



communityforestsnorthwest

Biomass Fuel Supply in England's Northwest

Directory

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It is often said that one of the barriers preventing the greater use of modern biomass systems is security of fuel supply.

Within the northwest of England this is simply not the case. It has the best woodchip supply chain in the country developed from an industry which supplies reprocessed woodchip to wood panel manufacturing plants. They deal in over 2 million tonnes annually.

The Northwest is now the major biomass fuel supplier to other region's of the UK. Where problems do occur it is often providing smaller amounts on an irregular basis.

Even here, there is a rapidly expanding sector of small and medium sized businesses supplying local markets.

No matter where you are in the Northwest you can obtain pellets in small bags on a pallet delivered to your door.

While this leaflet principally concerns the supply of woody biomass, other solid biomass fuels such as olive stone waste, palm oil expeller and other agricultural residuals are used as biomass fuels.

These are easily imported in large quantities via the region's ports.

Fuel Quality

Woodchip

There are two main considerations with regards chip quality; size and moisture content. It is these two factors that have led to the failure of many systems in the past.

Chip size

Long pieces in excess of 50mm - 100mm known as slivers may jam feed systems. Dust and fines under 2mm at higher percentages can also cause a problem with the feed mechanisms of some systems.

Moisture Content

Each boiler operates within moisture content limits. Even if you have some flexibility in moisture content (MC), bear in mind that dryer fuels which may initially appear more expensive may be better value for money as they have a higher energy output.

We have therefore also expressed indicative costs in Oven Dried Tonne (ODT) and pence a kilowatt hour (p/kWh) to allow comparison.

This is based on dry wood having an energy value of 19 Gigajoule/tonne.

It is vitally important that the fuel you use will work in the boiler you install. You should seek a written guarantee from the equipment supplier that the size and moisture content of your intended fuel is suitable.

Also get confirmation from the fuel supplier that they can consistently supply to your required specification.

In general, smaller boilers need higher quality fuel.

No British industry standard exists at present although a new European biomass fuel standard, CEN TC 335, is being developed.

However the industry currently use the Austrian Onörm standards (G30,G50,G100) and the British Biogen chip standards as guides.

- ⦿ 1 tonne of reprocessed woodchip of between 10-30% moisture content will measure around 5 cubic metres.
- ⦿ 1 tonne of virgin woodchip of around 30-60% moisture content will measure around 2 - 3 cubic metres.

Fuel Quality and Origin

Pellets

Pellets are cylinders of compressed sawdust around 5mm in diameter and up to 25mm long.

While they can be made of the same material as woodchips they are denser and more consistent in terms of size and moisture content. Almost all boilers will work with them and storage hoppers are smaller.

- ① 1 tonne of pellets at 8% moisture content will measure around 1.5 cubic metres.

Source of the wood

Virgin material has had no previous use although it may be a residue or waste. It can be specially grown energy crops such as short rotation coppice or miscanthus, harvested forestry materials or residuals from forestry, tree surgery, sawmilling or agriculture.

Moisture contents are generally higher, and specialised chippers are generally required to produce a fuel quality chip to the right sizes. Unless specifically produced for fuel, unscreened material from tree surgery is generally unsuitable.

Reprocessed material comes from wood which had a previous use such as timber off cuts and broken pallets which are sorted, chipped and reprocessed into a fuel. Size is generally more consistent and moisture content lower but the fuel should be produced from material exempt under the Waste Incineration Directive. (WID)

WID stipulates it should be free of heavy metals and halogenated organic compounds. The latter mainly concerns chlorine containing products such as PVCs.

Delivery

One of the biggest obstacles to installing biomass systems is the delivery, reception and storage of the fuels.

Access for lorries tipping into large underground bunkers, or blown into silos or hoppers, would be ideal.

However this is often not possible where space is restricted. This may restrict your choice of fuel supplier if their delivery vehicles cannot gain access.

Photography by Helen Seagrave, Envirolink Northwest

Fuel Suppliers in England's Northwest

AW Jenkinson Forest Products

Clifton Moor,
Clifton,
Penrith,
Cumbria
CA10 2EY

Richard Palmer,
Materials Manager
t 01931 712644

e enquiries@awjenkinson.co.uk
www.awjenkinson.co.uk

- ◉ **Amount of wood product sold per year;** 1 million tonnes
- ◉ **Type of product;** Chip
- ◉ **Source of wood;** Virgin, Reprocessed
- ◉ **Minimum delivery amount;** 5 tonnes
- ◉ **Delivery range;** Northwest
- ◉ **Delivery vehicles;** Variety including tippers, walking floor wagons and blowers vehicles
- ◉ **Long term supply contracts available;** Yes
- ◉ **Moisture content range;** 15 - 30% reprocessed; 45 - 65% virgin
- ◉ **Fuel size range;** Screened to specification
- ◉ **Indicative price range (delivered);** £25 - £100 tonne; £29 - £286/ODT; 0.6p - 5.4p/kWh
- ◉ **Comments;** Currently supplying the Lockerbie, Teesside and Shotton biomass plants

Boden & Davies Limited

Minshulls Farm,
Astley,
Manchester,
Greater
Manchester
M29 7JZ

Rob Andrews,
Business Development Manager
t 01942 882667

- ◉ **Amount of wood product sold per year;** 200,000 tonnes
- ◉ **Type of product;** Chip
- ◉ **Source of wood;** Reprocessed and Virgin
- ◉ **Minimum delivery amount;** 3 tonnes
- ◉ **Delivery range;** Northwest
- ◉ **Delivery vehicles;** 20, 35, 50 Cu metre skips, tippers and walking floor wagons
- ◉ **Long term supply contracts available;** Yes
- ◉ **Moisture content range;** 10% - 20%
- ◉ **Fuel size range;** Can be screened to specification
- ◉ **Indicative price range (delivered);** £25 - £30; £28 - £38/ODT; 0.5p - 0.7p/kWh
- ◉ **Comments;** Currently supplying the Lockerbie biomass plant

Photography by Nigel Blandford, Red Rose Forest

Bowland Bioenergy

Mead House,
Chipping,
Preston,
Lancashire
PR3 2TQ

Mike Ingoldby,
Director

t 01995 61829

t 07766 757997

e info@bowlandbioenergy.co.uk

www.bowlandbioenergy.co.uk

- ⊙ **Amount of wood product sold per year;** 1000 tonnes
- ⊙ **Type of product;** Chip & pellet
- ⊙ **Source of wood;** Virgin
- ⊙ **Minimum delivery amount;** 10 tonnes chip, 1 tonne pellet
- ⊙ **Delivery range;** Lancashire for chip; Northwest for pellet
- ⊙ **Delivery vehicles;** Tipping trailer for chip and Pick up, van, bulk tipper or blower for pellets
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 22% - 45% chip, 8% for pellet
- ⊙ **Fuel size range;** G30 & G50 chip or screened to size. 6mm pellet
- ⊙ **Indicative price range (delivered);** Chip £50 - £60 /tonne; £64 - £109/ODT; 1.2 -2.1p/kWh. Pellet £180-£235/tonne; £196-£255/ODT; 3.7-4.8p/kWh
- ⊙ **Comments;** Supplying fuel to several biomass boilers in Lancashire. Independent advice on fuel specifications and boiler matching

Enviroflame

C/o WTL International,
Tunstall Road,
Bosley,
Macclesfield,
Cheshire
SK11 0PE

Andrew Aitchison,
Sales Developer

t 01260 223284

www.enviroflame.co.uk

- ⊙ **Amount of wood product sold per year;** 20,000 tonnes
- ⊙ **Type of product;** Pellet
- ⊙ **Source of wood;** Virgin, Reprocessed
- ⊙ **Minimum delivery amount;** 1 tonne
- ⊙ **Delivery range;** Northwest
- ⊙ **Delivery vehicles;** Vans, trucks, tankers with blowers
- ⊙ **Long term supply contracts available;** Yes.
- ⊙ **Moisture content range;** 10% max
- ⊙ **Fuel size range;** 5mm pellet
- ⊙ **Indicative price range (delivered);** £190 - £300/tonne; £207 - £326/ODT; 3.9-6.2p/kWh
- ⊙ **Comments;** Northwest England's only bulk pellet manufacturer

Photography by Helen Seagrave, Envirolink Northwest

Euro Tree Service Limited

Pye Corner Farm,
Manley
Road, Alvanley,
Frodsham,
Cheshire
WA6 9DL

David Gilbert,
Operations Manager
t 01928 740289

www.eurotreeservice.co.uk

- ⊙ **Amount of wood product sold per year;** 500 tonnes
- ⊙ **Type of product;** Chip
- ⊙ **Source of wood;** Virgin
- ⊙ **Minimum delivery amount;** 4 tonnes
- ⊙ **Delivery range;** Merseyside and Cheshire
- ⊙ **Delivery vehicles;** Tipping trailer or wagons
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 30% - 50%
- ⊙ **Fuel size range;** Screened to size.
- ⊙ **Indicative price range (delivered);** Chip £40 - £70/tonne; £57-£140/ODT; 1.1-2.7p/kWh
- ⊙ **Comments;**

Forestry Commission

Grizedale,
Hawkshead,
Ambleside,
Cumbria
LA22 0Q1

John Bruce,
Harvesting Manager
t 01229 860373

www.forestry.gov.uk/northwestengland

- ⊙ **Amount of wood product sold per year;** 75,000 tonnes
- ⊙ **Type of product;** Roundwood (short poles) suitable for chipping
- ⊙ **Source of wood;** Virgin
- ⊙ **Minimum delivery amount;** 30 tonnes
- ⊙ **Delivery range;** Collect Delamere Forest, Cheshire or Cumbrian Forests.
- ⊙ **Delivery vehicles;** Collect using own or contracted wagons
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 40% -60%
- ⊙ **Fuel size range;** Roundwood poles with bark. Minimum diameter 50mm
- ⊙ **Indicative price range (collected);** £18 - £25/tonne; £30- £63/ODT; 0.6- 1.2p/kWh
- ⊙ **Comments;** Largest grower in Northwest England. Supplies roundwood poles at forest only but can facilitate delivered supply via specialist contractors

Photography by Helen Seagrave, Envirolink Northwest

Hadfield Wood Recyclers

Lumm Farm,
Littlemoss,
Droylesdon,
Greater Manchester
M43 7LB

Trevor Coultan,
Product Development Manager
t 0161 370 2360
www.hadfield.co.uk

- ⊙ **Amount of wood product sold per year;** 200,000 tonnes
- ⊙ **Type of product;** Chip
- ⊙ **Source of wood;** Reprocessed
- ⊙ **Minimum delivery amount;** 6 tonnes
- ⊙ **Delivery range;** Northwest
- ⊙ **Delivery vehicles;** Variety of sizes including blower vehicles with 100m range
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 18%
- ⊙ **Fuel size range;** 4mm - 15mm
- ⊙ **Indicative price range (delivered);** £60 - £110/tonne; £73 - £134/ODT; 1.4 - 2.5p/kWh
- ⊙ **Comments;** Currently supplying the Teesside biomass plant

Jepson Brothers Limited

Little Woolden Farm,
Culcheth,
Warrington,
Cheshire
WA3 5AR

Carl Jepson,
Director
t 01925 762213
t 07866 860391

- ⊙ **Amount of wood product sold per year;** 200 tonnes
- ⊙ **Type of product;** Chip
- ⊙ **Source of wood;** Virgin
- ⊙ **Minimum delivery amount;** 2 tonnes
- ⊙ **Delivery range;** Greater Manchester, Merseyside, North Cheshire
- ⊙ **Delivery vehicles;** Tipping trailer or wagons
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 30% - 40%
- ⊙ **Fuel size range;** Screened to size.
- ⊙ **Indicative price range (delivered);** Chip £30 - £75/tonne; £43-£125/ODT; 0.8-2.4p/kWh
- ⊙ **Comments;** Specialist fuel supplier for Biomass Engineering gasifiers

Photography by Helen Seagrave, Envirolink Northwest

Ken Linford

Riverside Nursery,
Leyland,
Lancashire
PR26 8LT

Ken Linford,
Director

t 01772 601418
t 07831 840123

- ◉ **Amount of wood product sold per year;** 400 tonnes
- ◉ **Type of product;** Chip
- ◉ **Source of wood;** Virgin
- ◉ **Minimum delivery amount;** 5 tonnes
- ◉ **Delivery range;** Lancashire
- ◉ **Delivery vehicles;** Farm tipper trailers
- ◉ **Long term supply contracts available;** Yes
- ◉ **Moisture content range;** 25 %
- ◉ **Fuel size range;** 2mm - 10mm
- ◉ **Indicative price range (delivered);** £30 - £60/tonne; £40 - £80/ODT; 0.8 - 1.5p/kWh
- ◉ **Comments;** Currently supplying some local systems

Oldham Brothers

Clarence House,
Kirkby
Bank Road,
Knowsley Industrial Park,
Merseyside
L33 7SY

Denise Roberts,
Sales Manager
t 0151 546 1616

- ◉ **Amount of wood product sold per year;** 15,000 tonnes
- ◉ **Type of product;** Chip
- ◉ **Source of wood;** Reprocessed
- ◉ **Minimum delivery amount;** 8 tonnes
- ◉ **Delivery range;** Northwest
- ◉ **Delivery vehicles;** 40cu metre skips
- ◉ **Long term supply contracts available;** Yes
- ◉ **Moisture content range;** 15 % - 20 %
- ◉ **Fuel size range;** Screened to specification
- ◉ **Indicative price range (delivered);** £25 - £30/tonne; £29 - £38/ODT; 0.6-0.7p/kWh
- ◉ **Comments;**

Photography by Helen Seagrave, Envirolink Northwest

P & R Lambert

Head Dyke Farm,
Head Dyke Lane,
Pilling,
Lancashire
PR3 6SJ

Phillip Lambert,
Managing Director
t 01253 790665

- ⊙ **Amount of wood product sold per year;** 8,000 tonnes
- ⊙ **Type of product;** Chip
- ⊙ **Source of wood;** Virgin
- ⊙ **Minimum delivery amount;** 6 tonnes
- ⊙ **Delivery range;** Lancashire and south Cumbria
- ⊙ **Delivery vehicles;** Bulk tippers
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 35 %
- ⊙ **Fuel size range;** Austrian G30 standard up to 30mm.
- ⊙ **Indicative price range (delivered);** £35 - £45/tonne; £54-£69/ODT; 1-1.3p/kWh
- ⊙ **Comments;** Currently supplying Shotton biomass plant

R Plevin & Sons Limited

Cheshire Street,
Mossley,
Ashton-under-Lyne,
Greater Manchester
OL5 9NG

Jamie Plevin,
Managing Director
t 01457 838444

- ⊙ **Amount of wood product sold per year;** 500,000 tonnes
- ⊙ **Type of product;** Chip, pellets
- ⊙ **Source of wood;** Reprocessed, Virgin
- ⊙ **Minimum delivery amount;** 5 tonnes chip, 1 tonne pellet
- ⊙ **Delivery range;** Northwest
- ⊙ **Delivery vehicles;** Tippers, walking floors
- ⊙ **Long term supply contracts available;** Yes
- ⊙ **Moisture content range;** 20% - 55% chip, 8% pellet
- ⊙ **Fuel size range;** Screened to specification
- ⊙ **Indicative price range (delivered);** Chip - £30 - £100 /tonne; £38 - £222/ODT; 0.7- 4.2 p/kWh. Pellet £150 - £200/tonne; £163 - £217 /ODT; 3.1-4.1 p/kWh
- ⊙ **Comments;**

WRS Composting Ltd

North End Farm,
New Causeway,
Formby,
Merseyside
L38 1QA

David Duncan,
Commercial Manager
t 0151 929 3999
t 07920 134224
www.wrscompost.co.uk

- ◉ **Amount of wood product sold per year;** 50,000 tonnes
- ◉ **Type of product;** Chip
- ◉ **Source of wood;** Reprocessed
- ◉ **Minimum delivery amount;** 27 tonnes
- ◉ **Delivery range;** Northwest
- ◉ **Delivery vehicles;** Walking floor wagons
- ◉ **Long term supply contracts available;** Yes
- ◉ **Moisture content range;** 50%
- ◉ **Fuel size range;** Screened to specification
- ◉ **Indicative price range (delivered);** £20 - £50/tonne; £40-£100/ODT; 0.8-1.9p/kWh
- ◉ **Comments;** Supplying fuel to Shotton biomass plant

Further advice

Greater Manchester
-Red Rose Forest
0161 872 1660

Merseyside and Cheshire
- The Mersey Forest
01925 816217

Lancashire
- Lancashire Woodlands Project
01772 533917

Cumbria
- Cumbria Woodlands
01539 822140

Further Information

Biomass Energy Centre
www.biomassenergycentre.org.uk
Logpile
www.nef.org.uk/logpile

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Published by Envirolink Northwest April 2007

Envirolink Northwest is a company limited by guarantee. Company Reg Number 3914702.

Registered Office C/o Spencer House, 91 Dewhurst Road, Birchwood, Warrington WA3 7PG Tel: 01925 813200 www.envirolinknorthwest.co.uk