operative  
for the development of renewable energy**

## **ANNUAL REPORT AND ACCOUNTS 2004 - 2005**



### **Work with us....**

**Sundance Renewables  
is a company limited by guarantee,  
registered in England and Wales.  
Registered Company 4420315**

**Main place of business:  
Excal House,  
Capel Hendre Industrial Estate  
Ammanford, Carmarthenshire,  
SA18 3SJ**

*Registered Address:*

*37 Fforest Road, Pontarddulais, Swansea, SA4 0TN*

## Profile of Sundance Renewables

Sundance Renewables is a workers' co-operative and a company limited by guarantee (registration no. 4420315), with the aim to facilitate the development of renewable energy projects. Also, by running training courses and engaging local communities in opportunities for the development of renewable energy projects, Sundance Renewables is increasing understanding and awareness of energy issues and sustainable communities.

Using renewable energy helps to reduce global warming and pollution, offers a better environment for our children and for us all, and will provide energy security for the future and more local jobs.

Sundance is an approved feasibility study consultant and installer for wind, solar and biomass systems under the Clear-Skies DTI grant programme and an installer for PV systems for the DTI Solar grant scheme. We are also a registered consultant for the Carbon Trust's Action Energy Programme. Over the past 3 years we have worked on many proposals for renewable energy projects and have installed a number of solar hot water, wind and photo-voltaic systems.

We have also set up a small scale production facility for biodiesel which is the first community enterprise of its kind in the UK. We are Wales' premier biodiesel manufacturer – in fact, we are the only manufacturer of biodiesel in Wales and the pump selling biodiesel from our premises is unique in Wales.

It has been a noticeable achievement over the past year to have begun production of biodiesel and to run our training courses that are designed to help others to gain from the benefit of our experience and replicate our work.

We are keen to build the capacity at all levels for the successful deployment of renewable energy systems in Wales. To this end, we shall be developing more training programmes and educational activities and hope to be able to attract more members to assist with our work. We have welcomed 2 new members this year – Alastair joined us as our biodiesel plant manager and Luke joined us as our first apprentice and they have both survived the 6 month initiation period to become full members.

We have continued to work with the Energy Federation of Co-operatives<sup>UK</sup> as there is considerable potential for the co-operative development of renewable energy and we particularly enjoy working with our colleagues in the co-operative sector.



## Our Aims and Objectives

### Our Mission Statement

***Sundance Renewables aims to increase the use of renewable energy technologies and raise awareness of energy issues, recycling and sustainability***

In order to achieve this we develop our work in the following areas:

- Development of renewable fuels – e.g. Biodiesel
- Installation of renewable energy systems
- Consultancy services
- Education and Training Courses
- Research

We try to find practical ways to

- Raise awareness of renewable energy
- Manage a co-operative company in an egalitarian way
- Recycle and re-use materials
- Reduce our use of non-renewable fuels and materials.

The people we wish to benefit directly from our work are:

- Workers and volunteers at Sundance Renewables
- Housing Co-operatives and Householders
- Local and other community groups
- Suppliers of used vegetable oil
- Owners of diesel vehicles
- Schools and youth groups
- Local Authorities
- Local businesses

The Impetus for our work is from

- Global climate change and the need to use alternatives to fossil fuel
- To provide worthwhile and sustainable local jobs
- To run a workers co-operative as a successful business model for community enterprise
- The desire to explore ways of balancing our needs with our environment
- The desire to pass on this knowledge through education and experience.

The results of our work are demonstrated and communicated by:

- Installation of renewable energy systems



- Production of a renewable fuel made from locally sourced used vegetable oil
- Courses
- Training
- Written Documentation
- Presentations and seminars
- Website

Sundance Renewables is a dynamic co-operative where we continuously seek ways of reducing our own environmental footprint. We encourage people to look at their own impact and to take control of their own lives in order to affect change. We look at methods of managing energy demand and daily energy use with a view to maximizing energy efficiency and conservation. We need to find the best way of living in our place with a minimal amount of damage to all the other elements that sustain us. The better we each manage our own impact the better this will be for everyone, everywhere in the world. One of the main lessons to convey is that we each can have an effect and to see our part in the environmental and political picture that affects peoples fighting to survive in other regions of the world. The impact of rising sea levels may be far worse in other parts of the UK and the rest of the world, for instance, but this doesn't lessen our own individual responsibility to act with a duty of care for the environment.

### **Think Globally and Act Locally**

Renewable energy projects will bring educational opportunities and local jobs as well as the obvious environmental benefits. There is considerable determination within many local groups to produce green electricity and have access to biodiesel, for example. The case for co-operative solutions is more compelling now than ever before. It is important to demonstrate how the aims of a renewable energy project can be met by translating into action co-operative principles as an alternative to 'big business as usual' solutions which inevitably ultimately disempower individuals in communities.

Our aim is not only to create environmentally friendly and sustainable energy developments, but to enable community groups to directly benefit from income that may be generated from renewable energy systems. We can identify projects, provide feasibility studies, consultancy and advise on funding, technology issues, planning, environmental assessments and community participation. Educating people is the key to helping people develop their own renewable energy ideas. We provide people with the necessary information to make well informed choices about the type of energy they want to see produced and used in their community.

By helping people to engage directly with the issues surrounding climate change and the possibilities for renewable energy to reduce carbon dioxide emissions, we can help stimulate local economies and regenerate local communities.



## People involved

### Members:

Alec Church	(Installation Manager)
Jan Cliff	(Director – Project Manager)
Joe Cliff	(Company Secretary)
Alastair Bowlie- Evans	(Biodiesel Plant Manager)
Luke Newton	(Apprentice)

### Volunteers

Ed Revall  
Sian Cliff  
John Jenkins  
Julie Davies  
Larch Juckes-Maxey

### Student Placements:

Nathan Edmonds (MRes Recycling Technology, University of Wales, Swansea, 'Optimal uses for Glycerin', commenced Jan 05)  
Sian Cliff (Cardiff University, Law Department, summer placement 2004)  
Luke Newton (Cardiff University, Physics Department, summer placement 2004)

## Members Update

Considerable changes to the membership and structure base of the Co-operative occurred again last year.

Sadly, in June, we said a fond farewell to Ron Taylor whose enthusiasm and dedication played a large part in our biodiesel project.

Then, we welcomed 2 new members, Larch Juckes-Maxey and Jules Davies, who made such a valuable contribution to the success of our official launch of the biodiesel project in October. Unfortunately, both left before the end of 6 months but they both continue to be supportive of our work and regularly volunteer their time and ideas.

Alastair joined us as our biodiesel plant manager in September and Luke decided to join us after a successful work placement over the summer.

Alec decided to resign as a Director so that he could concentrate on his work as installation manager and this left Jan as the only Director, with Joe remaining as our Company Secretary.

Sian has taken on working for us as our web mistress.

John gives his time as our IT support for the Linux system.

And Ed joined us to help out with our used vegetable oil collection service.



## Our Commitment to Sustainability

The concept of Sustainable Development has been around for decades and is the simple idea of ensuring a better quality of life for everyone, now and in the future. A widely-used international definition is *"development which meets the needs of the present without compromising the ability of future generations to meet their own needs"*.

Traditional measures of increasing economic activity account for more pollution and wasteful use of resources. We spend money to clean up the mess and so increase economic activity and Gross Domestic Product GDP – the traditional indicator of economic growth. A damaged environment impairs quality of life and will also threaten long term economic growth - for example, as a result of climate change. And too many people have been left behind, excluded from the benefits of development but often suffering from the side-effects.

We cannot continue with the “business as usual” model and we have to find a new way forward. This is the challenge of sustainable development.

For the future, we need ways to achieve economic, social and environmental objectives at the same time, and consider the longer term implications of decisions. We need to improve the efficiency with which we use resources. We need thriving cities, towns and villages based on strong economies, good access to services and attractive and safe surroundings. And we need international co-operation to overcome environmental problems, to allow fair trade to flourish and to help the world's poorest people as we move towards a more global society.

Sundance Renewables is committed to helping community regeneration through a sustainable approach to all aspects of our work and working environment. We are working towards recycling all our own waste and we recycle large amounts of metal, plastic and cardboard containers from our suppliers of used vegetable oil that we recycle into biodiesel – a sustainable and renewable fuel.

Our aim is to reduce our reliance on grants by increasing our trading activity and income generating capacity. We need to make more profit from our trading activities in order to make our work sustainable – which it is not, at the moment. We hope to be a model for sustainable community enterprises – enterprises that are able to offer goods and services that are valued and enterprises that do not have to rely disproportionately on grants.

We report on the key indicators for sustainable enterprises that comprise our triple bottom line of social, environmental and economic factors.



## Current Activities

By developing renewable fuels and low impact solutions, demonstrating their usefulness and then communicating this information through a range of channels, Sundance has the potential to meet the needs of a number of different groups and individuals.

The installation of solar, wind and biomass systems is steadily increasing and we aim to make this work more efficient and productive.

Last year, approximately £80,000 of investment went into the biodiesel project and the finance for this came from community grants and various loans.

We have established the first community based biodiesel plant in the UK and we are building up a strong basis for replicating the production of biodiesel as a community enterprise. The sale of biodiesel provides a basic income for the co-operative.

We will have to invest in expanding our production capacity in order to meet increasing demand for biodiesel and improve our potential for making a profit, but this will always be marginal with the government levying a fuel duty of 27.1p / litre on every litre we produce. We are circulating a petition that already has 100s of signatures, appealing to the government for a reduction in the duty on biodiesel.

The main strands for the Co-operative are now as follows:

<p>Demonstrating</p> <ul style="list-style-type: none"> <li>➤ the use of renewable energy technologies and fuels by increasing and improving our installation service and biodiesel production</li> <li>➤ a clear strategy for focusing work on achieving aims and objectives.</li> <li>➤ an increase in our educational potential and links with educational establishments</li> <li>➤ and maintaining a high standard of Health and Safety</li> </ul>
<p>Developing</p> <ul style="list-style-type: none"> <li>➤ Appropriate means to resource the implementation plan</li> <li>➤ Organisational Structures for monitoring and evaluation</li> </ul>
<p>Communicating</p> <ul style="list-style-type: none"> <li>➤ our work through increasing our local, national and international co-operative network</li> <li>➤ our aims and objectives clearly</li> <li>➤ a positive image</li> </ul>



## A Strategic Plan

The main challenges for 2005/2006 revolve around:

- Generating a sustainable income
- Developing the co-operative infrastructure and empowering members to work effectively
- Demonstrating a high standard of installation work and customer care
- Developing the biodiesel production plant and maximizing output
- Communicating our activities
- Establish useful training courses and educational activities

Since the final development stages of the biodiesel project and the establishment of a stable core of full time and part time staff, the Co-operative is running more cohesively. In order to maintain this it is important that the strategic development is a dynamic and inclusive process that will be achieved by the following.

*In order to achieve the aims and objectives embodied in this statement we will be working to a Strategic Plan, which is summarized below. This plan is as much about the running and structuring of the organisation as it is about the activities we carry out. Sundance needs a strong infrastructure to ensure we take the many opportunities available to us. It incorporates the means by which we are going to communicate both information about the organisation per se and of the work we do.*

Objectives	Activities	Outcomes	Critical Factors (Opportunities and Challenges)	Achieved By
Developing:				
1. Ways to attract more customers	Installation of solar thermal, PV, small wind and biomass systems. Sales from biodiesel Consultancy work Training courses Advertising Increase our contacts with LAs to encourage them to see Sundance as a resource for the practical application of relevant projects.	A better spread of installations over the year. A steady income from sales of biodiesel. A good quality of work and products. Effective training courses. Good contacts A positive image	Raising awareness of renewable energy Acceptability of biodiesel Building up a good reputation Availability of grants Number of enquiries leading to installations Involvement with Local Authority Development Plans Improving skills base Developing and implementing a marketing strategy	Education and information dissemination Maintain and seek to improve standards Efficient production of biodiesel Contacts with more (amenable and co-operative) builders Targeted marketing Increased networking Attention to following up enquiries Contacts with LAs Full job costing Training courses



<p>2. Appropriate means to resource the implementation plan</p>	<p>Income from trading activities, which include installation work, sales of biodiesel, Friends if Sundance, consultancy fees and training course fees. Sourcing appropriate funders Identifying our needs Sourcing trustworthy partners Reduce expenditure</p>	<p>Increased income, funding and resources allowing for improvement of infrastructure and activities. Waste minimization Energy conservation and efficiency</p>	<p>Successful installations Feast and famine scenarios Lack of capital for projects Cash flow management Untrustworthy partners Sourcing used vegetable oil at lowest possible cost Actively seek studies and installations</p>	<p>Determine a viable mark-up on goods Maximising production and sales of biodiesel Resource strategy in place Contracts for partnership working UVO collection database Promotion of consultancy and installation service</p>
<p>3. Organisational structures to ensure good documentation, facilitate the running of the organisation, aid continuity and monitoring and evaluate work being carried out.</p>	<p>Devising, implementing and maintaining appropriate systems to record and document the work done – will require a variety of quantitative and qualitative methods for monitoring and evaluating purposes.</p>	<p>Better Continuity Accessible Information giving a better resource To have good accessible documentation of all projects undertaken. Full job costing of every individual project.</p>	<p>To establish and implement the necessary systems. To be consistent and accurate in order to be meaningful. Transparency.</p>	<p>Recording systems in place to be regularly completed by Staff including Project Plans, Project Progress Reports and Full Job Costings.</p>

The income from installations is quite erratic. There does not appear to be any strong trends over the last year, but there was a period of over 3 months without any activity. The installation work is largely dependent on following up enquiries. It is an accepted wisdom that enquiries may take as long as 2 years to develop into an installation. Instability of installations makes forward planning more difficult. We therefore need to increase the volume of ongoing enquiries. This will include:

- Targeted marketing – e.g. housing market, building contractors
- Promotion of the benefits of renewable energy installations
- Promoting specific grants
- Running courses and generally raising our profile

We are developing a new form of working in our local area and if we are to continue as a viable community enterprise, we will need to work efficiently and effectively in order to sustain our livelihoods. It is important to develop organisational structures to ensure good financial monitoring, facilitate the running of the organisation, aid documentation, continuity and evaluate work being carried out.



The full benefits of the work we do cannot be realized if the information is not disseminated and shared. In order to do this we must have a good communication structure.

1. Communicating our work through increasing our local, national and International co-operative network

*Through becoming part of a wider network we are finding more opportunities to share information from the work we do, be part of the environmental debate, and make more organisations aware of the resource that Sundance Renewables is, utilizing the new and wider networks brought with new staff.*

2. Communicating our aims and objectives clearly

*As staff become clearer about the aims and objectives through the strategic development this will percolate through the project .*

3. Communicating a positive image

*As people become more familiar with the work we do so we will become known by our reputation.*

The Implementation is the means by which we will put this Strategic Plan into action and the emphasis of the Implementation will be adjusted to reflect the skills and interests of each current member.

Next year's Implementation Plan will cover the following:

#### Biodiesel production facility

- Re-design plant and equipment – for turnkey sales package and our own use
- Improve efficiency of oil collection service
- Better handling facility for incoming UVO
- Increase sales

#### Installation work

- Turn more enquiries into sales
- Make sales and installations more profitable
- More accurate job costing
- Better marketing

#### Training courses

- Maintain high standard and good feedback
- Follow up attendees
- Run at least one course every month

Continue to apply for appropriate funding



## Resources for implementing plans

Originally Sundance Renewables was set up with a £25,000 3 year interest free loan from the Wales SpinOut Programme. We have been making monthly repayments since December 2002 and last summer had a 3 month “holiday” which helped us through a cash flow crisis, but has incurred interest. Members have provided an additional source of loans and we also needed to take out a £15,000 6 month interest free loan with Communities Enterprise Wales (CEW) to help us through the final stages of the biodiesel project. £25,000 of members’ loans has been repaid with a monthly repayment being made on £6,000 and £15,000 remaining as a gift for the foreseeable future. We have a £5,000 overdraft facility with the Co-operative Bank and an account but no overdraft facility with the Triodos Bank. We repaid the £15,000 loan from CEW in January 2005.

Turnover increased significantly again last year, but there was still a financial shortfall due to the scale of the overall investment in the biodiesel project, which also diverted staff time from other activities. Careful budgeting, the advancement of loans and the willingness of all members to defer payment of wages has enabled the project to continue. Since the end of the last financial year we have made some improvements to our financial situation, with the prospect of steady work ahead from installations, training courses and sales of biodiesel.

## Funding Needs

### ➤ Revenue

Our overheads and revenues costs are in the region of £7,000/mth. It is our aim to be mainly self-financing for our revenue costs from the income received for our trading activities. Gross profit from sales of biodiesel are estimated at £4,000/mth – requiring at least another £3,000 income from installations, consultancy work and course fees. However, many other organizations and agencies doing some similar work to ourselves rely solely on grant funding and we would hope that proper consideration of the varied work and services that we offer will enable us to fairly access some appropriate funding.

### ➤ Capital Projects

We have been very ambitious as a new company – embarking on a substantial and risky capital investment project in our second year of trading, without having built up any reserves or having any shareholders to call upon. We have been fortunate in being able to attract some grant funding and to have members’ resources to help with capital costs.



### **Biodiesel Project**

Approximately £200,000 of capital investment has been made into the establishment of the biodiesel plant. Investment in the project is ongoing.

### **Vehicle**

A suitable vehicle, able to service installation work as well as enabling collection of vegetable oil from CA sites and delivery of biodiesel, is a high priority. A grant has been approved from Enfys to help with our "BioWheels".

### **Premises**

The refurbishment of the factory area to make it suitable for biodiesel production has involved the installation of a 3-phase electrical consumer unit, construction of an internal concrete bund to the entire area and a ramp under the roller shutter door. Additional work involved the fitting of a work bench and sink area with drainage and a grease trap. Further work has been undertaken outside in connection with the biodiesel production – namely the building of a concrete driveway to the methanol store. Drainage work was undertaken in conjunction with Excal and we need to determine the requirements of an outside pre-treatment area.

The Training/ workshop room needs to be refurbished.

The toilet and adjacent rooms need attention and we have asked Excal for a contribution to costs of necessary refurbishment / basic decoration.

### **➤ Partnership Projects**

#### **Awel Aman Tawe**

Last year Awel Aman Tawe took our share of a joint application grant awarded by the Local Authority Key Fund. We lost out on approximately £12,500 of revenue funding – almost exactly the amount of our deficit in our accounts. Despite many attempts to negotiate some form of settlement with AAT, they have refused to co-operate or to even let us approach the management committee with our complaint. A stipulation of the Key Fund grant allocated to them was that they should engage our services, but no work has been forthcoming. Moreover, it is very difficult to see any evidence of the work that the grant was intended for. As a local community group, engaged in the field of renewable energy, it is a great shame that such an impasse has arisen between us. Jan, in particular, has taken the affront personally and has taken steps to try to communicate with them, to no avail. There has been some disagreement among Sundance members as to whether to bother to pursue the matter in order to try and recoup our losses. In any case – this situation has certainly highlighted the need to have written contractual agreements in place for partnership projects.



## Friends of Sundance

Donations, especially from the Friends of Sundance are a potentially increasing source of income for the project. As a worker co-operative, full membership is restricted to workers and volunteers. Many people have approached us wanting to support our aims, or join us in some way. The Friends of Sundance scheme offers associate membership for a small annual subscription, a seasonal newsletter as well as preferred customer status for the purchase of biodiesel.

## Unsuccessful grant applications

### Strategic Recycling Scheme

We were dismayed that the 2 applications (with Swansea and Carmarthenshire groups) had to cut out our involvement in the projects as our collection of used vegetable oil to make biodiesel was deemed to be *Energy from Waste* rather than *Recycling* and therefore ineligible for funding. We received a weak apology and implausible explanation from the Welsh Assembly Government for their decision in this matter.

### Environment Wales – Management Grant

We were unsuccessful in our application for funding for an education worker, but we hope to be able to apply again next year.

Power Green Fund

Welsh Church Fund

CoalFields Regeneration Fund

Hanson Fund

WDA Regeneration Toolkit



## Co-operative, Social and Environmental Performance

An increasing number of organisations are using environmental and social performance indicators as a way of measuring and reporting on progress. The wide-ranging Report<sup>1</sup> of the Co-operative Commission, published in 2001, was a serious attempt to build successfully on what can be called the co-operative advantage. The Report, amongst 60 recommendations, stressed that co-operatives should after appropriate consultation, monitor and report on a common set of Key Social Performance Indicators (KSPIs). The term 'Social' is taken to encompass impacts relating to environmental issues, co-operative issues, as well as wider impacts on society and local communities. It is envisaged that indicators can and should support measurement of performance in the context of the co-operative principles, as set out by the International Co-operative Alliance in 1995.

There is now substantive evidence that the pursuit of social responsibility is not only good for society, but also business performance.<sup>2</sup> Concern for Community is a co-operative principle and encompasses the concept of sustainable development

The indicators presented have been formulated in the following context:

- Indicators should acknowledge, and be influenced by, Co-operative values (e.g. the issue of education and training)<sup>3</sup>
- Indicators should pay due regard to those emerging social and environmental reporting conventions which apply to business in general
- The majority of indicators should be relevant to all co-operatives (e.g. the generation of waste), regardless of size or sector
- The indicators should not be based on the lowest common denominator approach, but pay due regard to the fact that there is a rapid improvement in the volume and quality of social and environmental reporting by business, which is expected to continue

<sup>1</sup> Report of the Co-operative Commission [www.co-opcommission.org.uk](http://www.co-opcommission.org.uk)

<sup>2</sup> A report from CIS, 'Sustainability Pays', demonstrates this. Available at [www.cis.co.uk](http://www.cis.co.uk)

<sup>3</sup> As set out in the ICA statement of 1995



Indicators	Remarks
<p>1. Trade (£) conducted with other co-operatives  Note, trade encompasses the monetary value of both the purchase of products and services and sale of products and services.  * supports the co-operative principle – co-operation among co-operatives</p>	<p>Approx £25,000 (includes services provided for Heartwood Housing Co-operative and purchase of general goods and services from various UK co-operatives incl C.I.S. Ltd)</p>
<p>2. Time spent collaborating with other co-operatives (hours)  * supports the co-operative principle – co-operation among co-operatives</p>	<p>Approx 100 hours (includes work undertaken for Heartwood and Co-operatives UK Sustainability Working Group)</p>
<p>3. Investment in new or existing co-operative ventures as a proportion (%) of turnover  * supports the co-operative principle – co-operation among co-operatives</p>	<p>50% of turnover invested in new biodiesel venture and 50% invested in existing co-operative.</p>
<p>4. Participation in training and education schemes (hours)  * supports the co-operative principle – education, training and information</p>	<p>Approx. 500 hours (includes biodiesel training, in house training and various seminars/ conferences)</p>
<p>5. Staff turnover  Note, indicator partly covers LA4 in Global Reporting Initiative  6. Staff injury and absentee rates  Note, indicator partly covers LA7 in Global Reporting Initiative</p>	<p>During last year, 3 part time members have left and 4 new members joined (2 staying to become full members)</p>
<p>7. Staff profile: gender  Note, indicator partly covers LA11 in Global Reporting Initiative</p>	<p>1 female and 4 male</p>
<p>8. Staff profile: ethnicity  Note, indicator partly covers LA11 in Global Reporting Initiative</p>	<p>Welsh, English and South African members by birth.</p>
<p>9. Customer satisfaction (percentage satisfied)</p>	<p>Difficult to assess, especially with large number of general enquiries and tendency for positive feedback.</p>
<p>10. Evidence of consideration of any 'human rights' impacts as part of investment and procurement decisions, including selection of suppliers/ contractors  Note, indicator is analogous to HR2 in Global Reporting Initiative</p>	<p>Use of fair trade coffee and tea in the office and other fair trade products.</p>
<p>11. Evidence of consideration of social exclusion impacts as part of investment, procurement and employment decisions</p>	<p>Work undertaken in Communities First areas – i.e. Areas of highest social deprivation in Wales.</p>
<p>12. Contracts paid in accordance with agreed terms as a proportion (%) of total  Note, invoices would normally be payable within 30 days, but this may vary  Note, indicator is analogous to EC4 in Global</p>	<p>Approx 80%</p>



Reporting Initiative	
<p><b>13. Investment in community initiatives as a proportion (%) of profit before tax</b>  <b>Note, indicator is analogous to EC10 in Global Reporting Initiative</b>  <b>* supports the co-operative principle – Concern for community</b></p>	<p><b>No profit</b></p>
<p><b>14. Employee involvement in community initiatives (hours)</b>  <b>* supports the co-operative principle – Concern for community</b></p>	<p><b>Approx 200 hours</b></p>
<p><b>15. Net carbon dioxide emissions arising from operations and transport (tonnes)</b>  <b>Note, indicator is one of three core indicators recommended by UK Government guidance. Any engagement by business in carbon offset schemes (such as tree planting) would be incorporated in any final calculations on net carbon dioxide emissions.</b>  <b>Note, indicator covers part of EN8 in Global Reporting Initiative</b>  <b>*supports the co-operative principle – Concern for community</b></p>	<p><b>See Offset Carbon Emissions / Carbon Footprint below</b></p>
<p><b>16. Waste recycled/reused as a proportion (%) of total waste arisings</b>  <b>Note, indicator is one of three core indicators recommended by UK Government guidance.</b>  <b>Note, indicator covers part of EN5 in Global Reporting Initiative</b>  <b>*supports the co-operative principle – Concern for community</b></p>	<p><b>Approx 90%</b>   <b>Level 2 Green Dragon Environmental Standard</b></p>
<p><b>17. Water consumption (litres)</b>  <b>Note, indicator is one of three core indicators recommended by UK Government guidance.</b>   <b>Note, indicator covers part of EN11 in Global Reporting Initiative</b>  <b>*supports the co-operative principle – Concern for community</b></p>	<p><b>Approximately 250 litres of water is used per 1,500 litre batch of biodiesel</b></p>



## Offset Carbon emissions generated by Sundance Renewables

### Projects and Installations

Renewable energy projects are zero or low emission sources, offsetting power from fossil fuel sources and creating reductions equal to the carbon displaced from the fossil fuel source. Energy production is measured and emissions are calculated using emissions factors of the fuel displaced

Our biodiesel production plant has the capacity to produce 250,000 litres of biodiesel a year. This produces a carbon saving of 90% off an equivalent usage of fossil diesel which represents approx 250 tonnes of carbon or 875 tonnes of CO<sub>2</sub> emissions.

We collect used vegetable oil from approximately 100 outlets and we have the capacity to provide 100% biodiesel to around 250 vehicles a week (12,000 miles/yr average). The Government target is for biofuels to meet 2% of transport fuel sold by end of 2005. Some car manufacturers will only warranty for 5% biodiesel and on this basis we could supply around 5,000 vehicles a week.

#### **Analysis of carbon savings of installations:**

Our renewable energy projects have been various and include:

- 5 solar hot water installations, covering a total of 40sqm, providing a total of approximately 16500 kWh giving an annual carbon dioxide saving of approximately 7 tonnes
- 4 photovoltaic installations, with a total power rating of 511W, giving an annual carbon dioxide saving of approximately 0.2 tonnes
- 4 wind installations, with a total power rating of 4.3kW, giving an annual carbon dioxide saving of approximately 4 tonnes

### In House Electricity and Heat

At Excal House, our landlords pay the electricity costs which are included in our rental. The electricity supply company they use is SWALEC and we have suggested to them that they should move to a Green electricity supplier. We are still hoping to encourage Excal to submit a planning application to install a medium sized wind turbine at our premises or on the land adjacent, which is being purchased by Excal.

We have had a 3-phase supply unit connected to our biodiesel plant.

The heating for our new premises at Excal House is provided by a central oil boiler and the costs are included in our rental. There may be scope to replace some of the fossil fuel heating oil with biodiesel, glycerine or vegetable oil.



## Reductions of emissions related to transportation

### Fuel switch

Since November 2004, we have been producing 100% biodiesel which we use in our own vehicles as well as for general sale.



Total annual amount of fuel used = 2,000litres diesel  
2,000 litres biofuel

The use of 2,000 litres of biodiesel corresponds to an annual reduction in carbon dioxide emissions of 7 tonnes

### Efficiency, Mode Switch and Transportation management

Public transport has been used for several journeys to London and Cardiff (train) as well as frequent local bus services.

Regrettably, one air flight to Edinburgh was made in order to give a presentation at the Sustainable Development Commission Conference in February. The decision to fly rather than travel by rail was taken on the basis of the extra time required – an extra full working day would have been necessary to accommodate the rail journey and this was felt to be unjustified and unduly tiring.

We always try to optimise routes, using roundtrip journeys.

Our own management initiatives include car sharing wherever practicable and teleworking from home on a regular basis for most workers.



## Finance

The management information systems that we had been using were insufficient to support efforts to manage and develop our activities. It was acknowledged that we had to introduce better and more robust business processes to support the development and growth of our business, to help inform the decision making process and control costs.

A Business Review was carried out on our behalf, by Alastair Burian of Riverside Consultancies in May. We found this to be a very professional and constructive exercise. Mr Burian was dismayed at the state of our financial monitoring under the Prophet! System on our RISC OS computer system and tried valiantly to glean some useful information for a draft annual P&L account and Balance Sheet. This report was not unduly worrying and we continued to progress our work whilst waiting for the definitive accounts to be arrived at. We were unable to find a suitable financial software package for our Linux computer system and we rather reluctantly installed a Microsoft operating system on one computer to run the Sage financial software.

All the figures for last years accounts were finally inputted and organized by the Company Secretary with the help of Mr Burian on October 7<sup>th</sup>.

The Annual Accounts (to end March 2004) highlighted the financial difficulties that we have experienced, leading to the Strategic Plan that we are now working to. Since the end of that accounting period we have made significant improvements to our general financial situation. The biodiesel project, which has been a tremendous drain on our resources, has taken off and we have taken on 2 new permanent full time workers. Nevertheless, we are impressed with the need for accurate financial monitoring and better managerial systems. Several workers are accessing suitable training to assist in understanding these matters and to enable appropriate systems to be put in place and implemented in future.

The principle of limited return on capital is designed to ensure the co-operative is run for member interest. However, it means that it can be very difficult to raise outside equity for the business. In the case of Sundance Renewables, we have continued to rely heavily on directors' own resources throughout the last year. We were successful in getting some funding towards the total costs of the biodiesel project – which has been estimated to be in the region of £200,000. Much time and resources has been invested in the development of the biodiesel project and more investment is critical if we are to meet increasing demand.

We are making every effort to improve our working practices and to implement the necessary changes for our sustainable development as a worker co-operative and community enterprise in the field of renewable energy.



## Analysis of income received

### Grants

Create Enterprise Grant for biodiesel project – capital	26,000
- revenue	15,000
Enfys – biodiesel project, ancillary capital costs	25,000
NatureSave – biodiesel, general	7,500
Environment Wales – educational resources	7,500
Millennium Stadium Trust – establish training courses	10,000
Cymru Prosper (student subsidies)	2,700
<b>Total</b>	<b>93,700</b>

### Loans

Community Enterprise Wales (repaid in full)	15,000
Members loans (£25,000 repaid)	46,000
<b>Total</b>	<b>61,000</b>

### Project and Installation fees

Consultancy	15,000
Training courses	4,000
Presentations – various	2,000
Installations	
2 Wind turbines	
2 SHW systems	
PV panels	
Atmos boiler	
Total	19,700
<b>Total</b>	<b>40,700</b>

**Sales of Biodiesel** **13,400**

**Total Income** **208,800**

**Proportion of total income from grants** **44%**



**SWOT ANALYSIS**

<b>Strengths</b>	<b>Weaknesses</b>
<p>Energy and enthusiasm of workers  Range of skills  Commitment to improve individual skills  Common shared goals and dedication  Positive Group interaction  Personally challenging and empowering  Personal development  Flexible and informal atmosphere allowing for creativity of new projects and safe situation to make mistakes  Autonomy as a worker co-operative  Sense of ownership and purpose to our work  Commitment to voluntary hours</p>	<p>Lack of capital for projects  Close working and egalitarian, non-hierarchical structure makes constructive criticism difficult at organizational and personal levels  Misconceptions of image as a worker co-operative are still held  Need clearer definition of who we are – SME / Community enterprise  Quality of financial and organizational structures</p>
<b>Opportunities</b>	<b>Threats</b>
<p>Unique training opportunities  Potential to stimulate debate in local area and field of practice e.g. promote/influence uptake of renewable energy systems and biodiesel  More placement students-build better links with Universities and schools  Expand research projects  More links with other co-operatives and community organisations  International research/collaborative projects  Price of fossil fuels increasing  Greater awareness of need for renewable technologies  Continuing Professional Development being accessed to improve practical, financial and managerial skills  Government targets which we can help to meet</p>	<p>Inability to sustain income generating activities  Failure to put adequate financial and organizational structures in place</p>



## Conclusion

The commencement of the third year of trading of Sundance Renewables as a Co-operative and Company Limited by Guarantee has seen many developments in the planned direction. The Co-operative feels more cohesive and members are working well together to achieve the objectives of the organisation.

Having a Strategy Plan helps to keep the organisation focused and shows that we are becoming more confident and clear about what we are doing and why we exist. This is affecting the connections we are making and the influence we have.

Although there are aspects of developing the plan which are time consuming, the effort has been shown to be worth while in the benefits, accountability and clarity that we have gained.

It is highly recommended that the members enjoy a strategic development day annually and that the plan is monitored by members over the coming year.

Sundance Renewables has set up the first community based biodiesel plant in the UK. It is rare for an industrial process of this nature to be undertaken as a not for private profit venture. We have demonstrated what a small group of committed individuals can achieve and we have shown that biodiesel production is possible on a small scale. There is a great deal of interest and support for our biodiesel initiative and we are greatly encouraged by the enthusiasm of others for our work and achievements.

There is so much to do to increase the uptake of renewable energy in Wales. Nearly all the developments to date have been as a result of grant funding and projects are continuously held up whilst paperwork is put in place to access grant finance. We need to follow a more sustainable and equitable approach to the development of renewable energy projects.

We have shown what co-operative models can achieve in developing renewable energy projects and with extra funding and support we could achieve a whole lot more.

We hope that the year ahead will see our continuing success in developing renewable energy projects and that our circumstances will become more stable and financially sustainable.

Grateful thanks to all our funders, supporters and volunteers.



**Profit and Loss and Balance Sheet for Year Ending March 2005 –**

**Submitted to Companies House in accordance with annual reporting and accounting procedures.**



## **Appendix**

**Renewable Energy**

**What is a Co-operative**

**Workers Co-operatives**

**Statement on Co-operative Identity**

**Role of Directors**



## Renewable Energy

*(Information from "Review of Energy Policy in Wales Part 1: Renewable Energy" The National Assembly for Wales April 2002)*

Over the past 200 years, the global use of fossil fuels has increased the concentration of carbon dioxide in the atmosphere so much that the world's climate is changing.

To avoid the most adverse effects it is essential that carbon dioxide concentrations are stabilised and this in turn requires significant reductions in carbon emissions. Existing international agreements require countries to reduce emissions of greenhouse gases. The baseline for these is 1990 - under the Kyoto agreement the UK has an obligation to reduce greenhouse emissions by 12.5% by 2010. Reports from the Intergovernmental Panel on Climate Change (IPCC) suggest that much larger reductions are required by the middle of the century.

### **The IPCC pointed to three principles on which current international action was based:**

- The precautionary principal (lack of scientific certainty should not prevent action);
- The polluter pays; and
- The principal of equity, both intergenerational (recognising needs of future generations) and international (dividing permitted global emissions on a population basis).

### **Emissions of carbon dioxide could be reduced and their effects mitigated by:**

- Improvements in the efficiency of energy generation and energy use;
- Changes to non-fossil-fuel sources of energy generation; and
- Sequestration of greenhouse gases.

The impacts of climate change on Wales are those associated with a rise in sea level, increased winter rainfall, increased occurrence of storms and flooding and the changes in agriculture and habitat likely to result from increased temperatures. There will be a wide range of economic consequences, including increased insurance costs, expenditures on flood and storm defences, increased water management costs. The Royal Commission on Environmental Pollution have proposed a 60% reduction in carbon dioxide emissions for the UK by 2050. The UK Government have indicated that meeting such a target is feasible but will not be easy. In addition to the Kyoto carbon abatement targets the UK has targets to obtain 10% of its electricity supplies from renewable sources and to



have 10 GW of Combined Heat and Power (CHP) capacity installed by 2010. It is generally agreed that energy policy should address all three objectives of sustainable development - economic, environmental and social - as well as energy security. At present, the UK will be increasingly dependent on imported oil and gas. There is a strong likelihood that the UK will need to make very large carbon emission reductions over the next century in order to comply with international agreements. The immediate priorities of energy policy are therefore likely to be most cost-effectively served by promoting energy efficiency and expanding the role of renewables.

In Wales, the demand for heat is higher than the UK average due to its larger industrial base. Also, because of the age of the housing stock, more than 40% of houses in Wales have solid walls, compared to an average of 27% in the UK. Heat demand is not increasing as fast as electricity demand and there tends to be more scope for reducing heat demand than electricity demand, through energy efficiency measures. This, coupled with the greater carbon intensity of electricity compared with other fuels, means that the main focus on reducing carbon emissions in Wales is in respect of electricity production.

Wales is an ideal location for the development of renewable technologies, especially wind, tide and sea-current. Wind-power and biomass are both ideally suited for rural areas and offer opportunities for investment and job creation at a time when diversification is urgently needed.

The Economic Development Committee of the National Assembly concluded that its Energy Review should focus on energy efficiency, renewables and combined heat and power.

**It recommended that the Welsh Assembly Government:**

- recognises that over the next twenty to fifty years it will be necessary to move towards a zero carbon electricity system;
- seeks to develop its indigenous renewable resources so as to make a timely contribution to the reduction of carbon emissions;
- promotes renewable sources of energy in such a way as to enhance industrial, rural and commercial opportunities in Wales without prejudicing tourism or areas of environmental significance;
- should set a benchmark for production of electricity from renewable sources of 4 TWh per year - amounting to just over 10% of Welsh electricity production.

Renewable energy is therefore an industrial sector which can be expected to expand rapidly in Wales over the next 20 years.



## What is a Co-operative?

The International Co-operative Alliance in 1966 adopted 6 principles to define co-operative organisations. These can be summarised as:

- 1 Membership is voluntary and open to all who can make use of its services regardless of race, religion or creed
- 2 One member one vote
- 3 Limited return on capital
- 4 Profits distributed amongst its members in an equitable manner (if at all)
- 5 Make provision for member education
- 6 Co-operate with other co-operatives

In UK law, there is no legal definition of a co-operative. The two legal bases commonly used are registration as an Industrial and Provident Society or, increasingly, as a Company Limited by Guarantee.

Co-operatives are organisations for mutual benefit. It is their objective of serving members' interests rather than that of capital invested, that distinguishes co-operatives from other business forms.



## **Worker Co-operatives**

The growth of workers' co-operatives in the UK began in 1976 with the passing of the Industrial Common Ownership Act.

Forming a worker co-operative enables employees to manage their own working environment directly. Membership cannot be restricted artificially. Thus all employees (after a probationary period) have a right to join a workers' co-operative.

### **Key Factors for Successful Co-operatives:**

- 1 The desire to set up in business must precede the desire to set up a co-operative.
- 2 In obtaining finance, getting it when needed and timetabled is crucial.
- 3 A shared ideal or common goal.
- 4 Everyone is actively involved in the formation of the strategy of the co-operative.
- 5 Clear definition between management and strategy.
- 6 Management and working practices clearly established.
- 7 Roles and responsibilities defined and allocated.
- 8 Business generation system.
- 9 Close contact between members and customers.
- 10 Internal communications paramount.
- 11 Disciplined approach to meetings.
- 12 Formal process for generating new ideas.
- 13 Strong image.
- 14 Induction period for new members and training needs examined for members generally.
- 15 Awareness of management and business practices throughout the membership.
- 16 Management information systems.
- 17 Concern for the quality of the product/ service from the customers'



viewpoint.

## **STATEMENT ON CO-OPERATIVE IDENTITY**

*CO-OPERATIVE STATEMENT OF IDENTITY AND PRINCIPLES  
AS APPROVED AT THE ICA CONGRESS, MANCHESTER, SEPTEMBER 1995*

### **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.

### **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.

### **PRINCIPLES**

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

### **1ST PRINCIPLE: VOLUNTARY AND OPEN MEMBERSHIP**

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

### **2ND PRINCIPLE: DEMOCRATIC MEMBER CONTROL**

Co-operatives are democratic organisations 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 also organised in a democratic manner.

### **3RD 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. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any of the following purposes: developing their 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.

#### **4TH PRINCIPLE: AUTONOMY AND INDEPENDENCE**

Co-operatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, 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.

#### **5TH 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 co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.

#### **6TH PRINCIPLE: CO-OPERATION 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.

#### **7TH PRINCIPLE: CONCERN FOR COMMUNITY**

Co-operatives work for the sustainable development of their communities through policies approved by their members.



## Role of Directors

Directors of private limited companies derive their powers from the Memorandum and Articles of Association of the company, which set out the procedures that a company must adhere to. The Memorandum and Articles contain important information about the management of a company and it is essential that the directors are familiar with their provisions, so that they can carry out their duties in the correct manner.

### The legal duties of a director can be summarised in these general principles:

- A director is expected to show a level of care, diligence and skill appropriate to their actual knowledge and expertise
- They must be reasonably competent and comply with their fiduciary duties
- They must not allow the company to trade fraudulently, and where the company is in financial difficulties they must not trade wrongfully

A director need only display, in relation to their duties, the 'reasonable care of an ordinary man/ woman'. A director is entitled to rely on other people, and where appropriate should be seen to rely on others. A director is not liable for errors of judgement.

The director of a company owes a fiduciary duty first of all to the company of which s/he is a director and not to the individual members of that company. This essentially means that the director will act in 'Good Faith' and must always act in the best interests of the company as a whole.

### Liabilities of Directors

Directors of private limited companies are protected by the concept of limited liability. In a company limited by guarantee this means that when a company goes into liquidation or is wound up, they will not have to contribute to the assets of the company above the amount that they guaranteed in the memorandum of association (usually a nominal sum of £1.00). This protection may be lost in certain circumstances.

### Wrongful trading occurs when:

- The company is in insolvent liquidation
- The director knew, or ought to have concluded that there was no reasonable prospect of avoiding liquidation
- The person was a director at the relevant time

It is important to note that wrongful trading will only apply when all of the above points apply.

### Fraudulent trading occurs when:

- The business of the company is carried on with the intent to defraud creditors. Any person who is party to it may be liable to fine or even imprisonment.

Fraudulent trading is a criminal offence and the court has the power to order a director to contribute to the assets of the company. In reality, it is extremely rare for directors in the



co-operative sector to face such claims for personal liability if they have acted with reasonable good faith.

