Woodfuel in the Cairngorms National Park

Penny Lawson, Cairngorms National Park Authority

Types of Woodfuel

Logs
- for fires, stoves or boilers
- domestic, farms, communities or estate installations

Chip
- for boilers (40 KW+)
- business, community, public sector
- bulk delivery

Pellet
- for stoves and boilers
- compressed wood by-products
- bulk or bagged delivery

Sources
- forests and woodlands
- saw mill residue and co-products
- tree surgery and landscaping
- short rotation crops

Woodfuel Installations

Why woodfuel? 11% of Scotland's heat from renewables by 2020

Pro's

- Cut heating costs
- Reduce CO_2 emissions – carbon neutral
- Local supply
- More personal control/flexibility (logs)
- Link to better woodland management
- Support for local businesses
- Opportunities for community enterprise

Con's

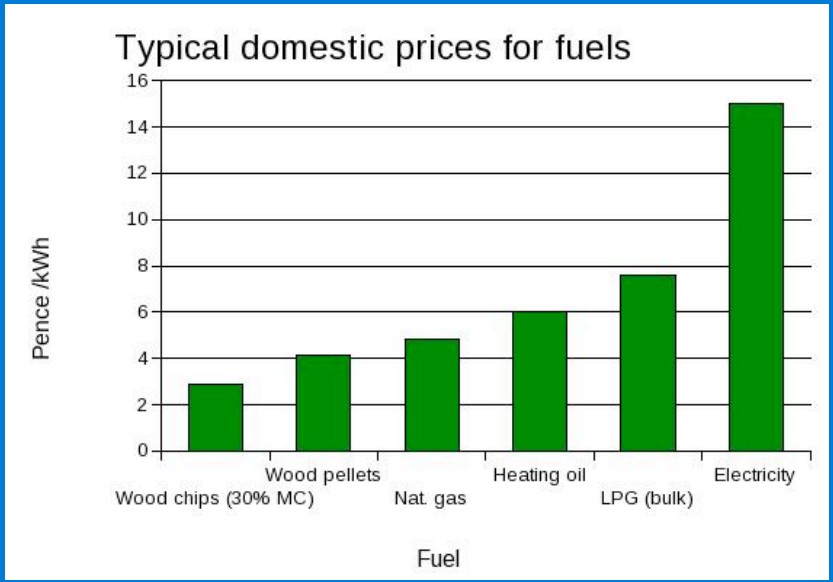
- Need space for fuel storage and installation
- Handling of fuel?
- Security of supply
- Capital cost

- It's new and different!

Cost savings

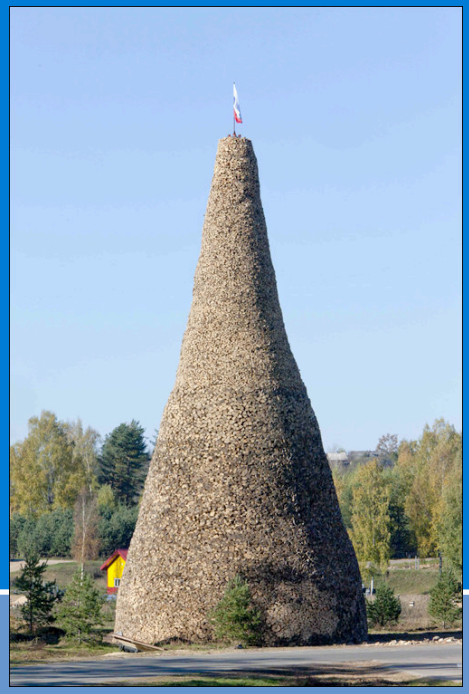
Fuel costs – indicative (Dec 2012)

	per KWh	**per yr** (av house)
Logs	2.3p	£690
Pellets	5.2p	£1560
Chips	2.6p	£780
Oil	7p	£2100



Grants and loans – eg Renewable Heat Incentive (RHI)
Phase I and II
based on KWh heat produced

Cairngorms NATIONAL PARK



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Page
Safety
Tools

Heating system selection

The flowchart shown in Figure 4 is designed to assist with the selection of the most appropriate combination of woodfuel and heating boiler or stove.

Figure 4
Woodfuel heating system selection flowchart.

1. Information on smoke control areas and exempt appliances is available at http://smokecontrol.defra.gov.uk/. (On larger systems grit and dust arrestors may be required by the local authority.)
2. A small pellet delivery vehicle is typically rigid, measuring 10 m long x 3 m wide x 3.5 m high. Pellets can also be transported in a 31 tonne articulated lorry. Pellets can be delivered pneumatically over a distance of around 20 m to inaccessible pellet stores. Chip is delivered in a variety of vehicles and trailer arrangements. Requirements for these are best discussed with fuel suppliers in your area.
3. Pellet deliveries require approximately 25% of the frequency of deliveries for chip.
4. Assumed to require a 40 kW boiler.
5. Pellet storage requirement is assumed to be 5 tonnes for a domestic setting (or approximately 7.5 m^3 at 670 kg/m^3). Wood chip bulk density and fuel storage requirement will vary with moisture content, however the bulk density of chip will always be much lower than that of pellet. See www.biomassenergycentre.org.uk for more details.
6. 10-12 bags.
7. A list of boiler suppliers is available at www.microgenerationcertification.org/Home+and+Business+Owners/Microgeneration+Installers/Biomass

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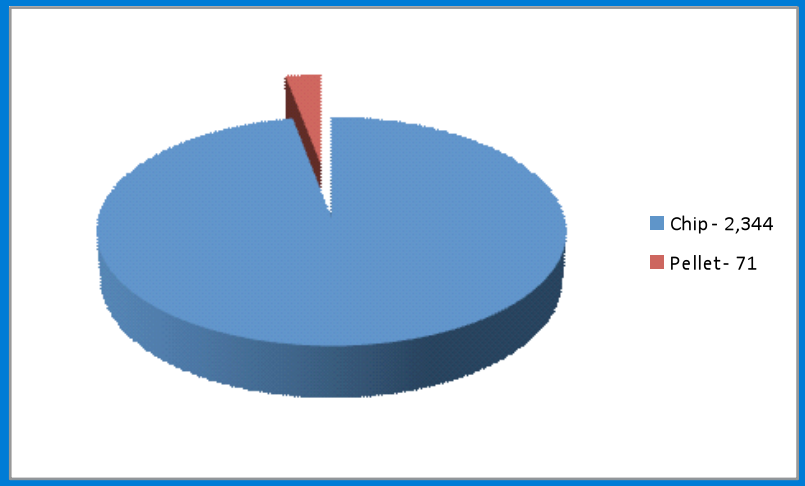
How much is woodfuel used in the Park?

Cairngorms NP – Woodfuel use (odt/yr) 2011



19 installations
(automated or semi-automated only)
16 industrial/commercial
3 domestic

Total 3.88 MW capacity

2.42 thousand odt/yr woodfuel used, 99% in ind/comm sector

97% of this is wood chip, rest pellet

Of this, 400 odt produced in CNP

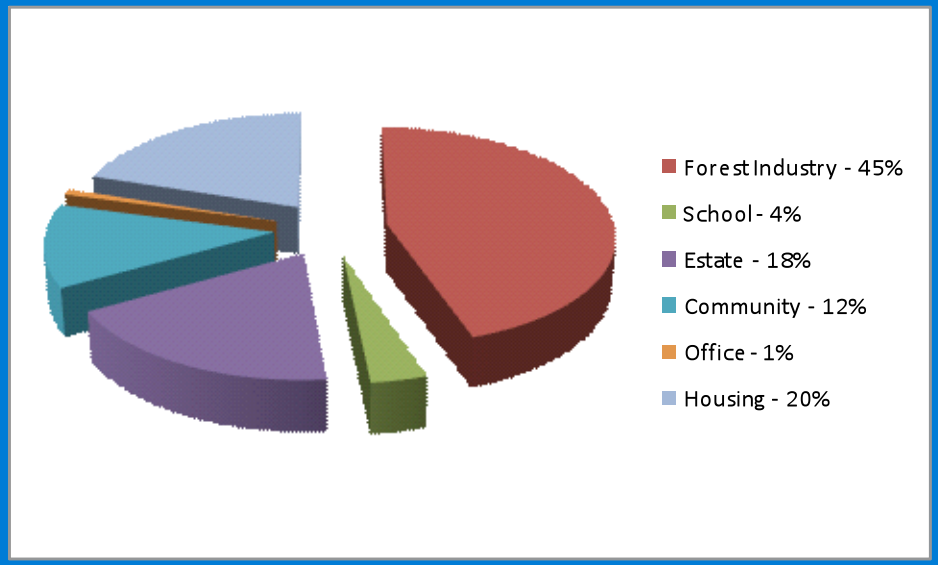
Who is using woodfuel?

14 of 16 installations using chip

45% used by forest industry itself (one local sawmill and one processing plant)

Estates, housing scheme

Community uses 12%
Incl. care home



Can we grow enough wood?
(Calculated for National Park alone...)

For heating and hot water for all buildings in CNP approx 100,000 tonnes/yr

This is equivalent to 20% of annual increment of all woodland, but....
- Other demands
- Market forces
- Availability

Can we ensure enough supply of woodfuel?

Grampian and Cairngorms NP, Woodfuel production odt/yr (2011)

	Current	**Maximum**	
Chip	43,500	130,000	
Pellet	16,000	30,000	
Logs	2,100	2,500	ie there **is** extra capacity

What could we achieve?

20,000 tonnes/yr woodfuel

20% of heat demand in Park

16% reduction in CO2 emissions

Equivalent to

Kingussue
Newtonmore
Carrbridge
Nethybridge

Welcome to low carbon Cairngorms.

Adapting to climate change and cutting greenhouse gases are vital to ensure Cairngorms National Park thrives. The new five year Partnership Plan (2012-2017) for the Park sees households and businesses adapting to a low carbon economy as a key measure of success.

Using renewable sources of energy to heat our homes, businesses and public spaces is something many people can do, and there is lots of help and information out there for the taking to make it as easy as possible. Using wood for heat can save you money too - good for the planet, good for your pocket!

Explore whether logs, chips or pellets would be the best option for you. Learn about wood fuelled heating systems, browse our directory to find an installer or buy woodfuel and find out how to store and season firewood. Discover how to manage woods for fuel, get into the firewood business or work together with friends and neighbours to create a community woodfuel scheme. Find out why farmers and land managers are turning to trees and exploring new ways to collaborate to meet the increasing demand for quality firewood.

Putting woodlands to work

Small woodlands on farms are increasingly being looked upon

11 December 2012

	per kWH	per Year
Woodfuel - Logs	£0.023	£690
Woodfuel - Pellets	£0.052	£1560
Woodfuel - Chips	£0.026	£780
Oil - Kerosene	£0.07	£2100

this is based on...

Latest News

HOSPITALITY SECTOR GET FIRED UP ABOUT WOODFUEL

The Duke of Gordon Hotel in Kingussie was host to over 20 a...

Learn More >

Browse Directory

View All - Directory Home

Woodfuel Suppliers' Directory

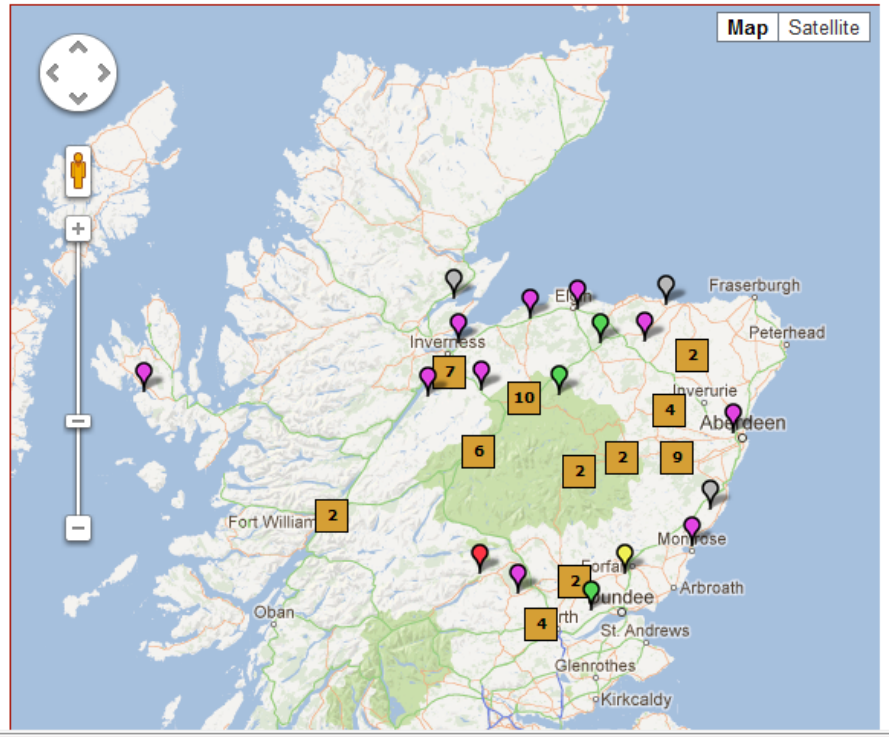
If you're looking for somewhere to buy firewood, wood chips or pellets, or want to find out who can supply and install woodfuel heating for you in the Cairngorms area, you're at the right place.

The list of suppliers is growing - so if you don't find someone this time round check back - or if you, or someone you know, should be listed here, please contact us.

Enter a town name in Directory Search on the right to search for all woodfuel businesses in or near a particular town, or select a business category which will display them on the map.

If you would like to amend your details or request your business is added click here.

Check out the Usewoodfuel directory and the Usegreenheat site for more listings outwith the Cairngorms National Park.



Directory Search

Town, Company etc

Any Category

Search Directory

Browse Directory

View All - Directory Home

- Boiler Supplier (25)
- Briquettes (10)
- Logs/fuelwood (38)
- Stove Supplier (16)
- Wood Chip Supplier (12)
- Wood Pellet Supplier (12)

<< print preview of these entries

Sources of general information

www.lowcarboncairngorms.co.uk

www.usewoodfuel.co.uk

www.biomassenergycentre.org.uk

CNPA Cairngorms Woodfuel Action Plan

http://cairngorms.co.uk/park-authority/about-us/publications/?publicationID=268