

### Heat Load and Technology Selector

### NB - Avoid over sizing your equipment

Size requirement	Technology Selection	Level of Automation / Control	Maintenance Cleaning Fuelling	EΔ%	Fuel Storage needed	Supply	Running cost pence per kW	Compare to oil*	Installation Cost	Payback vs oil (years)
5-15kW	Pellet Stove	High	Fortnight	90	Small	Buy at £180 per tonne	3.8	x 1.5	£100	Not at present
5-15kW	Log Stove	Med	Daily	50-70	Med	Buy £60-£90 tonnes or self supply	3-5	x 1.2-2	£50 - £80	Unlikely
5-15kW	Open Fire	Low	Daily	10-20	Med		6-10	x 2.4-4	£100 - £200	Unlikely
15-35kW	Pellet Stove / Pellet Boiler or combination	High	Fortnight	90	Small	Buy bulk £120+	2.8	x 1.1	£100	Not at present
15-35kW	Log Boiler	Med	1-3 days	80	Med	Buy / self supply £60-£90 tonnes	1.5-2.5	x 0.7-1	£60 - £250	5-10
15-35kW	Chip Boiler	High	Fortnight	80-90	High	Buy £50 per tonne or self supply	1.3	x 0.52	£100 - £300	5-10
35-150kW	Chip Boiler	High	Month	90	High	Buy £45 per tonne or self supply	1.1	x 0.45	£100 - £300	5-10
35-150kW	Pellet Boiler	High	Month	90	Small/Med	Buy £100 bulk	1.9	x 0.8	£100	10-20
150-500kW	Chip Boiler	High	Month	90	High	Buy or self £40/+	1.0	x 0.4	£100 - £200	3-5
500kW-1MW	Commercial	High	Month	90	High	Buy or self £30-£40 inc waste	0.8	x 0.3	£75 - £150	3-5

#### Examples (unit prices approximate - exclusive of installation)

	Wood Stove £500		Pellet Stove £1,500		Log Boiler Economy £1,500		Log Boiler, top of range £6,000-£8,000
	Pellet Boiler £3,000-£5,000		Chip Boiler, top range £15,000		Chip Boiler, Farm - cost effective £5,000		Commercial Wood Chip Boiler £30,000-£40,000

Fuel prices are estimated on current market values. If self supplying costs will vary depending on size and efficiency.

#### Quick Calc for log stoves:

To produce a comfortable room temperature of around 70° fahrenheit, (21°/22° celsius) when the outside temperature is 0°, you will need about 1kW. of heat for every 14 cubic metres of space. This is equal to about 1 bar of an average electric fire.

#### Rough guide for heat loads:

Domestic house 20-40 kW  
 Farm house 30-50 kW  
 Mansion 75-150 kW

\*oil@ 25p litre  
 2.5p/kWh

Comparisons with other fuels:  
 Electricity at 8.5p kWh  
 Gas at 1.5p kWh  
 LPG at 2.3p kWh

1kW = 3400 BTU  
 Moisture Contents ?

Pellet 8-10%  
 Chip 20%  
 Log 20%