

Roves Fuel – farmers fuelling the future

Farmers

Energy crops offer farmers a means of improving their current income and diversifying their production base, thus helping to sustain their businesses. Energy crops, such as Short Rotation Coppice (SRC) and Miscanthus, can be grown on set aside land. Grants are available for establishing energy crops and for forming cooperative producer groups.

By operating cooperatively, and adding value to their raw product, farmers will enjoy improved farm incomes. Energy cropping will contribute to a more sustainable and enterprising rural economy by maintaining some jobs and increasing opportunities for further diversification into recreation and sporting activities.

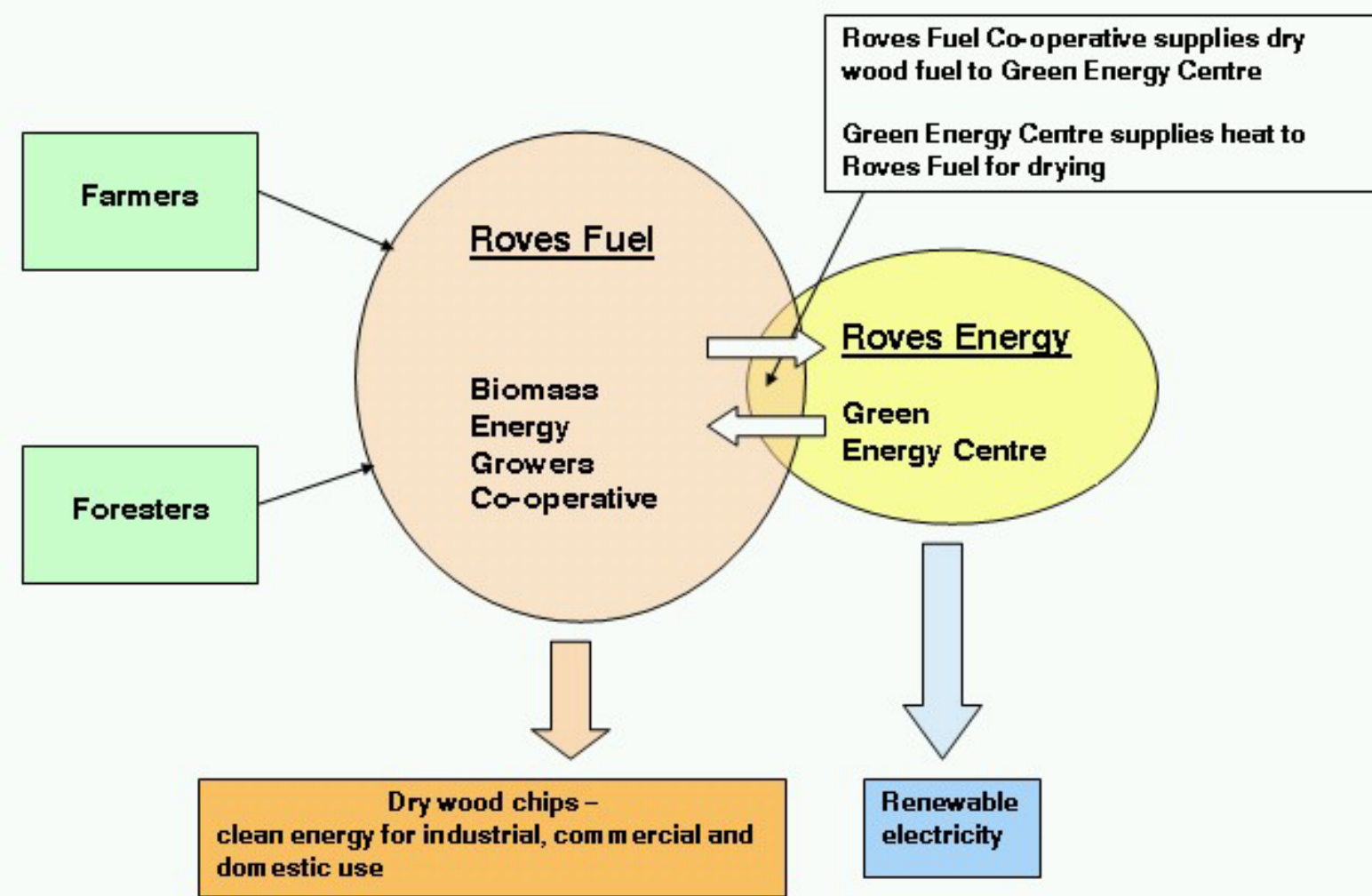
Foresters

Foresters, too, will benefit. Any primary woodland product is a suitable fuel for energy production. Woodland thinnings, with little current market value, and other products, which may be travelling long distances, will find a local market. Management of derelict woodland will become viable once again, benefiting jobs, equipment suppliers and timber quality. There will be major benefits to landscape, recreation, wildlife and sporting opportunities.

Roves Fuel – Biomass Energy Growers Co-operative

Roves Fuel is a co-operative owned by its members, who are farmers located primarily in Wiltshire and the neighbouring counties. These farmers are committed to the development of short-rotation coppice for energy use as an opportunity for growing an alternative crop. Roves Fuel enables the members to access a number of energy markets including power stations which are mixing biomass with coal, local authority buildings, community heating schemes and domestic premises.

Members provide and prepare their land for growing short-rotation coppice. The co-operative will provide seedlings and plant the coppice. Farmers are responsible for vermin control as the crop matures. Roves Fuel will then harvest the crop at appropriate intervals and retains the right to market the coppice. The harvested coppice will be processed by the co-operative into forms appropriate for the target market. Processing will involve chipping and drying. The co-operative owns chipping equipment and purchases heat for drying from Roves Energy.



Renewable electricity

As well as supplying heat to Roves Fuel for drying purposes, the Green Energy Centre will produce renewable electricity, which will be sold to an electricity supplier. Current Government legislation requires that electricity suppliers source a stated percentage (10% by 2010) of the electricity they supply from accredited renewable generators. There is, therefore, a ready market for electricity produced by the Green Energy Centre.

Roves Energy – Green Energy Centre

Roves Fuel (the farmers cooperative) requires heat for drying the wood produced by farmers and foresters. The heat will be supplied in the form of steam from a highly efficient Combined Heat and Power (CHP) system, known as Roves Energy. Combined heat and power is the simultaneous production of heat and electricity from a single source of input energy. CHP systems are considered to be “very” energy efficient because use is made of the heat produced during the generation of electricity that would normally be wasted. Roves Energy will be wholly, or partly, owned by Roves Fuel. It will produce 2 MW of renewable electricity and 4 MW renewable heat (as steam). Roves Fuel will purchase the heat produced by the Roves Energy CHP system to dry incoming wood. Some of this dry wood will be sold to Roves Energy as its fuel source, the remainder will be sold for other wood-fuelled energy systems. 25,000 tonnes of harvested (wet) wood will be required to fuel Roves Energy, which will produce sufficient heat to dry a further 75,000 tonnes. Up to 12,500 acres (5,000 hectares) of SRC will be required to supply the project.



Dry wood chips

Roves Fuel aims to produce dry wood chips for supply as a clean renewable energy source to a number of other markets. These will include industrial, commercial and domestic applications. Currently, many businesses are seeking to reduce the impact they are having on the environment. One way of doing this is by switching from fossil fuel (oil, gas, coal) to biomass for heat and power production. One significant early market opportunity for Roves Fuel will be electricity generation. Under the UK Government’s Renewables Obligation, electricity suppliers are required to purchase an increasing percentage of their electricity from accredited generators. Existing coal-fired power generators are seeking to supply some green electricity by part-fuelling their plant with wood. A large market for wood fuel appropriately processed for this use will soon be available. Roves Green Energy aims to prepare wood for sale into this market. Initially, Roves Fuel will aim to supply around 45,000 oven-dry tonnes of wood chips for electricity generation at existing coal-fired power stations. In the medium-term, Roves Fuel will enter other markets supplying quality green fuel to industrial sites, commercial properties and public buildings. In the longer-term, Roves Fuel will enter the domestic fuel market. Some of the wood chips produced by Roves Fuel will be supplied direct to Roves Energy in order that the Green Energy Centre has a consistent, renewable energy source for heat and electricity production.

Local Benefits

Roves Fuel is focussed on rural regeneration through effective environmental management and economic diversification for rural communities and businesses. Roves Fuel aims to support the development of energy crops and the supply of wood for energy from forestry operations.

The use of short-rotation coppice as a source of fuel will provide additional income for the farmers who grow the crop. Creating a demand for forestry residues will help to introduce management measures to currently under-managed woodlands, making them more viable.

Critical to the success of Roves Fuel is the establishment of a Biomass Energy Growers Co-operative. This co-operative will be made up of individuals and organisations from the Swindon and surrounding areas. The Co-operative will ensure that its operations conform to the highest environmental standards. It will use as many local companies and contractors as possible to ensure that economic and social benefits are accrued in the local area.

Global Benefits

Carbon dioxide is taken from the atmosphere by trees as they grow. This same amount of carbon dioxide is released when the renewable energy is extracted. The overall process is carbon dioxide neutral and environmentally benign and lies at the heart of biomass fuelled energy. If new short-rotation coppice is grown, harvested and used instead of burning harmful fossil fuels then meaningful net reduction in atmospheric carbon emissions is achieved. Equally, using forestry residues for energy achieves the same reduction in carbon dioxide emissions.

Using biomass energy in a sustainable way makes an important contribution tackling the internationally recognised problem of climate change.

Roves Energy, which provides the heat required by Roves Fuel, seeks to maximise benefits to the local environment and local economy. At the same time, Roves Energy will be fully involved in addressing one of the major global challenges facing mankind by only using a green and renewable resource for the production of heat and electricity.



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Roves Fuel

“Farmers fuelling the future”

A grower-led project to produce renewable energy from farms and woodlands