

Case Study I. Renewable energy; reducing pollution, restoring landscapes and generating jobs.



EX236 SW Wood Fuels Ltd.

SDF made a contribution towards the first year start-up costs of wages & salaries, dissemination and marketing activities of SW Wood Fuels Ltd. SW Wood Fuels is a not-for profit trust with around 100 members aiming to link producers and users of wood chip and other biomass fuels and to provide practical support. Woodland owners and managers can join the company for an annual fee (of £5 - £20) and in return can hire the wood-chipper (not brought specifically from SDF funds, which are rather a general subsidy to first year running costs). SW Wood Fuels will advise on woodchip production and storage and is involved in a number of other activities including education and promotion. Wood chip heating is not new technology (it is

commonplace in Austria where boilers are manufactured and from whom they are presently imported), however it is new to Exmoor (and to most of the UK). It could make a major contribution in terms of renewable energy (and reducing CO₂ production) and in providing a market for smallwoods (including coppice) and timber waste – which is produced locally.

Other related projects

S W Wood Fuels is a not-for-profit spin-off of Wood Energy Ltd, a new and highly innovative Exmoor based commercial company promoting wood chip and other biofuel boilers. In **EX213** SDF has co-funded (with Clear Skies) feasibility studies for wood-chip boiler installation at three Exmoor centres including the Field Studies Council's Nettlecombe Court centre and the Calvert Trust. The firm is also involved in marketing wood pellet burners. These are presently imported from Finland, but they are trying to market a small-scale pellet maker, which could provide a use for sawdust that is currently wasted. A third Exmoor SDF grant is **X225** to Hydrogeneration Ltd, a sibling company of Wood Energy, for installation of modular hydropower unit into an Exe valley mill site. This is a private site and most energy generated will be for private domestic use, however the owner has ambitions to sell excess power back to the national grid. In addition to asking that the owner be prepared to demonstrate the installation to others who may be interested, the SDF officer has also uniquely incorporated into the grant an agreement that 15% of any profit from electricity sales from this installation be ploughed back into SDF.

Two other Parks besides Exmoor have funded work by one or other member of this consortium. Dartmoor has agreed an SDF grant **DT73** towards a feasibility study for

SW Wood Fuels Ltd to identify the potential to replace the oil fired boiler at Grimstone Manor conference centre with a wood chip boiler, and **DT69** has funded a similar study at Heatree Activity Centre. In addition Peak District SDF has provided a substantial grant **PD104** for Wood Energy Ltd to install a biomass boiler at the at the National Park's Losehill Hall Centre.

Although this is a large total SDF grant for this raft of projects for 3 associated enterprises and 5 of their 4 customers, and although only **EX236** has any significant community involvement, it is an interesting application of start-up/ funding with clear potential benefits for the environment and the local economy. The four projects share the same core principles of being innovative and locally sustainable with the potential to change attitudes and practices. The aim is to encourage the number of boiler installations and the supply of woodchip fuels to beyond the point where demand and supply of woodchip balances in a sustainable way. If SDF can assist in this the outcome will have been worthwhile.

Several projects in different Parks have had similar elements. For example in the North York Moors, **NY07** is a two-year pump-priming project aiming to assist making charcoal production in the area a long term sustainable enterprise which contributes positively to woodland management. The grant has assisted charcoal burners (who previously worked individually) to form a cooperative to enable them to improve the supply chain and to expand existing production and markets. This project is linked to **NY21** the Gourmet Woodland Mushroom project; previously useless charcoal fines can be used as a medium for mushroom cultivation.



NY04 Bioflame; Clean burn technology

Bioflame are a local company, with premises on a broiler farm inside the national park. They have developed a prototype mobile gasifier (like a clean burn incinerator) that can potentially burn a range of fuels from wood waste even to dried sewage sludge! There is an option to generate electricity from the steam produced.

The SDF grant has paid for emissions testing equipment – needed to secure a Defra license before marketing - for a prototype mobile gasifier where the waste burnt generates energy. Matthias Grundmann, the Technical Director says, "we would have struggled like anything" without SDF help, which "has really given us a starting block to push off".

The gasifier was originally intended for old tyres, but these now have a market as a source of high quality carbon. It has already been marketed outside the UK for a range of different wastes including coffee wastes (machines have been exported to Costa Rica). It is hoped that once

licensed for the UK, there will be direct marketing to farms within the National Park. This will provide a way of local incineration of waste, generating energy and (because wood chip is used as a combustion starter) stimulating woodland management at the same time.

Pointers to best practice

- Local entrepreneurship; technical innovation with good marketing
- Once started, others may follow. Support is needed in the early stages to develop demand and supply to a critical level where they can be mutually self- sustaining.
- Biofuels can reduce pollution and stimulate good woodland habitat/landscape management.
- Both supply and demand ends can provide local employment.