



SERBIA	BIOMASS				FOSSIL FUELS		
	Price/t (incl. VAT, excl. Transport)	VAT for biomass in %	av. transport costs of biomass/ km	Average energy content MWh/t of biomass <sup>1</sup>	Average energy content MWh/t for fossil fuels (a) natural gas <sup>2</sup> (b) heating oil <sup>3</sup> (c) and coal	Price/unit & Price/t (incl. VAT, excl. transport)	Price/t <sup>4</sup> (incl. VAT, excl. transport) with the same energy content than 1 ton of the biomass product
Firewood	40.00 – 50.00 €/t	10%	1.50 – 2.00 €/km	2.3 – 4.2 MWh/t	natural gas: 12.7 – 14.1 MWh/t heating oil: 11.2 – 11.8 MWh/t coal: 7 MWh/t	natural gas: 0.50 €/m <sup>3</sup> or 684.00 €/t heating oil: 0.50 €/l or 555.50 €/t coal: 150.00 €/t	natural gas: 112.00 – 226.00 €/t heating oil: 108.00 – 208.00 €/t coal: 49.00 – 90.00 €/t
Wood chips	45.00 – 60.00 €/t	20%	1.50 – 2.00 €/km	2.0 – 4.2 MWh/t	natural gas: 12.7 – 14.1 MWh/t heating oil: 11.2 – 11.8 MWh/t coal: 7 MWh/t	natural gas: 0.50 €/m <sup>3</sup> or 684.00 €/t heating oil: 0.50 €/l or 555.50 €/t coal: 150.00 €/t	natural gas: 97.00 – 226.00 €/t heating oil: 94.00 – 208.00 €/t coal: 43.00 – 90.00 €/t
Wood pellets	190.00 – 210.00 €/t	20%	1.50 – 2.00 €/km	4.8 MWh/t	natural gas: 12.7 – 14.1 MWh/t heating oil: 11.2 – 11.8 MWh/t coal: 7 MWh/t	natural gas: 0.50 €/m <sup>3</sup> or 684.00 €/t heating oil: 0.50 €/l or 555.50 €/t coal: 150.00 €/t	natural gas: 221.00 – 258.00 €/t heating oil: 225.00 – 238.00 €/t coal: 102.00 €/t
Wood briquettes	180.00 – 200.00 €/t	20%	1.50 – 2.00 €/km	4.8 MWh/t	natural gas: 12.7 – 14.1 MWh/t heating oil: 11.2 – 11.8 MWh/t coal: 7 MWh/t	natural gas: 0.50 €/m <sup>3</sup> or 684.00 €/t heating oil: 0.50 €/l or 555.50 €/t coal: 150.00 €/t	natural gas: 233.00 – 258.00 €/t heating oil: 226.00 – 238.00 €/t coal: 103.00 €/t
Charcoal	250.00 – 300.00 €/t	20%	1.50 – 2.00 €/km	7.8 – 8.5 MWh/t	natural gas: 12.7 – 14.1 MWh/t heating oil: 11.2 – 11.8 MWh/t coal: 7 MWh/t	natural gas: 0.50 €/m <sup>3</sup> or 684.00 €/t heating oil: 0.50 €/l or 555.50 €/t coal: 150.00 €/t	natural gas: 378.00 – 458.00 €/t heating oil: 367.00 – 422.00 €/t coal: 167.00 – 182.00 €/t

<sup>1</sup> Range of MWh/t for firewood, wood chips and charcoal depends on the tree species from coniferous and broad-leaf-trees as well as depending on the moisture content

<sup>2</sup> Conversion of natural gas unit from kWh/m<sup>3</sup> to MWh/t: Upper heating value 10,28 kWh/m<sup>3</sup>, Lower heating value 9.26 kWh/m<sup>3</sup> with a density of 0,731 kg/m<sup>3</sup>-> 1368m<sup>3</sup>/t

<sup>3</sup> Heating Oil/Mazut: 1111l/t

<sup>4</sup> Calculate: Price for each fossil counterpart \* (min.& max. energy content of biomass / max. & min. energy content of fossil fuel) = price range of fossil fuel with same energy content than 1 ton of respective woody energy product