



# LIMES INNOVATION EOOD

Comparison between the use of different fuels for heating a small production hall with an area of 500 m<sup>2</sup> and a height of 4 m or heated space of 2000 m<sup>3</sup>

We assume that the hall is with normal insulation for a manufacturing facility - The power required for heating is 100 kW  
Boiler B100

Fuel	Caloricity		Fuel Price			
	kcal/kg	kWh/kg	€/l	Specific weight	€/kg	€/kWh
Industrial oil	9 443	10,98	0,84	0,89	0,95	0,086
Diesel oil	10 002	11,63	1,09	0,86	1,27	0,109
Natural Gas	7 749	9,01				0,059
LPG	11 008	12,80	0,44	0,56	0,79	0,061
Pellets	3 600	4,50			0,20	0,045
Wood	2 700	3,14			0,07	0,023
Black Coal	5 951	6,92			0,16	0,024
Briquettes	3 500	4,07			0,14	0,035
Electricity	860	1,00 kWh				0,102

Sample - comparison between different fuels	kW	Working hrs	kWh	Cost €/per day	Cost €/per 6 months (winter)	Savings€ if use pellets
We assume that a a boiler B100 with output power of 100 kW is installed	100	8	800			
Industrial oil				69,06	12 431	5 887
Diesel oil				87,11	15 680	9 135
Natural Gas				47,45	8 541	1 996
LPG				49,07	8 833	2 289
Pellets				36,36	6 545	
Wood				18,24	3 283	
Black Coal				18,91	3 405	
Briquettes				28,14	5 065	
Electricity				81,81	14 725	8 181

Pellets quantity needed for 1 heating season **32,72 tons costing 200 €/ton**

\* NOTE:

1 Price of fuels as of 18.02.2015 . in Bulgaria

2 Heating with wood and coal is cheaper but requires manual loading and cleaning.