

1 **Discussion paper – BC methodologies for Manufacturing Industries (1A2)**

2 The chapter on combustion in manufacturing industries and construction provides tier 1 emission factors
3 (EFs) for the main four fuel groups (solid, gaseous, liquid and biomass). The chapter also includes a large
4 number of tier 2 EF tables for a variety of processes. In the previous GB update it was decided that only
5 emissions of NO_x, SO₂ and CO should be attributed to fuel combustion (1A2) while the remaining pollutants
6 should be considered under industrial processes (2A-G). This choice will not be revisited in the current
7 review of the GB. Therefore, only limited work has been done for the tier 2 EFs since they with the
8 exception of cement production do not include EFs of PM, HM and POPs. Furthermore, this means that EF's
9 for BC will only be discussed for the tier 1 EF tables. For the tier 2 approaches the BC EFs will be discussed
10 in the papers on industrial processes.

11 As described in the discussion paper on the consistency of the GB chapter for manufacturing industries, the
12 fuel allocation should be reconsidered.

13 For BC the factors derived for public electricity and heat production will be used in this chapter. Therefore,
14 the BC factor for solid, gaseous, liquid and biomass will be the same as the tier 1 BC EFs implemented for
15 hard coal, natural gas, fuel oil and biomass in chapter 1A1. For more information on the data sources
16 please refer to the discussion paper on black carbon methodologies for sector 1A1.

17 The chosen BC factors are shown in the table below.

Fuel type	BC EF, % of PM _{2.5}
Solid	2.2
Gaseous	3.26 (2.89)
Liquid	5.6
Biomass	3.25

18