

## 6. Specific Emissions Factors and Fuel Mix

The following table gives a summary of the fuels used in the New Zealand Steel processes. It also provides a comparison of CO<sub>2e</sub> numbers for these fuels currently used by New Zealand Steel in energy reporting and the agreed emissions factors, the emissions factors provided in Terms of Reference<sup>7</sup> and specific emissions factors that will be used in this study.

**Table 1: Emissions Factors to be used on the WBPS**

<b>Fuel type</b>		<b>NZS</b>	<b>NZ Gov't</b>	<b>Specific Emissions Factor</b>
Coal (lignite)	Tonnes CO2/ GJ	0.0937	0.095	0.091 <sup>2</sup>
Natural Gas	Tonnes CO2/ GJ	0.0573	0.05239	0.05239
Limestone	Tonnes CO2/ Tonne Limestone	0.44	-	0.44
Coke	Tonnes CO2/ Tonne Coke	3.23	3.08	3.08
Electrical Energy	Tonnes CO2/ MWh	0.44	0.63	0.6 <sup>4</sup>
Diesel	Tonnes CO2/ litre fuel	0.00265	0.00271	0.00271
Electrode Paste	Tonnes CO2/ Tonne Carbon	3.43	-	3.43

Diesel used by NZS contractors will not be included in the NGA as the emissions from it is less than 5% of total plant CO<sub>2</sub> emissions.

With the exception of electricity, the NZS factors are those used in the 1995 –2000 Voluntary Agreement on Co2 Emissions.

<sup>12</sup> Carbon Content of New Zealand Coals May 2004, Solid Energy

<sup>4</sup> CO<sub>2</sub> intensity number provided by MFE during kick-off meeting held 13 October 2005 at New Zealand Steel