



SCOT HEAT & POWER

BEST IN BIOMASS

Company Profile

Introduction

Mission Statement

Synonymous with quality and innovation, Scot Heat & Power Ltd is driven by a single guiding principle: to remain at the very forefront of the biomass energy sector, continuously dedicating itself to offering the preferred choice of clients and customers seeking a bespoke, highly efficient and cost-effective solution.

Through ongoing investment in the right people and the right cutting edge equipment for a highly dependable, trustworthy service, we aim to develop a sustainable business that delivers to the market the best possible biomass options available at any given time.

Who we are

Scot Heat & Power Ltd was established to meet the growing demand for an environmentally sustainable means of producing heat, steam and electricity, driving significant cost benefits back to the customer.

The company was established by Malcolm Snowie, former MD at the Snowie Group – a company which offered a complete recycling and environmental package – and that in-depth industry know-how continues to benefit his biomass interests.

Malcolm has always had a keen interest in environmental and sustainable issues and this was a key driver behind the formation of Scot Heat & Power Ltd. Scot Heat & Power Ltd is a trading style of Scot Heating Company Ltd.

Where can you find us?

Scot Heat & Power Ltd has various depots around Scotland and England. Our fleet of highly specialised equipment can reach you wherever you are, no matter how remote the location. Our depots are located in:

Our depots are located in:

- **Edinburgh**
- **Stirlingshire**
- **Perth & Kinross-shire**
- **Kilmarnock**
- **Aberdeenshire**
- **Lincolnshire**
- **Cumbria**



Our Business Philosophy & Abilities

Company Philosophy

The philosophy that we apply to our work is the same as the advice we provide when discussing biomass wood fuels; you will quite simply get back what you put in. For example if you put in low quality fuel to your installation, then you will get reduced output, increased maintenance and a higher risk of future problems. In order to achieve our company's mission, we consistently work to our core values and provide the best service we can, from the first contact with a customer through to the ongoing supply of fuel and servicing of their installation.

Core Values

Dependable – by doing what is required to ensure the customer gets the best service and always being available for all requirements; be it phone, email, call-out, we will be there 24 hours a day, seven days a week.

Reliable – always offering the best possible level of service to each and every customer and consistently fulfilling all commitments and agreements.

Accountable – Scot Heat & Power is firmly established as a key supplier in the biomass market.

We will not shirk responsibilities, pass the buck or seek blame should a problem occur. When an issue does occur we:

- Diagnose The Cause
- Find The Solution
- Implement The Solution
- Resolve to Client Satisfaction

We are here for the long term so will not walk away from a problem.



Why Choose Scot Heat & Power

With an ongoing focus on reducing impact on the environment and finding a more sustainable source of fuel to meet energy needs, there is now an abundance of companies out there offering products, services and solutions to help you do this. So what separates Scot Heat & Power from our competitors and why should you choose us to provide your biomass solution?

Focus

Unlike many of our competitors we have chosen to concentrate solely on the biomass energy sector and not diversify into other renewable energy technologies – this ensures our team are focused, and extremely knowledgeable in this particular field.

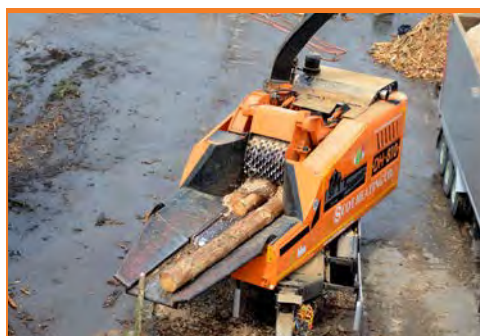
Once your biomass boiler is installed, approximately 80% of the life cycle costs are on wood fuel – biomass is unlike other renewable technologies such as wind or solar in that it still requires a physical fuel source, so getting the correct wood fuel is vital to the success of your project. At Scot Heat & Power Ltd, we focus solely on energy from biomass to reduce your carbon footprint and fuel bills, enhancing efficiency and heightening cost-effectiveness across your energy needs.

Ambition

Once your initial installation is complete, we consider this to be only the first stage of our relationship with a client and not the final one. There are many companies that are capable of providing a biomass boiler installation; however, it is not easy to find a diligent, customer-focused company that is able to offer the correct wood fuel with different options on delivery methods and fully stand by their installation once complete. That is where choosing Scot Heat & Power Ltd to provide your biomass solution pays off as we develop a long-term relationship with our customers, based on trust and value.

Commitment

In order to maintain our standing as one of the leading biomass wood fuel suppliers in the UK, we continue to actively invest in and seek out the best equipment, people and processes so that we are able to offer the highest level of service required to meet your ongoing wood fuel needs.



Leaders In Our Industry

Our Approach

Our team of specialists will be happy to visit your site to meet with you and perform a full technical survey to develop a specification and provide you with a proposal designed to meet your energy requirements.

A Full Circle Approach

- Full technical & commercial analysis
- Design solution & integration spec



- Complete Project Management of install
- All planning & building requirements handled

- Wood Fuel Supply
- Wood Chip
- Wood Pellets
- Ongoing Maintenance Programme

- Commissioning & hand over of system
- Start bespoke Energy Supply Contract & operate system
- Register RHI application



Service from Start to Finish and Beyond

We pride ourselves on the ability to design, install, commission and operate bespoke biomass solutions to the highest levels of performance. From 60kW up to 10MW, we have the capability to provide you with the most effective installation to meet your needs, matched by the capacity to fully operate and maintain the system, ensuring you reap the wide benefits that biomass energy provides.

Range of Services

Biomass Boiler Systems

Through our dedicated, holistic approach, we specialise in the design installation and operation of biomass heating systems, providing a full-circle installation from start to finish. We provide:

- **System Operation**
- **Service & Maintenance Contracts** – we provide a comprehensive service and maintenance offering, ensuring ongoing delivery of high quality systems to your individual needs, and the best fuel supply pellets and woodchip for continuity and peace-of-mind.
- **Remote Monitoring Solutions**
- **24/7/365 Engineer Availability**

We produce renewable bio fuels, including wood pellets and wood chip for the residential and commercial sectors, plus Combined Heat and Power (CHP) - which integrates the production of usable heat and power electricity in one single, highly efficient process - and biomass boiler technology.



Power+ Generator

Scot Heat & Power are the first Scottish company to offer ElectraTherm's innovative Power+ Generator that utilises biomass for efficient clean energy production.

US-based ElectraTherm – a global leader in distributed waste heat to power generation – already has two installations in the UK, but the deal with Scot Heat & Power marks its first Scottish presence, following recent installations in Germany, Italy, Romania, and Japan.

Available from Scot Heat & Power north of the border, the Power+ Generator is a flexible electricity generator that can be used with standard biomass hot water boilers, utilising low temperature and low pressure Organic Rankine Cycle (ORC) and its proprietary technologies for major efficiencies.

The Power+ can also produce fuel-free, emission-free electricity from low grade waste heat, and is capable of reaching outputs of up to 110kWe power generation.



Heizomat's range of biomass boilers are all manufactured in Germany from the highest quality materials and components. We offer two ranges of boilers:

- **HSK-RA series (50-198kw)** - Primarily a woodchip boiler but equally efficient at burning wood pellets, saw dust and shavings, this boiler series provides a compact solution to heating with biomass;
- **RHK-AK series (50-990kw)** - A multi-fuel biomass boiler maintaining high efficiency at partial and peak load outputs with a wide variety of fuels from woodchip to Miscanthus. Utilising a chain and flight ash removal system and high capacity combustion chamber.

All of Heizomat's boilers benefit from the following features to allow for full automation and efficient combustion at partial and full load.

- **Parallel extraction agitator system with a 5000Nm torque gear box.**
- **Solid core augers, continuously seam welded.**
- **Milling cutter/rotary valve to allow cutting of any oversize fuel.**
- **Automatic ignition through single or double glow bars linked to primary air blower.**
- **Automated ash removal system; chain & flight for RHK-AK and sweep-arm & grate for HSK-RA boiler both provide efficient fuel specific ash removal**
- **Self cleaning of heat exchangers through the periodic rotation of turbulators linked to the de-ashing system.**
- **Combustion fully modulated according to flue gas O2 content and temperature combined with return water temp.**
- **Automatic ash removal into ash collection bin available in either 45, 240 or 900ltrs depending on the size of boiler.**
- **Complete control through the SIMATIC 7" touch screen control system, linked to SMS modem and/or smartphone monitoring.**
- **Not to mention a boiler which is built to last from high grade boiler steel, just compare the weight of the Heizomat boilers against others.**





Jernforsen is one of Europe's leading companies within the field of biomass heating technology with over 1,000 plants delivered across the world since 1984. Jernforsen work in the range of 2MW to 35MW thermal output and can supply components or complete turn-key solutions.

Scandinavian technology generally has deserved reputation for using high quality components, building robust equipment which is very reliable and gives high availability. Process industries appreciate these qualities and Jernforsen's regular customers are sawmills and other wood processing industries, the paper and pulp industry, town district heating systems and utility energy suppliers. In the recent past, biomass plant for pellet production and (steam) Combined Heat and Power has become more common.

Applications include hot water or steam boilers for:

District Heating: where efficiency and environmental constraints are the key factors for low operating costs, many of these systems have flue gas condensers to increase the efficiency of the plant and give low emissions.

Sawmills and Processing Industries: where the ability to use poor quality fuel is important together with have high availability with only (annual) scheduled down time for service and maintenance.

Combined Head and Power: via a high pressure boiler which can produce steam up to 25tonnes per hour at 480°C into a one or two-stage turbine, depending on the end use with optimisation depending on the back pressure or condensation design.

Drying plants: to dry anything from sawdust for pellet production to grass for live-stock winter feed pellet production. The drying plants can be designed to produce either hot drying gas between 300-500°C or as steam systems that supply continuous kilns or converted rotary kilns.

Waste Reduction: Scot Heat & Power are able to provide WID compliant furnaces with infeed systems that can handle a wide range of waste fuels. Waste Fuel Use / Waste Combustion / WID Compliant.

Different strategies can be used to deal flue gas emissions from simple multi-cyclone dust arrestor to electrostatic precipitators with NO_x, such as Selective Non-Catalytic Reduction, and flue gas treatments to reduce emissions of Sulphur Dioxide (SO₂), Hydrogen Chloride (HCl) and Hydrogen Fluoride (HF) etc to ensure compliance with any regulatory and incentive requirements

Combining Skills, Creating Solutions



Scot Heat and Power Ltd and Cochran Ltd have formed a collaborative partnership to offer a complete boiler package. These systems will meet the requirements of modern energy production. This collaboration will provide clients with a system design with flexible configurations to suit all types of Industrial applications and allow a biomass installation to operate in harmony with an existing gas or oil boiler.

These installations will provide a net effect of:

- **Energy efficiency improvements**
- **Income generation through the RHI**
- **Reduction in energy costs**
- **96% reduction in carbon emissions**

Established over 110 years ago, Cochran Ltd is the name of choice when it comes to industrial hot water and steam generating plants and have an unrivalled track record of exceeding the expectations of their customers.

Scot Heat & Power Ltd will supply and install a biomass system including the fuel feed system and fuel whilst Cochran Ltd will design, develop and install the heating system infrastructure and interface from the biomass system into the sites existing heating network of either Gas or Oil.

Once operational Scot Heat & Power Ltd can supply the required biomass wood fuel whilst Cochran Ltd service and maintain the installation providing a continued and uninterrupted supply of carbon neutral energy on a 24/7 basis.



Accreditations & Legislation

As a growing company, Scot Heat & Power Ltd have invested heavily in the resources of our company, and staff adhere to legislation as well as gaining accreditations, demonstrating that as a company we are more than qualified to do the job, no matter what size.

Accreditations

Scot Heat & Power Ltd operates an Integrated Management System (IMS) that has attained accreditation to ISO 9001 and ISO 14001 standard - this provides our customers with confidence that our operations are carried out to an exacting standard developed to ensure customer satisfaction is achieved and maintained. Scot Heat & Power Ltd has attained the below accreditations and certifications:

- **ISO 9001 Accredited IMS - GB11/84123**
- **ISO 14001 Accredited IMS - GB11/84124**
- **HETAS Accreditation for Biomass Engineers**
- **Forestry Stewardship Council Certified Supply Chain - TT-COC-004374**
- **Woodsure Plus Accredited Supplier - WP165/14**
- **Biomass Suppliers List Approved Supplier - BSL0161534**
- **OHSAS 18001 Accredited Health & Safety System Approved**

Legislation

All Scot Heat & Power Ltd company staff are aware of, and adhere to;

- **Health & Safety at Work Act 1974**
- **Waste Management Duty of Care, Environment Protection Act 1990, Section 34**
- **Environmental Protection Act 1990**
- **Climate Change Act 2008**
- **Clean Air Act 1993**
- **Wildlife and Countryside Act 1981 (as amended 1991)**
- **Fire Safety (Scotland) Regulations 2006**
- **Equalities Act 2010**





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Fuels & Services

Biomass Wood Fuel



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It is important to choose your Biomass Wood Fuel Supplier carefully to ensure your installation operates at it's optimum performance level, and safely.

Scot Heat & Power has invested extensively in our wood fuel production operations to ensure we deliver a consistently high quality product offering our customers important peace of mind, value for money and the best customer service.

We deliver a premium grade RHI compliant wood chip / wood pellet ensuring the moisture content, fuel specification and delivery specifications are met at all times. As well as supplying wood chip and wood pellet, we offer consultancy and advice to those considering wood fuel heating solutions. We can help you make the most of the long term financial support which the Renewable Heat Incentive (RHI) has to offer.

Environmentally Responsible Energy Provision for the UK

- Client demand assessment
- Raw materials procurement
- Stock rotation & seasoning
- Client fuel quality assessment



- Continuous monitoring of stock
- Processed to meet demand profile
- Fuel stored in depot before delivery



- Delivery to customers site
- Performed to H&S requirements
- Vehicle performance monitored by remote system



- Deliveries scheduled to ensure continuous energy supply
- Dedicated vehicles used to negate contamination
- Vehicle loaded at depot by Scot Heat & Power trained staff

Biomass Wood Fuel

Sustainable Wood Fuel

A biomass boiler is similar to any other boiler as it provides hot water to be distributed to a building for either heating, hot water usage and/or process steam heat with the main difference being the fuel that is used to fuel the system. Rather than utilising fossil fuels, an ever decreasing commodity, we use biomass, typically wood chip or pellets, but also incorporating crops like willow, miscanthus and poplar.

It is possible to have a system designed to suit a particular fuel which may be a by-product of your day-to-day business i.e. a boiler burning draff from the whisky industry or a system which has been designed to produce heat for a chicken shed by burning the waste from the shed floor.

Wood Chip

Wood chip is the popular choice for fuel on the larger boilers (around 100 kW and above) as it is easier to come by locally, and you may even be able to produce it yourself. The key to a trouble-free life is to ensure that your chip is of a high quality with regulated moisture content of between 25 and 35% as this will ensure your boiler runs efficiently without “wasting” energy, trying to dry the excess moisture from the chip. It also ensures that the amount of ash is kept to a minimum.

Wood Pellet

Wood pellets burn in the same manner as wood chip but with a lower moisture content (typically 8%) resulting in more energy per tonne compared to chip. With a smaller storage footprint, (typically 50% less than chip) wood pellets can be the obvious answer for a size-restricted site.



Delivery & Services

We offer:

- Blown
- Tipped
- Walking Floor delivered fuel

Fuel Supply Agreements

Fuel Supply Agreements

Once your system is installed you need to source a reliable wood fuel supplier – we have proactively invested in our operations to ensure that we are the supplier of choice and can offer:

- **Wood Chips, Wood Pellets, logs & Briquettes**
- **Delivery via a range of methods ensuring no site is an issue**
- **Energy Supply Contracts for supply of heat**
- **Priority deliveries for contracted customers**



Contract Wood Chipper Hire

Within our fleet of wood fuel processing equipment we operate two Doppstadt Wood Chippers that can process from 300 to 500 tonnes of timber per day and are available for hire to process your own timber resources. This service includes:

- **On site processing at your location**
- **Loading crane with operator**
- **Range of screens to produce several sizes of chip**
- **Chip transportation if required**

Our Resources

Timber Handling Equipment

We have a range of equipment used to handle our timber resources in preparation for processing.



Our Resources

Timber Processing Equipment

We operate two Doppstadt wood chippers that are able to process between 300 and 500 tonnes of timber per day into wood chip from P31.5 to P100 specification.



Our Resources

Wood Fuel Handling Equipment

Once processed, we have a range of dedicated wood fuel handling equipment to ensure quality is maintained throughout our production process.



Our Resources

Wood Fuel Delivery Vehicles

We operate a fleet of delivery vehicles dedicated to handling biomass wood fuel offering a range of delivery options ensuring site restrictions are not an issue.



Diversification - Equipment Hire

Contract shredder hire

As well as having a high speed shredder available, Scot Heat & Power has now further enhanced its offering with the Haas Tyron double shaft slow speed shredder, delivering impeccable performance every time. It is capable of crushing such difficult materials as wood waste, pallets, railway sleepers, domestic, industrial and bulky waste, cable drums, tyres, paper rolls, mattresses, green waste, and roots.

Boasting powerful diesel and electric motors, the top-of-the-range shredder benefits from a stationary on lift frame, drawbar for quick repositioning of the frame, and individual shaft and tool configuration from fine (<150mm) to coarse (ca. 500mm), not to mention a 12-channel remote control for easy use. Essentially, it's ideal for turning waste into fuel and has been utilised already to produce Solid Recovered Fuel (SRF) – a high quality alternative to fossil fuel.



Accreditations & Legislation



Accreditations

- Biomass Suppliers List Approved Supplier - BSL0161534
BSL accrediting us as a renewable heating incentive (RHI) eligible biomass and wood fuel supplier
- Forestry Stewardship Council Certified Supply Chain - TT-COC-004374
- Woodsure Plus Accredited Supplier - WP165/14
- ENplus A1 accreditation for wood Pellets provided by woodsure
- ISO 9001 Accredited IMS - GB11/84123
- ISO 14001 Accredited IMS - GB11/84124
- HETAS Accreditation for Biomass Engineers
- OHSAS 18001 Accredited Health & Safety System Approved
- Wamitab Certified



Memberships

- FTA
- REA
- Confor



Legislation

All Scot Heat & Power Ltd company staff are aware of, and adhere to;

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- Waste Management Duty of Care, Environment Protection Act 1990, Section 34
- Environmental Protection Act 1990
- Climate Change Act 2008
- Clean Air Act 1993
- Wildlife and Countryside Act 1981 (as amended 1991)
- Fire Safety (Scotland) Regulations 2006
- Equalities Act 2010



Specialised Equipment Hire

Specialised Hire

The need to diversify comes on the back of a spike in interest for specialist machines and options together with the Company's past experience / track record in the waste industry. Thanks to the expertise built up over the years there is no job too large or small for our team. Scot Heat & Power provides its customers in the environmental and allied industry sectors with plant, machines and servicing that helps them deliver environmentally friendly services and schemes.

All specialist specification demands met. True expertise provided as part of the service. Disaster recovery our speciality.

Nationwide coverage

Range of equipment developed for the environmental market including waste handling, specialist attachments, mobile crushers, mobile screeners, material handlers. The range is growing.



Personal Expertise

The expertise to deliver the right solution for your business

We do a good job, provide a personal, reliable service with timeliness of operations and attention to detail.

Scot Heat & Power now have a vast range of contract services to help your business meet increased demands, time constraints and targets.

- **Shredders – suitable for material that due to the difficulty in processing can not normally be processed for fuel, the shredded material can be screened for suitability of use in any biomass boiler**
- **Man and a Van**
- **Mechanics – Do you have a problem that needs fixing yesterday? Call us**
- **Transport : Walking Floors / Roll on Roll off skips**
- **Contract Management Consultancy**
- **Fork Lift / Material Handling**
- **Excavators / Loading Shovels**
- **Workforce Mobilisation**
- **Biomass Boiler Hire**
- **Disaster Recovery**
- **Need Extra Muscle
See if we can Help**



Waste Management

Scot Heat & Power is diversifying into waste management solutions, and is able to advise on waste disposal, waste removal and recycling needs for total environmental compliance, while meeting bespoke needs.

We work in partnership with customers to help minimise the financial and environmental impacts of their waste. We are committed to delivering our services responsibly and in a sustainable manner.





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Contact Us

If you are interested in learning more about the benefits that a Biomass Heating System can provide for you then contact us to discuss your requirements further and arrange a meeting.

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