



## ANNEX 1: KEY SOURCE ANALYSIS

The following tables present results from the key source analysis, the methodology of the analysis is presented in Chapter 1.5 of the NIR 2005.

**Table A1.1** presents results from the Level Assessment of the key source analysis.

**Table A1.2** presents results from the Trend Assessment of the key source analysis.

**Table A1.3** presents emission sources in the level of aggregation as used for the key source analysis. Emissions from 1990 to 2003 for these sources are also included.

**Table A1.4** summarizes the key sources identified including their ranking in the level and trend assessments.



Rank	IPCC Source Categories		GHG	Unit	Level		Cumulative
					BY	Assessment	Total
1	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	14,12%	14,12%
2	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	10,07%	24,19%
3	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	9,41%	33,60%
4	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	7,95%	41,55%
5	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	5,99%	47,55%
6	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	5,28%	52,82%
7	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	5,11%	57,93%
8	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4,51%	62,45%
9	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	4,29%	66,74%
10	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	3,75%	70,49%
11	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	3,51%	74,00%
12	2 A 1	Cement Production	CO2	Gg	2.033,4	2,59%	76,59%
13	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	2,49%	79,08%
14	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	2,10%	81,18%
15	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.314,3	1,67%	82,85%
16	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	1,56%	84,42%
17	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1,53%	85,95%
18	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.016,0	1,29%	87,24%
19	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	1,16%	88,41%
20	4 B 1	Cattle	N2O	Gg CO2e	662,7	0,84%	89,25%
21	4 B 1	Cattle	CH4	Gg CO2e	547,3	0,70%	89,95%
22	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	0,70%	90,64%
23	2F6	Semiconductor Manufacture	FCs	GgCO2e	505,7	0,64%	91,29%
24	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	0,61%	91,90%
25	4 B 8	Swine	CH4	Gg CO2e	447,7	0,57%	92,47%
26	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	0,56%	93,03%
27	2 A 2	Lime Production	CO2	Gg	396,2	0,50%	93,54%
28	2 B 1	Ammonia Production	CO2	Gg	396,0	0,50%	94,04%
29	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	0,40%	94,44%
30	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	286,4	0,36%	94,81%
31	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	0,36%	95,17%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1990</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	14,11%	14,11%
<b>2</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	10,07%	24,18%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	9,40%	33,58%
<b>4</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	7,95%	41,53%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	5,99%	47,52%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	5,27%	52,80%
<b>7</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	5,11%	57,90%
<b>8</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4,51%	62,42%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	4,29%	66,71%
<b>10</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	3,75%	70,46%
<b>11</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	3,51%	73,97%
<b>12</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	2,59%	76,56%
<b>13</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	2,49%	79,04%
<b>14</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	2,10%	81,14%
<b>15</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.314,3	1,67%	82,81%
<b>16</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	1,56%	84,38%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1,53%	85,91%
<b>18</b>	2C3	Aluminium production	PFCs	GgCO2e	1.050,2	1,34%	87,25%
<b>19</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.016,0	1,29%	88,54%
<b>20</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	1,16%	89,70%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	662,7	0,84%	90,54%
<b>22</b>	4 B 1	Cattle	CH4	Gg CO2e	547,3	0,70%	91,24%
<b>23</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	0,61%	91,85%
<b>24</b>	4 B 8	Swine	CH4	Gg CO2e	447,7	0,57%	92,42%
<b>25</b>	2 A 2	Lime Production	CO2	Gg	396,2	0,50%	92,93%
<b>26</b>	2 B 1	Ammonia Production	CO2	Gg	396,0	0,50%	93,43%
<b>27</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	0,40%	93,83%
<b>28</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	286,4	0,36%	94,19%
<b>29</b>	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	0,36%	94,55%
<b>30</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	253,3	0,32%	94,88%
<b>31</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	238,1	0,30%	95,18%



Rank	IPCC Source Categories		GHG	Unit	1991	Level Assessment	Cumulative Total
1	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.686,2	14,14%	14,14%
2	1 A 3 b gasoline	Road Transportation	CO2	Gg	8.678,7	10,50%	24,64%
3	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.784,5	9,42%	34,06%
4	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.817,0	8,25%	42,31%
5	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.829,9	5,84%	48,15%
6	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.638,8	5,61%	53,77%
7	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.133,3	5,00%	58,77%
8	2 C 1	Iron and Steel Production	CO2	Gg	3.508,4	4,24%	63,01%
9	4 A 1	Cattle	CH4	Gg CO2e	3.319,3	4,02%	67,03%
10	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	3.143,5	3,80%	70,83%
11	1 A 4 solid	Other Sectors	CO2	Gg	3.053,3	3,69%	74,53%
12	2 A 1	Cement Production	CO2	Gg	2.005,0	2,43%	76,95%
13	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.904,6	2,30%	79,26%
14	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.814,8	2,20%	81,45%
15	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.498,0	1,81%	83,26%
16	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.291,4	1,56%	84,83%
17	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.174,0	1,42%	86,25%
18	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.056,8	1,28%	87,53%
19	2C3	Aluminium production	PFCs	GgCO2e	1.050,2	1,27%	88,80%
20	2 B 2	Nitric Acid Production	N2O	Gg CO2e	927,3	1,12%	89,92%
21	4 B 1	Cattle	N2O	Gg CO2e	652,9	0,79%	90,71%
22	4 B 1	Cattle	CH4	Gg CO2e	538,0	0,65%	91,36%
23	4 B 8	Swine	CH4	Gg CO2e	441,7	0,53%	91,89%
24	2 B 1	Ammonia Production	CO2	Gg	408,0	0,49%	92,39%
25	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	391,6	0,47%	92,86%
26	2 A 2	Lime Production	CO2	Gg	361,3	0,44%	93,30%
27	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	341,7	0,41%	93,71%
28	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	331,5	0,40%	94,11%
29	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	289,2	0,35%	94,46%
30	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	277,2	0,34%	94,80%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1992</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
1	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.748,9	15,45%	15,45%
2	1 A 3 b gasoline	Road Transportation	CO2	Gg	8.297,1	10,91%	26,35%
3	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.293,6	9,59%	35,94%
4	1 A 3 b diesel oil	Road Transportation	CO2	Gg	5.156,8	6,78%	42,72%
5	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.116,0	5,41%	48,13%
6	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.042,6	5,31%	53,45%
7	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	4.009,5	5,27%	58,72%
8	4 A 1	Cattle	CH4	Gg CO2e	3.164,3	4,16%	62,88%
9	2 C 1	Iron and Steel Production	CO2	Gg	3.073,9	4,04%	66,92%
10	1 A 4 solid	Other Sectors	CO2	Gg	2.551,1	3,35%	70,28%
11	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.414,2	3,17%	73,45%
12	2 A 1	Cement Production	CO2	Gg	2.105,0	2,77%	76,22%
13	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.912,4	2,51%	78,73%
14	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.675,6	2,20%	80,93%
15	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.481,6	1,95%	82,88%
16	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.216,1	1,60%	84,48%
17	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.178,3	1,55%	86,03%
18	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.068,1	1,40%	87,43%
19	2 B 2	Nitric Acid Production	N2O	Gg CO2e	837,5	1,10%	88,54%
20	4 B 1	Cattle	N2O	Gg CO2e	624,0	0,82%	89,36%
21	4 B 1	Cattle	CH4	Gg CO2e	514,6	0,68%	90,03%
22	4 B 8	Swine	CH4	Gg CO2e	451,6	0,59%	90,63%
23	2C3	Aluminium production	PFCs	GgCO2e	417,6	0,55%	91,18%
24	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	382,5	0,50%	91,68%
25	2 B 1	Ammonia Production	CO2	Gg	371,1	0,49%	92,17%
26	2 A 2	Lime Production	CO2	Gg	355,1	0,47%	92,63%
27	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	336,1	0,44%	93,07%
28	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	316,4	0,42%	93,49%
29	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	296,5	0,39%	93,88%
30	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	292,4	0,38%	94,27%
31	2F6	Semiconductor Manufacture	FCs	GgCO2e	287,8	0,38%	94,64%
32	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	253,3	0,33%	94,98%
33	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	233,4	0,31%	95,28%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1993</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	12.250,4	16,08%	16,08%
<b>2</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.958,7	10,45%	26,53%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.198,2	9,45%	35,98%
<b>4</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	5.677,5	7,45%	43,43%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.283,2	5,62%	49,05%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.995,5	5,24%	54,30%
<b>7</b>	4 A 1	Cattle	CH4	Gg CO2e	3.155,7	4,14%	58,44%
<b>8</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.122,3	4,10%	62,54%
<b>9</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	3.088,9	4,05%	66,59%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.913,6	3,82%	70,42%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.188,3	2,87%	73,29%
<b>12</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.184,9	2,87%	76,16%
<b>13</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	2.052,0	2,69%	78,85%
<b>14</b>	2 A 1	Cement Production	CO2	Gg	2.031,9	2,67%	81,52%
<b>15</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.516,6	1,99%	83,51%
<b>16</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.228,2	1,61%	85,12%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.086,0	1,43%	86,55%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.034,0	1,36%	87,91%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	878,7	1,15%	89,06%
<b>20</b>	4 B 1	Cattle	N2O	Gg CO2e	625,6	0,82%	89,88%
<b>21</b>	4 B 1	Cattle	CH4	Gg CO2e	509,1	0,67%	90,55%
<b>22</b>	4 B 8	Swine	CH4	Gg CO2e	463,7	0,61%	91,16%
<b>23</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	438,8	0,58%	91,74%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	402,9	0,53%	92,26%
<b>25</b>	2 A 2	Lime Production	CO2	Gg	365,2	0,48%	92,74%
<b>26</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	360,4	0,47%	93,22%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	324,6	0,43%	93,64%
<b>28</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	316,1	0,41%	94,06%
<b>29</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	294,8	0,39%	94,44%
<b>30</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	277,2	0,36%	94,81%
<b>31</b>	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e	249,2	0,33%	95,14%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1994</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	12.868,3	16,70%	16,70%
<b>2</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.673,0	9,96%	26,66%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	6.585,9	8,55%	35,21%
<b>4</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	5.914,7	7,68%	42,89%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.350,2	5,65%	48,53%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.829,3	4,97%	53,50%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.376,9	4,38%	57,89%
<b>8</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	3.279,1	4,26%	62,14%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.202,0	4,16%	66,30%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.829,4	3,67%	69,97%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.328,3	3,02%	72,99%
<b>12</b>	2 A 1	Cement Production	CO2	Gg	2.102,3	2,73%	75,72%
<b>13</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.901,7	2,47%	78,19%
<b>14</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.853,4	2,41%	80,59%
<b>15</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.821,3	2,36%	82,96%
<b>16</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.308,9	1,70%	84,66%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.251,2	1,62%	86,28%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.061,3	1,38%	87,66%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	825,2	1,07%	88,73%
<b>20</b>	4 B 1	Cattle	N2O	Gg CO2e	636,6	0,83%	89,56%
<b>21</b>	4 B 1	Cattle	CH4	Gg CO2e	512,0	0,66%	90,22%
<b>22</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	498,4	0,65%	90,87%
<b>23</b>	4 B 8	Swine	CH4	Gg CO2e	457,1	0,59%	91,46%
<b>24</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	430,9	0,56%	92,02%
<b>25</b>	2 A 2	Lime Production	CO2	Gg	390,5	0,51%	92,53%
<b>26</b>	2 B 1	Ammonia Production	CO2	Gg	381,4	0,50%	93,02%
<b>27</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	372,8	0,48%	93,51%
<b>28</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	322,9	0,42%	93,92%
<b>29</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	296,0	0,38%	94,31%
<b>30</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	286,6	0,37%	94,68%
<b>31</b>	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e	262,4	0,34%	95,02%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1995</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	13.957,4	17,41%	17,41%
<b>2</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.411,3	9,25%	26,66%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.247,4	9,04%	35,70%
<b>4</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	6.553,4	8,18%	43,87%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	4.529,8	5,65%	49,53%
<b>6</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.512,3	5,63%	55,15%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.886,9	4,85%	60,00%
<b>8</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.667,5	4,58%	64,58%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.222,6	4,02%	68,60%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.628,9	3,28%	71,88%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.172,4	2,71%	74,59%
<b>12</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.825,2	2,28%	76,87%
<b>13</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.796,4	2,24%	79,11%
<b>14</b>	2 A 1	Cement Production	CO2	Gg	1.631,3	2,04%	81,14%
<b>15</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.556,3	1,94%	83,08%
<b>16</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.268,9	1,58%	84,67%
<b>17</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.217,2	1,52%	86,19%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.036,2	1,29%	87,48%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	857,2	1,07%	88,55%
<b>20</b>	4 B 1	Cattle	N2O	Gg CO2e	646,9	0,81%	89,35%
<b>21</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	0,68%	90,04%
<b>22</b>	4 B 1	Cattle	CH4	Gg CO2e	507,0	0,63%	90,67%
<b>23</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	505,7	0,63%	91,30%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	468,3	0,58%	91,88%
<b>25</b>	4 B 8	Swine	CH4	Gg CO2e	458,5	0,57%	92,46%
<b>26</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	0,55%	93,01%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	409,9	0,51%	93,52%
<b>28</b>	2 A 2	Lime Production	CO2	Gg	394,6	0,49%	94,01%
<b>29</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	302,4	0,38%	94,39%
<b>30</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	296,4	0,37%	94,76%
<b>31</b>	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e	257,3	0,32%	95,08%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1996</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	15.109,1	18,15%	18,15%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	8.688,2	10,44%	28,59%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	8.386,0	10,07%	38,66%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.855,7	8,24%	46,90%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	4.695,9	5,64%	52,54%
<b>6</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.370,7	5,25%	57,79%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.675,0	4,42%	62,21%
<b>8</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.511,8	4,22%	66,43%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.170,4	3,81%	70,24%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.444,2	2,94%	73,17%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.185,5	2,63%	75,80%
<b>12</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.754,8	2,11%	77,91%
<b>13</b>	2 A 1	Cement Production	CO2	Gg	1.634,2	1,96%	79,87%
<b>14</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.573,7	1,89%	81,76%
<b>15</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.550,0	1,86%	83,62%
<b>16</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.335,8	1,60%	85,23%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.134,6	1,36%	86,59%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.008,0	1,21%	87,80%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	874,2	1,05%	88,85%
<b>20</b>	4 B 1	Cattle	N2O	Gg CO2e	637,9	0,77%	89,62%
<b>21</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	627,8	0,75%	90,37%
<b>22</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	610,6	0,73%	91,11%
<b>23</b>	4 B 1	Cattle	CH4	Gg CO2e	500,4	0,60%	91,71%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	465,3	0,56%	92,27%
<b>25</b>	4 B 8	Swine	CH4	Gg CO2e	447,6	0,54%	92,80%
<b>26</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	403,9	0,49%	93,29%
<b>27</b>	2 A 2	Lime Production	CO2	Gg	382,7	0,46%	93,75%
<b>28</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	355,4	0,43%	94,18%
<b>29</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	324,4	0,39%	94,57%
<b>30</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	296,8	0,36%	94,92%
<b>31</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	292,8	0,35%	95,27%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1997</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	14.573,0	17,55%	17,55%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	7.968,6	9,60%	27,14%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.245,6	8,72%	35,87%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.497,0	7,82%	43,69%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	5.062,1	6,10%	49,79%
<b>6</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	5.002,2	6,02%	55,81%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	4.063,4	4,89%	60,70%
<b>8</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	3.394,5	4,09%	64,79%
<b>9</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.379,7	4,07%	68,86%
<b>10</b>	4 A 1	Cattle	CH4	Gg CO2e	3.116,2	3,75%	72,61%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.159,4	2,60%	75,21%
<b>12</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.925,2	2,32%	77,53%
<b>13</b>	2 A 1	Cement Production	CO2	Gg	1.760,9	2,12%	79,65%
<b>14</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.650,6	1,99%	81,64%
<b>15</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.430,1	1,72%	83,36%
<b>16</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.348,0	1,62%	84,98%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.167,1	1,41%	86,39%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.024,9	1,23%	87,62%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	862,6	1,04%	88,66%
<b>20</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	720,5	0,87%	89,53%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	627,6	0,76%	90,29%
<b>22</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	593,8	0,71%	91,00%
<b>23</b>	4 B 1	Cattle	CH4	Gg CO2e	496,8	0,60%	91,60%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	457,1	0,55%	92,15%
<b>25</b>	4 B 8	Swine	CH4	Gg CO2e	448,3	0,54%	92,69%
<b>26</b>	2 A 2	Lime Production	CO2	Gg	412,5	0,50%	93,19%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	384,3	0,46%	93,65%
<b>28</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	349,2	0,42%	94,07%
<b>29</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	314,4	0,38%	94,45%
<b>30</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	297,2	0,36%	94,81%
<b>31</b>	2F8	Other Sources of SF6	SF6	GgCO2e	256,1	0,31%	95,11%



<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1998</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	14.886,5	18,04%	18,04%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	9.738,1	11,80%	29,84%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.267,3	8,81%	38,65%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.810,2	8,25%	46,90%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.340,8	5,26%	52,16%
<b>6</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.867,4	4,69%	56,85%
<b>7</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	3.498,1	4,24%	61,09%
<b>8</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.278,7	3,97%	65,06%
<b>9</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	3.151,3	3,82%	68,88%
<b>10</b>	4 A 1	Cattle	CH4	Gg CO2e	3.094,0	3,75%	72,63%
<b>11</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	2.211,2	2,68%	75,31%
<b>12</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.184,5	2,65%	77,96%
<b>13</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.673,2	2,03%	79,99%
<b>14</b>	2 A 1	Cement Production	CO2	Gg	1.598,7	1,94%	81,93%
<b>15</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.376,7	1,67%	83,59%
<b>16</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.180,2	1,43%	85,02%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.167,3	1,41%	86,44%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.040,1	1,26%	87,70%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	896,7	1,09%	88,79%
<b>20</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	809,9	0,98%	89,77%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	622,9	0,75%	90,52%
<b>22</b>	2 B 1	Ammonia Production	CO2	Gg	501,2	0,61%	91,13%
<b>23</b>	4 B 1	Cattle	CH4	Gg CO2e	494,2	0,60%	91,73%
<b>24</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	477,8	0,58%	92,31%
<b>25</b>	4 B 8	Swine	CH4	Gg CO2e	462,4	0,56%	92,87%
<b>26</b>	2 A 2	Lime Production	CO2	Gg	453,8	0,55%	93,42%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	345,4	0,42%	93,84%
<b>28</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	301,6	0,37%	94,20%
<b>29</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	297,5	0,36%	94,56%
<b>30</b>	2F8	Other Sources of SF6	SF6	GgCO2e	286,1	0,35%	94,91%
<b>31</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	242,4	0,29%	95,20%



<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>1999</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	15.037,8	18,70%	18,70%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	9.525,1	11,85%	30,55%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.219,0	8,98%	39,53%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.317,8	7,86%	47,39%
<b>5</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.370,7	5,44%	52,82%
<b>6</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	3.779,5	4,70%	57,52%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.730,3	4,64%	62,16%
<b>8</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.173,9	3,95%	66,11%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.067,1	3,81%	69,92%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.409,5	3,00%	72,92%
<b>11</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.998,3	2,49%	75,41%
<b>12</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.867,6	2,32%	77,73%
<b>13</b>	2 A 1	Cement Production	CO2	Gg	1.607,4	2,00%	79,73%
<b>14</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.566,6	1,95%	81,68%
<b>15</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.400,0	1,74%	83,42%
<b>16</b>	1 A 4 solid	Other Sectors	CO2	Gg	1.172,0	1,46%	84,88%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.093,8	1,36%	86,24%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.046,8	1,30%	87,54%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	923,5	1,15%	88,69%
<b>20</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	864,1	1,07%	89,76%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	618,6	0,77%	90,53%
<b>22</b>	4 B 1	Cattle	CH4	Gg CO2e	487,8	0,61%	91,14%
<b>23</b>	2 B 1	Ammonia Production	CO2	Gg	472,1	0,59%	91,72%
<b>24</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	453,9	0,56%	92,29%
<b>25</b>	2 A 2	Lime Production	CO2	Gg	453,1	0,56%	92,85%
<b>26</b>	4 B 8	Swine	CH4	Gg CO2e	416,6	0,52%	93,37%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	350,0	0,44%	93,81%
<b>28</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	298,1	0,37%	94,18%
<b>29</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	270,4	0,34%	94,51%
<b>30</b>	2F8	Other Sources of SF6	SF6	GgCO2e	246,4	0,31%	94,82%
<b>31</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	245,7	0,31%	95,13%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>2000</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	14.460,7	17,83%	17,83%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	10.771,8	13,28%	31,12%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	6.526,0	8,05%	39,17%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.107,5	7,53%	46,70%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	5.004,2	6,17%	52,87%
<b>6</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.726,1	5,83%	58,70%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	4.165,8	5,14%	63,84%
<b>8</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	3.056,6	3,77%	67,61%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.028,4	3,73%	71,34%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.294,4	2,83%	74,17%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.849,4	2,28%	76,45%
<b>12</b>	2 A 1	Cement Production	CO2	Gg	1.711,6	2,11%	78,56%
<b>13</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.526,8	1,88%	80,45%
<b>14</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.313,6	1,62%	82,07%
<b>15</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.214,2	1,50%	83,56%
<b>16</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.088,5	1,34%	84,91%
<b>17</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.060,6	1,31%	86,21%
<b>18</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	1.015,6	1,25%	87,47%
<b>19</b>	1 A 4 solid	Other Sectors	CO2	Gg	952,4	1,17%	88,64%
<b>20</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	951,6	1,17%	89,82%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	613,9	0,76%	90,57%
<b>22</b>	2 A 2	Lime Production	CO2	Gg	497,5	0,61%	91,19%
<b>23</b>	4 B 1	Cattle	CH4	Gg CO2e	476,7	0,59%	91,77%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	463,0	0,57%	92,35%
<b>25</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	407,1	0,50%	92,85%
<b>26</b>	4 B 8	Swine	CH4	Gg CO2e	404,3	0,50%	93,35%
<b>27</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	339,2	0,42%	93,76%
<b>28</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	320,8	0,40%	94,16%
<b>29</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	298,8	0,37%	94,53%
<b>30</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	282,1	0,35%	94,88%
<b>31</b>	2F8	Other Sources of SF6	SF6	GgCO2e	265,2	0,33%	95,20%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>2001</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
<b>1</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	15.371,0	18,11%	18,11%
<b>2</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	11.961,8	14,09%	32,20%
<b>3</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.308,5	8,61%	40,82%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.151,9	7,25%	48,06%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	5.956,5	7,02%	55,08%
<b>6</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.480,5	5,28%	60,36%
<b>7</b>	2 C 1	Iron and Steel Production	CO2	Gg	4.125,2	4,86%	65,22%
<b>8</b>	4 A 1	Cattle	CH4	Gg CO2e	2.974,0	3,50%	68,73%
<b>9</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	2.948,2	3,47%	72,20%
<b>10</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.270,8	2,68%	74,88%
<b>11</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.810,3	2,13%	77,01%
<b>12</b>	2 A 1	Cement Production	CO2	Gg	1.719,9	2,03%	79,04%
<b>13</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.586,1	1,87%	80,90%
<b>14</b>	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.382,2	1,63%	82,53%
<b>15</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.365,1	1,61%	84,14%
<b>16</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	1.118,9	1,32%	85,46%
<b>17</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.116,0	1,31%	86,77%
<b>18</b>	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.075,6	1,27%	88,04%
<b>19</b>	1 A 4 solid	Other Sectors	CO2	Gg	865,3	1,02%	89,06%
<b>20</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	786,5	0,93%	89,99%
<b>21</b>	4 B 1	Cattle	N2O	Gg CO2e	603,5	0,71%	90,70%
<b>22</b>	2 A 2	Lime Production	CO2	Gg	506,6	0,60%	91,30%
<b>23</b>	4 B 1	Cattle	CH4	Gg CO2e	464,6	0,55%	91,84%
<b>24</b>	2 B 1	Ammonia Production	CO2	Gg	442,0	0,52%	92,36%
<b>25</b>	4 B 8	Swine	CH4	Gg CO2e	422,5	0,50%	92,86%
<b>26</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	416,9	0,49%	93,35%
<b>27</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	414,7	0,49%	93,84%
<b>28</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	334,0	0,39%	94,24%
<b>29</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	333,0	0,39%	94,63%
<b>30</b>	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	300,0	0,35%	94,98%
<b>31</b>	2F8	Other Sources of SF6	SF6	GgCO2e	268,3	0,32%	95,30%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>2002</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
1	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	15.339,8	17,75%	17,75%
2	1 A 3 b diesel oil	Road Transportation	CO2	Gg	13.515,0	15,64%	33,38%
3	1 A 4 stat-liquid	Other Sectors	CO2	Gg	6.951,9	8,04%	41,43%
4	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.622,6	7,66%	49,09%
5	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	5.510,0	6,37%	55,46%
6	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.982,1	5,76%	61,23%
7	2 C 1	Iron and Steel Production	CO2	Gg	4.618,1	5,34%	66,57%
8	4 A 1	Cattle	CH4	Gg CO2e	2.921,5	3,38%	69,95%
9	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	2.882,7	3,34%	73,29%
10	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.145,7	2,48%	75,77%
11	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	1.860,5	2,15%	77,92%
12	2 A 1	Cement Production	CO2	Gg	1.735,7	2,01%	79,93%
13	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.533,8	1,77%	81,70%
14	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.422,0	1,65%	83,35%
15	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	1.215,1	1,41%	84,75%
16	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.091,7	1,26%	86,02%
17	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.074,7	1,24%	87,26%
18	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	849,5	0,98%	88,24%
19	2 B 2	Nitric Acid Production	N2O	Gg CO2e	807,2	0,93%	89,18%
20	1 A 4 solid	Other Sectors	CO2	Gg	777,3	0,90%	90,08%
21	4 B 1	Cattle	N2O	Gg CO2e	593,8	0,69%	90,76%
22	2 A 2	Lime Production	CO2	Gg	546,6	0,63%	91,40%
23	4 B 1	Cattle	CH4	Gg CO2e	454,5	0,53%	91,92%
24	2 B 1	Ammonia Production	CO2	Gg	445,1	0,51%	92,44%
25	2F6	Semiconductor Manufacture	FCs	GgCO2e	425,8	0,49%	92,93%
26	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	423,2	0,49%	93,42%
27	4 B 8	Swine	CH4	Gg CO2e	403,3	0,47%	93,89%
28	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	373,5	0,43%	94,32%
29	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	366,0	0,42%	94,74%
30	6 B	WASTEWATER HANDLING	CH4	Gg CO2e	301,5	0,35%	95,09%

<b>Rank</b>		<b>IPCC Source Categories</b>	<b>GHG</b>	<b>Unit</b>	<b>2003</b>	<b>Level Assessment</b>	<b>Cumulative Total</b>
1	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	16.569,4	18,10%	18,10%
2	1 A 3 b diesel oil	Road Transportation	CO2	Gg	15.099,5	16,49%	34,59%
3	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.701,6	8,41%	43,00%
4	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.913,3	7,55%	50,55%
5	1 A 3 b gasoline	Road Transportation	CO2	Gg	6.783,4	7,41%	57,95%
6	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.545,3	4,96%	62,92%
7	2 C 1	Iron and Steel Production	CO2	Gg	4.513,1	4,93%	67,85%
8	4 A 1	Cattle	CH4	Gg CO2e	2.887,7	3,15%	71,00%
9	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	2.828,9	3,09%	74,09%
10	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.347,6	2,56%	76,65%
11	1 A 1 b liquid	Petroleum refining	CO2	Gg	2.051,0	2,24%	78,89%
12	2 A 1	Cement Production	CO2	Gg	1.735,7	1,90%	80,79%
13	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.418,7	1,55%	82,34%
14	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.414,1	1,54%	83,88%
15	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	1.304,7	1,42%	85,31%
16	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.110,7	1,21%	86,52%
17	1 A 2 mobile-liquid	Manufacturing Industries and Construction	CO2	Gg	1.104,7	1,21%	87,73%
18	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.016,1	1,11%	88,84%
19	2 B 2	Nitric Acid Production	N2O	Gg CO2e	883,4	0,96%	89,80%
20	1 A 4 solid	Other Sectors	CO2	Gg	669,9	0,73%	90,53%
21	4 B 1	Cattle	N2O	Gg CO2e	588,3	0,64%	91,18%
22	2 A 2	Lime Production	CO2	Gg	546,6	0,60%	91,77%
23	2 B 1	Ammonia Production	CO2	Gg	493,6	0,54%	92,31%
24	2F6	Semiconductor Manufacture	FCs	GgCO2e	483,0	0,53%	92,84%
25	4 B 1	Cattle	CH4	Gg CO2e	449,5	0,49%	93,33%
26	4 B 8	Swine	CH4	Gg CO2e	410,3	0,45%	93,78%
27	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	402,7	0,44%	94,22%
28	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	373,5	0,41%	94,63%
29	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	344,8	0,38%	95,00%

Rank	IPCC Source Categories			GHG	Unit	BY	1996	Level Assessment	Trend Assessment	Contribution to Trend	Cumulative Total
1	1 A 3 b diesel oil	Road Transportation	CO2	Gg		4.012,9	8.688,2	10,44%	0,050	23,52%	23,52%
2	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg		11.088,0	15.109,1	18,15%	0,038	17,81%	41,33%
3	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg		6.247,0	4.695,9	5,64%	0,022	10,21%	51,54%
4	1 A 3 b gasoline	Road Transportation	CO2	Gg		7.911,2	6.855,7	8,24%	0,017	8,11%	59,65%
5	1 A 4 solid	Other Sectors	CO2	Gg		2.947,9	1.754,8	2,11%	0,016	7,26%	66,92%
6	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e		4.144,1	3.511,8	4,22%	0,010	4,67%	71,59%
7	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg		4.705,2	4.370,7	5,25%	0,007	3,27%	74,86%
8	1 A 4 stat-liquid	Other Sectors	CO2	Gg		7.388,4	8.386,0	10,07%	0,006	2,94%	77,80%
9	2 A 1	Cement Production	CO2	Gg		2.033,4	1.634,2	1,96%	0,006	2,76%	80,56%
10	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg		2.755,3	2.444,2	2,94%	0,005	2,53%	83,09%
11	4 A 1	Cattle	CH4	Gg CO2e		3.372,5	3.170,4	3,81%	0,005	2,14%	85,23%
12	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg		1.228,7	1.550,0	1,86%	0,003	1,31%	86,55%
13	4 D 1	Direct Soil Emissions	N2O	Gg CO2e		1.649,4	1.573,7	1,89%	0,002	0,93%	87,47%
14	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg		118,0	292,8	0,35%	0,002	0,89%	88,36%
15	2 A 7 b	Magnesit Sinter Plants	CO2	Gg		481,2	355,4	0,43%	0,002	0,82%	89,18%
16	4 D 3	Indirect Emissions	N2O	Gg CO2e		1.203,7	1.134,6	1,36%	0,002	0,75%	89,93%
17	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e		443,1	610,6	0,73%	0,002	0,75%	90,68%
18	2F6	Semiconductor Manufacture	FCs	GgCO2e		505,7	403,9	0,49%	0,001	0,70%	91,38%
19	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg		282,7	172,8	0,21%	0,001	0,67%	92,05%
20	1 A 1 b liquid	Petroleum refining	CO2	Gg		1.953,4	2.185,5	2,63%	0,001	0,61%	92,66%
21	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e		126,5	239,0	0,29%	0,001	0,56%	93,22%
22	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg		238,1	159,8	0,19%	0,001	0,49%	93,71%
23	2 B 2	Nitric Acid Production	N2O	Gg CO2e		912,0	874,2	1,05%	0,001	0,49%	94,20%
24	2 C 1	Iron and Steel Production	CO2	Gg		3.545,7	3.675,0	4,42%	0,001	0,44%	94,64%
25	4 B 1	Cattle	CH4	Gg CO2e		547,3	500,4	0,60%	0,001	0,42%	95,06%

Table A1.2: Trend Assessment

<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>1997</b>	<b>Level</b>	<b>Trend</b>	<b>Contribution</b>	<b>Cumulative</b>
							<b>Assessment</b>	<b>Assessment</b>	<b>to Trend</b>	<b>Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	7.968,6	9,60%	0,042	20,68%	20,68%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	14.573,0	17,55%	0,032	15,81%	36,49%
<b>3</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.497,0	7,82%	0,021	10,37%	46,86%
<b>4</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	1.348,0	1,62%	0,020	9,82%	56,68%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	5.002,2	6,02%	0,018	8,90%	65,58%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	3.379,7	4,07%	0,011	5,56%	71,14%
<b>7</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	1.925,2	2,32%	0,007	3,47%	74,62%
<b>8</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	7.245,6	8,72%	0,006	3,15%	77,76%
<b>9</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	3.394,5	4,09%	0,005	2,67%	80,43%
<b>10</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	3.116,2	3,75%	0,005	2,50%	82,93%
<b>11</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.760,9	2,12%	0,004	2,16%	85,09%
<b>12</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4.063,4	4,89%	0,004	1,74%	86,84%
<b>13</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	314,4	0,38%	0,002	1,05%	87,89%
<b>14</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	720,5	0,87%	0,002	0,79%	88,68%
<b>15</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	384,3	0,46%	0,001	0,69%	89,37%
<b>16</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	349,2	0,42%	0,001	0,66%	90,03%
<b>17</b>	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	190,1	0,23%	0,001	0,60%	90,63%
<b>18</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.167,1	1,41%	0,001	0,59%	91,22%
<b>19</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	862,6	1,04%	0,001	0,57%	91,79%
<b>20</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	2.159,4	2,60%	0,001	0,52%	92,31%
<b>21</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.650,6	1,99%	0,001	0,52%	92,83%
<b>22</b>	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e	126,5	223,7	0,27%	0,001	0,50%	93,32%
<b>23</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	5.062,1	6,10%	0,001	0,48%	93,81%
<b>24</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	248,8	0,30%	0,001	0,47%	94,27%
<b>25</b>	4 B 1	Cattle	CH4	Gg CO2e	547,3	496,8	0,60%	0,001	0,45%	94,73%
<b>26</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	92,3	0,11%	0,001	0,41%	95,14%

Table A1.2: Trend Assessment



<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>1998</b>	<b>Level</b>	<b>Trend</b>	<b>Contribution</b>	<b>Cumulative</b>
							<b>Assessment</b>	<b>Assessment</b>	<b>to Trend</b>	<b>Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	9.738,1	11,80%	0,064	24,64%	24,64%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	14.886,5	18,04%	0,037	14,45%	39,09%
<b>3</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	3.498,1	4,24%	0,035	13,68%	52,77%
<b>4</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	1.180,2	1,43%	0,022	8,56%	61,33%
<b>5</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.810,2	8,25%	0,017	6,70%	68,03%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	3.278,7	3,97%	0,012	4,80%	72,83%
<b>7</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	2.211,2	2,68%	0,011	4,11%	76,93%
<b>8</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.340,8	5,26%	0,007	2,69%	79,62%
<b>9</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.598,7	1,94%	0,006	2,40%	82,02%
<b>10</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	7.267,3	8,81%	0,006	2,21%	84,24%
<b>11</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	3.094,0	3,75%	0,005	2,01%	86,24%
<b>12</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	164,2	0,20%	0,003	1,34%	87,59%
<b>13</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	3.151,3	3,82%	0,003	1,14%	88,73%
<b>14</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	809,9	0,98%	0,003	1,05%	89,78%
<b>15</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	301,6	0,37%	0,002	0,79%	90,57%
<b>16</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	345,4	0,42%	0,002	0,71%	91,29%
<b>17</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	3.867,4	4,69%	0,002	0,63%	91,92%
<b>18</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	2.184,5	2,65%	0,002	0,59%	92,51%
<b>19</b>	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	172,2	0,21%	0,001	0,56%	93,07%
<b>20</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	118,4	0,14%	0,001	0,45%	93,51%
<b>21</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	238,1	150,5	0,18%	0,001	0,44%	93,96%
<b>22</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.167,3	1,41%	0,001	0,43%	94,39%
<b>23</b>	1 A 3 b gasoline	Road Transportation	N2O	Gg CO2e	126,5	226,7	0,27%	0,001	0,42%	94,81%
<b>24</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	242,4	0,29%	0,001	0,39%	95,21%

Table A1.2: Trend Assessment



<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>1999</b>	<b>Level</b>	<b>Trend</b>	<b>Contribution</b>	<b>Cumulative</b>
							<b>Assessment</b>	<b>Assessment</b>	<b>to Trend</b>	<b>Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	9.525,1	11,85%	0,066	24,46%	24,46%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	15.037,8	18,70%	0,045	16,65%	41,11%
<b>3</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	3.779,5	4,70%	0,032	11,82%	52,93%
<b>4</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	1.172,0	1,46%	0,022	8,34%	61,26%
<b>5</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.317,8	7,86%	0,022	8,05%	69,31%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	3.173,9	3,95%	0,013	4,83%	74,14%
<b>7</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	1.998,3	2,49%	0,009	3,34%	77,48%
<b>8</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.607,4	2,00%	0,006	2,14%	79,62%
<b>9</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.370,7	5,44%	0,005	2,02%	81,64%
<b>10</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	22,2	0,03%	0,005	1,95%	83,59%
<b>11</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	2.409,5	3,00%	0,005	1,86%	85,45%
<b>12</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	3.067,1	3,81%	0,005	1,74%	87,19%
<b>13</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	7.219,0	8,98%	0,004	1,56%	88,75%
<b>14</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	864,1	1,07%	0,004	1,37%	90,12%
<b>15</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	350,0	0,44%	0,002	0,64%	90,76%
<b>16</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.093,8	1,36%	0,002	0,63%	91,39%
<b>17</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	1.867,6	2,32%	0,002	0,60%	91,99%
<b>18</b>	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	158,4	0,20%	0,002	0,59%	92,58%
<b>19</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.566,6	1,95%	0,001	0,55%	93,13%
<b>20</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	239,2	0,30%	0,001	0,53%	93,67%
<b>21</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	135,5	0,17%	0,001	0,53%	94,20%
<b>22</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	3.730,3	4,64%	0,001	0,45%	94,65%
<b>23</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	245,7	0,31%	0,001	0,35%	95,00%

Table A1.2: Trend Assessment

<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>2000</b>	<b>Level Assessment</b>	<b>Trend Assessment</b>	<b>Contribution to Trend</b>	<b>Cumulative Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	10.771,8	13,28%	0,079	28,80%	28,80%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	14.460,7	17,83%	0,036	13,09%	41,89%
<b>3</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	952,4	1,17%	0,025	9,09%	50,97%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.107,5	7,53%	0,025	8,95%	59,92%
<b>5</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	5.004,2	6,17%	0,017	6,28%	66,20%
<b>6</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	3.056,6	3,77%	0,015	5,31%	71,51%
<b>7</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	6.526,0	8,05%	0,013	4,79%	76,30%
<b>8</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	2.294,4	2,83%	0,007	2,39%	78,69%
<b>9</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4.165,8	5,14%	0,006	2,19%	80,89%
<b>10</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	3.028,4	3,73%	0,005	1,97%	82,86%
<b>11</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	1.015,6	1,25%	0,005	1,96%	84,81%
<b>12</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	7,6	0,01%	0,005	1,95%	86,77%
<b>13</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.711,6	2,11%	0,005	1,68%	88,45%
<b>14</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.526,8	1,88%	0,002	0,77%	89,22%
<b>15</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	1.849,4	2,28%	0,002	0,73%	89,95%
<b>16</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	282,1	0,35%	0,002	0,70%	90,64%
<b>17</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	339,2	0,42%	0,002	0,68%	91,33%
<b>18</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.088,5	1,34%	0,002	0,67%	92,00%
<b>19</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	158,4	0,20%	0,002	0,61%	92,61%
<b>20</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.726,1	5,83%	0,002	0,57%	93,18%
<b>21</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	505,7	407,1	0,50%	0,001	0,50%	93,68%
<b>22</b>	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	181,0	0,22%	0,001	0,48%	94,16%
<b>23</b>	1 A 4 biomass	Other Sectors	CH4	Gg CO2e	314,7	232,3	0,29%	0,001	0,40%	94,57%
<b>24</b>	2 A 2	Lime Production	CO2	Gg	396,2	497,5	0,61%	0,001	0,38%	94,95%
<b>25</b>	4 B 1	Cattle	CH4	Gg CO2e	547,3	476,7	0,59%	0,001	0,38%	95,33%

Table A1.2: Trend Assessment

<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>2001</b>	<b>Level Assessment</b>	<b>Trend Assessment</b>	<b>Contribution to Trend</b>	<b>Cumulative Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	11.961,8	14,09%	0,083	29,76%	29,76%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	15.371,0	18,11%	0,037	13,22%	42,99%
<b>3</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.151,9	7,25%	0,026	9,36%	52,34%
<b>4</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	865,3	1,02%	0,025	9,06%	61,40%
<b>5</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	2.948,2	3,47%	0,017	5,97%	67,37%
<b>6</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	5.956,5	7,02%	0,009	3,10%	70,47%
<b>7</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	2.270,8	2,68%	0,008	2,76%	73,23%
<b>8</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	7.308,5	8,61%	0,007	2,64%	75,87%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	2.974,0	3,50%	0,007	2,62%	78,49%
<b>10</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.480,5	5,28%	0,007	2,36%	80,85%
<b>11</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	1.118,9	1,32%	0,006	2,06%	82,91%
<b>12</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.719,9	2,03%	0,005	1,86%	84,77%
<b>13</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	7,6	0,01%	0,005	1,84%	86,61%
<b>14</b>	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	1.810,3	2,13%	0,003	1,17%	87,78%
<b>15</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4.125,2	4,86%	0,003	1,15%	88,93%
<b>16</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	333,0	0,39%	0,002	0,80%	89,73%
<b>17</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	786,5	0,93%	0,002	0,78%	90,51%
<b>18</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.586,1	1,87%	0,002	0,77%	91,27%
<b>19</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	334,0	0,39%	0,002	0,73%	92,00%
<b>20</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.116,0	1,31%	0,002	0,72%	92,72%
<b>21</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	193,1	0,23%	0,002	0,68%	93,40%
<b>22</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	238,1	414,7	0,49%	0,002	0,61%	94,02%
<b>23</b>	2F6	Semiconductor Manufacture	FCs	GgCO2e	505,7	416,9	0,49%	0,001	0,51%	94,52%
<b>24</b>	4 B 1	Cattle	CH4	Gg CO2e	547,3	464,6	0,55%	0,001	0,50%	95,02%

Table A1.2: Trend Assessment

<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>2002</b>	<b>Level Assessment</b>	<b>Trend Assessment</b>	<b>Contribution to Trend</b>	<b>Cumulative Total</b>
<b>1</b>	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	13.515,0	15,64%	0,096	31,24%	31,24%
<b>2</b>	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	15.339,8	17,75%	0,033	10,77%	42,01%
<b>3</b>	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	777,3	0,90%	0,026	8,47%	50,48%
<b>4</b>	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.622,6	7,66%	0,022	7,16%	57,63%
<b>5</b>	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	2.882,7	3,34%	0,018	5,76%	63,40%
<b>6</b>	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	5.510,0	6,37%	0,014	4,69%	68,08%
<b>7</b>	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	6.951,9	8,04%	0,012	4,05%	72,13%
<b>8</b>	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	1.860,5	2,15%	0,012	4,02%	76,16%
<b>9</b>	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	2.921,5	3,38%	0,008	2,71%	78,87%
<b>10</b>	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4.618,1	5,34%	0,008	2,46%	81,33%
<b>11</b>	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	1.215,1	1,41%	0,006	2,10%	83,43%
<b>12</b>	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	849,5	0,98%	0,005	1,73%	85,16%
<b>13</b>	2 A 1	Cement Production	CO2	Gg	2.033,4	1.735,7	2,01%	0,005	1,72%	86,88%
<b>14</b>	2C4	SF6 Used in Al and Mg Foundries	SF6	GgCO2e	443,1	7,6	0,01%	0,005	1,65%	88,53%
<b>15</b>	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.533,8	1,77%	0,003	0,97%	89,50%
<b>16</b>	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.074,7	1,24%	0,003	0,86%	90,36%
<b>17</b>	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	366,0	0,42%	0,002	0,81%	91,17%
<b>18</b>	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	807,2	0,93%	0,002	0,67%	91,84%
<b>19</b>	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.982,1	5,76%	0,002	0,67%	92,52%
<b>20</b>	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	191,6	0,22%	0,002	0,59%	93,11%
<b>21</b>	1 A 2 other	Manufacturing Industries and Construction	CO2	Gg	238,1	423,2	0,49%	0,002	0,55%	93,66%
<b>22</b>	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	373,5	0,43%	0,002	0,54%	94,20%

Table A1.2: Trend Assessment

<b>Rank</b>	<b>IPCC Source Categories</b>		<b>GHG</b>	<b>Unit</b>	<b>BY</b>	<b>2003</b>	<b>Level Assessment</b>	<b>Trend Assessment</b>	<b>Contribution to Trend</b>	<b>Cumulative Total</b>
1	1 A 3 b diesel oil	Road Transportation	CO2	Gg	4.012,9	15.099,5	16,49%	0,098	32,94%	32,94%
2	1 A gaseous	Fuel Combustion (stationary)	CO2	Gg	11.088,0	16.569,4	18,10%	0,034	11,51%	44,46%
3	1 A 4 solid	Other Sectors	CO2	Gg	2.947,9	669,9	0,73%	0,026	8,75%	53,21%
4	1 A 3 b gasoline	Road Transportation	CO2	Gg	7.911,2	6.783,4	7,41%	0,023	7,72%	60,92%
5	6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg CO2e	4.144,1	2.828,9	3,09%	0,019	6,33%	67,25%
6	4 A 1	Cattle	CH4	Gg CO2e	3.372,5	2.887,7	3,15%	0,010	3,30%	70,55%
7	1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg	4.705,2	4.545,3	4,96%	0,009	2,97%	73,53%
8	1 A 4 stat-liquid	Other Sectors	CO2	Gg	7.388,4	7.701,6	8,41%	0,009	2,89%	76,41%
9	1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg	2.755,3	2.347,6	2,56%	0,008	2,73%	79,15%
10	2F1/2/3	ODS Substitutes	HFCs	GgCO2e	547,1	1.304,7	1,42%	0,006	2,11%	81,26%
11	2 A 1	Cement Production	CO2	Gg	2.033,4	1.735,7	1,90%	0,006	2,01%	83,27%
12	4 D 1	Direct Soil Emissions	N2O	Gg CO2e	1.649,4	1.414,1	1,54%	0,005	1,61%	84,87%
13	4 D 3	Indirect Emissions	N2O	Gg CO2e	1.203,7	1.016,1	1,11%	0,004	1,22%	86,10%
14	2 C 1	Iron and Steel Production	CO2	Gg	3.545,7	4.513,1	4,93%	0,004	1,20%	87,30%
15	1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg	6.247,0	6.913,3	7,55%	0,003	1,17%	88,47%
16	1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg	1.228,7	1.110,7	1,21%	0,003	1,02%	89,48%
17	1 A 1 a other	Public Electricity and Heat Production	CO2	Gg	118,0	402,7	0,44%	0,002	0,84%	90,32%
18	1 A 1 b liquid	Petroleum refining	CO2	Gg	1.953,4	2.051,0	2,24%	0,002	0,72%	91,04%
19	4 B 1	Cattle	CH4	Gg CO2e	547,3	449,5	0,49%	0,002	0,60%	91,64%
20	2 A 7 b	Magnesit Sinter Plants	CO2	Gg	481,2	373,5	0,41%	0,002	0,59%	92,23%
21	4 B 1	Cattle	N2O	Gg CO2e	662,7	588,3	0,64%	0,002	0,58%	92,81%
22	2 B 2	Nitric Acid Production	N2O	Gg CO2e	912,0	883,4	0,96%	0,002	0,57%	93,38%
23	6 B	WASTEWATER HANDLING	N2O	Gg CO2e	17,0	192,4	0,21%	0,002	0,55%	93,93%
24	3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg	282,7	193,6	0,21%	0,001	0,43%	94,36%
25	1 A 4 mobile-diesel	Other Sectors	CO2	Gg	1.314,3	1.418,7	1,55%	0,001	0,36%	94,72%
26	4 B 8	Swine	CH4	Gg CO2e	447,7	410,3	0,45%	0,001	0,35%	95,07%

Table A1.2: Trend Assessment

IPCC 96	Bezeichnung	Gas	Unit	BY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1 A 1 a biomass	Public Electricity and Heat Production	CH4	Gg C	0,1	0,1	0,1	0,2	0,2	0,2	0,2	0,3	0,3	0,4	0,3	0,5	0,6	0,7	0,8
1 A 1 a gaseou	Public Electricity and Heat Production	CH4	Gg C	0,5	0,5	0,5	0,5	0,6	0,6	0,7	1,1	0,9	1,2	1,0	1,0	0,8	1,1	2,5
1 A 1 a liquid	Public Electricity and Heat Production	CH4	Gg C	0,3	0,3	0,4	0,4	0,6	0,5	0,4	0,5	0,5	0,6	0,5	0,3	0,4	0,2	0,3
1 A 1 a other	Public Electricity and Heat Production	CH4	Gg C	0,6	0,6	0,7	1,2	1,2	1,3	1,3	1,5	1,6	1,5	1,3	1,5	1,9	2,2	2,5
1 A 1 a solid	Public Electricity and Heat Production	CH4	Gg C	1,5	1,5	1,7	0,9	0,7	0,6	0,5	0,4	0,4	0,1	0,1	0,2	0,3	0,2	0,3
1 A 1 c gaseou	Manuf. of Solid fuels and Other Energy Indu	CH4	Gg C	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
1 A 1 c liquid	Manuf. of Solid fuels and Other Energy Indu	CH4	Gg C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1 A 2 biomass	Manufacturing Industries and Construction	CH4	Gg C	1,2	1,2	1,2	1,2	1,3	1,4	1,4	1,4	1,5	1,3	1,8	1,5	1,6	1,7	1,8
1 A 2 gaseous	Manufacturing Industries and Construction	CH4	Gg C	2,2	2,2	2,3	2,3	2,4	2,9	2,9	3,0	3,4	3,1	2,8	3,1	3,0	3,2	3,1
1 A 2 mobile-lic	Manufacturing Industries and Construction	CH4	Gg C	1,6	1,6	1,6	1,7	1,6	1,6	1,6	1,5	1,5	1,5	1,3	1,3	1,2	1,2	1,1
1 A 2 other	Manufacturing Industries and Construction	CH4	Gg C	1,1	1,1	1,3	1,6	1,2	1,3	1,4	1,6	1,4	1,5	1,7	1,7	1,8	2,2	2,0
1 A 2 solid	Manufacturing Industries and Construction	CH4	Gg C	1,3	1,3	1,5	1,5	1,5	1,4	1,4	1,5	1,7	1,7	1,5	1,7	1,6	1,5	1,4
1 A 2 stat-liquic	Manufacturing Industries and Construction	CH4	Gg C	0,9	0,9	1,1	0,8	0,9	0,9	0,8	0,7	0,9	0,8	0,6	0,6	0,5	0,4	0,5
1 A 3 a jet kero	Civil Aviation	CH4	Gg C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
1 A 3 b diesel c	Road Transportation	CH4	Gg C	2,5	2,5	2,7	2,7	2,8	2,7	2,8	3,4	2,8	3,1	2,8	2,9	3,1	3,3	3,4
1 A 3 b gasolin	Road Transportation	CH4	Gg C	58,0	58,0	57,2	51,5	47,0	42,7	38,5	34,2	30,8	29,0	25,9	23,3	21,2	19,9	18,3
1 A 3 c liquid	Railways	CH4	Gg C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
1 A 3 c solid	Railways	CH4	Gg C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1 A 3 d gas/die	Navigation	CH4	Gg C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1 A 3 d gasolin	Navigation	CH4	Gg C	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
1 A 3 e gaseou	Other	CH4	Gg C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,2	0,2	0,3	0,3	0,3	0,3
1 A 4 biomass	Other Sectors	CH4	Gg C	314,7	314,7	341,7	316,4	316,1	286,6	302,4	324,4	248,8	242,4	245,7	232,3	261,4	249,0	271,9
1 A 4 gaseous	Other Sectors	CH4	Gg C	4,0	4,0	4,0	3,5	2,9	1,8	1,2	1,2	1,2	1,2	1,5	1,3	1,6	1,3	1,4
1 A 4 mobile-di	Other Sectors	CH4	Gg C	2,9	2,9	2,5	2,5	2,6	2,7	2,5	2,7	2,8	2,6	2,5	2,2	2,2	2,2	2,2
1 A 4 mobile-g	Other Sectors	CH4	Gg C	1,2	1,2	1,2	1,2	1,1	1,2	1,2	1,2	1,2	1,2	1,1	1,1	1,1	1,0	1,0
1 A 4 mobile-lic	Other Sectors	CH4	Gg C	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,1	2,1	2,0	1,8	1,7	1,5	1,3
1 A 4 other	Other Sectors	CH4	Gg C	0,6	0,6	0,5	0,5	0,3	0,4	0,4	0,7	0,7	0,4	0,6	0,3	0,2	0,2	0,3
1 A 4 solid	Other Sectors	CH4	Gg C	70,3	70,3	71,7	60,3	51,9	44,8	44,2	44,0	28,7	25,2	25,0	20,3	18,5	16,6	14,3
1 A 4 stat-liquic	Other Sectors	CH4	Gg C	0,8	0,8	0,8	0,8	0,8	0,7	0,7	0,7	0,6	0,7	0,7	0,6	0,6	0,7	0,7
1 A 5 liquid	Other	CH4	Gg C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1 B 1 a	Coal Mining	CH4	Gg C	11,0	11,0	9,4	7,8	7,6	6,2	5,8	5,0	5,1	5,1	5,1	5,6	5,4	8,1	8,1
1 B 2 a	Oil	CH4	Gg C	101,0	101,0	101,3	101,6	101,0	100,3	98,3	99,7	101,7	98,2	92,8	90,2	91,9	93,8	88,2
1 B 2 b	Natural gas	CH4	Gg C	165,6	165,6	170,7	170,2	178,4	175,3	189,0	208,6	204,4	207,4	217,2	210,4	212,4	210,6	224,8
2 B	CHEMICAL INDUSTRY	CH4	Gg C	7,4	7,4	7,3	6,6	7,3	7,6	7,0	7,2	7,4	8,0	7,2	7,2	6,7	7,4	7,2
2 C	METAL PRODUCTION	CH4	Gg C	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
4 A 1	Cattle	CH4	Gg C	3.372,5	3.372,5	3.319,3	3.164,3	3.155,7	3.202,0	3.222,6	3.170,4	3.116,2	3.094,0	3.067,1	3.028,4	2.974,0	2.921,5	2.887,7
4 A 3	Sheep	CH4	Gg C	52,1	52,1	54,8	52,4	56,1	57,5	61,4	64,0	64,5	60,6	59,2	57,0	53,8	51,1	54,7
4 A 4	Goats	CH4	Gg C	3,9	3,9	4,3	4,1	5,0	5,2	5,7	5,7	6,1	5,7	6,1	5,9	6,2	6,1	5,7
4 A 6	Horses	CH4	Gg C	18,6	18,6	21,8	23,2	24,5	25,2	27,4	27,7	28,0	28,5	30,8	30,8	30,8	30,8	32,9
4 A 8	Swine	CH4	Gg C	116,2	116,2	114,6	117,2	120,3	117,5	116,7	115,4	115,9	120,0	108,1	105,5	108,4	104,1	102,2
4 A 9	Poultry	CH4	Gg C	3,7	3,7	3,9	3,7	3,9	3,8	3,8	3,5	4,0	3,9	3,9	3,2	3,4	3,4	3,5
4 A-10	Other	CH4	Gg C	6,2	6,2	6,2	6,2	6,2	6,3	6,8	7,0	9,4	8,5	6,6	6,5	6,5	6,5	6,9
4 B 1	Cattle	CH4	Gg C	547,3	547,3	538,0	514,6	509,1	512,0	507,0	500,4	496,8	494,2	487,8	476,7	464,6	454,5	449,5
4 B 3	Sheep	CH4	Gg C	1,2	1,2	1,3	1,2	1,3	1,4	1,5	1,5	1,5	1,4	1,4	1,4	1,3	1,2	1,3
4 B 4	Goats	CH4	Gg C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
4 B 6	Horses	CH4	Gg C	1,4	1,4	1,7	1,8	1,9	1,9	2,1	2,1	2,2	2,2	2,4	2,4	2,4	2,4	2,5
4 B 8	Swine	CH4	Gg C	447,7	447,7	441,7	451,6	463,7	457,1	458,5	447,6	448,3	462,4	416,6	404,3	422,5	403,3	410,3
4 B 9	Poultry	CH4	Gg C	22,6	22,6	23,6	22,4	23,8	23,2	22,9	21,3	24,2	23,4	23,7	19,3	20,6	20,6	21,3
4 B-13	Other Animals	CH4	Gg C	0,1	0,1	0,1	0,1	0,1	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2

Table A1.3: Source Categories and Emissions for Key Source Analysis



4 D	AGRICULTURAL SOILS	CH4	Gg	C	6,9	6,9	6,9	6,6	9,8	8,4	9,3	9,4	9,4	9,4	9,4	9,4	9,1	9,1	9,1
4 F	FIELD BURNING OF AGRICULTURAL RESIDUES	CH4	Gg	C	1,4	1,4	1,4	1,3	1,3	1,4	1,4	1,3	1,4	1,4	1,4	1,3	1,4	1,4	1,3
6 A	SOLID WASTE DISPOSAL ON LAND	CH4	Gg	C	4.144,1	4.144,1	4.133,3	4.042,6	3.995,5	3.829,3	3.667,5	3.511,8	3.379,7	3.278,7	3.173,9	3.056,6	2.948,2	2.882,7	2.828,9
6 B	WASTEWATER HANDLING	CH4	Gg	C	286,4	286,4	289,2	292,4	294,8	296,0	296,4	296,8	297,2	297,5	298,1	298,8	300,0	301,5	302,8
6 C	WASTE INCINERATION	CH4	Gg	C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
6 D	OTHER WASTE	CH4	Gg	C	10,9	10,9	11,4	13,7	17,2	20,6	21,9	23,0	22,7	23,5	24,7	24,5	24,5	24,6	25,0
1 A 1 a liquid	Public Electricity and Heat Production	CO2	Gg		1.228,7	1.228,7	1.498,0	1.481,6	2.052,0	1.901,7	1.556,3	1.550,0	1.925,2	2.211,2	1.998,3	1.214,2	1.365,1	849,5	1.110,7
1 A 1 a other	Public Electricity and Heat Production	CO2	Gg		118,0	118,0	141,7	233,4	240,9	246,0	247,4	292,8	314,4	301,6	239,2	282,1	333,0	366,0	402,7
1 A 1 a solid	Public Electricity and Heat Production	CO2	Gg		6.247,0	6.247,0	6.817,0	4.009,5	3.088,9	3.279,1	4.529,8	4.695,9	5.002,2	3.498,1	3.779,5	5.004,2	5.956,5	5.510,0	6.913,3
1 A 1 b liquid	Petroleum refining	CO2	Gg		1.953,4	1.953,4	1.904,6	1.912,4	2.188,3	2.328,3	2.172,4	2.185,5	2.159,4	2.184,5	1.867,6	1.849,4	1.810,3	2.145,7	2.051,0
1 A 1 c liquid	Manufacture of Solid fuels and Other Energy	CO2	Gg		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,4
1 A 2 mobile-lic	Manufacturing Industries and Construction	CO2	Gg		1.016,0	1.016,0	1.056,8	1.068,1	1.034,0	1.061,3	1.036,2	1.008,0	1.024,9	1.040,1	1.046,8	1.060,6	1.075,6	1.091,7	1.104,7
1 A 2 other	Manufacturing Industries and Construction	CO2	Gg		238,1	238,1	213,0	296,5	118,4	170,1	161,9	159,8	201,6	150,5	270,4	320,8	414,7	423,2	344,8
1 A 2 solid	Manufacturing Industries and Construction	CO2	Gg		4.705,2	4.705,2	4.638,8	4.116,0	4.283,2	4.350,2	4.512,3	4.370,7	5.062,1	4.340,8	4.370,7	4.726,1	4.480,5	4.982,1	4.545,3
1 A 2 stat-liquid	Manufacturing Industries and Construction	CO2	Gg		2.755,3	2.755,3	3.143,5	2.414,2	2.913,6	2.829,4	2.628,9	2.444,2	3.394,5	3.151,3	2.409,5	2.294,4	2.270,8	1.860,5	2.347,6
1 A 3 a aviation	Civil Aviation	CO2	Gg		7,8	7,8	8,1	8,3	8,6	8,8	7,1	6,8	7,6	8,2	8,7	6,4	6,4	6,4	6,4
1 A 3 a jet kero	Civil Aviation	CO2	Gg		24,2	24,2	29,4	34,7	40,0	45,3	50,5	56,7	62,9	69,1	72,4	75,7	60,3	68,8	60,3
1 A 3 b diesel c	Road Transportation	CO2	Gg		4.012,9	4.012,9	4.829,9	5.156,8	5.677,5	5.914,7	6.553,4	8.688,2	7.968,6	9.738,1	9.525,1	10.771,8	11.961,8	13.515,0	15.099,5
1 A 3 b gasoline	Road Transportation	CO2	Gg		7.911,2	7.911,2	8.678,7	8.297,1	7.958,7	7.673,0	7.411,3	6.855,7	6.497,0	6.810,2	6.317,8	6.107,5	6.151,9	6.622,6	6.783,4
1 A 3 c liquid	Railways	CO2	Gg		167,3	167,3	174,2	173,5	169,6	171,2	159,2	143,5	145,0	143,1	177,1	176,9	176,5	174,3	171,8
1 A 3 c solid	Railways	CO2	Gg		6,6	6,6	6,0	6,3	5,7	5,6	5,8	5,8	3,3	2,9	2,8	2,5	2,4	2,3	2,2
1 A 3 d gas/die	Navigation	CO2	Gg		42,8	42,8	37,9	37,0	37,3	46,3	44,6	44,7	52,6	53,2	53,9	54,5	63,7	70,6	75,3
1 A 3 d gasoline	Navigation	CO2	Gg		9,3	9,3	9,3	9,3	9,3	9,3	9,3	9,3	9,2	9,2	9,1	9,1	9,0	9,0	8,9
1 A 4 mobile-di	Other Sectors	CO2	Gg		1.314,3	1.314,3	1.174,0	1.216,1	1.228,2	1.308,9	1.217,2	1.335,8	1.430,1	1.376,7	1.400,0	1.313,6	1.382,2	1.422,0	1.418,7
1 A 4 mobile-gas	Other Sectors	CO2	Gg		42,9	42,9	42,7	43,3	42,3	44,5	43,9	45,1	44,8	44,1	44,1	43,9	43,8	43,7	43,5
1 A 4 mobile-lic	Other Sectors	CO2	Gg		141,8	141,8	142,2	143,6	144,5	143,5	144,3	143,3	142,3	141,4	140,6	140,5	140,4	140,5	140,2
1 A 4 other	Other Sectors	CO2	Gg		22,9	22,9	18,7	20,6	11,9	14,1	14,2	29,0	26,0	15,1	25,3	13,9	6,3	6,2	10,4
1 A 4 solid	Other Sectors	CO2	Gg		2.947,9	2.947,9	3.053,3	2.551,1	2.184,9	1.853,4	1.796,4	1.754,8	1.348,0	1.180,2	1.172,0	952,4	865,3	777,3	669,9
1 A 4 stat-liquid	Other Sectors	CO2	Gg		7.388,4	7.388,4	7.784,5	7.293,6	7.198,2	6.585,9	7.247,4	8.386,0	7.245,6	7.267,3	7.219,0	6.526,0	7.308,5	6.951,9	7.701,6
1 A 5 liquid	Other	CO2	Gg		35,0	35,0	37,1	33,7	39,4	41,6	32,6	38,9	37,1	42,4	41,6	45,0	36,2	41,0	36,2
1 A gaseous	Fuel Combustion (stationary)	CO2	Gg		11.088,0	11.088,0	11.686,2	11.748,9	12.250,4	12.868,3	13.957,4	15.109,1	14.573,0	14.886,5	15.037,8	14.460,7	15.371,0	15.339,8	16.569,4
1 B 2 a	Oil	CO2	Gg		43,0	43,0	43,0	40,0	37,0	47,5	38,0	41,0	31,1	61,0	90,0	72,0	88,0	84,0	133,0
1 B 2 b	Natural gas	CO2	Gg		59,0	59,0	68,0	80,0	75,0	80,0	89,0	30,0	89,4	80,8	80,5	92,5	94,7	83,0	100,0
2 A 1	Cement Production	CO2	Gg		2.033,4	2.033,4	2.005,0	2.105,0	2.031,9	2.102,3	1.631,3	1.634,2	1.760,9	1.598,7	1.607,4	1.711,6	1.719,9	1.735,7	1.735,7
2 A 2	Lime Production	CO2	Gg		396,2	396,2	361,3	355,1	365,2	390,5	394,6	382,7	412,5	453,8	453,1	497,5	506,6	546,6	546,6
2 A 3	Limestone and Dolomite Use	CO2	Gg		200,3	200,3	202,9	181,1	180,9	195,4	225,4	201,3	228,5	238,4	221,6	249,9	245,3	264,7	269,7
2 A 4	Soda Ash Production and use	CO2	Gg		19,4	19,4	22,3	19,7	19,8	21,1	21,2	21,2	19,7	19,7	21,6	18,2	21,4	18,9	18,8
2 A 7 a	Bricks and Tiles (decarbonizing)	CO2	Gg		112,3	112,3	117,5	121,5	130,6	134,7	143,4	143,4	132,2	128,8	116,7	111,7	119,3	115,9	115,9
2 A 7 b	Magnetite Sinter Plants	CO2	Gg		481,2	481,2	391,6	336,1	324,6	322,9	409,9	355,4	384,3	345,4	350,0	339,2	334,0	373,5	373,5
2 B 1	Ammonia Production	CO2	Gg		396,0	396,0	408,0	371,1	402,9	381,4	468,3	465,3	457,1	501,2	472,1	463,0	442,0	445,1	493,6
2 B 2	Nitric Acid Production	CO2	Gg		0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
2 B 4	Carbide Production	CO2	Gg		37,5	37,5	35,2	41,3	32,9	25,1	26,2	32,8	32,8	35,0	32,5	48,1	46,7	40,8	40,6
2 B 5	Other	CO2	Gg		30,5	30,5	28,0	38,0	33,8	22,6	20,0	18,4	17,6	19,0	19,9	20,8	20,0	24,0	24,2
2 C 1	Iron and Steel Production	CO2	Gg		3.545,7	3.545,7	3.508,4	3.073,9	3.122,3	3.376,9	3.886,9	3.675,0	4.063,4	3.867,4	3.730,3	4.165,8	4.125,2	4.618,1	4.513,1
2 C 2	Ferroalloys Production	CO2	Gg		20,8	20,8	20,8	20,8	20,8	20,8	20,8	18,8	19,3	19,2	18,9	18,9	18,9	18,9	18,9
2 C 3	Aluminium production	CO2	Gg		158,4	158,4	158,4	63,0	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
3	SOLVENT AND OTHER PRODUCT USE	CO2	Gg		282,7	282,7	236,8	187,7	187,4	171,5	189,9	172,8	190,1	172,2	158,4	181,0	193,6	193,6	193,6
6 C	WASTE INCINERATION	CO2	Gg		20,7	20,7	18,5	7,5	8,5	9,8	10,1	10,4	10,7	11,0	11,3	11,3	11,2	11,3	11,3
2F6	Semiconductor Manufacture	FCs	Gg	C	505,7	133,1	215,2	287,8	360,4	430,9	505,7	403,9	593,8	477,8	453,9	407,1	416,9	425,8	483,0
2F1/2/3	ODS Substitutes	HFCs	Gg	C	547,1	217,2	331,5	382,5	438,8	498,4	547,1	627,8	720,5	809,9	864,1	1.015,6	1.118,9	1.215,1	1.304,7

Table A1.3: Source Categories and Emissions for Key Source Analysis

1 A 1 a biomass	Public Electricity and Heat Production	N2O	Gg	C	2,5	2,5	3,7	4,3	4,5	4,7	5,5	7,6	7,6	8,7	8,7	11,4	15,0	17,1	19,7
1 A 1 a gaseou	Public Electricity and Heat Production	N2O	Gg	C	10,2	10,2	10,0	9,2	9,2	10,6	11,2	12,0	8,3	11,2	10,8	9,2	10,6	11,0	7,1
1 A 1 a liquid	Public Electricity and Heat Production	N2O	Gg	C	6,7	6,7	7,8	7,0	9,9	9,5	7,5	7,7	10,0	11,5	10,8	6,0	6,5	4,2	5,2
1 A 1 a other	Public Electricity and Heat Production	N2O	Gg	C	1,0	1,0	1,3	2,1	2,1	2,2	2,2	2,6	2,8	2,7	2,2	2,5	3,3	3,9	4,2
1 A 1 a solid	Public Electricity and Heat Production	N2O	Gg	C	23,0	23,0	27,3	17,4	15,0	14,9	19,6	15,4	14,2	14,9	16,5	22,1	24,3	22,9	28,3
1 A 1 b gaseou	Petroleum refining	N2O	Gg	C	0,3	0,3	0,3	0,3	0,3	0,2	0,2	0,3	0,3	0,3	0,2	0,2	0,2	0,2	0,3
1 A 1 b liquid	Petroleum refining	N2O	Gg	C	2,6	2,6	2,6	2,5	3,3	3,6	3,4	3,1	3,1	3,1	2,5	2,8	2,4	3,3	3,4
1 A 1 c gaseou	Manufacture of Solid fuels and Other Energy	N2O	Gg	C	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
1 A 1 c liquid	Manufacture of Solid fuels and Other Energy	N2O	Gg	C	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
1 A 2 biomass	Manufacturing Industries and Construction	N2O	Gg	C	20,5	20,5	21,0	21,6	24,9	25,3	24,6	23,3	27,9	20,9	33,1	25,8	28,7	30,5	34,8
1 A 2 gaseous	Manufacturing Industries and Construction	N2O	Gg	C	2,4	2,4	2,4	2,5	2,5	3,0	3,1	3,3	3,6	3,3	3,1	3,3	3,3	3,4	3,3
1 A 2 mobile-lic	Manufacturing Industries and Construction	N2O	Gg	C	109,9	109,9	114,3	115,4	111,7	118,4	115,6	113,5	118,2	121,8	114,9	112,1	109,8	107,9	97,5
1 A 2 other	Manufacturing Industries and Construction	N2O	Gg	C	1,9	1,9	2,3	2,8	2,1	2,3	2,4	2,8	2,4	2,6	3,0	3,0	3,1	3,8	3,5
1 A 2 solid	Manufacturing Industries and Construction	N2O	Gg	C	15,2	15,2	16,1	14,7	14,5	14,8	16,1	15,7	18,1	18,6	16,9	19,7	18,3	19,8	18,3
1 A 2 stat-liquid	Manufacturing Industries and Construction	N2O	Gg	C	9,5	9,5	11,0	8,3	9,8	9,9	9,1	8,3	11,2	10,5	8,0	7,9	7,9	6,0	7,5
1 A 3 a jet kero	Civil Aviation	N2O	Gg	C	0,3	0,3	0,4	0,5	0,5	0,6	0,6	0,7	0,8	0,9	0,9	1,0	0,8	0,9	0,8
1 A 3 b diesel c	Road Transportation	N2O	Gg	C	33,2	33,2	39,0	40,8	44,0	45,3	49,2	62,1	58,2	69,9	69,2	77,1	83,8	94,0	103,8
1 A 3 b gasolin	Road Transportation	N2O	Gg	C	126,5	126,5	186,9	220,9	249,2	262,4	257,3	239,0	223,7	226,7	202,8	188,0	176,9	175,7	164,6
1 A 3 c liquid	Railways	N2O	Gg	C	6,6	6,6	6,9	6,7	6,5	6,4	5,9	5,2	5,2	5,1	6,2	6,1	6,0	5,8	5,6
1 A 3 c solid	Railways	N2O	Gg	C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0
1 A 3 d gas/die	Navigation	N2O	Gg	C	3,8	3,8	3,4	3,2	3,2	3,9	3,7	3,7	4,3	4,2	4,2	4,2	4,8	5,3	5,5
1 A 3 d gasolin	Navigation	N2O	Gg	C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
1 A 3 e gaseou	Other	N2O	Gg	C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,2	0,2	0,3	0,3	0,3	0,3
1 A 4 biomass	Other Sectors	N2O	Gg	C	85,4	85,4	94,2	88,5	90,0	82,8	89,1	96,8	90,8	88,4	89,5	84,7	95,5	90,9	99,2
1 A 4 gaseous	Other Sectors	N2O	Gg	C	14,3	14,3	17,4	19,4	21,2	19,0	22,5	22,8	22,2	22,1	26,9	23,1	29,0	24,4	26,6
1 A 4 mobile-di	Other Sectors	N2O	Gg	C	137,8	137,8	123,5	127,8	129,0	138,4	130,2	144,7	156,8	151,2	151,2	139,2	142,9	142,6	137,5
1 A 4 mobile-g	Other Sectors	N2O	Gg	C	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
1 A 4 mobile-lic	Other Sectors	N2O	Gg	C	7,4	7,4	7,4	7,5	7,6	7,8	8,0	7,9	7,9	7,9	7,0	6,9	6,8	6,7	5,8
1 A 4 other	Other Sectors	N2O	Gg	C	1,0	1,0	0,8	0,9	0,5	0,6	0,6	1,3	1,1	0,7	1,1	0,6	0,3	0,3	0,5
1 A 4 solid	Other Sectors	N2O	Gg	C	22,6	22,6	23,5	19,7	16,8	14,3	13,8	13,4	10,4	8,9	9,0	7,3	6,6	5,9	5,2
1 A 4 stat-liquid	Other Sectors	N2O	Gg	C	25,8	25,8	28,4	26,8	27,4	25,4	27,7	31,8	28,7	28,8	28,4	25,5	28,5	27,3	30,1
1 A 5 liquid	Other	N2O	Gg	C	0,9	0,9	0,9	0,9	1,0	1,0	0,8	1,0	0,9	1,0	0,9	1,1	0,9	1,0	1,0
2 B 2	Nitric Acid Production	N2O	Gg	C	912,0	912,0	927,3	837,5	878,7	825,2	857,2	874,2	862,6	896,7	923,5	951,6	786,5	807,2	883,4
3	SOLVENT AND OTHER PRODUCT USE	N2O	Gg	C	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5	232,5
4 B 1	Cattle	N2O	Gg	C	662,7	662,7	652,9	624,0	625,6	636,6	646,9	637,9	627,6	622,9	618,6	613,9	603,5	593,8	588,3
4 B 3	Sheep	N2O	Gg	C	2,9	2,9	3,0	2,9	3,1	3,2	3,4	3,5	3,6	3,3	3,3	3,1	3,0	2,8	3,0
4 B 4	Goats	N2O	Gg	C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
4 B 6	Horses	N2O	Gg	C	0,2	0,2	0,3	0,3	0,3	0,3	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
4 B 8	Swine	N2O	Gg	C	94,2	94,2	92,9	95,0	97,5	96,0	96,0	93,5	93,7	97,6	88,1	85,5	89,3	85,0	87,0
4 B 9	Poultry	N2O	Gg	C	26,2	26,2	27,8	26,3	28,0	27,4	26,8	24,9	28,2	27,3	27,4	22,7	24,0	24,0	24,8
4 B-13	Other Animals	N2O	Gg	C	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
4 D 1	Direct Soil Emissions	N2O	Gg	C	1.649,4	1.649,4	1.814,8	1.675,6	1.516,6	1.821,3	1.825,2	1.573,7	1.650,6	1.673,2	1.566,6	1.526,8	1.586,1	1.533,8	1.414,1
4 D 2	Animal Production	N2O	Gg	C	206,9	206,9	212,9	206,4	218,8	223,6	232,5	232,7	234,5	227,4	226,3	220,5	216,3	211,9	216,0
4 D 3	Indirect Emissions	N2O	Gg	C	1.203,7	1.203,7	1.291,4	1.178,3	1.086,0	1.251,2	1.268,9	1.134,6	1.167,1	1.167,3	1.093,8	1.088,5	1.116,0	1.074,7	1.016,1
4 D 4	Other	N2O	Gg	C	7,5	7,5	7,5	7,1	10,7	9,1	10,1	10,2	10,2	10,3	10,3	9,5	9,5	9,5	9,5
4 F	FIELD BURNING OF AGRICULTURAL RESIDUES	N2O	Gg	C	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,4	0,3	0,4	0,3	0,4	0,4	0,3
6 B	WASTEWATER HANDLING	N2O	Gg	C	17,0	17,0	17,6	18,3	18,7	35,9	60,1	81,3	92,3	118,4	135,5	158,4	193,1	191,6	192,4
6 C	WASTE INCINERATION	N2O	Gg	C	0,1	0,1	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
6 D	OTHER WASTE	N2O	Gg	C	23,9	23,9	25,0	29,7	37,0	43,8	46,3	48,4	47,6	49,2	52,3	52,4	53,0	53,3	54,3
2C3	Aluminium production	PFCs	Gg	Cf	0,0	1.050,2	1.050,2	417,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Table A1.3: Source Categories and Emissions for Key Source Analysis



2C4	SF6 Used in Al and Mg Foundries	SF6	GgCf	443,1	253,3	277,2	253,3	277,2	372,8	443,1	610,6	349,2	164,2	22,2	7,6	7,6	7,6	0,0
2F7	Electrical Equipment	SF6	GgCf	26,1	20,6	21,7	22,8	23,9	25,0	26,1	26,9	27,1	27,2	28,9	29,1	29,4	30,0	31,5
2F8	Other Sources of SF6	SF6	GgCf	241,2	126,6	179,2	183,1	190,6	222,5	241,2	252,2	256,1	286,1	246,4	265,2	268,3	268,0	185,1
	<b>TOTAL</b>		<b>GgCf</b>	<b>78.535,2</b>	<b>78.573,0</b>	<b>82.647,0</b>	<b>76.062,6</b>	<b>76.177,6</b>	<b>77.045,4</b>	<b>80.159,1</b>	<b>83.237,4</b>	<b>83.046,1</b>	<b>82.513,7</b>	<b>80.403,0</b>	<b>81.083,5</b>	<b>84.871,8</b>	<b>86.433,8</b>	<b>91.566,4</b>

IPCC Category Description		Gas	BY	LA90	LA91	LA92	LA93	LA94	LA95	LA96	LA97	LA98	LA99	LA00	LA01	LA02	LA03	TA96	TA97	TA98	TA99	TA00	TA01	TA02	TA03	
1 A gaseous	Fuel Combustion (stationary)	CO2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	
1 A 1 a liquid	Public Electricity and Heat Production	CO2	16	16	15	15	13	13	15	15	12	11	11	15	15	18	16	12	7	7	7			12	16	
1 A 1 a other	Public Electricity and Heat Production	CO2				33				31	29	28		30	29	29	27	14	13	15	20	16	16	17	17	
1 A 1 a solid	Public Electricity and Heat Production	CO2	4	4	4	7	9	8	5	5	6	7	6	5	5	5	4	3	5	3	3	5	6	6	15	
1 A 1 b liquid	Petroleum refining	CO2	13	13	13	13	11	11	11	11	11	12	12	11	11	10	11	20	20	18	17	15	14		18	
1 A 2 mob-liquid	Manufacturing Industries and Constr.	CO2	18	19	18	18	18	18	18	18	18	18	18	17	18	16	17									
1 A 2 other	Manufacturing Industries and Constr.	CO2		31		29							29	28	27	26	29	22		21			22	21		
1 A 2 solid	Manufacturing Industries and Constr.	CO2	5	5	6	5	5	5	6	6	5	5	5	6	6	6	6	7	23	8	9	20	10	19	7	
1 A 2 stat-liquid	Manufacturing Industries and Constr.	CO2	11	11	10	11	10	10	10	10	8	9	10	10	10	11	10	10	9	13	11	8	7	8	9	
1 A 3 b diesel oil	Road Transportation	CO2	7	7	5	4	4	4	4	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	
1 A 3 b gasoline	Road Transportation	CO2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	5	4	3	5	5	4	3	4	4	
1 A 3 b gasoline	Road Transportation	N2O					31	31	31									21	22	23						
1 A 4 biomass	Other Sectors	CH4	29	27	27	28	28	30	29	29		31	31						24	24	23	23				
1 A 4 mob-diesel	Other Sectors	CO2	15	15	17	16	16	16	17	16	15	15	15	14	14	14	13								25	
1 A 4 solid	Other Sectors	CO2	10	10	11	10	12	14	13	12	16	16	16	19	19	20	20	5	4	4	4	3	4	3	3	
1 A 4 stat-liquid	Other Sectors	CO2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	8	8	10	13	7	8	7	8	
2 A 1	Cement Production	CO2	12	12	12	12	14	12	14	13	13	14	13	12	12	12	12	9	11	9	8	13	12	13	11	
2 A 2	Lime Production	CO2	27	25	26	26	25	25	28	27	26	26	25	22	22	22	22					24				
2 A 7 b	Magnesit Sinter Plants	CO2	24	23	25	27	27	28	27	28	27	27	27	27	28	28	28	15	15	16	15	17	19	22	20	
2 B 1	Ammonia Production	CO2	28	26	24	25	24	26	24	24	24	22	23	24	24	24	23									
2 B 2	Nitric Acid Production	N2O	19	20	20	19	19	19	19	19	19	19	19	20	20	19	19	23	19				17	18	22	
2 C 1	Iron and Steel Production	CO2	8	8	8	9	8	7	7	7	7	6	7	7	7	7	7	24	12	17	22	9	15	10	14	
2 C 3	Aluminium production	PFCs		18	19	23																				
2 C 4	SF6 used in Al and Mg Foundries	SF6	26	30	30	32	30	27	26	22	28							17	16	12	10	12	13	14		
2 F 1/2/3	ODS Substitutes	HFCs	22		28	24	23	22	21	21	20	20	20	18	16	15	15		14	14	14	11	11	11	10	
2 F 6	Semiconductor Manufacture	FCs	23			31	26	24	23	26	22	24	24	25	26	25	24	18				21	23			
2 F 8	Other Sources of SF6	SF6									31	30	30	31	31											
3	Solvent and Other Product Use	CO2	31	29														19	17	19	18	22			24	
4 A 1	Cattle	CH4	9	9	9	8	7	9	9	9	10	10	9	9	8	8	8	11	10	11	12	10	9	9	6	
4 B 1	Cattle	N2O	20	21	21	20	20	20	20	20	21	21	21	21	21	21	21								21	
4 B 1	Cattle	CH4	21	22	22	21	21	21	22	23	23	23	22	23	23	23	25	25	25				25	24		19
4 B 8	Swine	CH4	25	24	23	22	22	23	25	25	25	25	26	26	25	27	26								26	
4 D 1	Direct Soil Emissions	N2O	14	14	14	14	15	15	12	14	14	13	14	13	13	13	14	13	21		19	14	18	15	12	
4 D 3	Indirect Emissions	N2O	17	17	16	17	17	17	16	17	17	17	17	16	17	17	18	16	18	22	16	18	20	16	13	
6 A	Solid Waste disposal on land	CH4	6	6	7	6	6	6	8	8	9	8	8	8	9	9	9	6	6	6	6	6	5	5	5	
6 B	Wastewater handling	N2O	30	28	29	30	29	29	30	30	30	29	28	29	30	30			26	20	21	19	21	20	23	
	LA00= Level Assessment 2000																									
	TA00= Trend Assessment BY-2001																									

Table A1.4: Ranking of Key Sources



## ANNEX 2: SECTOR 1 A FUEL COMBUSTION

This annex includes a description of the national energy balance (including fuel and fuel categories) and a description of the methodology applied to extract activity data from the energy balance for the calculation of emissions for *Sector 1 A Fuel Combustion* (e.g. correspondence of categories of the energy balance to IPCC categories). Activity data used for estimating emissions in the sectoral approach as taken from the energy balance is also presented.

Furthermore, at the beginning of this Annex, the revision of the national energy balance as well as the implication of this revision on activity data is described.

### Recalculations

In 2004 STATISTIK AUSTRIA revised the energy balance and the following improvements have been made.

#### Changes in methodology

The energy balance was revised regarding consumption of households and the commercial sector. The new estimates are now based on a model which considers space heating and water heating demand. As for most fuels gross inland deliveries were not changed this mostly implied shifts to or from the industrial sector.

#### Implications on activity data by fuels

##### *102A Hard Coal, 105A Lignite, 107A Coke oven Coke*

Minor adjustments of gross inland deliveries from 1995 onwards due to error correction and better information from industry that has become available.

##### *110A Petrol Coke*

This new fuel category has been introduced (petrol coke was reported as "Other Oil Products" in the previous submission).

##### *301A Natural Gas*

For 2001 and 2002 Gross inland deliveries have been corrected following new statistical data that has become available.

For 1990, 1995 to 2002 shifts between Public Transformation Plants and Autoproducers.

For the whole time series shifts between industry and small combustion sector as already mentioned above under "Changes in methodology".

##### *203x Residual Fuel Oil, 224A Other Oil Products*

Gross inland deliveries were updated for 1990 to 2001 as better information on refinery fuel types used for CHP and electricity generation has become available. For 1990 to 1992 up to 63 kt of "Other Oil Products" were shifted from Refinery to Industrial Auto Producers as "Residual Fuel Oil" to improve time series consistency.

##### *116A Wood Waste, 111 A Fuel Wood*

From 1999 on an increase of gross inland deliveries based on new statistical data on consumption and on production and foreign trade of wood pellets.

### 115A Industrial waste

From 1999 on an increase of gross inland deliveries, mainly due to new information on cement industry. Update of heating values according to national cement study which is consistent with data used for the national allocation plan for the European Emissions Trading System (CO<sub>2</sub> trading).

### 309A Biogas, 309B Sewage Sludge Gas, 310A Landfill Gas

From 1999 on slightly corrections between fuel types and gross inland deliveries. Furthermore, an error regarding the heating values used was corrected.

Table 1 presents the recalculation difference of fuel consumption for the base year 1990 and the years 2001 and 2002.

Table 1: Recalculation difference of fuel consumption [PJ] with respect to previous submission.

IPCC Category / Fuel Group	Fuel Consumption [PJ]								
	Subm. 2004	1990 Subm. 2005	Differen ce	Subm. 2004	2001 Subm. 2005	Differen ce	Subm. 2004	2002 Subm. 2005	Differen ce
<b>1 A FUEL COMBUSTION ACTIVITIES</b>	825.48	822.61	-2.87	996.63	1 002.98	6.35	989.88	1 017.88	28.00
1 A liquid	380.40	376.78	-3.62	462.16	458.10	-4.06	468.98	474.08	5.10
1 A solid	140.87	140.86	-0.01	124.63	121.87	-2.76	114.60	119.65	5.05
1 A gaseous	201.60	201.60	0.00	272.29	279.47	7.19	264.68	278.91	14.23
1 A biomass	94.38	94.38	0.00	125.27	128.08	2.80	129.16	126.86	-2.30
1 A other	8.23	8.99	0.76	12.28	15.46	3.18	12.47	18.38	5.91
<b>1 A 1 Energy Industries</b>	193.60	186.25	-7.35	213.99	197.54	-16.44	227.17	203.23	-23.94
1 A 1 liquid	54.05	46.29	-7.76	52.72	44.85	-7.87	39.73	42.74	3.01
1 A 1 solid	61.47	61.40	-0.07	61.13	60.73	-0.40	59.80	56.13	-3.67
1 A 1 gaseous	73.62	74.10	0.48	82.41	71.96	-10.44	104.83	81.39	-23.44
1 A 1 biomass	2.04	2.04	-	11.91	12.38	0.46	13.60	14.07	0.47
1 A 1 other	2.41	2.41	-	5.81	7.62	1.81	9.22	8.90	-0.31
<b>1 A 1 a Public Electricity and Heat Production</b>	143.63	140.95	-2.68	159.90	159.24	-0.67	180.25	160.72	-19.53
1 A 1 a liquid	17.47	15.63	-1.84	19.97	17.30	-2.67	10.55	10.72	0.17
1 A 1 a solid	61.47	61.40	-0.07	61.13	60.73	-0.40	59.80	56.13	-3.67
1 A 1 a gaseous	60.23	59.46	-0.77	61.08	61.21	0.13	87.09	70.90	-16.20
1 A 1 a biomass	2.04	2.04	-	11.91	12.38	0.46	13.60	14.07	0.47
1 A 1 a other	2.41	2.41	-	5.81	7.62	1.81	9.22	8.90	-0.31
<b>1 A 1 b Petroleum refining</b>	43.70	39.80	-3.90	40.13	34.93	-5.20	36.54	39.39	2.85
1 A 1 b liquid	35.66	30.66	-5.00	32.75	27.55	-5.20	29.18	32.02	2.84
1 A 1 b solid	NO	NO	-	NO	NO	-	NO	NO	-



IPCC Category / Fuel Group	Fuel Consumption [PJ]								
	1990			2001			2002		
	Subm. 2004	Subm. 2005	Difference	Subm. 2004	Subm. 2005	Difference	Subm. 2004	Subm. 2005	Difference
1 A 1 b gaseous	8.04	9.14	1.10	7.38	7.38	0.00	7.36	7.37	0.02
1 A 1 b biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 1 b other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 1 c Manufacture of Solid fuels and Other Energy Industries</b>	6.26	5.49	-0.77	13.95	3.37	-10.58	10.38	3.12	-7.26
1 A 1 c liquid	0.92	NO	-0.92	NO	NO	-	NO	NO	-
1 A 1 c solid	NO	NO	-	NO	NO	-	NO	NO	-
1 A 1 c gaseous	5.34	5.49	0.15	13.95	3.37	-10.58	10.38	3.12	-7.26
1 A 1 c biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 1 c other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 2 Manufacturing Industries and Construction</b>	208.68	207.17	-1.50	233.67	247.54	13.87	208.40	252.12	43.72
1 A 2 liquid	43.85	49.30	5.45	37.93	44.00	6.07	38.65	38.53	-0.13
1 A 2 solid	48.05	48.10	0.05	52.23	51.88	-0.34	45.54	55.19	9.66
1 A 2 gaseous	83.09	77.38	-5.70	98.81	105.86	7.05	77.63	109.77	32.14
1 A 2 biomass	28.11	28.11	0.00	39.16	38.58	-0.57	43.76	39.77	-4.00
1 A 2 other	5.58	4.28	-1.30	5.55	7.21	1.66	2.82	8.86	6.04
<b>1 A 2 a Iron and Steel</b>	53.50	56.65	3.15	67.26	68.86	1.60	65.04	69.52	4.48
1 A 2 a liquid	3.83	5.72	1.89	11.03	11.38	0.35	12.73	6.80	-5.93
1 A 2 a solid	39.21	39.20	-0.01	40.99	40.16	-0.83	38.02	44.33	6.32
1 A 2 a gaseous	10.46	11.73	1.27	15.25	17.32	2.07	14.28	18.38	4.09
1 A 2 a biomass	NO	NO	-	0.00	NO	-	0.00	0.00	0.00
1 A 2 a other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 2 b Non-ferrous Metals</b>	1.89	1.89	0.00	3.49	3.39	-0.10	2.57	3.49	0.92
1 A 2 b liquid	0.51	0.50	-0.01	0.51	0.68	0.18	0.56	0.68	0.12
1 A 2 b solid	0.04	0.04	0.00	0.40	0.12	-0.28	0.15	0.16	0.01
1 A 2 b gaseous	1.34	1.35	0.01	2.58	2.58	0.00	1.86	2.65	0.79
1 A 2 b biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 2 b other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 2 c Chemicals</b>	14.49	16.60	2.11	15.28	23.03	7.75	15.88	24.46	8.58
1 A 2 c liquid	0.93	0.99	0.05	0.25	0.95	0.70	0.16	0.84	0.68
1 A 2 c solid	0.23	0.78	0.55	1.74	2.75	1.00	1.22	2.64	1.42
1 A 2 c gaseous	7.66	9.67	2.01	7.48	16.38	8.89	7.26	16.06	8.80
1 A 2 c biomass	2.90	2.90	-	2.37	1.52	-0.85	5.65	2.31	-3.34
1 A 2 c other	2.76	2.27	-0.49	3.43	1.43	-2.00	1.59	2.62	1.03



IPCC Category / Fuel Group	Fuel Consumption [PJ]								
	Subm. 2004	1990 Subm. 2005	Differen ce	Subm. 2004	2001 Subm. 2005	Differen ce	Subm. 2004	2002 Subm. 2005	Differen ce
<b>1 A 2 d Pulp, Paper and Print</b>	36.39	53.87	17.48	42.60	58.40	15.81	36.84	58.95	22.12
1 A 2 d liquid	5.09	10.54	5.45	1.80	2.53	0.73	1.14	1.99	0.85
1 A 2 d solid	2.31	3.68	1.37	3.04	3.79	0.75	2.53	4.36	1.84
1 A 2 d gaseous	12.78	17.11	4.33	17.20	26.44	9.24	12.41	24.53	12.12
1 A 2 d biomass	16.21	21.88	5.67	20.53	25.53	4.99	20.75	27.97	7.22
1 A 2 d other	NO	0.66	0.66	0.02	0.11	0.09	0.01	0.10	0.09
<b>1 A 2 e Food Processing, Beverages and Tobacco</b>	12.31	13.54	1.22	14.51	18.36	3.85	10.60	21.60	11.00
1 A 2 e liquid	3.31	4.21	0.90	1.41	2.77	1.36	1.23	2.31	1.08
1 A 2 e solid	0.06	0.06	0.00	0.30	0.31	0.00	0.14	0.30	0.16
1 A 2 e gaseous	8.82	9.14	0.32	12.77	15.07	2.30	9.21	18.81	9.60
1 A 2 e biomass	0.13	0.13	-	0.02	0.21	0.19	0.01	0.18	0.16
1 A 2 e other	NO	NO	-	0.01	NO	-0.01	0.00	NO	0.00
<b>1 A 2 f Other</b>	90.10	64.63	-25.47	90.53	75.49	-15.04	77.48	74.10	-3.38
1 A 2 f liquid	30.18	27.34	-2.84	22.93	25.68	2.74	22.83	25.91	3.08
1 A 2 f solid	6.20	4.35	-1.85	5.74	4.75	-0.99	3.48	3.40	-0.08
1 A 2 f gaseous	42.02	28.38	-13.64	43.52	28.07	-15.46	32.61	29.35	-3.26
1 A 2 f biomass	8.87	3.21	-5.67	16.23	11.33	-4.90	17.35	9.31	-8.04
1 A 2 f other	2.82	1.36	-1.46	2.09	5.66	3.57	1.22	6.13	4.92
<b>1 A 3 Transport</b>	171.75	166.91	-4.84	255.94	258.14	2.20	280.96	286.58	5.61
1 A 3 gasoline	105.42	105.29	-0.13	83.35	83.30	-0.05	89.53	89.56	0.03
1 A 3 diesel	61.78	57.06	-4.72	162.38	165.63	3.25	183.83	186.78	2.95
1 A 3 natural gas	4.05	4.05	-	9.09	8.25	-0.84	6.55	9.17	2.62
1 A 3 solid	0.07	0.07	-	0.02	0.03	0.00	0.02	0.02	0.00
1 A 3 biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 3 a Civil Aviation</b>	0.44	0.44	0.00	1.09	0.92	-0.17	1.03	1.03	0.01
1 A 3 a aviation gasoline	0.10	0.11	0.00	0.09	0.09	0.00	0.09	0.09	0.00
1 A 3 a jet kerosene	0.33	0.33	-	1.00	0.83	-0.17	0.94	0.95	0.01
<b>1 A 3 b Road Transportation</b>	164.24	159.39	-4.85	242.60	245.56	2.95	270.24	272.90	2.65
1 A 3 b gasoline	105.30	105.17	-0.13	83.23	83.18	-0.05	89.41	89.44	0.03
1 A 3 b diesel oil	58.94	54.22	-4.72	159.37	162.37	3.00	180.84	183.46	2.62
1 A 3 b natural gas	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 b biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 b other	NO	NO	-	NO	NO	-	NO	NO	-



IPCC Category / Fuel Group	Fuel Consumption [PJ]								
	Subm. 2004	1990 Subm. 2005	Difference	Subm. 2004	2001 Subm. 2005	Difference	Subm. 2004	2002 Subm. 2005	Difference
<b>1 A 3 c Railways</b>	2.33	2.33	-	2.29	2.42	0.13	2.26	2.39	0.12
1 A 3 c solid	0.07	0.07	-	0.02	0.03	0.00	0.02	0.02	0.00
1 A 3 c liquid	2.26	2.26	-	2.26	2.40	0.13	2.24	2.36	0.12
1 A 3 c other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 3 d Navigation</b>	0.70	0.70	-	0.87	0.99	0.12	0.87	1.08	0.21
1 A 3 d coal	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 d residual oil	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 d gas/diesel oil	0.58	0.58	-	0.74	0.86	0.12	0.75	0.96	0.21
1 A 3 d other	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 d gasoline	0.12	0.12	-	0.12	0.12	0.00	0.12	0.12	0.00
<b>1 A 3 e Other</b>	4.05	4.05	-	9.09	8.25	-0.84	6.55	9.17	2.62
1 A 3 e liquid	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 e solid	NO	NO	-	NO	NO	-	NO	NO	-
1 A 3 e gaseous	4.05	4.05	-	9.09	8.25	-0.84	6.55	9.17	2.62
<b>1 A 4 Other Sectors</b>	250.96	261.79	10.83	292.44	299.26	6.83	272.79	275.39	2.60
1 A 4 liquid	114.38	117.91	3.53	124.09	118.90	-5.19	115.65	114.88	-0.78
1 A 4 solid	31.28	31.29	0.01	11.24	9.23	-2.02	9.25	8.30	-0.94
1 A 4 gaseous	40.85	46.07	5.22	81.98	93.39	11.41	75.67	78.57	2.90
1 A 4 biomass	64.22	64.22	0.00	74.20	77.12	2.91	71.79	73.02	1.23
1 A 4 other	0.23	2.29	2.06	0.92	0.63	-0.29	0.43	0.62	0.19
<b>1 A 4 a Commercial/Institutional</b>	27.57	36.77	9.20	32.63	47.08	14.45	21.49	31.45	9.96
1 A 4 a liquid	16.46	17.91	1.45	11.29	9.17	-2.11	6.14	8.31	2.17
1 A 4 a solid	1.04	1.03	0.00	0.48	0.38	-0.10	0.28	0.27	-0.01
1 A 4 a gaseous	7.66	13.36	5.69	18.49	32.50	14.01	13.33	18.67	5.33
1 A 4 a biomass	2.18	2.17	0.00	1.45	4.39	2.94	1.31	3.59	2.28
1 A 4 a other	0.23	2.29	2.06	0.92	0.63	-0.29	0.43	0.62	0.19
<b>1 A 4 b Residential</b>	194.23	193.75	-0.48	226.82	222.34	-4.48	218.51	214.46	-4.05
1 A 4 b liquid	73.73	73.73	0.00	86.53	86.57	0.04	83.25	83.34	0.09
1 A 4 b solid	29.63	29.63	-	10.54	8.66	-1.89	8.79	7.87	-0.92
1 A 4 b gaseous	32.83	32.35	-0.48	62.81	60.20	-2.61	61.67	59.23	-2.44
1 A 4 b biomass	58.05	58.05	-	66.94	66.92	-0.02	64.80	64.02	-0.78
1 A 4 b other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 4 c Agriculture/Forestry/Fisheries</b>	29.16	31.27	2.11	32.99	29.84	-3.14	32.80	29.49	-3.31

IPCC Category / Fuel Group	Fuel Consumption [PJ]								
	1990			2001			2002		
	Subm. 2004	Subm. 2005	Difference	Subm. 2004	Subm. 2005	Difference	Subm. 2004	Subm. 2005	Difference
1 A 4 c liquid	24.20	26.28	2.08	26.27	23.16	-3.11	26.26	23.23	-3.04
1 A 4 c solid	0.62	0.63	0.02	0.22	0.19	-0.03	0.18	0.16	-0.02
1 A 4 c gaseous	0.35	0.37	0.01	0.68	0.68	0.01	0.67	0.67	0.01
1 A 4 c biomass	4.00	4.00	-	5.82	5.81	-0.01	5.69	5.42	-0.27
1 A 4 c other	NO	NO	-	NO	NO	-	NO	NO	-
<b>1 A 5 Other</b>	0.48	0.48	-	0.60	0.50	-0.10	0.56	0.56	0.00
1 A 5 liquid	0.48	0.48	-	0.60	0.50	-0.10	0.56	0.56	0.00
1 A 5 solid	NO	NO	-	NO	NO	-	NO	NO	-
1 A 5 gaseous	NO	NO	-	NO	NO	-	NO	NO	-
1 A 5 biomass	NO	NO	-	NO	NO	-	NO	NO	-
1 A 5 other	NO	NO	-	NO	NO	-	NO	NO	-
<b>International Bunkers</b>	12.26	12.26	-	22.20	22.65	0.45	20.79	20.98	0.19

A “-” indicates that no recalculations were carried out.

## Methodology

For calculations of emissions from category *1 A Fuel Combustion* CORINAIR methodology was applied. The fuel consumption based on the energy balance is multiplied with source specific emission factors for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. Sector specific considerations and emission factors are described in the related sub chapters of Chapter 3 *Energy* of the NIR 2005.

Activity data is taken from the national energy balance as described in the following sub chapters. Data of the national energy balance is presented in Annex 4.

## The National Energy Balance

The new time series is consistent to the *IEA/EUROSTAT Joint Questionnaire* format. The revised year 2002 and the new energy balance for 2003 has been submitted to the IEA in January 2005. The revised time series 1990 to 2001 is not yet submitted to IEA/EUROSTAT. This is due to a planned improvement and finalization of the whole time series by Statistik Austria in 2005. It is planned to submit the finalised time series to IEA/EUROSTAT until the end of 2005.

There are five different IEA questionnaires for each of: oil; natural gas; coal; renewable fuels; electricity and heat. Table 2 shows the unified categories of the IEA questionnaires with ISIC codes and the corresponding SNAP and IPCC categories to which the fuel consumption is assigned to.

Data of the national energy balance is presented in Annex 4.





Table 2: Categories of the national energy balance [IEA-JQ, 2004] and their correspondence to IPCC categories.

IEA-Category and ISIC Codes*	Comments	SNAP	IPCC-Category
Production			Reference Approach: Production
Imports			Reference Approach: Import
Exports			Reference Approach: Export
Bunkers	No consumption <sup>(1)</sup>		
Stock Changes			Reference Approach: Stock Change
Refinery Fuel		0103	1 A 1 b Petroleum Refining
<b>Transformation Sector, of which:</b>			
Public Electricity plants	In the inventory plant specific data are considered.	0101 0102	1 A 1 a Public Electricity and Heat Production
Public CHP plants			
Public Heat plants			
Auto Producer Electricity plants	For autoproducers by sectors see table below.		
Auto Producer CHP plants			
Auto Producer Heat plants			
Coke Ovens	Transformation from <i>Coking Coal to Coke Oven Coke</i> .		
Blast furnaces	Coke Oven Coke.	030326	1 A 2 a Iron and Steel
Gas Works	Transformation of <i>Other Oil Products to Gas Works Gas</i> .		
Petrochemical Industry	No consumption <sup>(1)</sup>		
Patent Fuel Plants	No consumption <sup>(1)</sup>		
Not Elsewhere Specified	No consumption <sup>(1)</sup>		
<b>Energy Sector, of which (ISIC 10, 11, 12, 23, 40):</b>			
Coal Mines	No consumption <sup>(1)</sup>		
Oil and Gas Extraction		0105	1 A 1 c Manufacture of Solid fuels and Other Energy Industries
Inputs to oil refineries		0103	1 A 1 b Petroleum Refining
Coke Ovens	<i>Coke Oven Gas and Blast Furnace Gas.</i>	0301	1 A 2 a Iron and Steel
Blast furnaces	<i>Coke Oven Coke.</i>	030326	1 A 2 a Iron and Steel
Gas Works	<i>Natural Gas.</i>	0201	1 A 4 a Commercial/ Institutional
Electricity, CHP and Heat Plants		0101	1 A 1 a Public Electricity and Heat Production
Liquefaction Plants	No consumption <sup>(1)</sup>		
Not Elsewhere Specified	No consumption <sup>(1)</sup>		
Distribution Losses	Includes statistical differences and therefore it may be less than zero.		
<b>Final Energy Consumption</b>			
<b>Total Transport, of which (ISIC 60, 61, 62):</b>			
Domestic Air Transport	Division to SNAP categories is performed by	07	1 A 2 f Manuf. Ind. and Constr. - Other
Road		08	



IEA-Category and ISIC Codes*	Comments	SNAP	IPCC-Category
Rail	means of studies.	0201	1 A 3 Transport
Inland Waterways			1 A 4 b Residential 1 A 4 c Agriculture/ Forestry/ Fisheries
Pipeline Transport	<i>Natural Gas.</i>	010506	1 A 3 e Transport-Other
Non Specified	<i>Other biofuels and Lubricants.</i>	0201	1 A 4 a Commercial/ Institutional
<b>Total Industry, of which:</b>			
Iron and Steel (ISIC 271, 2731)		0301 030301 030326	1 A 2 a Iron and Steel
Chemical incl.Petro-Chemical (ISIC 24)		0301	1 A 2 c Chemicals
Non ferrous Metals (ISIC 272, 2732)		0301	1 A 2 b Non-ferrous Metals
Non metallic Mineral Products (ISIC 26)		0301 030311 030317 030319	1 A 2 f Manuf. Ind. and Constr. - Other
Transportation Equipment (ISIC 34, 35)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Machinery (ISIC 28, 29, 30, 31, 32)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Mining and Quarrying (ISIC 13, 14)		0105	1 A 1 c Manufacture of Solid fuels and Other Energy Industries
Food, Beverages and Tobacco (ISIC 15, 16)		0301	1 A 2 e Food Processing, Beverages and Tobacco
Pulp, Paper and Printing (ISIC 21, 22)		0301	1 A 2 d Pulp, Paper and Print
Wood and Wood Products (ISIC 20)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Construction (ISIC 45)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Textiles and Leather (ISIC 17, 18, 19)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Non Specified (ISIC 25, 33, 36, 37)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
<b>Total Other sectors, of which:</b>			
Commercial and Public Services (ISIC 41, 50, 51, 52, 55, 63, 64, 65, 66, 67, 70, 71, 72, 73, 74, 75, 80, 85, 90, 91, 92, 93, 99)		0201	1 A 4 a Commercial/ Institutional
Residential (ISIC 95)		0202	1 A 4 b Residential
Agriculture (ISIC 01, 02, 05)		0203	1 A 4 c Agriculture/Forestry/ Fisheries



IEA-Category and ISIC Codes*	Comments	SNAP	IPCC-Category
Non Specified	No consumption <sup>(1)</sup>		
*Sector names may differ to original IEA questionnaire naming convention. Note that the ISIC codes cited in this table are consistent with the NACE nomenclature.			
(1) Indicates that no fuel consumption is reported in the energy balance for the specific category. In some cases this may be interpreted as "included elsewhere" if the energy statistic has lack of detailed sectoral data.			
Table 3: Categories of the national energy balance [IEA-JQ, 2004] and their correspondence to IPCC categories: Autoproducers by sector.			
<b>Auto Producers (Electricity + CHP + Heat), of which:</b>			
<b>Energy Sector, of which</b>			
Coal Mines	No consumption <sup>(1)</sup>		
Oil and Gas Extraction		0105	1 A 1 c Manufacture of Solid fuels and Other Energy Industries
Inputs to oil refineries		0103	1 A 1 b Petroleum Refining
Coke Ovens	No consumption <sup>(1)</sup>		
Gas Works	No consumption <sup>(1)</sup>		
Liquefaction Plants	No consumption <sup>(1)</sup>		
Not Elsewhere Specified	No consumption <sup>(1)</sup>		
<b>Industrie, of which:</b>			
Iron and Steel		030326	1 A 2 a Iron and Steel
Chemical (incl.Petro-Chemical)		0301	1 A 2 c Chemicals
Non ferrous Metals		0301	1 A 2 b Non-ferrous Metals
Non metallic Mineral Products		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Transportation Equipment		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Machinery		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Mining and Quarrying		0301	1 A 1 c Manufacture of Solid fuels and Other Energy Industries
Food, Beverages and Tobacco		0301	1 A 2 e Food Processing, Beverages and Tobacco
Pulp, Paper and Printing		0301	1 A 2 d Pulp, Paper and Print
Wood and Wood Products		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Construction		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Textiles and Leather		0301	1 A 2 f Manuf. Ind. and Constr. - Other
Non Specified (Industry)		0301	1 A 2 f Manuf. Ind. and Constr. - Other
<b>Total Transport, of which</b>			
Pipeline Transport	No consumption <sup>(1)</sup>		
Non Specified	No consumption <sup>(1)</sup>		
<b>Other Sectors, of which</b>			
Commercial and Public Services		0201	1 A 4 a Commercial/ Institutional

Residential	No consumption <sup>(1)</sup>
Agriculture	No consumption <sup>(1)</sup>
Non Specified	No consumption <sup>(1)</sup>

\*Sector names may differ to original IEA questionnaire naming convention. Note that the ISIC codes cited in this table are consistent with the NACE nomenclature.

(1) Indicates that no fuel consumption is reported in the energy balance for the specific category. In some cases this may be interpreted as "included elsewhere" if the energy statistic has lack of detailed sectoral data.

## Fuels and Fuel Categories

The units used in the national fuel statistics are: *ton* for solid or liquid fuels and *cubic meter* for gaseous fuels. To convert these units into the caloric unit *Joule* the calorific value of each fuel category has to be quantified. These calorific values are specified in the unit *Joule per Mass or Volume Unit*, e.g. MJ/kg, MJ/m<sup>3</sup> gas.

Each fuel has chemical and physical characteristics which influence its burning performance e.g. calorific value or carbon and sulphur content. Fuel categories are formed to pool fuels of the same characteristics in fuel groups. Limitations are given by the fuel categories of the energy balance. A list of the inventory fuel categories and their correspondence to IPCC-fuel categories is shown in Table 4.

Table 4: Fuel categories used for the inventory and correspondence to IPCC fuel categories

Inventory Fuel Category		IEA Fuel Category	Average Net Calorific Value <sup>(2)</sup>	IPCC Fuel Category <sup>(3)</sup>
Code <sup>(1)</sup>	Category	Category		
102 A	Hard Coal	Bituminous Coal and Anthracite	27.50	Solid (coal)
104 A	Hard Coal Briquettes	Patent Fuel	31.00	Solid (coal)
105 A	Brown Coal	Lignite/Brown Coal	9.82	Solid (coal)
106 A	Brown Coal Briquettes	BKB/PB	19.30	Solid (coal)
107 A	Coke	Coke Oven Coke	28.20	Solid (coal)
113 A	Peat	Peat	8.80	Solid
304 A	Coke Oven Gas	Coke Oven Gas	-	Solid
305 A	Blast Furnace Gas	Blast Furnace Gas	-	Solid
110 A	Petrol Coke	Petrol Coke	34.00	Liquid
203 B	Light Fuel Oil Sulphur Content < 0,2 %	Residual Fuel Oil	41.36	Liquid (residual oil)
203 C	Medium Fuel Oil Sulphur Content < 0,4%	Residual Fuel Oil	41.36	Liquid (residual oil)
203 D	Heavy Fuel Oil Sulphur Content >= 1%	Residual Fuel Oil	41.36	Liquid (residual oil)
204 A	Gasoil	Heating and other Gasoil	42.84	Liquid (gas/diesel oil)
205 0	Diesel	Transport Diesel	42.80	Liquid (diesel oil; gas/diesel oil)
206 A	Petroleum	Other Kerosene	43.30	Liquid



Inventory Fuel Category		IEA Fuel Category	Average Net Calorific Value <sup>(2)</sup>	IPCC Fuel Category <sup>(3)</sup>
Code <sup>(1)</sup>	Category	Category		
206 B	Kerosene	Kerosene Type Jet Fuel	43.30	Liquid (jet kerosene)
207 A	Aviation Gasoline	Gasoline Type Jet Fuel	42.49	Liquid (aviation gasoline)
208 0	Motor Gasoline	Motor Gasoline	42.49	Liquid (gasoline)
224 A	Other Petroleum Products	Other Products	43.95	Liquid
303 A	Liquified Petroleum Gas (LPG)	LPG	46.00	Liquid
308 A	Refinery Gas	Refinery Gas	45.93	Liquid
301 A	Natural Gas	Natural Gas	35.85	Gaseous (natural gas)
114 B	Municipal Waste	Municipal Solid Waste Renewable	8.93	Other Fuels
		Municipal Solid Waste Non Renewable	9.14	Other Fuels
114 C	Hazardous Waste	Industrial Wastes	15.76	Other Fuels
115 A	Industrial Waste	Industrial Wastes	15.76	Other Fuels
111 A	Fuel Wood	Wood/Wood wastes/Other Solid Wastes, of which: Wood	14.35	Biomass
116 A	Wood Wastes	Wood/Wood wastes/Other Solid Wastes, of which: Other vegetal materials and waste (including straw, sawdust, wood chips)	11.36	Biomass
118 A	Sewage Sludge	Industrial Wastes	3.64	Biomass
215 A	Black Liquor	Wood/Wood wastes/Other Solid Wastes, of which: Black Liquor	7.92	Biomass
309 A	Biogas	Biogas	22.06	Biomass
309 B	Sewage Sludge Gas	Sewage Sludge Gas	22.06	Biomass
310 A	Landfill Gas	Landfill Gas	17.00	Biomass

(1) First three digits are based on CORINAIR / NAPFUE 94–Code

(2) Units: [MJ / kg] or [MJ / m<sup>3</sup> Gas] respectively, for the Year 2003. Note that for some fuels sector specific calorific values are taken. The energy balance reports some fuels (e.g. renewables) in [TJ] so that unit conversion by means of calorific values is not necessary.

(3) Fuel subcategories are shown in parenthesis



## Energy Consumption and CO<sub>2</sub> Emissions by Sectors and Fuel Types

In Table 5 to Table 18 detailed data on fuel consumption and CO<sub>2</sub> emissions for each fuel type according to Table 4 and each sector of *1 A Fuel Combustion* are provided for the period from 1990 to 2003. For information on completeness, in particular on CO<sub>2</sub> emissions included elsewhere, please refer to the documentation boxes of the CRF and to Chapter 3.2.1 subchapter *Completeness* of the NIR.



Table 5: 2003 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>70.89</b>	<b>53.08</b>	<b>0.02</b>	<b>7.15</b>	<b>131.13</b>	<b>6.91</b>	<b>4.55</b>	<b>0.00</b>	<b>0.67</b>	<b>12.13</b>
102A Hard Coal	57.19	7.10	0.02	1.37	65.68	5.41	0.67	0.00	0.13	6.20
104A Hard Coal Briquettes				0.06	0.06				0.01	0.01
105A Brown Coal	13.70	1.73		0.24	15.67	1.51	0.17		0.03	1.70
106A Brown Coal Briquettes		0.00		1.38	1.38		0.00		0.13	0.13
107A Coke		33.31		4.08	37.39		3.46		0.38	3.84
113A Peat				0.02	0.02				0.00	0.00
304A Coke Oven Gas		10.93			10.93		0.25			0.25
<b>Total Liquid</b>	<b>44.72</b>	<b>45.03</b>	<b>301.43</b>	<b>124.81</b>	<b>516.00</b>	<b>3.17</b>	<b>3.45</b>	<b>22.21</b>	<b>9.30</b>	<b>38.17</b>
110A Petrol Coke	2.00	2.22			4.22	0.20	0.22			0.43
203B Light Fuel Oil	0.67	9.07		14.60	24.34	0.05	0.71		1.12	1.88
203C Medium Fuel Oil				1.61	1.61				0.13	0.13
203D Heavy Fuel Oil	14.30	11.90			26.19	1.14	0.93			2.06
204A Gasoil	0.15	4.52		80.89	85.56	0.01	0.34		6.07	6.42
2050 Diesel	0.19	14.91	208.35	20.06	243.50	0.01	1.10	15.35	1.48	17.94
206A Other Kerosene		0.01		0.20	0.21		0.00		0.02	0.02
206B Jet Kerosene			1.30		1.30			0.06		0.09
207A Aviation Gasoline			0.09		0.09			0.01		0.01
2080 Motor Gasoline		0.09	91.70	1.68	93.46		0.01	6.79	0.12	6.92
224A Other Petroleum Products	14.83				14.83	1.16				1.16
303A Liquefied Petroleum Gas (LPG)	0.06	2.33		5.77	8.15	0.00	0.15		0.37	0.52
308A Refinery Gas	12.53				12.53	0.59				0.59
<b>301A Total Gaseous (Natural Gas)</b>	<b>100.84</b>	<b>105.84</b>	<b>8.81</b>	<b>85.77</b>	<b>301.26</b>	<b>5.55</b>	<b>5.82</b>	<b>0.48</b>	<b>4.72</b>	<b>16.57</b>
<b>Total Other Fuel</b>	<b>9.77</b>	<b>8.05</b>		<b>1.04</b>	<b>18.85</b>	<b>0.40</b>	<b>0.34</b>		<b>0.01</b>	<b>0.76</b>
114B Municipal Waste	5.78				5.78	0.28				0.28
114C Hazardous Waste	2.00				2.00	0.10				0.10
115A Industrial Waste	1.98	8.05		1.04	11.07	0.02	0.34		0.01	0.37
<b>Total Biomass<sup>(1)</sup></b>	<b>16.36</b>	<b>43.77</b>		<b>79.70</b>	<b>139.82</b>	<b>(1.8)</b>	<b>(4.8)</b>		<b>(8.07)</b>	<b>(14.67)</b>
111A Fuel Wood	0.26	1.28		70.25	71.79	0.03	0.13		7.03	7.18
116A Wood Wastes	15.57	18.39		8.48	42.44	1.71	2.02		0.93	4.67
118A Sewage Sludge	0.26				0.26	0.03				0.03
215A Black Liquor		23.55			23.55		2.59			2.59
309A Biogas		0.51			0.51		0.06			0.06
309B Sewage Sludge Gas	0.05			0.70	0.75	0.01			0.08	0.08
310A Landfill Gas	0.23	0.04		0.27	0.53	0.03	0.00		0.03	0.06
<b>Total<sup>(1)</sup></b>	<b>242.57</b>	<b>255.76</b>	<b>310.27</b>	<b>298.47</b>	<b>1 107.07</b>	<b>16.03</b>	<b>14.16</b>	<b>22.69</b>	<b>14.70</b>	<b>67.62</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 6: 2002 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>56.13</b>	<b>55.19</b>	<b>0.02</b>	<b>8.30</b>	<b>119.65</b>	<b>5.51</b>	<b>4.98</b>	<b>0.00</b>	<b>0.78</b>	<b>11.27</b>
102A Hard Coal	42.89	8.36	0.02	1.67	52.95	4.05	0.79	0.00	0.16	5.00
104A Hard Coal Briquettes				0.02	0.02				0.00	0.00
105A Brown Coal	13.24	1.60		0.33	15.17	1.46	0.16		0.04	1.65
106A Brown Coal Briquettes		0.00		1.26	1.26		0.00		0.12	0.12
107A Coke		35.66		5.00	40.66		3.71		0.46	4.17
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		9.58			9.58		0.33			0.33
<b>Total Liquid</b>	<b>42.74</b>	<b>38.53</b>	<b>277.94</b>	<b>114.88</b>	<b>474.08</b>	<b>3.00</b>	<b>2.95</b>	<b>20.47</b>	<b>8.56</b>	<b>35.01</b>
110A Petrol Coke	2.75	2.22			4.97	0.28	0.22			0.50
203B Light Fuel Oil	1.08	5.56		12.12	18.77	0.08	0.43		0.93	1.45
203C Medium Fuel Oil				1.91	1.91				0.15	0.15
203D Heavy Fuel Oil	9.77	10.88			20.65	0.78	0.85			1.63
204A Gasoil	0.13	2.79		73.40	76.32	0.01	0.21		5.51	5.72
2050 Diesel	0.03	14.73	186.81	20.14	221.71	0.00	1.09	13.76	1.48	16.33
206A Other Kerosene		0.01		0.18	0.19		0.00		0.01	0.02
206B Jet Kerosene			1.48		1.48			0.07		0.11
207A Aviation Gasoline			0.09		0.09			0.01		0.01
2080 Motor Gasoline		0.09	89.56	1.65	91.30		0.01	6.63	0.12	6.76
224A Other Petroleum Products	14.78				14.78	1.15				1.15
303A Liquefied Petroleum Gas (LPG)	0.13	2.25		5.46	7.84	0.01	0.14		0.35	0.50
308A Refinery Gas	14.07				14.07	0.68				0.68
<b>301A Total Gaseous (Natural Gas)</b>	<b>81.39</b>	<b>109.77</b>	<b>9.17</b>	<b>78.57</b>	<b>278.91</b>	<b>4.48</b>	<b>6.04</b>	<b>0.50</b>	<b>4.32</b>	<b>15.34</b>
<b>Total Other Fuel</b>	<b>8.90</b>	<b>8.86</b>		<b>0.62</b>	<b>18.38</b>	<b>0.37</b>	<b>0.42</b>		<b>0.01</b>	<b>0.80</b>
114B Municipal Waste	4.91				4.91	0.24				0.24
114C Hazardous Waste	2.15				2.15	0.11				0.11
115A Industrial Waste	1.84	8.86		0.62	11.32	0.02	0.42		0.01	0.45
<b>Total Biomass<sup>(1)</sup></b>	<b>14.07</b>	<b>39.77</b>		<b>73.02</b>	<b>126.86</b>	<b>(1.55)</b>	<b>(4.36)</b>		<b>(7.39)</b>	<b>(13.3)</b>
111A Fuel Wood	0.05	1.35		64.70	66.10	0.00	0.14		6.47	6.61
116A Wood Wastes	13.67	15.14		7.36	36.17	1.50	1.67		0.81	3.98
118A Sewage Sludge	0.24				0.24	0.03				0.03
215A Black Liquor		22.97			22.97		2.53			2.53
309A Biogas		0.28			0.28		0.03			0.03
309B Sewage Sludge Gas	0.06	0.00		0.66	0.72	0.01	0.00		0.07	0.08
310A Landfill Gas	0.06	0.03		0.30	0.38	0.01	0.00		0.03	0.04
<b>Total<sup>(1)</sup></b>	<b>203.23</b>	<b>252.12</b>	<b>287.14</b>	<b>275.39</b>	<b>1 017.88</b>	<b>13.35</b>	<b>14.39</b>	<b>20.97</b>	<b>13.66</b>	<b>62.42</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.





Table 7: 2001 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>60.73</b>	<b>51.88</b>	<b>0.03</b>	<b>9.23</b>	<b>121.87</b>	<b>5.96</b>	<b>4.48</b>	<b>0.00</b>	<b>0.87</b>	<b>11.30</b>
102A Hard Coal	46.12	9.38	0.03	2.18	57.71	4.36	0.88	0.00	0.20	5.45
104A Hard Coal Briquettes				0.02	0.02				0.00	0.00
105A Brown Coal	14.05	1.41		0.41	15.87	1.54	0.14		0.04	1.72
106A Brown Coal Briquettes	0.56	0.00		1.52	2.09	0.05	0.00		0.15	0.20
107A Coke		31.32		5.08	36.40		3.26		0.47	3.72
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		9.78			9.78		0.21			0.21
<b>Total Liquid</b>	<b>44.85</b>	<b>44.00</b>	<b>250.35</b>	<b>118.90</b>	<b>458.10</b>	<b>3.18</b>	<b>3.35</b>	<b>18.43</b>	<b>8.87</b>	<b>33.86</b>
110A Petrol Coke	2.27	0.67			2.94	0.23	0.07			0.30
203B Light Fuel Oil	2.58	7.84		14.31	24.73	0.20	0.61		1.10	1.91
203C Medium Fuel Oil				1.40	1.40				0.11	0.11
203D Heavy Fuel Oil	14.22	16.37		0.03	30.63	1.13	1.28		0.00	2.41
204A Gasoil	0.79	2.32		77.49	80.60	0.06	0.17		5.81	6.05
2050 Diesel	0.01	14.51	165.66	19.62	199.81	0.00	1.07	12.20	1.44	14.72
206A Other Kerosene		0.01		0.04	0.04		0.00		0.00	0.00
206B Jet Kerosene			1.30		1.30			0.06		0.09
207A Aviation Gasoline			0.09		0.09			0.01		0.01
2080 Motor Gasoline		0.09	83.30	1.63	85.02		0.01	6.16	0.12	6.29
224A Other Petroleum Products	9.89				9.89	0.77				0.77
303A Liquefied Petroleum Gas (LPG)		2.19		4.38	6.58		0.14		0.28	0.42
308A Refinery Gas	15.08				15.08	0.78				0.78
<b>301A Total Gaseous (Natural Gas)</b>	<b>71.96</b>	<b>105.86</b>	<b>8.25</b>	<b>93.39</b>	<b>279.47</b>	<b>3.96</b>	<b>5.82</b>	<b>0.45</b>	<b>5.14</b>	<b>15.37</b>
<b>Total Other Fuel</b>	<b>7.62</b>	<b>7.21</b>		<b>0.63</b>	<b>15.46</b>	<b>0.33</b>	<b>0.41</b>		<b>0.01</b>	<b>0.75</b>
114B Municipal Waste	4.61				4.61	0.23				0.23
114C Hazardous Waste	1.94				1.94	0.10				0.10
115A Industrial Waste	1.07	7.21		0.63	8.91	0.01	0.41		0.01	0.43
<b>Total Biomass<sup>(1)</sup></b>	<b>12.38</b>	<b>38.58</b>		<b>77.12</b>	<b>128.08</b>	<b>(1.36)</b>	<b>(4.23)</b>		<b>(7.82)</b>	<b>(13.41)</b>
111A Fuel Wood	0.07	1.05		67.03	68.15	0.01	0.11		6.70	6.82
116A Wood Wastes	11.89	13.92		8.70	34.52	1.31	1.53		0.96	3.80
118A Sewage Sludge	0.27				0.27	0.03				0.03
215A Black Liquor		23.30			23.30		2.56			2.56
309A Biogas	0.02	0.21		0.02	0.25	0.00	0.02		0.00	0.03
309B Sewage Sludge Gas	0.05	0.00		0.67	0.72	0.01	0.00		0.08	0.08
310A Landfill Gas	0.07	0.10		0.69	0.86	0.01	0.01		0.08	0.10
<b>Total<sup>(1)</sup></b>	<b>197.54</b>	<b>247.54</b>	<b>258.63</b>	<b>299.26</b>	<b>1 002.98</b>	<b>13.42</b>	<b>14.06</b>	<b>18.89</b>	<b>14.88</b>	<b>61.29</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 8: 2000 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>51.07</b>	<b>55.84</b>	<b>0.03</b>	<b>10.16</b>	<b>117.08</b>	<b>5.00</b>	<b>4.73</b>	<b>0.00</b>	<b>0.95</b>	<b>10.69</b>
102A Hard Coal	39.11	10.42	0.03	2.14	51.70	3.70	0.98	0.00	0.20	4.88
104A Hard Coal Briquettes				0.11	0.11				0.01	0.01
105A Brown Coal	11.60	1.35		0.44	13.39	1.28	0.13		0.05	1.45
106A Brown Coal Briquettes	0.35	0.00		1.71	2.06	0.03	0.00		0.17	0.20
107A Coke		33.60		5.75	39.35		3.49		0.53	4.02
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		10.47			10.47		0.12			0.12
<b>Total Liquid</b>	<b>43.48</b>	<b>44.09</b>	<b>233.82</b>	<b>107.57</b>	<b>428.97</b>	<b>3.06</b>	<b>3.35</b>	<b>17.20</b>	<b>8.02</b>	<b>31.69</b>
110A Petrol Coke	1.61	0.81			2.43	0.16	0.08			0.24
203B Light Fuel Oil	1.98	8.12		12.55	22.65	0.15	0.63		0.97	1.75
203C Medium Fuel Oil				1.48	1.48				0.12	0.12
203D Heavy Fuel Oil	14.84	16.52		0.15	31.51	1.18	1.29		0.01	2.48
204A Gasoil	0.01	1.64		68.45	70.09	0.00	0.12		5.13	5.26
2050 Diesel	0.01	14.36	149.39	18.69	182.45	0.00	1.06	11.00	1.38	13.44
206A Other Kerosene		0.01		0.24	0.26		0.00		0.02	0.02
206B Jet Kerosene			1.63		1.63			0.08		0.12
207A Aviation Gasoline			0.09		0.09			0.01		0.01
2080 Motor Gasoline		0.09	82.71	1.63	84.43		0.01	6.12	0.12	6.25
224A Other Petroleum Products	9.74				9.74	0.76				0.76
303A Liquefied Petroleum Gas (LPG)	0.94	2.54		4.37	7.85	0.06	0.16		0.28	0.50
308A Refinery Gas	14.35				14.35	0.74				0.74
<b>Total Gaseous (Natural Gas)</b>	<b>71.38</b>	<b>107.22</b>	<b>9.65</b>	<b>74.68</b>	<b>262.92</b>	<b>3.93</b>	<b>5.90</b>	<b>0.53</b>	<b>4.11</b>	<b>14.46</b>
<b>Total Other Fuel</b>	<b>5.85</b>	<b>6.93</b>		<b>1.39</b>	<b>14.17</b>	<b>0.28</b>	<b>0.32</b>		<b>0.01</b>	<b>0.62</b>
114B Municipal Waste	4.52				4.52	0.22				0.22
114C Hazardous Waste	1.20				1.20	0.06				0.06
115A Industrial Waste	0.13	6.93		1.39	8.45	0.00	0.32		0.01	0.34
<b>Total Biomass(1)</b>	<b>9.45</b>	<b>36.76</b>		<b>68.48</b>	<b>114.69</b>	<b>(1.04)</b>	<b>(4.04)</b>		<b>(6.94)</b>	<b>(12.02)</b>
111A Fuel Wood	0.04	0.89		59.31	60.23	0.00	0.09		5.93	6.02
116A Wood Wastes	8.99	11.45		8.02	28.46	0.99	1.26		0.88	3.13
118A Sewage Sludge	0.29				0.29	0.03				0.03
215A Black Liquor		24.12			24.12		2.65			2.65
309A Biogas	0.02	0.30		0.02	0.34	0.00	0.03		0.00	0.04
309B Sewage Sludge Gas	0.05			0.74	0.79	0.01			0.08	0.09
310A Landfill Gas	0.06			0.40	0.46	0.01			0.04	0.05
<b>Total(1)</b>	<b>181.23</b>	<b>250.84</b>	<b>243.50</b>	<b>262.27</b>	<b>937.84</b>	<b>12.28</b>	<b>14.30</b>	<b>17.74</b>	<b>13.10</b>	<b>57.45</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.



Table 9: 1999 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transpo rt	Other Sectors	Total	Energy Ind.	Industry	Transpo rt	Other Sectors	Total
<b>Total Solid</b>	<b>37.79</b>	<b>51.19</b>	<b>0.03</b>	<b>12.51</b>	<b>101.52</b>	<b>3.78</b>	<b>4.37</b>	<b>0.00</b>	<b>1.17</b>	<b>9.32</b>
102A Hard Coal	24.14	9.00	0.03	2.49	35.66	2.28	0.85	0.00	0.23	3.36
104A Hard Coal Briquettes				0.12	0.12				0.01	0.01
105A Brown Coal	13.65	1.16		0.52	15.33	1.50	0.11		0.06	1.67
106A Brown Coal Briquettes		0.00		2.05	2.05		0.00		0.20	0.20
107A Coke		28.80		7.32	36.12		3.00		0.67	3.67
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		12.22			12.22		0.42			0.42
<b>Total Liquid</b>	<b>52.41</b>	<b>45.27</b>	<b>219.73</b>	<b>117.95</b>	<b>435.36</b>	<b>3.87</b>	<b>3.46</b>	<b>16.16</b>	<b>8.80</b>	<b>32.33</b>
110A Petrol Coke	2.14	1.19			3.32	0.22	0.12			0.34
203B Light Fuel Oil	1.35	9.85		11.83	23.03	0.11	0.77		0.91	1.78
203C Medium Fuel Oil	0.09	0.00		2.13	2.22	0.01	0.00		0.17	0.17
203D Heavy Fuel Oil	24.47	15.52		0.17	40.16	1.95	1.21		0.01	3.17
204A Gasoil	0.29	1.84		77.49	79.62	0.02	0.14		5.81	5.97
2050 Diesel	0.10	14.17	132.46	19.85	166.59	0.01	1.04	9.76	1.46	12.27
206A Other Kerosene		0.12		0.58	0.70		0.01		0.05	0.05
206B Jet Kerosene			1.54		1.54			0.07		0.11
207A Aviation Gasoline			0.12		0.12			0.01		0.01
2080 Motor Gasoline		0.09	85.61	1.64	87.34		0.01	6.33	0.12	6.46
224A Other Petroleum Products	9.40				9.40	0.73				0.73
303A Liquefied Petroleum Gas (LPG)	0.20	2.49		4.25	6.94	0.01	0.16		0.27	0.44
308A Refinery Gas	14.39				14.39	0.82				0.82
<b>Total Gaseous (Natural Gas)</b>	<b>79.53</b>	<b>99.26</b>	<b>7.81</b>	<b>86.82</b>	<b>273.41</b>	<b>4.37</b>	<b>5.46</b>	<b>0.43</b>	<b>4.77</b>	<b>15.04</b>
<b>Total Other Fuel</b>	<b>4.99</b>	<b>6.92</b>		<b>2.53</b>	<b>14.44</b>	<b>0.24</b>	<b>0.27</b>		<b>0.03</b>	<b>0.53</b>
114B Municipal Waste	4.52				4.52	0.22				0.22
114C Hazardous Waste	0.34				0.34	0.02				0.02
115A Industrial Waste	0.13	6.92		2.53	9.59	0.00	0.27		0.03	0.30
<b>Total Biomass<sup>(1)</sup></b>	<b>7.14</b>	<b>42.29</b>		<b>72.30</b>	<b>121.73</b>	<b>(0.79)</b>	<b>(4.63)</b>		<b>(7.31)</b>	<b>(12.73)</b>
111A Fuel Wood	0.02	1.81		64.10	65.94	0.00	0.18		6.41	6.59
116A Wood Wastes	6.98	16.51		7.00	30.50	0.77	1.82		0.77	3.35
118A Sewage Sludge	0.06				0.06	0.01				0.01
215A Black Liquor		23.65			23.65		2.60			2.60
309A Biogas	0.01	0.32		0.02	0.35	0.00	0.04		0.00	0.04
309B Sewage Sludge Gas	0.02	0.00		0.70	0.71	0.00	0.00		0.08	0.08
310A Landfill Gas	0.04	0.00		0.48	0.52	0.00	0.00		0.05	0.06
<b>Total<sup>(1)</sup></b>	<b>181.86</b>	<b>244.93</b>	<b>227.56</b>	<b>292.11</b>	<b>946.47</b>	<b>12.26</b>	<b>13.56</b>	<b>16.60</b>	<b>14.78</b>	<b>57.23</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 10: 1998 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>35.81</b>	<b>54.97</b>	<b>0.03</b>	<b>12.58</b>	<b>103.40</b>	<b>3.50</b>	<b>4.34</b>	<b>0.00</b>	<b>1.18</b>	<b>9.02</b>
102A Hard Coal	28.48	11.92	0.03	3.08	43.51	2.69	1.12	0.00	0.29	4.10
104A Hard Coal Briquettes				0.12	0.12				0.01	0.01
105A Brown Coal	7.34	0.66		0.57	8.57	0.81	0.06		0.06	0.93
106A Brown Coal Briquettes		0.00		1.99	1.99		0.00		0.19	0.19
107A Coke		30.21		6.82	37.03		3.14		0.63	3.77
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		12.17			12.17		0.01			0.01
<b>Total Liquid</b>	<b>61.07</b>	<b>54.86</b>	<b>228.48</b>	<b>118.18</b>	<b>462.59</b>	<b>4.40</b>	<b>4.19</b>	<b>16.83</b>	<b>8.83</b>	<b>34.29</b>
110A Petrol Coke	2.20	0.67			2.87	0.22	0.07			0.29
203B Light Fuel Oil	2.11	15.31		9.86	27.29	0.16	1.19		0.76	2.12
203C Medium Fuel Oil	0.14	0.00		2.13	2.28	0.01	0.00		0.17	0.18
203D Heavy Fuel Oil	27.98	21.21		0.26	49.45	2.22	1.65		0.02	3.90
204A Gasoil	0.20	0.52		80.48	81.21	0.02	0.04		6.04	6.09
2050 Diesel	0.08	14.00	134.57	19.51	168.16	0.01	1.03	9.93	1.44	12.42
206A Other Kerosene		0.01		0.73	0.73		0.00		0.06	0.06
206B Jet Kerosene			1.51		1.51			0.07		0.11
207A Aviation Gasoline			0.11		0.11			0.01		0.01
2080 Motor Gasoline		0.09	92.30	1.64	94.03		0.01	6.82	0.12	6.95
224A Other Petroleum Products	11.18				11.18	0.87				0.87
303A Liquefied Petroleum Gas (LPG)	0.13	3.05		3.57	6.74	0.01	0.19		0.23	0.43
308A Refinery Gas	17.04				17.04	0.87				0.87
<b>Total Gaseous (Natural Gas)</b>	<b>85.50</b>	<b>107.40</b>	<b>6.34</b>	<b>71.42</b>	<b>270.66</b>	<b>4.70</b>	<b>5.91</b>	<b>0.35</b>	<b>3.93</b>	<b>14.89</b>
<b>Total Other Fuel</b>	<b>6.14</b>	<b>5.99</b>		<b>1.51</b>	<b>13.64</b>	<b>0.30</b>	<b>0.15</b>		<b>0.02</b>	<b>0.47</b>
114B Municipal Waste	4.78				4.78	0.23				0.23
114C Hazardous Waste	1.36				1.36	0.07				0.07
115A Industrial Waste		5.99		1.51	7.50		0.15		0.02	0.17
<b>Total Biomass<sup>(1)</sup></b>	<b>7.27</b>	<b>32.13</b>		<b>70.45</b>	<b>109.84</b>	<b>(0.8)</b>	<b>(3.53)</b>		<b>(7.11)</b>	<b>(11.44)</b>
111A Fuel Wood	0.21	0.15		64.52	64.88	0.02	0.02		6.45	6.49
116A Wood Wastes	6.73	8.54		5.26	20.53	0.74	0.94		0.58	2.26
118A Sewage Sludge	0.25				0.25	0.03				0.03
215A Black Liquor		22.92			22.92		2.52			2.52
309A Biogas		0.03			0.03		0.00			0.00
309B Sewage Sludge Gas	0.05			0.66	0.72	0.01			0.07	0.08
310A Landfill Gas	0.03	0.49		0.01	0.53	0.00	0.05		0.00	0.06
<b>Total<sup>(1)</sup></b>	<b>195.79</b>	<b>255.35</b>	<b>234.86</b>	<b>274.15</b>	<b>960.14</b>	<b>12.90</b>	<b>14.59</b>	<b>17.18</b>	<b>13.95</b>	<b>58.67</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.



Table 11: 1997 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>50.96</b>	<b>53.23</b>	<b>0.03</b>	<b>14.36</b>	<b>118.59</b>	<b>5.00</b>	<b>5.06</b>	<b>0.00</b>	<b>1.35</b>	<b>11.42</b>
102A Hard Coal	39.25	12.15	0.03	3.38	54.82	3.71	1.14	0.00	0.31	5.17
104A Hard Coal Briquettes				0.22	0.22				0.02	0.02
105A Brown Coal	11.70	0.69		0.64	13.03	1.29	0.07		0.07	1.42
106A Brown Coal Briquettes		0.00		2.55	2.56		0.00		0.25	0.25
107A Coke		28.79		7.56	36.35		2.99		0.70	3.69
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		11.60			11.60		0.86			0.86
<b>Total Liquid</b>	<b>57.29</b>	<b>57.77</b>	<b>200.21</b>	<b>118.61</b>	<b>433.89</b>	<b>4.08</b>	<b>4.42</b>	<b>14.74</b>	<b>8.86</b>	<b>32.15</b>
110A Petrol Coke	2.15	0.49			2.64	0.22	0.05			0.27
203B Light Fuel Oil	2.54	18.55		9.80	30.90	0.20	1.45		0.75	2.40
203C Medium Fuel Oil	0.09	0.01		2.06	2.16	0.01	0.00		0.16	0.17
203D Heavy Fuel Oil	23.22	21.57		0.16	44.95	1.84	1.68		0.01	3.54
204A Gasoil	0.11	0.48		81.01	81.60	0.01	0.04		6.08	6.12
2050 Diesel	0.31	13.80	110.62	20.24	144.97	0.02	1.02	8.17	1.49	10.71
206A Other Kerosene		0.00		0.42	0.43		0.00		0.03	0.03
206B Jet Kerosene			1.35		1.35			0.06		0.10
207A Aviation Gasoline			0.10		0.10			0.01		0.01
2080 Motor Gasoline		0.09	88.13	1.66	89.88		0.01	6.51	0.12	6.64
224A Other Petroleum Products	11.60				11.60	0.90				0.90
303A Liquefied Petroleum Gas (LPG)	0.09	2.78		3.25	6.12	0.01	0.18		0.21	0.39
308A Refinery Gas	17.18				17.18	0.88				0.88
<b>301A Total Gaseous (Natural Gas)</b>	<b>72.18</b>	<b>117.07</b>	<b>4.20</b>	<b>71.51</b>	<b>264.96</b>	<b>3.97</b>	<b>6.44</b>	<b>0.23</b>	<b>3.93</b>	<b>14.57</b>
<b>Total Other Fuel</b>	<b>6.40</b>	<b>5.63</b>		<b>2.60</b>	<b>14.62</b>	<b>0.31</b>	<b>0.20</b>		<b>0.03</b>	<b>0.54</b>
114B Municipal Waste	4.89				4.89	0.24				0.24
114C Hazardous Waste	1.50				1.50	0.08				0.08
115A Industrial Waste		5.63		2.60	8.23		0.20		0.03	0.23
<b>Total Biomass<sup>(1)</sup></b>	<b>6.40</b>	<b>37.03</b>		<b>71.96</b>	<b>115.38</b>	<b>(0.7)</b>	<b>(4.07)</b>		<b>(7.25)</b>	<b>(12.02)</b>
111A Fuel Wood	0.07	0.20		66.93	67.21	0.01	0.02		6.69	6.72
116A Wood Wastes	6.01	14.61		4.39	25.00	0.66	1.61		0.48	2.75
118A Sewage Sludge	0.24				0.24	0.03				0.03
215A Black Liquor		21.67			21.67		2.38			2.38
309A Biogas		0.05			0.05		0.01			0.01
309B Sewage Sludge Gas	0.06			0.64	0.69	0.01			0.07	0.08
310A Landfill Gas	0.03	0.49		0.01	0.52	0.00	0.06		0.00	0.06
<b>Total<sup>(1)</sup></b>	<b>193.23</b>	<b>270.73</b>	<b>204.44</b>	<b>279.05</b>	<b>947.44</b>	<b>13.37</b>	<b>16.12</b>	<b>14.98</b>	<b>14.17</b>	<b>58.68</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 12: 1996 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>47.52</b>	<b>47.53</b>	<b>0.06</b>	<b>18.70</b>	<b>113.82</b>	<b>4.70</b>	<b>4.37</b>	<b>0.01</b>	<b>1.75</b>	<b>10.83</b>
102A Hard Coal	33.51	9.70	0.06	4.33	47.60	3.17	0.91	0.01	0.40	4.49
104A Hard Coal Briquettes										
105A Brown Coal	14.01	1.12		0.92	16.05	1.52	0.11		0.10	1.73
106A Brown Coal Briquettes		0.25		2.97	3.22		0.02		0.29	0.31
107A Coke		25.05		10.47	35.52		2.61		0.96	3.57
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		11.42			11.42		0.72			0.72
<b>Total Liquid</b>	<b>52.92</b>	<b>45.47</b>	<b>214.65</b>	<b>132.32</b>	<b>445.36</b>	<b>3.74</b>	<b>3.45</b>	<b>15.80</b>	<b>9.91</b>	<b>32.94</b>
110A Petrol Coke	2.13	0.32			2.44	0.21	0.03			0.25
203B Light Fuel Oil	1.88	11.84		22.22	35.93	0.15	0.92		1.71	2.78
203C Medium Fuel Oil	0.34	0.00		1.66	2.00	0.03	0.00		0.13	0.16
203D Heavy Fuel Oil	19.40	16.03		0.25	35.69	1.54	1.25		0.02	2.81
204A Gasoil	0.06	0.49		83.18	83.74	0.00	0.04		6.24	6.28
2050 Diesel	0.14	13.59	120.24	19.00	152.97	0.01	1.00	8.88	1.40	11.30
206A Other Kerosene		0.01		0.51	0.51		0.00		0.04	0.04
206B Jet Kerosene			1.29		1.29			0.06		0.09
207A Aviation Gasoline			0.09		0.09			0.01		0.01
2080 Motor Gasoline		0.09	93.03	1.66	94.78		0.01	6.86	0.12	7.00
224A Other Petroleum Products	11.02				11.02	0.86				0.86
303A Liquefied Petroleum Gas (LPG)	0.38	3.10		3.83	7.32	0.02	0.20		0.25	0.47
308A Refinery Gas	17.57				17.57	0.91				0.91
<b>Total Gaseous (Natural Gas)</b>	<b>91.60</b>	<b>105.37</b>	<b>4.22</b>	<b>73.53</b>	<b>274.71</b>	<b>5.04</b>	<b>5.80</b>	<b>0.23</b>	<b>4.04</b>	<b>15.11</b>
<b>Total Other Fuel</b>	<b>5.96</b>	<b>6.35</b>		<b>2.90</b>	<b>15.21</b>	<b>0.29</b>	<b>0.16</b>		<b>0.03</b>	<b>0.48</b>
114B Municipal Waste	4.77				4.77	0.23				0.23
114C Hazardous Waste	1.19				1.19	0.06				0.06
115A Industrial Waste		6.35		2.90	9.25		0.16		0.03	0.19
<b>Total Biomass<sup>(1)</sup></b>	<b>6.36</b>	<b>32.78</b>		<b>76.05</b>	<b>115.19</b>	<b>(0.7)</b>	<b>(3.6)</b>		<b>(7.64)</b>	<b>(11.94)</b>
111A Fuel Wood	0.04	0.74		72.50	73.28	0.00	0.07		7.25	7.33
116A Wood Wastes	6.03	10.59		2.87	19.50	0.66	1.16		0.32	2.14
118A Sewage Sludge	0.22				0.22	0.02				0.02
215A Black Liquor		21.17			21.17		2.33			2.33
309A Biogas		0.04			0.04		0.00			0.00
309B Sewage Sludge Gas	0.03			0.64	0.67	0.00			0.07	0.07
310A Landfill Gas	0.03	0.24		0.04	0.31	0.00	0.03		0.00	0.03
<b>Total<sup>(1)</sup></b>	<b>204.37</b>	<b>237.49</b>	<b>218.92</b>	<b>303.50</b>	<b>964.29</b>	<b>13.76</b>	<b>13.78</b>	<b>16.04</b>	<b>15.74</b>	<b>59.36</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.



Table 13: 1995 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>45.49</b>	<b>48.09</b>	<b>0.06</b>	<b>19.12</b>	<b>112.75</b>	<b>4.53</b>	<b>4.51</b>	<b>0.01</b>	<b>1.80</b>	<b>10.84</b>
102A Hard Coal	29.91	7.41	0.06	4.12	41.50	2.82	0.70	0.01	0.38	3.91
104A Hard Coal Briquettes										
105A Brown Coal	15.58	2.29		1.14	19.00	1.71	0.22		0.12	2.05
106A Brown Coal Briquettes		0.27		3.06	3.32		0.03		0.30	0.32
107A Coke		27.21		10.80	38.01		2.83		0.99	3.82
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		10.91			10.91		0.74			0.74
<b>Total Liquid</b>	<b>51.92</b>	<b>48.16</b>	<b>193.33</b>	<b>115.73</b>	<b>409.13</b>	<b>3.73</b>	<b>3.67</b>	<b>14.24</b>	<b>8.65</b>	<b>30.31</b>
110A Petrol Coke	1.87	0.36			2.23	0.19	0.04			0.22
203B Light Fuel Oil	1.39	10.98		18.51	30.87	0.11	0.86		1.43	2.39
203C Medium Fuel Oil	0.11	0.00		2.31	2.43	0.01	0.00		0.18	0.19
203D Heavy Fuel Oil	23.30	19.63		0.46	43.38	1.85	1.53		0.04	3.42
204A Gasoil	0.09	0.20		70.50	70.80	0.01	0.02		5.29	5.31
2050 Diesel	0.28	14.02	91.54	17.37	123.22	0.02	1.04	6.76	1.28	9.10
206A Other Kerosene				0.25	0.25				0.02	0.02
206B Jet Kerosene			1.11		1.11			0.05		0.08
207A Aviation Gasoline			0.10		0.10			0.01		0.01
2080 Motor Gasoline		0.09	100.57	1.65	102.32		0.01	7.42	0.12	7.55
224A Other Petroleum Products	8.88				8.88	0.69				0.69
303A Liquefied Petroleum Gas (LPG)	1.06	2.87		4.67	8.61	0.07	0.18		0.30	0.55
308A Refinery Gas	14.94				14.94	0.78				0.78
<b>Total Gaseous (Natural Gas)</b>	<b>75.85</b>	<b>101.18</b>	<b>4.09</b>	<b>72.65</b>	<b>253.77</b>	<b>4.17</b>	<b>5.57</b>	<b>0.23</b>	<b>4.00</b>	<b>13.96</b>
<b>Total Other Fuel</b>	<b>5.04</b>	<b>5.59</b>		<b>1.42</b>	<b>12.04</b>	<b>0.25</b>	<b>0.16</b>		<b>0.01</b>	<b>0.42</b>
114B Municipal Waste	3.91				3.91	0.19				0.19
114C Hazardous Waste	1.12				1.12	0.06				0.06
115A Industrial Waste		5.59		1.42	7.00		0.16		0.01	0.18
<b>Total Biomass<sup>(1)</sup></b>	<b>4.59</b>	<b>33.86</b>		<b>69.63</b>	<b>108.08</b>	<b>(0.51)</b>	<b>(3.71)</b>		<b>(7)</b>	<b>(11.22)</b>
111A Fuel Wood		1.07		66.28	67.35		0.11		6.63	6.74
116A Wood Wastes	4.33	11.24		2.69	18.27	0.48	1.24		0.30	2.01
118A Sewage Sludge	0.22				0.22	0.02				0.02
215A Black Liquor		21.39			21.39		2.35			2.35
309A Biogas		0.04			0.04		0.00			0.00
309B Sewage Sludge Gas	0.01			0.61	0.62	0.00			0.07	0.07
310A Landfill Gas	0.03	0.12		0.05	0.20	0.00	0.01		0.01	0.02
<b>Total<sup>(1)</sup></b>	<b>182.88</b>	<b>236.87</b>	<b>197.48</b>	<b>278.54</b>	<b>895.77</b>	<b>12.68</b>	<b>13.90</b>	<b>14.47</b>	<b>14.46</b>	<b>55.54</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 14: 1994 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>32.97</b>	<b>44.87</b>	<b>0.06</b>	<b>19.70</b>	<b>97.60</b>	<b>3.28</b>	<b>4.35</b>	<b>0.01</b>	<b>1.85</b>	<b>9.49</b>
102A Hard Coal	22.73	6.38	0.06	4.05	33.22	2.17	0.60	0.01	0.38	3.15
104A Hard Coal Briquettes										
105A Brown Coal	10.05	2.20		1.28	13.53	1.09	0.21		0.14	1.44
106A Brown Coal Briquettes	0.19	0.46		3.21	3.86	0.02	0.04		0.31	0.38
107A Coke		25.04		11.16	36.19		2.60		1.03	3.63
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		10.79			10.79		0.89			0.89
<b>Total Liquid</b>	<b>59.11</b>	<b>51.05</b>	<b>188.33</b>	<b>108.23</b>	<b>406.73</b>	<b>4.23</b>	<b>3.89</b>	<b>13.87</b>	<b>8.08</b>	<b>30.11</b>
110A Petrol Coke	1.79	0.36			2.16	0.18	0.04			0.22
203B Light Fuel Oil	1.88	10.77		14.98	27.64	0.15	0.84		1.15	2.14
203C Medium Fuel Oil	0.09	0.00		2.86	2.95	0.01	0.00		0.22	0.23
203D Heavy Fuel Oil	27.62	22.35		0.37	50.34	2.20	1.74		0.03	3.97
204A Gasoil	0.08	0.20		64.72	65.00	0.01	0.01		4.85	4.88
2050 Diesel	0.21	14.29	82.88	18.57	115.95	0.02	1.06	6.13	1.37	8.58
206A Other Kerosene				0.10	0.10				0.01	0.01
206B Jet Kerosene			1.17		1.17			0.05		0.08
207A Aviation Gasoline			0.12		0.12			0.01		0.01
2080 Motor Gasoline		0.09	104.16	1.66	105.92		0.01	7.68	0.12	7.81
224A Other Petroleum Products	10.60				10.60	0.83				0.83
303A Liquefied Petroleum Gas (LPG)	0.13	2.98		4.95	8.06	0.01	0.19		0.32	0.52
308A Refinery Gas	16.71				16.71	0.84				0.84
<b>Total Gaseous (Natural Gas)</b>	<b>70.72</b>	<b>98.30</b>	<b>3.78</b>	<b>61.17</b>	<b>233.97</b>	<b>3.89</b>	<b>5.41</b>	<b>0.21</b>	<b>3.36</b>	<b>12.87</b>
<b>Total Other Fuel</b>	<b>5.00</b>	<b>5.29</b>		<b>1.41</b>	<b>11.71</b>	<b>0.25</b>	<b>0.17</b>		<b>0.01</b>	<b>0.43</b>
114B Municipal Waste	3.82				3.82	0.19				0.19
114C Hazardous Waste	1.18				1.18	0.06				0.06
115A Industrial Waste		5.29		1.41	6.70		0.17		0.01	0.18
<b>Total Biomass<sup>(1)</sup></b>	<b>3.94</b>	<b>33.13</b>		<b>64.53</b>	<b>101.60</b>	<b>(0.43)</b>	<b>(3.64)</b>		<b>(6.48)</b>	<b>(10.55)</b>
111A Fuel Wood		0.90		61.48	62.39		0.09		6.15	6.24
116A Wood Wastes	3.71	12.62		2.32	18.65	0.41	1.39		0.25	2.05
118A Sewage Sludge	0.22				0.22	0.02				0.02
215A Black Liquor		19.61			19.61		2.16			2.16
309A Biogas										
309B Sewage Sludge Gas				0.64	0.64				0.07	0.07
310A Landfill Gas				0.09	0.09				0.01	0.01
<b>Total<sup>(1)</sup></b>	<b>171.75</b>	<b>232.65</b>	<b>192.17</b>	<b>255.03</b>	<b>851.61</b>	<b>11.64</b>	<b>13.82</b>	<b>14.08</b>	<b>13.31</b>	<b>52.90</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.





Table 15: 1993 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>30.81</b>	<b>44.11</b>	<b>0.06</b>	<b>23.23</b>	<b>98.21</b>	<b>3.09</b>	<b>4.28</b>	<b>0.01</b>	<b>2.18</b>	<b>9.56</b>
102A Hard Coal	19.93	7.90	0.06	4.68	32.58	1.92	0.74	0.01	0.44	3.10
104A Hard Coal Briquettes										
105A Brown Coal	10.64	2.48		1.54	14.66	1.15	0.24		0.17	1.55
106A Brown Coal Briquettes	0.23	0.28		3.67	4.18	0.02	0.03		0.36	0.41
107A Coke		22.81		13.33	36.14		2.37		1.23	3.60
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		10.64			10.64		0.90			0.90
<b>Total Liquid</b>	<b>59.10</b>	<b>51.56</b>	<b>188.78</b>	<b>115.16</b>	<b>414.61</b>	<b>4.24</b>	<b>3.95</b>	<b>13.90</b>	<b>8.61</b>	<b>30.74</b>
110A Petrol Coke	2.22	0.78			3.01	0.22	0.08			0.30
203B Light Fuel Oil	2.22	12.55		18.48	33.25	0.17	0.98		1.42	2.57
203C Medium Fuel Oil	0.39	0.04		3.50	3.92	0.03	0.00		0.27	0.31
203D Heavy Fuel Oil	28.19	21.36		0.42	49.97	2.23	1.67		0.03	3.93
204A Gasoil	0.11	0.26		67.95	68.32	0.01	0.02		5.10	5.12
2050 Diesel	0.24	13.93	79.53	17.48	111.19	0.02	1.03	5.88	1.29	8.23
206A Other Kerosene				0.62	0.62				0.05	0.05
206B Jet Kerosene			1.07		1.07			0.04		0.08
207A Aviation Gasoline			0.12		0.12			0.01		0.01
2080 Motor Gasoline		0.09	108.06	1.63	109.79		0.01	7.97	0.12	8.10
224A Other Petroleum Products	9.86				9.86	0.77				0.77
303A Liquefied Petroleum Gas (LPG)	0.22	2.54		5.08	7.84	0.01	0.16		0.32	0.50
308A Refinery Gas	15.65				15.65	0.77				0.77
<b>Total Gaseous (Natural Gas)</b>	<b>69.35</b>	<b>81.16</b>	<b>3.87</b>	<b>68.35</b>	<b>222.73</b>	<b>3.81</b>	<b>4.46</b>	<b>0.21</b>	<b>3.76</b>	<b>12.25</b>
<b>Total Other Fuel</b>	<b>4.90</b>	<b>4.83</b>		<b>1.19</b>	<b>10.92</b>	<b>0.24</b>	<b>0.12</b>		<b>0.01</b>	<b>0.37</b>
114B Municipal Waste	3.76				3.76	0.18				0.18
114C Hazardous Waste	1.14				1.14	0.06				0.06
115A Industrial Waste		4.83		1.19	6.02		0.12		0.01	0.13
<b>Total Biomass<sup>(1)</sup></b>	<b>3.75</b>	<b>32.12</b>		<b>69.53</b>	<b>105.40</b>	<b>(0.41)</b>	<b>(3.52)</b>		<b>(6.99)</b>	<b>(10.92)</b>
111A Fuel Wood		0.80		66.37	67.18		0.08		6.64	6.72
116A Wood Wastes	3.52	12.77		2.45	18.74	0.39	1.40		0.27	2.06
118A Sewage Sludge	0.23				0.23	0.03				0.03
215A Black Liquor		18.54			18.54		2.04			2.04
309A Biogas										
309B Sewage Sludge Gas		0.00		0.63	0.63		0.00		0.07	0.07
310A Landfill Gas				0.08	0.08				0.01	0.01
<b>Total<sup>(1)</sup></b>	<b>167.91</b>	<b>213.78</b>	<b>192.71</b>	<b>277.46</b>	<b>851.87</b>	<b>11.38</b>	<b>12.81</b>	<b>14.12</b>	<b>14.57</b>	<b>52.93</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 16: 1992 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>39.96</b>	<b>44.96</b>	<b>0.07</b>	<b>27.11</b>	<b>112.10</b>	<b>4.01</b>	<b>4.12</b>	<b>0.01</b>	<b>2.55</b>	<b>10.68</b>
102A Hard Coal	27.97	8.06	0.07	5.48	41.58	2.73	0.76	0.01	0.51	4.01
104A Hard Coal Briquettes										
105A Brown Coal	11.74	2.27		1.89	15.91	1.25	0.22		0.20	1.67
106A Brown Coal Briquettes	0.26	0.32		4.30	4.87	0.03	0.03		0.42	0.47
107A Coke		23.14		15.43	38.57		2.41		1.42	3.83
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		11.16			11.16		0.70			0.70
<b>Total Liquid</b>	<b>48.31</b>	<b>45.52</b>	<b>183.87</b>	<b>115.99</b>	<b>393.68</b>	<b>3.39</b>	<b>3.48</b>	<b>13.72</b>	<b>8.70</b>	<b>29.32</b>
110A Petrol Coke	2.30	0.93			3.23	0.23	0.09			0.33
203B Light Fuel Oil	1.88	8.12		25.53	35.53	0.15	0.63		1.97	2.75
203C Medium Fuel Oil	0.12	0.07		3.68	3.87	0.01	0.01		0.29	0.30
203D Heavy Fuel Oil	19.86	19.51		1.13	40.50	1.57	1.52		0.09	3.18
204A Gasoil	0.04	0.18		60.38	60.61	0.00	0.01		4.53	4.55
2050 Diesel	0.00	14.34	72.55	17.32	104.20	0.00	1.06	5.37	1.28	7.71
206A Other Kerosene		0.05		1.26	1.31		0.00		0.10	0.10
206B Jet Kerosene			0.92		0.92			0.03		0.07
207A Aviation Gasoline			0.12		0.12			0.01		0.01
2080 Motor Gasoline		0.09	110.29	1.60	111.98		0.01	8.31	0.12	8.44
224A Other Petroleum Products	7.28				7.28	0.57				0.57
303A Liquefied Petroleum Gas (LPG)	0.22	2.23		5.09	7.54	0.01	0.14		0.33	0.48
308A Refinery Gas	16.60				16.60	0.85				0.85
<b>Total Gaseous (Natural Gas)</b>	<b>67.44</b>	<b>79.62</b>	<b>3.97</b>	<b>62.58</b>	<b>213.62</b>	<b>3.71</b>	<b>4.38</b>	<b>0.22</b>	<b>3.44</b>	<b>11.75</b>
<b>Total Other Fuel</b>	<b>4.75</b>	<b>6.46</b>		<b>2.06</b>	<b>13.27</b>	<b>0.23</b>	<b>0.30</b>		<b>0.02</b>	<b>0.55</b>
114B Municipal Waste	3.48				3.48	0.17				0.17
114C Hazardous Waste	1.26				1.26	0.06				0.06
115A Industrial Waste		6.46		2.06	8.53		0.30		0.02	0.32
<b>Total Biomass<sup>(1)</sup></b>	<b>3.60</b>	<b>29.18</b>		<b>67.47</b>	<b>100.25</b>	<b>(0.4)</b>	<b>(3.2)</b>		<b>(6.77)</b>	<b>(10.37)</b>
111A Fuel Wood		0.71		65.28	65.98		0.07		6.53	6.60
116A Wood Wastes	3.40	10.40		2.19	16.00	0.37	1.14		0.24	1.76
118A Sewage Sludge	0.20				0.20	0.02				0.02
215A Black Liquor		18.07			18.07		1.99			1.99
309A Biogas										
309B Sewage Sludge Gas										
310A Landfill Gas										
<b>Total<sup>(1)</sup></b>	<b>164.07</b>	<b>205.74</b>	<b>187.91</b>	<b>275.21</b>	<b>832.92</b>	<b>11.35</b>	<b>12.27</b>	<b>13.94</b>	<b>14.71</b>	<b>52.31</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.



Table 17: 1991 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>67.34</b>	<b>49.40</b>	<b>0.06</b>	<b>32.42</b>	<b>149.23</b>	<b>6.82</b>	<b>4.64</b>	<b>0.01</b>	<b>3.05</b>	<b>14.52</b>
102A Hard Coal	41.79	6.86	0.06	6.89	55.60	4.13	0.64	0.01	0.64	5.42
104A Hard Coal Briquettes										
105A Brown Coal	24.92	2.89		2.38	30.19	2.62	0.28		0.26	3.16
106A Brown Coal Briquettes	0.63	0.47		5.05	6.15	0.06	0.05		0.49	0.60
107A Coke		26.90		18.10	45.00		2.80		1.66	4.46
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		12.28			12.28		0.87			0.87
<b>Total Liquid</b>	<b>48.39</b>	<b>54.92</b>	<b>184.53</b>	<b>121.62</b>	<b>409.46</b>	<b>3.40</b>	<b>4.20</b>	<b>13.77</b>	<b>9.14</b>	<b>30.55</b>
110A Petrol Coke	2.20	1.02			3.22	0.22	0.10			0.32
203B Light Fuel Oil	2.08	10.60		27.90	40.58	0.16	0.83		2.15	3.14
203C Medium Fuel Oil	0.06	0.02		4.81	4.88	0.00	0.00		0.37	0.38
203D Heavy Fuel Oil	19.88	25.31		0.79	45.98	1.57	1.97		0.06	3.60
204A Gasoil	0.01	0.19		64.86	65.07	0.00	0.01		4.86	4.88
2050 Diesel	0.00	14.19	68.15	16.74	99.08	0.00	1.05	5.04	1.24	7.33
206A Other Kerosene				1.36	1.36				0.11	0.11
206B Jet Kerosene			0.89		0.89			0.03		0.06
207A Aviation Gasoline			0.11		0.11			0.01		0.01
2080 Motor Gasoline		0.09	115.37	1.58	117.04		0.01	8.69	0.12	8.82
224A Other Petroleum Products	7.58				7.58	0.59				0.59
303A Liquified Petroleum Gas (LPG)	0.58	3.50		3.58	7.67	0.04	0.22		0.23	0.49
308A Refinery Gas	16.00				16.00	0.82				0.82
<b>Total Gaseous (Natural Gas)</b>	<b>73.74</b>	<b>78.67</b>	<b>4.07</b>	<b>56.00</b>	<b>212.48</b>	<b>4.06</b>	<b>4.33</b>	<b>0.22</b>	<b>3.08</b>	<b>11.69</b>
<b>Total Other Fuel</b>	<b>2.90</b>	<b>5.30</b>		<b>1.87</b>	<b>10.08</b>	<b>0.14</b>	<b>0.21</b>		<b>0.02</b>	<b>0.37</b>
114B Municipal Waste	2.90				2.90	0.14				0.14
114C Hazardous Waste										
115A Industrial Waste		5.30		1.87	7.18		0.21		0.02	0.23
<b>Total Biomass<sup>(1)</sup></b>	<b>3.02</b>	<b>28.46</b>		<b>71.36</b>	<b>102.83</b>	<b>(0.33)</b>	<b>(3.12)</b>		<b>(7.16)</b>	<b>(10.61)</b>
111A Fuel Wood		0.73		69.22	69.96		0.07		6.92	7.00
116A Wood Wastes	3.02	9.98		2.14	15.14	0.33	1.10		0.23	1.67
118A Sewage Sludge										
215A Black Liquor		17.74			17.74		1.95			1.95
309A Biogas										
309B Sewage Sludge Gas										
310A Landfill Gas										
<b>Total<sup>(1)</sup></b>	<b>195.39</b>	<b>216.75</b>	<b>188.66</b>	<b>283.28</b>	<b>884.07</b>	<b>14.42</b>	<b>13.38</b>	<b>14.00</b>	<b>15.30</b>	<b>57.13</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

Table 18: 1990 energy consumption and CO<sub>2</sub> emissions from category 1 A Fuel Combustion by fuel type and sector.

	Consumption (PJ)					CO <sub>2</sub> emissions (Tg)				
	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A	1 A 1	1 A 2	1 A 3 + 1 A 5	1 A 4	1 A
	Energy Ind.	Industry	Transport	Other Sectors	Total	Energy Ind.	Industry	Transport	Other Sectors	Total
<b>Total Solid</b>	<b>61.40</b>	<b>48.10</b>	<b>0.07</b>	<b>31.29</b>	<b>140.86</b>	<b>6.25</b>	<b>4.71</b>	<b>0.01</b>	<b>2.95</b>	<b>13.91</b>
102A Hard Coal	38.44	5.59	0.07	6.87	50.97	3.85	0.53	0.01	0.64	5.03
104A Hard Coal Briquettes										
105A Brown Coal	22.73	2.19		2.36	27.28	2.37	0.21		0.26	2.84
106A Brown Coal Briquettes	0.23	0.85		4.84	5.91	0.02	0.08		0.47	0.57
107A Coke		26.36		17.21	43.57		2.74		1.58	4.33
113A Peat				0.01	0.01				0.00	0.00
304A Coke Oven Gas		13.12			13.12		1.14			1.14
<b>Total Liquid</b>	<b>46.29</b>	<b>49.30</b>	<b>163.28</b>	<b>117.91</b>	<b>376.78</b>	<b>3.18</b>	<b>3.77</b>	<b>12.18</b>	<b>8.89</b>	<b>28.05</b>
110A Petrol Coke	1.95	0.98			2.92	0.20	0.10			0.29
203B Light Fuel Oil	1.61	9.83		35.16	46.60	0.13	0.77		2.71	3.60
203C Medium Fuel Oil	0.29	0.01		4.47	4.77	0.02	0.00		0.35	0.37
203D Heavy Fuel Oil	16.97	21.71		1.63	40.32	1.34	1.69		0.13	3.16
204A Gasoil	0.00	0.06		52.94	53.00	0.00	0.00		3.97	3.97
2050 Diesel	0.01	13.64	57.08	18.58	89.31	0.00	1.01	4.22	1.38	6.61
206A Other Kerosene				0.77	0.77				0.06	0.06
206B Jet Kerosene			0.79		0.79			0.02		0.06
207A Aviation Gasoline			0.11		0.11			0.01		0.01
2080 Motor Gasoline		0.08	105.29	1.63	107.01		0.01	7.92	0.12	8.05
224A Other Petroleum Products	6.77				6.77	0.53				0.53
303A Liquefied Petroleum Gas (LPG)	0.41	2.99		2.73	6.14	0.03	0.19		0.18	0.39
308A Refinery Gas	18.28				18.28	0.95				0.95
<b>Total Gaseous (Natural Gas)</b>	<b>74.10</b>	<b>77.38</b>	<b>4.05</b>	<b>46.07</b>	<b>201.60</b>	<b>4.08</b>	<b>4.26</b>	<b>0.22</b>	<b>2.53</b>	<b>11.09</b>
<b>Total Other Fuel</b>	<b>2.41</b>	<b>4.28</b>		<b>2.29</b>	<b>8.99</b>	<b>0.12</b>	<b>0.24</b>		<b>0.02</b>	<b>0.38</b>
114B Municipal Waste	2.41				2.41	0.12				0.12
114C Hazardous Waste										
115A Industrial Waste		4.28		2.29	6.58		0.24		0.02	0.26
<b>Total Biomass<sup>(1)</sup></b>	<b>2.04</b>	<b>28.11</b>		<b>64.22</b>	<b>94.38</b>	<b>(0.22)</b>	<b>(3.09)</b>		<b>(6.44)</b>	<b>(9.75)</b>
111A Fuel Wood		0.66		62.45	63.11		0.07		6.25	6.31
116A Wood Wastes	2.04	9.65		1.77	13.46	0.22	1.06		0.19	1.48
118A Sewage Sludge										
215A Black Liquor		17.80			17.80		1.96			1.96
309A Biogas										
309B Sewage Sludge Gas										
310A Landfill Gas										
<b>Total<sup>(1)</sup></b>	<b>186.25</b>	<b>207.17</b>	<b>167.40</b>	<b>261.79</b>	<b>822.61</b>	<b>13.62</b>	<b>12.97</b>	<b>12.40</b>	<b>14.39</b>	<b>53.43</b>

(1) CO<sub>2</sub> emissions of Biomass are not included in Total.

## ANNEX 3: CO<sub>2</sub> REFERENCE APPROACH

In this annex the results, methodology and detailed data for the CO<sub>2</sub> reference approach are presented.

### Methodology

The default methodology according to IPCC Worksheet 1-1 was used.

### Emission factors

#### Carbon emission factors

For estimation of emissions that arise from combustion of fossil fuels the default carbon emission factors described in chapter 1.4.1.1 of the IPCC Reference Manual have been used (IPCC Workbook 1.6 table 1-2). For selected values see Table 5.

#### Fraction of carbon oxidised

The default values of table 1-6 of the IPCC Reference Manual have been used. For selected values see Table 5.

### Activity data

#### Production, Imports, Exports, Stock Change

Activity data are taken from the national energy balance [IEA JQ 2004] (see Annex 2 and Annex 4). The reference approach requires more detailed fuel categories than provided in the national energy balance. Some fuel categories are aggregations of the detailed fuel categories the reference approach asks for. For the following fuel types the energy statistics does not give detailed data:

- Ethane and Naphta is included in Refinery Feedstocks.
- Anthracite is included in Other Bituminous Coal.
- Liquid Biomass is included in Solid Biomass.

#### International Bunkers

International bunkers are only relevant for aviation. However, there is “international” navigation on the Danube, but this is included in national navigation.

Fuel consumption of international bunkers is consistent with memo item international bunkers as described in the relevant chapter for Category 1 A 3.

#### Carbon Stored (Feedstocks)

Emissions from carbon stored in products are calculated for each fuel by multiplying its non-energy use with the corresponding default IPCC carbon emission factor.

For all fuels except for coke oven coke the IPCC default values for the fraction of carbon stored are used. To estimate carbon stored from coke oven coke carbon remaining in steel is calculated as the following:

$$\text{Carbon stored in steel [Mg]} = \text{raw steel production [Mg]} * 0.0015 + \text{electric steel [Mg]} * 0.01$$

which leads to an average fraction of carbon stored of 0.007 of total inland coke consumption.

In the Sectoral Approach the release of stored carbon as emissions is considered as quoted in the NIR, chapter 3.4 *Feedstocks*.

## Recalculations

In comparison to the previous submission the difference of CO<sub>2</sub> emissions of reference and the sectoral approach as reported in CRF-Table 1.A(c) is higher now. This is because the reference approach now additionally covers all actual emissions from non energy use of fossil carbon. In the previous submission total carbon of non energy use was subtracted which led to comparably low differences of CO<sub>2</sub> emissions between the two approaches. In this submission the reference approach gives a upper limit of CO<sub>2</sub> emissions from fossil fuels.

### Activity data

In the previous submission *Petrol Coke* was included in *Other Oil*. In this submission *Petrol Coke* is reported separately.

Imports, Exports and Production is updated according to the new version of the energy balance [IEA JQ 2004]. Changes of activity data are based on energy balance recalculations as described in Annex 2.

### Carbon Stored (Feedstocks)

In the previous submission a fraction of carbon stored of 100% for each fuel was selected. In response to the ERT recommendations the IPCC default values for fraction of carbon stored are selected. For coke oven coke now only the remaining carbon in steel finished products is subtracted from total coke oven coke consumption.

## Results of the Reference Approach

Table 1-Table 5 present calculation results, apparent fuel consumption, carbon stored, international bunker fuels, conversion factors, carbon emission factors and the fraction of carbon oxidised for all fuel types of the Reference Approach.

Table 1 presents the calculation results for each fuel type of the Reference Approach.

*Table 1: Actual CO<sub>2</sub> emissions (Gg CO<sub>2</sub>)*

Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Crude Oil	24 681	25 675	27 102	26 450	27 615	26 751	27 168	29 094	28 522	26 800	25 573	27 308	27 766	27 488
Orimulsion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas Liquids	116	116	113	113	133	121	150	122	637	201	302	154	154	154
Gasoline	-240	1 221	664	709	-184	386	-235	-932	-84	-278	515	226	672	1 215
Jet Kerosene	-843	-967	-1 081	-1 087	-1 076	-1 206	-1 379	-1 464	-1 536	-1 445	-1 550	-1 477	-1 374	-1 269
Other Kerosene	-44	-39	-62	45	-33	-7	21	31	47	48	16	-1	10	11
Shale Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Gas / Diesel Oil	1 815	2 048	1 983	1 936	1 903	3 719	6 143	4 404	6 165	6 599	6 916	8 237	9 471	12 198
Residual Fuel Oil	995	749	378	1 328	1 502	1 212	1 183	1 222	1 893	922	1 097	967	-68	865
LPG	252	364	331	218	407	373	409	259	341	389	405	422	434	373
Ethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bitumen	-863	-902	-1 220	-912	-998	-815	-838	-960	-950	-1 046	-1 100	-1 291	-1 336	-1 276
Lubricants	148	120	96	61	54	-85	-165	-172	-158	-156	-166	-183	-165	-226
Petroleum Coke	88	92	84	71	37	39	30	46	61	108	74	61	203	202
Refinery Feedstocks	3 031	3 467	2 843	3 262	2 418	1 643	2 366	2 589	1 719	2 592	1 600	1 983	1 514	622
Other Oil	-570	-959	-1 161	-1 081	-1 418	-1 212	-1 462	-1 370	-1 512	-1 555	-1 375	-1 703	-1 746	-1 712
<b>Liquid Fossil Totals</b>	<b>28 565</b>	<b>30 984</b>	<b>30 072</b>	<b>31 114</b>	<b>30 359</b>	<b>30 919</b>	<b>33 392</b>	<b>32 869</b>	<b>35 144</b>	<b>33 179</b>	<b>32 305</b>	<b>34 704</b>	<b>35 534</b>	<b>38 645</b>
Anthracite	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coking Coal	5 926	5 247	5 037	4 731	4 839	4 766	5 301	5 313	5 500	5 560	4 658	4 720	4 681	4 730
Other Bit. Coal	4 727	5 157	3 857	3 022	3 081	3 849	4 414	5 084	4 035	3 385	4 795	5 338	5 020	6 217
Sub- Bit. Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lignite	2 705	2 995	1 577	1 454	1 342	1 885	1 752	1 423	936	1 696	1 471	1 767	1 683	1 780
Oil Shale	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB & Patent Fuel	548	570	452	388	358	308	299	250	192	197	197	195	118	132
Coke Oven / Gas Coke	2 007	2 802	2 028	2 054	2 188	2 687	1 898	2 376	1 970	1 839	3 118	2 746	3 545	2 825
<b>Solid Fuel Totals</b>	<b>15 914</b>	<b>16 770</b>	<b>12 952</b>	<b>11 649</b>	<b>11 808</b>	<b>13 496</b>	<b>13 665</b>	<b>14 446</b>	<b>12 634</b>	<b>12 678</b>	<b>14 240</b>	<b>14 765</b>	<b>15 048</b>	<b>15 684</b>
<b>Gaseous Fossil</b>	<b>12 238</b>	<b>12 939</b>	<b>12 705</b>	<b>13 399</b>	<b>13 782</b>	<b>15 048</b>	<b>16 017</b>	<b>15 437</b>	<b>15 848</b>	<b>16 125</b>	<b>15 388</b>	<b>16 309</b>	<b>16 494</b>	<b>17 834</b>
<b>TOTAL</b>	<b>56 716</b>	<b>60 693</b>	<b>55 729</b>	<b>56 163</b>	<b>55 950</b>	<b>59 463</b>	<b>63 073</b>	<b>62 752</b>	<b>63 626</b>	<b>61 982</b>	<b>61 934</b>	<b>65 778</b>	<b>67 076</b>	<b>72 163</b>
<b>Biomass Total</b>	<b>9 105</b>	<b>9 921</b>	<b>9 653</b>	<b>10 155</b>	<b>9 789</b>	<b>10 416</b>	<b>11 104</b>	<b>11 124</b>	<b>10 589</b>	<b>11 757</b>	<b>11 056</b>	<b>12 352</b>	<b>12 233</b>	<b>13 486</b>
Solid Biomass	9 105	9 921	9 653	10 078	9 710	10 324	10 994	10 987	10 451	11 585	10 884	12 153	12 083	13 293
Liquid Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Biomass	0	0	0	77	79	92	110	137	138	172	172	199	150	194

Table 2 presents the apparent fuel consumption for each fuel type of the Reference Approach.

Table 2: Apparent Consumption (TJ)

Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Crude Oil	339 954	353 655	373 311	364 329	380 375	368 466	374 218	400 742	392 864	369 149	352 242	376 144	382 450	378 621
Orimulsion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas														
Liquids	1 854	1 854	1 809	1 809	2 125	1 944	2 400	1 961	10 206	3 217	4 842	2 473	2 473	2 473
Gasoline	-3 341	17 855	9 690	10 332	-2 683	5 621	-3 419	-13 579	-1 144	-4 059	7 522	3 308	9 796	17 707
Jet Kerosene	-11 906	-13 667	-15 270	-15 351	-15 207	-17 043	-19 483	-20 686	-21 705	-20 411	-21 904	-20 861	-19 416	-17 932
Other Kerosene	-623	-551	-870	633	-461	-105	290	440	666	674	218	-14	137	154

Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Shale Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas / Diesel Oil	24 755	27 930	27 038	26 399	25 959	50 721	83 770	60 058	84 070	90 000	94 318	112 339	129 157	166 359
Residuel Fuel Oil	12 990	9 781	4 941	17 342	19 611	15 825	15 450	15 949	24 720	12 033	14 316	12 629	-887	11 291
LPG	4 029	5 825	5 306	3 486	6 517	5 974	6 545	4 147	5 464	6 224	6 486	6 763	6 956	6 025
Ethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bitumen	10 811	8 480	2 452	5 064	5 426	7 475	9 324	9 766	11 092	9 407	9 798	8 685	7 412	8 668
Lubricants	5 313	4 541	3 738	2 693	2 532	563	-161	-201	-40	-82	-111	-355	-538	-1 270
Petroleum Coke	883	920	837	709	366	393	304	462	607	1 083	743	609	2 031	2 027
Refinery Feedstocks	41 754	47 758	39 162	44 933	33 308	22 633	32 591	35 661	23 671	35 705	22 032	27 307	20 851	8 566
Other Oil	6 406	2 655	5 142	3 190	-733	-299	-774	5 581	-545	-706	374	-2 363	-3 000	-2 397
<b>Liquid Fossil Totals</b>	<b>432 880</b>	<b>467 037</b>	<b>457 286</b>	<b>465 569</b>	<b>457 133</b>	<b>462 169</b>	<b>501 056</b>	<b>500 301</b>	<b>529 927</b>	<b>502 235</b>	<b>490 877</b>	<b>526 665</b>	<b>537 421</b>	<b>580 291</b>
Anthracite	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coking Coal	65 423	58 690	55 855	52 568	53 834	53 427	58 604	59 096	60 811	61 358	52 579	52 969	53 149	53 140
Other Bit. Coal	51 016	55 653	41 633	32 626	33 254	41 541	47 629	54 857	43 542	36 531	51 740	57 597	54 165	67 077
Sub- Bit. Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lignite	27 278	30 194	15 906	14 663	13 532	19 004	17 671	14 347	9 441	17 101	14 834	17 816	16 968	17 952
Oil Shale	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peat	4	4	4	4	4	4	4	4	4	4	4	4	4	4
BKB & Patent Fuel	5 912	6 146	4 872	4 185	3 858	3 323	3 221	2 694	2 066	2 126	2 127	2 099	1 277	1 422
Coke Oven / Gas Coke	19 100	26 605	19 290	19 534	20 818	25 549	18 090	22 623	18 769	17 540	29 618	26 103	33 668	26 847
<b>Solid Fuel Totals</b>	<b>168 733</b>	<b>177 293</b>	<b>137 560</b>	<b>123 581</b>	<b>125 300</b>	<b>142 849</b>	<b>145 218</b>	<b>153 621</b>	<b>134 632</b>	<b>134 660</b>	<b>150 904</b>	<b>156 589</b>	<b>159 232</b>	<b>166 443</b>
<b>Gaseous Fossil</b>	<b>219 239</b>	<b>231 794</b>	<b>227 610</b>	<b>240 044</b>	<b>246 908</b>	<b>269 583</b>	<b>286 941</b>	<b>276 551</b>	<b>283 920</b>	<b>288 876</b>	<b>275 681</b>	<b>292 169</b>	<b>295 485</b>	<b>319 491</b>
<b>TOTAL</b>	<b>820 853</b>	<b>876 124</b>	<b>822 456</b>	<b>829 194</b>	<b>829 341</b>	<b>874 601</b>	<b>933 215</b>	<b>930 474</b>	<b>948 478</b>	<b>925 770</b>	<b>917 462</b>	<b>975 423</b>	<b>992 138</b>	<b>1 066 225</b>
<b>Biomass Total</b>	<b>94 376</b>	<b>102 837</b>	<b>100 050</b>	<b>105 164</b>	<b>101 375</b>	<b>107 860</b>	<b>114 968</b>	<b>115 145</b>	<b>109 595</b>	<b>121 667</b>	<b>114 401</b>	<b>127 803</b>	<b>126 626</b>	<b>139 565</b>
Solid Biomass	94 376	102 837	100 050	104 456	100 649	107 011	113 954	113 882	108 326	120 079	112 816	125 967	125 243	137 780
Liquid Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Biomass	0	0	0	708	726	849	1 014	1 263	1 269	1 588	1 585	1 836	1 384	1 785

Table 3 presents the carbon stored for each fuel type of the Reference Approach.

Table 3: Carbon Stored (Gg C)

Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Crude Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orimulsion	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Gas Liquids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	2.9	1.1	0.1	0.0	0.0	0.0	0.0	0.1	1.6	0.0	0.3	0.3	0.0	0.0
Jet Kerosene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Other Kerosene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shale Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas / Diesel Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual Fuel Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LPG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Ethane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Naphtha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bitumen	475.7	435.0	389.9	362.5	394.3	389.0	435.9	479.2	505.8	495.1	518.7	546.7	531.0	542.3
Lubricants	65.6	57.9	48.2	37.0	35.8	34.6	42.2	43.4	42.6	41.4	43.4	43.3	34.7	36.9
Petroleum Coke	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refinery Feedstocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Oil	285.3	317.4	422.7	361.6	376.1	327.8	387.2	489.0	405.7	414.3	386.3	421.9	421.0	423.7
<b>Liquid Fossil Totals</b>	<b>829.5</b>	<b>811.4</b>	<b>861.0</b>	<b>761.1</b>	<b>806.2</b>	<b>751.4</b>	<b>865.3</b>	<b>1 011.8</b>	<b>955.6</b>	<b>950.8</b>	<b>948.7</b>	<b>1 012.1</b>	<b>986.7</b>	<b>1 003.7</b>
Anthracite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coking Coal	38.8	54.1	39.2	39.7	42.3	52.0	36.8	46.0	38.2	35.7	60.2	53.1	68.5	54.6
Other Bit. Coal	0.6	0.6	0.7	0.6	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5
Sub- Bit. Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lignite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oil Shale	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BKB & Patent Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coke Oven / Gas Coke	5.0	5.2	4.7	4.8	5.2	5.9	5.4	6.2	5.5	5.5	6.0	6.0	6.7	5.9
<b>Solid Fuel Totals</b>	<b>44.5</b>	<b>59.9</b>	<b>44.7</b>	<b>45.1</b>	<b>47.9</b>	<b>58.4</b>	<b>42.6</b>	<b>52.7</b>	<b>44.1</b>	<b>41.6</b>	<b>66.7</b>	<b>59.5</b>	<b>75.7</b>	<b>61.1</b>
<b>Gaseous Fossil</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL</b>	<b>873.9</b>	<b>871.3</b>	<b>905.6</b>	<b>806.2</b>	<b>854.1</b>	<b>809.8</b>	<b>907.9</b>	<b>1 064.5</b>	<b>999.7</b>	<b>992.3</b>	<b>1 015.4</b>	<b>1 071.7</b>	<b>1 062.4</b>	<b>1 064.8</b>
<b>Biomass Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Solid Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquid Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 4 presents international bunker fuels for the relevant fuel types of the Reference Approach.

Table 4: International Bunkers [Gg]

Fuel Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Jet Kerosene	275	309	334	354	368	409	453	471	488	475	516	508	471	448

Table 5 presents conversion factors, carbon emission factors and the fraction of carbon oxidised for all fuel types of the Reference Approach.

Table 5: Conversion factor, carbon emission factor and fraction of carbon oxidised.

Fuel Type	Conversion Factor [TJ/t] [TJ/1000 m <sup>3</sup> ]	Carbon emission factor [t C/TJ]	Fraction of carbon oxidised [t C/t C]
Crude Oil	42.75	20.00	0.99
Orimulsion	-	-	-
Natural Gas Liquids	45.22	17.20	0.99
Gasoline	44.80	18.90	0.99
Jet Kerosene	44.59	19.50	0.99
Other Kerosene	44.75	19.60	0.99
Shale Oil	-	-	-
Gas / Diesel Oil	43.33	20.20	0.99
Residual Fuel Oil	40.19	21.10	0.99
LPG	47.31	17.20	0.99
Ethane	-	-	-
Naphtha	-	-	-
Bitumen	40.19	22.00	0.99
Lubricants	40.19	20.00	0.99
Petroleum Coke	31.00	27.50	0.99
Refinery Feedstocks	42.50	20.00	0.99
Other Oil	40.19	20.00	0.99
Anthracite	-	-	-
Coking Coal	28.00	25.80	0.98
Other Bit. Coal	28.00	25.80	0.98
Sub- Bit. Coal	-	-	-
Lignite	10.90	27.60	0.98
Oil Shale	-	-	-
Peat	8.80	28.90	0.98
BKB & Patent Fuel	19.30	25.80	0.98
Coke Oven / Gas Coke	28.20	29.50	0.98
Natural Gas	1.00	15.30	1.00
Solid Biomass	1.00	29.90	0.88
Liquid Biomass	-	-	-
Gas Biomass	1.00	29.90	0.99



## ANNEX 4: NATIONAL ENERGY BALANCE

The following tables present the data of the national energy balance by IEA categories. Calorific values for unit conversion are presented at the end of this Annex. Data was submitted to the Umweltbundesamt by STATISTIK AUSTRIA in November 2004.

Please note that for reasons of confidentiality energy consumption of autoproducers by sub sectors as quoted in ANNEX 2 are not published here.

### Coal

Table 1: National Energy Balance 1990-2003. Coking Coal [1000 tons].

101A Coking Coal	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	2 376	2 071	2 120	1 766	1 919	1 778	2 013	2 167	2 089	2 146	1 738	1 861	1 864	1 890
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-39	25	-125	111	4	130	80	-57	83	45	139	30	34	8
<b>Gross Inland Deliveries (Obs.)</b>	<b>2 337</b>	<b>2 096</b>	<b>1 995</b>	<b>1 877</b>	<b>1 923</b>	<b>1 908</b>	<b>2 093</b>	<b>2 111</b>	<b>2 172</b>	<b>2 191</b>	<b>1 878</b>	<b>1 892</b>	<b>1 898</b>	<b>1 898</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>2 337</b>	<b>2 096</b>	<b>1 995</b>	<b>1 877</b>	<b>1 923</b>	<b>1 908</b>	<b>2 093</b>	<b>2 111</b>	<b>2 172</b>	<b>2 191</b>	<b>1 878</b>	<b>1 892</b>	<b>1 898</b>	<b>1 898</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	2 337	2 096	1 995	1 877	1 923	1 908	2 093	2 111	2 172	2 191	1 878	1 892	1 898	1 898
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0

101A Coking Coal	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Final Consumption</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: National Energy Balance 1990-2003. Bituminous Coal &amp; Anthracite [1000 tons].

102A Bituminous Coal & Anthracite	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	1	1	1	1	0	0	0	0	0	0	0	0
Total Imports (Balance)	1 233	1 717	1 692	1 422	1 096	1 216	1 724	1 616	1 653	1 211	1 672	1 862	2 167	2 069
Total Exports (Balance)	0	0	9	0	0	1	2	4	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	589	270	-197	-257	91	268	-21	348	-97	94	176	195	-233	327
<b>Gross Inland Deliveries (Obs.)</b>	1 822	1 988	1 487	1 165	1 188	1 484	1 701	1 959	1 555	1 305	1 848	2 057	1 934	2 396
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	1 421	1 561	1 075	746	822	1 082	1 238	1 437	1 061	915	1 422	1 684	1 618	2 136
Public Electricity	964	957	647	394	485	550	1 069	1 275	890	740	1 203	1 390	1 373	1 908
Public Combined Heat and Power	409	535	352	318	327	518	128	127	127	140	161	244	194	177
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	6	0	0
Auto Producers of Electricity	0	0	0	0	0	0	19	5	4	4	10	13	11	13
Auto Producers for CHP	48	68	76	34	10	14	22	31	40	32	48	31	39	38



<b>102A Bituminous Coal &amp; Anthracite</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>33</b>	<b>2</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	7	33	2	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>400</b>	<b>425</b>	<b>410</b>	<b>417</b>	<b>365</b>	<b>400</b>	<b>462</b>	<b>521</b>	<b>493</b>	<b>381</b>	<b>392</b>	<b>370</b>	<b>315</b>	<b>258</b>
Total Transport	3	0	1	0	0	0	1	1	1	1	1	1	1	1
Rail	3	0	1	0	0	0	1	1	1	1	1	1	1	1
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	152	177	212	248	218	250	305	399	382	290	314	291	254	207
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	6	8	27	42	42	45	50	73	70	88	57	70	71	68
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	145	142	164	167	142	163	196	208	199	131	171	151	98	82
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	1	27	22	38	35	43	59	118	113	72	87	70	85	57
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	245	248	198	169	146	149	156	121	109	90	77	78	61	50
Commerce - Public Services	16	19	11	12	9	10	12	10	11	9	7	7	5	4
Residential	226	226	184	155	135	137	142	108	98	80	68	70	55	45
Agriculture	3	3	3	2	2	2	2	2	1	1	1	1	1	1
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

102A Bituminous Coal & Anthracite	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Total Non-Energy Use</b>	2	2	2	2	1	1	1	1	1	1	1	1	2	2

Table 3: National Energy Balance 1990-2003. Patent Fuel [1000 tons].

104A Patent Fuel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	0	0	0	0	0	0	0	7	4	4	4	1	1	2
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	0	0	0	0	0	0	0	7	4	4	4	1	1	2
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	0	0	0	0	7	4	4	4	1	1	2
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0



<b>104A Patent Fuel</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	7	4	4	4	1	1	2
Commerce - Public Services	0	0	0	0	0	0	0	1	1	1	1	0	0	0
Residential	0	0	0	0	0	0	0	6	3	3	3	0	1	2
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4: National Energy Balance 1990-2003. Lignite and Brown Coal [1000 tons].

<b>105A Lignite and brown coal</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Indigenous Production	2 448	2 081	1 771	1 691	1 369	1 297	1 108	1 130	1 140	1 137	1 249	1 206	1 412	1 152
Total Imports (Balance)	36	53	22	1	19	29	43	23	13	13	34	6	5	5
Total Exports (Balance)	3	3	3	1	0	0	0	0	0	1	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	23	639	-330	-347	-146	417	470	163	-287	419	78	423	140	490
<b>Gross Inland Deliveries (Obs.)</b>	<b>2 503</b>	<b>2 770</b>	<b>1 459</b>	<b>1 345</b>	<b>1 241</b>	<b>1 743</b>	<b>1 621</b>	<b>1 316</b>	<b>866</b>	<b>1 569</b>	<b>1 361</b>	<b>1 635</b>	<b>1 557</b>	<b>1 647</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>2 133</b>	<b>2 338</b>	<b>1 167</b>	<b>1 068</b>	<b>984</b>	<b>1 524</b>	<b>1 495</b>	<b>1 205</b>	<b>763</b>	<b>1 417</b>	<b>1 212</b>	<b>1 481</b>	<b>1 390</b>	<b>1 477</b>
Public Electricity	1 182	1 445	583	301	405	1 081	1 358	1 164	738	1 372	1 168	1 418	1 316	1 393
Public Combined Heat and Power	881	830	484	668	509	339	48	13	3	9	8	30	43	52
Public Heat Plants	16	8	9	7	7	9	9	4	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Auto Producers for CHP	54	54	91	92	63	95	76	23	22	35	35	33	31	32
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

105A Lignite and brown coal	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	6	3	1	0	1	0	0	1	0	15	2	0	1	0
Coal Mines	3	1	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	3	2	1	0	1	0	0	1	0	15	2	0	1	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	364	429	291	277	257	219	126	111	103	137	147	153	167	170
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	147	211	118	136	139	115	33	46	45	84	102	111	133	145
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	11	14	4	0	1	4	6	3	3	15	38	44	59	69
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	2	1	1	1	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	132	193	112	133	139	111	27	43	42	69	64	67	74	76
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	2	3	1	1	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	217	218	173	141	117	104	93	65	58	53	45	42	34	24
Commerce - Public Services	9	14	6	9	10	5	3	3	3	3	3	3	3	4
Residential	208	205	168	132	108	99	90	62	55	50	42	39	30	20
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0





Table 5: National Energy Balance 1990-2003. Brown Coal Briquettes [1000 tons].

106A BKB-PB	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	295	286	239	237	181	173	167	133	103	106	95	108	65	72
Total Exports (Balance)	0	0	0	0	0	1	1	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	12	32	13	-20	19	1	0	0	0	0	11	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	<b>306</b>	<b>318</b>	<b>252</b>	<b>217</b>	<b>200</b>	<b>172</b>	<b>167</b>	<b>133</b>	<b>103</b>	<b>106</b>	<b>107</b>	<b>108</b>	<b>65</b>	<b>72</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>12</b>	<b>32</b>	<b>13</b>	<b>12</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>29</b>	<b>0</b>	<b>0</b>
Public Electricity	7	13	6	5	5	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	18	29	0	0
Public Heat Plants	5	19	8	7	5	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>295</b>	<b>286</b>	<b>239</b>	<b>205</b>	<b>190</b>	<b>172</b>	<b>167</b>	<b>133</b>	<b>103</b>	<b>106</b>	<b>88</b>	<b>79</b>	<b>65</b>	<b>72</b>
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	44	25	17	15	24	14	13	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0

106A BKB-PB	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	1	2	1	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	43	23	16	15	24	14	13	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	251	261	223	190	166	158	154	132	103	106	88	79	65	72
Commerce - Public Services	6	11	8	7	11	6	6	20	11	11	6	4	2	3
Residential	235	240	206	176	149	146	142	108	88	91	79	72	60	66
Agriculture	10	11	9	8	7	6	6	5	4	4	3	3	3	3
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 6: National Energy Balance 1990-2003. Coke Oven Coke [1000 tons].

107A Coke Oven Coke	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	1 725	1 540	1 487	1 402	1 432	1 448	1 559	1 566	1 598	1 608	1 385	1 394	1 395	1 395
Total Imports (Balance)	815	893	685	580	607	718	652	764	642	654	981	1 091	1 073	904
Total Exports (Balance)	1	2	2	0	0	1	0	0	0	2	1	1	2	2
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-136	52	1	113	132	189	-10	39	24	-30	71	-164	124	51
<b>Gross Inland Deliveries (Obs.)</b>	<b>2 402</b>	<b>2 483</b>	<b>2 171</b>	<b>2 094</b>	<b>2 171</b>	<b>2 354</b>	<b>2 200</b>	<b>2 369</b>	<b>2 264</b>	<b>2 230</b>	<b>2 435</b>	<b>2 320</b>	<b>2 589</b>	<b>2 347</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>596</b>	<b>609</b>	<b>526</b>	<b>546</b>	<b>632</b>	<b>691</b>	<b>637</b>	<b>737</b>	<b>811</b>	<b>767</b>	<b>888</b>	<b>878</b>	<b>1 026</b>	<b>958</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	596	609	526	546	632	691	636	737	811	767	888	878	1 026	958
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>97</b>	<b>63</b>	<b>79</b>	<b>71</b>	<b>43</b>	<b>77</b>	<b>88</b>	<b>73</b>	<b>68</b>	<b>48</b>	<b>53</b>	<b>52</b>	<b>59</b>	<b>53</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



107A Coke Oven Coke	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Blast Furnaces (Energy)	97	63	79	71	43	77	88	73	68	48	53	52	59	53
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>853</b>	<b>924</b>	<b>763</b>	<b>660</b>	<b>605</b>	<b>576</b>	<b>544</b>	<b>490</b>	<b>441</b>	<b>469</b>	<b>457</b>	<b>364</b>	<b>360</b>	<b>318</b>
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	243	282	216	192	213	198	172	222	200	210	253	183	182	174
Iron and Steel	233	229	137	153	160	179	163	179	163	145	198	150	151	163
Chemical (incl. Petro-Chemical)	2	12	17	10	17	7	3	14	11	16	18	15	11	4
Non ferrous Metals	1	6	10	5	8	4	2	7	6	7	7	4	6	2
Non metallic Mineral Products	4	19	33	13	10	5	2	15	13	36	12	3	5	1
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	1	3	8	4	7	2	1	3	2	3	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	1	5	10	5	10	2	1	5	4	3	18	11	11	4
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	7	2	1	2	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	610	642	547	468	391	379	371	268	242	260	204	180	177	145
Commerce - Public Services	13	14	12	10	9	8	8	6	5	4	3	3	2	1
Residential	585	615	524	448	375	363	356	257	231	250	196	174	172	141
Agriculture	12	13	11	10	8	8	8	5	5	5	4	4	3	3
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>857</b>	<b>887</b>	<b>803</b>	<b>817</b>	<b>891</b>	<b>1 010</b>	<b>932</b>	<b>1 069</b>	<b>944</b>	<b>946</b>	<b>1 037</b>	<b>1 026</b>	<b>1 144</b>	<b>1 018</b>

Table 7: National Energy Balance 1990-2003. Peat [1000 tons].

113A Peat	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0

113A Peat	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



113A Peat	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Other Sectors	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8: National Energy Balance 1990-2003. Coke Oven Gas [TJ].

304A Coke Oven Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	13	12	11	10	10	10	11	11	12	12	10			10
	117	276	164	636	790	906	419	605	166	220	466	9 776	9 579	931
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	13	12	11	10	10	10	11	11	12	12	10			10
	117	276	164	636	790	906	419	605	166	220	466	9 776	9 579	931
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	3 385	2 763	2 885	2 960	3 490	6 228	3 545	3 087	3 087	4 005	3 794	3 984	3 092	1 871
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	2 183	2 002	2 033	2 649	3 256	3 449	2 639	1 255
Auto Producers for CHP	3 385	2 763	2 885	2 960	3 490	6 228	1 362	1 085	1 054	1 357	489	535	453	526
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	50	0	0	91
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	3 621	3 188	2 863	2 474	2 274	1 987	3 058	2 781	3 279	2 951	3 115	3 099	3 047	3 099
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	3 621	3 188	2 863	2 474	2 274	1 987	3 058	2 781	3 279	2 951	3 115	3 099	3 047	3 099
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0

<b>304A Coke Oven Gas</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Final Consumption</b>	6 111	6 325	5 416	5 202	5 026	2 691	4 816	5 737	5 801	5 264	3 557	2 694	3 441	5 962
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry	6 111	6 325	5 416	5 202	5 026	2 691	4 816	5 737	5 801	5 264	3 557	2 694	3 441	5 962
Iron and Steel	6 111	6 325	5 416	5 202	5 026	2 691	4 816	5 737	5 801	5 264	3 557	2 694	3 441	5 962
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 9: National Energy Balance 1990-2003. Blast Furnace Gas [TJ].

<b>305A Blast Furnace Gas</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Indigenous Production	16	16	14	14	17	18	17	20	22	21	24	24	28	26
	175	530	273	992	342	912	283	011	012	407	806	513	644	743
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	16	16	14	14	17	18	17	20	22	21	24	24	28	26
	175	530	273	992	342	912	283	011	012	407	806	513	644	743
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	4 822	4 352	5 405	5 773	7 708	7 132	6 956	8 582	7 768	6 703	6 260	6 273	8 027	7 958
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	4 493	5 447	5 320	4 530	5 257	5 404	7 240	6 784



305A Blast Furnace Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Auto Producers for CHP	4 822	4 352	5 405	5 773	7 708	7 132	2 463	3 135	2 448	2 173	1 003	869	786	1 174
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>1 983</b>	<b>2 026</b>	<b>1 749</b>	<b>2 753</b>	<b>2 642</b>	<b>3 398</b>	<b>1 516</b>	<b>2 583</b>	<b>4 911</b>	<b>824</b>	<b>778</b>	<b>944</b>	<b>882</b>	<b>1 030</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	1 983	2 026	1 749	2 753	2 642	3 398	1 516	2 583	4 911	824	778	944	882	1 030
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>		10								13	17	17	19	17
	9 370	152	7 119	6 465	6 991	8 383	8 811	8 846	9 333	880	768	297	736	756
Total Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Industry		10								13	17	17	19	17
	9 370	152	7 119	6 465	6 991	8 383	8 811	8 846	9 333	880	768	297	736	756
Iron and Steel		10								13	17	17	19	17
	9 370	152	7 119	6 465	6 991	8 383	8 811	8 846	9 333	880	768	297	736	756
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Sectors	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0



<b>305A Blast Furnace Gas</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>





## Oil

Table 10: National Energy Balance 1990-2003. Crude Oil [1000 tons].

Crude Oil	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	1 149	1 280	1 180	1 154	1 099	1 035	992	972	959	1 002	971	957	833	1 151
Refinery Losses	120	129	181	124	60	153	75	82	156	76	35	66	21	0
Refinery Intake (Calculated)	7 952	8 273	8 732	8 522	8 898	8 619	8 754	9 374	9 190	8 635	8 240	8 799	8 945	8 857
Refinery Intake (Observed)	7 952	8 273	8 732	8 522	8 898	8 619	8 754	9 374	9 190	8 635	8 240	8 799	8 945	8 857
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total Imports (Balance)	6 797	7 000	7 550	7 453	7 790	7 590	7 737	8 450	8 269	7 698	7 315	7 940	8 118	7 819
Total Exports (Balance)	0	0	0	0	0	0	51	25	44	51	61	63	0	0
Stock Change (National Territory)	6	-8	3	-84	9	-6	75	-23	6	-14	16	-36	-5	-114
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 11: National Energy Balance 1990-2003. Natural Gas Liquids [1000 tons].

Natural Gas Liquids	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	41	41	40	40	47	43	53	55	88	61	101	55	55	55
Refinery Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refinery Intake (Calculated)	41	41	40	40	47	43	53	43	226	71	107	55	55	55
Refinery Intake (Observed)	41	41	40	40	47	43	53	43	226	71	107	55	55	55
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	0	0	0	0	0	0	0	0	135	0	6	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	-12	2	10	0	0	0	0
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 12: National Energy Balance 1990-2003. Refinery Feedstocks [1000 tons].

Refinery Feedstocks	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Refinery Intake (Calculated)	1 069	1 225	1 001	1 124	861	582	858	853	564	873	540	652	492	204
Refinery Intake (Observed)	1 069	1 225	1 001	1 124	861	582	858	853	564	873	540	652	492	204
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Imports (Balance)	1 009	1 154	902	708	915	600	916	761	746	740	627	570	593	375
Total Exports (Balance)	0	0	0	0	77	39	62	14	7	15	76	42	6	25
Stock Change (National Territory)	-26	-30	19	349	-54	-28	-88	92	-182	115	-32	115	-96	-148

Table 13: National Energy Balance 1990-2003. Residual Fuel Oil [1000 tons].

203X; Residual Fuel Oil	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	1 913	1 981	1 821	1 678	1 472	1 502	1 441	1 540	1 347	1 308	979	1 044	1 012	978
Refinery Fuel	81	77	80	126	143	139	56	49	63	22	37	7	7	25
Total Imports (Balance)	602	480	376	541	456	532	386	449	671	468	262	280	241	328
Total Exports (Balance)	185	149	65	110	77	38	121	53	18	37	152	228	146	55
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-93	-88	-188	1	109	-100	119	1	-38	-131	246	262	-117	8
<b>Gross Inland Deliveries (Obs.)</b>	<b>2 156</b>	<b>2 147</b>	<b>1 865</b>	<b>1 984</b>	<b>1 816</b>	<b>1 757</b>	<b>1 770</b>	<b>1 888</b>	<b>1 899</b>	<b>1 586</b>	<b>1 298</b>	<b>1 351</b>	<b>982</b>	<b>1 234</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>608</b>	<b>740</b>	<b>610</b>	<b>708</b>	<b>651</b>	<b>573</b>	<b>537</b>	<b>636</b>	<b>732</b>	<b>642</b>	<b>389</b>	<b>416</b>	<b>269</b>	<b>355</b>
Public Electricity	28	37	10	102	95	88	194	313	348	271	110	79	34	104
Public Combined Heat and Power	253	297	338	408	398	316	178	151	234	281	161	191	168	203
Public Heat Plants	99	124	104	110	80	70	109	129	106	63	95	125	51	28
Auto Producers of Electricity	0	0	0	0	0	0	22	11	10	5	6	4	2	10
Auto Producers for CHP	227	281	156	87	77	97	33	31	33	20	15	16	13	8
Auto Producer Heat Plants	1	1	2	1	1	1	1	1	1	2	1	1	1	3
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>116</b>	<b>117</b>	<b>118</b>	<b>120</b>	<b>127</b>	<b>150</b>	<b>110</b>	<b>143</b>	<b>191</b>	<b>191</b>	<b>231</b>	<b>256</b>	<b>154</b>	<b>160</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	116	117	118	120	127	150	110	143	191	191	231	256	154	160
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>1 432</b>	<b>1 290</b>	<b>1 136</b>	<b>1 157</b>	<b>1 038</b>	<b>1 035</b>	<b>1 123</b>	<b>1 109</b>	<b>976</b>	<b>752</b>	<b>678</b>	<b>680</b>	<b>560</b>	<b>718</b>
<b>Total Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	<b>478</b>	<b>500</b>	<b>435</b>	<b>635</b>	<b>615</b>	<b>531</b>	<b>538</b>	<b>819</b>	<b>685</b>	<b>413</b>	<b>345</b>	<b>304</b>	<b>224</b>	<b>327</b>
Iron and Steel	18	16	13	18	19	22	25	12	10	12	26	16	8	12
Chemical (incl. Petro-Chemical)	21	22	16	21	27	26	27	44	37	27	17	19	13	20



203X; Residual Fuel Oil	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Non ferrous Metals	3	4	4	5	6	7	10	20	16	10	10	9	7	10
Non metallic Mineral Products	107	102	101	174	147	130	123	213	179	97	62	46	35	51
Transportation Equipment	12	14	12	17	19	17	5	6	5	6	6	7	3	5
Machinery	26	29	25	35	36	31	41	72	60	38	39	35	26	37
Mining and Quarrying	6	5	5	7	7	7	9	12	10	15	14	15	10	15
Food, Beverages and Tobacco	72	80	73	98	91	86	65	93	77	47	47	45	32	47
Pulp, Paper and Printing	116	124	108	155	153	105	91	152	128	66	47	41	30	43
Wood and Wood Products	14	14	12	16	17	20	26	45	38	22	11	5	12	18
Construction	30	32	20	26	27	21	34	48	40	20	20	14	10	14
Textiles and Leather	25	29	22	30	31	24	34	52	44	25	19	24	17	25
Non Specified (Industry)	28	30	24	32	36	35	47	48	40	28	29	30	21	30
<b>Total Other Sectors</b>	<b>953</b>	<b>789</b>	<b>702</b>	<b>522</b>	<b>423</b>	<b>503</b>	<b>586</b>	<b>290</b>	<b>291</b>	<b>339</b>	<b>333</b>	<b>375</b>	<b>336</b>	<b>391</b>
Commerce - Public Services	292	212	186	178	178	231	278	78	65	66	62	72	71	104
Residential	471	410	367	244	174	194	219	151	161	194	193	218	190	207
Agriculture	191	167	149	99	71	79	89	61	65	79	78	85	74	81
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>116</b>	<b>117</b>	<b>118</b>	<b>120</b>	<b>127</b>	<b>150</b>	<b>110</b>	<b>143</b>	<b>191</b>	<b>191</b>	<b>231</b>	<b>256</b>	<b>154</b>	<b>160</b>

Table 14: National Energy Balance 1990-2003. Heating and Other Gas Oil [1000 tons].

204A Heating and Other Gas Oil	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	1 239	1 575	1 412	1 639	1 614	1 454	1 598	1 604	1 280	1 245	1 062	1 301	1 062	1 103
Refinery Fuel	0	0	1	0	0	0	0	1	2	6	0	0	0	0
Total Imports (Balance)	0	0	0	88	18	165	376	355	577	615	533	626	734	860
Total Exports (Balance)	0	28	0	59	48	0	0	0	0	0	1	3	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	5	-20	11	-65	-58	39	-17	-53	41	1	44	-41	-11	37
<b>Gross Inland Deliveries (Obs.)</b>	<b>1 244</b>	<b>1 527</b>	<b>1 422</b>	<b>1 604</b>	<b>1 526</b>	<b>1 658</b>	<b>1 956</b>	<b>1 906</b>	<b>1 895</b>	<b>1 854</b>	<b>1 638</b>	<b>1 883</b>	<b>1 785</b>	<b>1 999</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>3</b>	<b>4</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	15	1	0
Public Combined Heat and Power	0	0	0	2	2	2	0	0	0	0	0	4	2	1
Public Heat Plants	0	0	0	0	0	0	1	2	2	0	0	0	0	3
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

204A Heating and Other Gas Oil	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>1 244</b>	<b>1 527</b>	<b>1 422</b>	<b>1 601</b>	<b>1 524</b>	<b>1 656</b>	<b>1 955</b>	<b>1 904</b>	<b>1 893</b>	<b>1 853</b>	<b>1 637</b>	<b>1 864</b>	<b>1 782</b>	<b>1 996</b>
<b>Total Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>11</b>	<b>11</b>	<b>12</b>	<b>43</b>	<b>38</b>	<b>54</b>	<b>65</b>	<b>105</b>
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	2	2	4	5	7
Non ferrous Metals	0	0	0	0	0	0	0	0	0	4	2	3	3	4
Non metallic Mineral Products	0	1	1	1	1	1	2	2	2	3	2	2	2	4
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	1	1	2	1	1	3	3	3	7	6	8	10	16
Mining and Quarrying	0	0	0	0	0	0	1	1	1	1	1	2	2	4
Food, Beverages and Tobacco	0	0	0	1	0	1	1	1	1	10	10	15	18	29
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	1	1	1	1	2
Wood and Wood Products	0	0	0	0	0	0	0	0	0	2	1	1	2	2
Construction	0	1	1	1	1	1	3	3	3	8	10	13	16	26
Textiles and Leather	0	0	0	0	0	0	0	0	0	2	2	2	3	5
Non Specified (Industry)	0	0	0	0	0	0	1	1	1	3	2	3	3	6
<b>Total Other Sectors</b>	<b>1 243</b>	<b>1 523</b>	<b>1 417</b>	<b>1 595</b>	<b>1 519</b>	<b>1 651</b>	<b>1 944</b>	<b>1 893</b>	<b>1 880</b>	<b>1 810</b>	<b>1 599</b>	<b>1 810</b>	<b>1 717</b>	<b>1 890</b>
Commerce - Public Services	26	87	84	119	89	92	222	219	237	186	88	97	49	79
Residential	1 216	1 434	1 333	1 475	1 429	1 558	1 720	1 673	1 643	1 623	1 510	1 711	1 667	1 810
Agriculture	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 15: National Energy Balance 1990-2003. Diesel [1000 tons].

2050 Diesel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	1 531	1 634	1 833	1 965	2 034	1 920	2 008	2 311	2 615	2 430	2 662	2 658	2 922	2 746
Refinery Fuel	0	0	0	2	2	1	1	1	1	0	0	0	0	4



2050 Diesel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Imports (Balance)	576	686	589	609	800	937	1 777	1 159	1 898	1 877	2 075	2 433	2 728	3 491
Total Exports (Balance)	3	68	73	104	88	83	97	271	467	459	415	415	520	539
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-7	74	97	140	-24	112	-106	195	-108	44	-59	-8	49	-9
<b>Gross Inland Deliveries (Obs.)</b>	<b>2 097</b>	<b>2 326</b>	<b>2 446</b>	<b>2 608</b>	<b>2 720</b>	<b>2 885</b>	<b>3 581</b>	<b>3 394</b>	<b>3 937</b>	<b>3 892</b>	<b>4 263</b>	<b>4 668</b>	<b>5 180</b>	<b>5 685</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Public Electricity	0	0	0	4	3	6	2	6	1	2	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	1	0	0	1	1	0	0	0
Auto Producers for CHP	0	0	0	1	1	2	1	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>2 096</b>	<b>2 326</b>	<b>2 446</b>	<b>2 603</b>	<b>2 715</b>	<b>2 877</b>	<b>3 578</b>	<b>3 388</b>	<b>3 936</b>	<b>3 889</b>	<b>4 261</b>	<b>4 668</b>	<b>5 179</b>	<b>5 685</b>
<b>Total Transport</b>	<b>1 477</b>	<b>1 653</b>	<b>1 745</b>	<b>1 867</b>	<b>1 954</b>	<b>2 077</b>	<b>2 629</b>	<b>2 479</b>	<b>2 916</b>	<b>2 879</b>	<b>3 181</b>	<b>3 505</b>	<b>3 909</b>	<b>4 312</b>
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	1 416	1 596	1 689	1 812	1 899	2 026	2 582	2 432	2 869	2 831	3 128	3 451	3 858	4 260
Rail	54	50	49	48	49	45	41	41	41	42	47	47	44	44
Inland Waterways	7	7	7	7	6	6	6	6	6	6	6	7	8	8
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	<b>275</b>	<b>321</b>	<b>343</b>	<b>373</b>	<b>393</b>	<b>426</b>	<b>559</b>	<b>524</b>	<b>626</b>	<b>617</b>	<b>681</b>	<b>756</b>	<b>853</b>	<b>946</b>
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	3	4	4	4	5	5	6	6	7	7	8	9	10	11
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	4	5	5	6	6	6	8	8	9	9	10	11	13	14
Transportation Equipment	19	22	24	26	27	29	39	36	43	43	47	52	59	65

2050 Diesel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Machinery	1	1	1	1	1	1	2	2	2	2	2	2	3	3
Mining and Quarrying	19	23	24	26	28	30	40	37	44	44	48	54	60	67
Food, Beverages and Tobacco	1	1	1	1	2	2	2	2	2	2	3	3	3	4
Pulp, Paper and Printing	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Wood and Wood Products	4	4	5	5	5	6	8	7	8	8	9	10	11	13
Construction	219	256	274	298	314	340	446	418	499	492	543	603	680	755
Textiles and Leather	3	4	4	4	4	5	6	6	7	7	7	8	9	10
Non Specified (Industry)	0	1	1	1	1	1	1	1	1	1	1	1	1	2
<b>Total Other Sectors</b>	<b>344</b>	<b>352</b>	<b>357</b>	<b>363</b>	<b>368</b>	<b>374</b>	<b>389</b>	<b>384</b>	<b>395</b>	<b>393</b>	<b>399</b>	<b>407</b>	<b>418</b>	<b>428</b>
Commerce - Public Services	33	38	41	44	47	50	66	62	74	73	81	89	101	112
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	312	314	317	319	321	324	323	322	321	320	319	318	317	316
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 16: National Energy Balance 1990-2003. Other Kerosene [1000 tons].

206A Other Kerosene	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	31	43	49	0	13	8	5	0	2	1	1	1	1	1
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	14	4	18	0	0	4	10	10	16	15	5	0	3	4
Total Exports (Balance)	21	13	31	9	13	6	5	2	2	0	0	0	0	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-7	-4	-6	23	2	0	1	2	1	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	<b>18</b>	<b>31</b>	<b>30</b>	<b>14</b>	<b>2</b>	<b>6</b>	<b>12</b>	<b>10</b>	<b>17</b>	<b>16</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>5</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



<b>206A Other Kerosene</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>18</b>	<b>31</b>	<b>30</b>	<b>14</b>	<b>2</b>	<b>6</b>	<b>12</b>	<b>10</b>	<b>17</b>	<b>16</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>5</b>
<b>Total Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	<b>18</b>	<b>31</b>	<b>29</b>	<b>14</b>	<b>2</b>	<b>6</b>	<b>12</b>	<b>10</b>	<b>17</b>	<b>13</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>5</b>
Commerce - Public Services	18	31	29	14	2	6	12	10	17	13	6	1	4	5
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 17: National Energy Balance 1990-2003. Kerosene Type Jet Fuel [1000 tons].

<b>206B Kerosene Type Jet Fuel</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Refinery Gross Output	291	334	371	377	376	420	479	508	540	508	544	513	484	446
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	13	8	9	10	27	23	24	12	9	21	35	37	38	47
Total Exports (Balance)	5	5	10	1	0	0	0	0	6	5	5	1	1	5
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0

206B Kerosene Type Jet Fuel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Stock Change (National Territory)	0	-1	-7	1	0	4	-8	-4	-2	2	-4	4	-3	4
<b>Gross Inland Deliveries (Obs.)</b>	299	336	363	386	403	447	495	515	541	525	569	553	519	491
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	299	336	363	386	403	447	495	515	541	525	569	553	519	491
<b>Total Transport</b>	299	336	363	386	403	447	495	515	541	525	569	553	519	491
International Civil Aviation	269	307	335	363	378	425	466	493	511	489	537	523	484	414
Domestic Air Transport	30	29	28	24	25	22	29	22	30	36	32	30	34	77
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0





<b>206B Kerosene Type Jet Fuel</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 18: National Energy Balance 1990-2001. Gasoline Type Jet Fuel [1000 tons].

<b>207A Gasoline Type Jet Fuel</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Refinery Gross Output	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	2	3	3	3	3	4	2	3	3	3	3	4	3	4
Total Exports (Balance)	0	0	0	0	0	0	1	1	0	1	1	1	2	3
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	1	0	0	0	0	-2	1	0	0	0	0	-1	0	1
<b>Gross Inland Deliveries (Obs.)</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0

207A Gasoline Type Jet Fuel	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	3	3	3	3	3	2	2	2	3	3	2	2	2	2
<b>Total Transport</b>	3	3	3	3	3	2	2	2	3	3	2	2	2	2
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	3	3	3	3	3	2	2	2	3	3	2	2	2	2
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl.Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 19: National Energy Balance 1990-2003. Motor Gasoline [1000 tons].

2080 Motor Gasoline	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	2 631	2 400	2 462	2 340	2 541	2 271	2 297	2 410	2 232	2 141	1 815	1 922	1 927	1 799
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	257	387	506	541	583	698	612	547	759	762	670	603	706	879
Total Exports (Balance)	281	127	214	311	640	596	700	831	824	824	472	582	496	474
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-54	136	-78	-2	-6	20	10	-22	36	-31	-33	51	8	-12
<b>Gross Inland Deliveries (Obs.)</b>	2 553	2 796	2 675	2 568	2 478	2 395	2 219	2 105	2 204	2 047	1 980	1 994	2 144	2 192
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0



2080 Motor Gasoline	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	2 553	2 796	2 675	2 568	2 478	2 395	2 219	2 105	2 204	2 047	1 980	1 994	2 144	2 192
<b>Total Transport</b>	2 457	2 695	2 585	2 482	2 395	2 312	2 144	2 033	2 128	1 976	1 911	1 925	2 067	2 167
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	2 457	2 695	2 585	2 482	2 395	2 312	2 144	2 033	2 128	1 976	1 911	1 925	2 067	2 167
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	93	97	86	83	80	79	72	68	72	68	66	67	73	24
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	7	3	0	0	0	0	0	0	4	0	1	1	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	70	77	70	67	64	64	58	55	55	55	54	54	59	18
Machinery	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	12	13	12	12	11	11	10	10	10	10	9	10	10	4

2080 Motor Gasoline	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Textiles and Leather	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	4	4	4	4	4	3	3	3	3	3	3	3	3	1
Commerce - Public Services	4	4	4	4	4	3	3	3	3	3	3	3	3	1
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	7	3	0	0	0	0	0	0	4	0	1	1	0	0

Table 20: National Energy Balance 1990-2003. Lubricants [1000 tons].

219A Lubricants	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	31	31	27	25	26	73	109	113	107	105	111	117	100	123
Refinery Fuel	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total Imports (Balance)	177	171	115	98	105	51	50	51	53	52	57	51	47	44
Total Exports (Balance)	32	30	48	35	34	41	49	57	53	51	58	65	62	80
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-13	-28	26	4	-8	4	-5	1	-1	-3	-1	5	2	4
<b>Gross Inland Deliveries (Obs.)</b>	163	144	120	92	89	86	105	108	106	103	108	108	86	92
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	18	16	13	10	10	9	11	12	12	11	12	12	9	10
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	1	1	1	1	0	0	1	1	1	1	1	1	0	1
Coke Ovens (Energy)	5	5	4	3	3	3	3	4	3	3	4	4	3	3
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	1	1	1	0	0	0	1	1	1	1	1	1	0	0
Power Plants	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Non Specified (Energy)	9	8	7	5	5	5	6	6	6	6	6	6	5	5
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	145	128	107	82	79	77	94	96	94	92	96	96	77	82



219A Lubricants	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Total Transport</b>	67	59	49	38	36	35	43	44	43	42	44	44	35	38
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	66	58	48	37	35	34	42	43	42	41	43	43	35	37
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Total Industry</b>	75	66	55	42	41	40	48	50	49	48	50	50	40	42
Iron and Steel	14	12	10	8	8	7	9	9	9	9	9	9	7	7
Chemical (incl. Petro-Chemical)	6	6	5	4	3	3	4	4	4	4	4	4	3	4
Non ferrous Metals	2	2	2	1	1	1	1	2	1	1	2	2	1	1
Non metallic Mineral Products	10	9	7	6	5	5	6	7	6	6	7	7	5	6
Transportation Equipment	2	2	1	1	1	1	1	1	1	1	1	1	1	1
Machinery	3	3	2	2	2	2	2	2	2	2	2	4	3	3
Mining and Quarrying	3	3	2	2	2	2	2	2	2	2	2	2	2	2
Food, Beverages and Tobacco	10	9	8	6	6	5	7	7	7	7	7	7	5	6
Pulp, Paper and Printing	8	7	6	5	4	4	5	5	5	5	5	5	4	5
Wood and Wood Products	3	2	2	1	1	1	2	2	2	2	2	2	1	1
Construction	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Textiles and Leather	4	4	3	2	2	2	3	3	3	3	3	3	2	2
Non Specified (Industry)	8	7	6	5	5	4	5	6	5	5	6	4	3	3
<b>Total Other Sectors</b>	3	3	2	2	2	2	2	2	2	2	2	2	2	2
Commerce - Public Services	3	3	2	2	2	2	2	2	2	2	2	2	1	1
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	163	144	120	92	89	86	105	108	106	103	108	108	86	92

Table 21: National Energy Balance 1990-2003. White Spirit [1000 tons].

220A White Spirit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	0	7	8	7	7	5	5	0	0	0	0	0	0	0
Refinery Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Imports (Balance)	11	9	8	8	6	8	8	11	12	12	7	6	9	11
Total Exports (Balance)	0	2	3	1	0	0	1	1	1	0	0	0	1	0
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	1	0	1	-1	0	1	0	1	1	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	11	14	14	14	14	12	12	11	11	13	7	7	9	11
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0

220A White Spirit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	11	14	14	14	14	12	12	11	11	13	7	7	9	11
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	11	14	14	14	14	12	12	11	11	13	7	7	9	11
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	11	14	10	10	10	10	9	8	5	4	3	3	5	4
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	4	4	4	2	3	3	6	8	3	4	4	7
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0



<b>220A White Spirit</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>11</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>4</b>

Table 22: National Energy Balance 1990-2003. Bitumen [1000 tons].

<b>222A Bitumen</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Refinery Gross Output	269	281	380	284	311	254	263	299	300	326	343	402	416	398
Refinery Fuel	0	0	0	0	0	0	2	0	4	0	0	0	0	0
Total Imports (Balance)	292	232	70	154	154	187	250	242	279	231	292	296	248	296
Total Exports (Balance)	1	21	15	22	25	5	11	6	1	1	45	78	62	82
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-22	0	6	-6	7	4	-7	7	-2	4	-3	-1	-1	1
<b>Gross Inland Deliveries (Obs.)</b>	<b>538</b>	<b>492</b>	<b>441</b>	<b>410</b>	<b>446</b>	<b>440</b>	<b>493</b>	<b>542</b>	<b>572</b>	<b>560</b>	<b>587</b>	<b>618</b>	<b>601</b>	<b>613</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	<b>538</b>	<b>492</b>	<b>441</b>	<b>410</b>	<b>446</b>	<b>440</b>	<b>493</b>	<b>542</b>	<b>572</b>	<b>560</b>	<b>587</b>	<b>618</b>	<b>601</b>	<b>613</b>
<b>Total Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0

222A Bitumen	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	538	492	441	410	446	440	493	542	572	560	587	618	601	613
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	538	492	441	410	446	440	493	542	572	560	587	618	601	613
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	538	492	441	410	446	440	493	542	572	560	587	618	601	613

Table 23: National Energy Balance 1990-2003. Other Oil Products [1000 tons].

224A Other Oil Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	499	649	743	754	893	761	923	953	960	927	859	988	1 030	1 048
Refinery Fuel	162	181	174	236	254	212	264	277	267	213	223	226	254	278
Total Imports (Balance)	182	90	66	188	0	29	14	143	106	101	149	85	84	92
Total Exports (Balance)	3	0	3	96	1	39	54	6	137	131	139	162	168	149
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	-30	-31	59	-19	-25	-4	14	-9	7	0	-7	11	1	-13
<b>Gross Inland Deliveries (Obs.)</b>	485	527	691	591	614	534	633	803	668	683	638	697	693	699
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	23	14	0	1	1	0	0	0	0	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0





224A Other Oil Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	23	14	0	1	1	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	462	512	691	590	614	534	633	803	668	683	638	697	693	699
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	462	512	691	590	614	534	633	803	668	683	638	697	693	699
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	462	512	691	590	614	534	633	803	668	683	638	697	693	699
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0

224A Other Oil Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	462	512	691	590	614	534	633	803	668	683	638	697	693	699

Table 24: National Energy Balance 1990-2003. LPG [1000 tons].

303A LPG	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Refinery Gross Output	47	43	51	96	37	60	20	45	30	19	34	0	23	50
Refinery Fuel	8	8	1	2	0	19	6	0	1	4	20	0	2	1
Total Imports (Balance)	97	149	151	114	210	149	184	148	132	152	159	140	155	137
Total Exports (Balance)	14	44	40	34	58	42	42	55	19	20	17	4	7	9
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	2	18	1	-6	-15	20	-3	-5	3	0	-5	6	-2	-1
<b>Gross Inland Deliveries (Obs.)</b>	125	158	162	168	174	166	152	132	144	147	150	143	168	176
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	1	4	4	3	3	3	3	2	1	1	0	0	1	0
Public Electricity	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Public Heat Plants	1	4	4	3	3	3	3	1	1	1	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	124	153	158	165	172	163	150	130	143	147	150	143	168	176
<b>Total Transport</b>	9	9	10	10	10	11	15	11	13	14	14	14	14	14
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	9	9	10	10	10	11	15	11	13	14	14	14	14	14
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0



<b>303A LPG</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	<b>65</b>	<b>76</b>	<b>48</b>	<b>55</b>	<b>65</b>	<b>62</b>	<b>67</b>	<b>60</b>	<b>66</b>	<b>54</b>	<b>55</b>	<b>48</b>	<b>49</b>	<b>51</b>
Iron and Steel	4	5	4	4	4	3	12	12	13	6	1	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Non ferrous Metals	8	7	6	5	7	6	6	4	5	4	4	4	6	6
Non metallic Mineral Products	12	14	12	15	21	23	21	13	14	15	15	14	10	11
Transportation Equipment	1	2	1	1	1	3	2	10	11	0	1	1	1	1
Machinery	11	13	11	12	14	13	12	10	11	11	14	13	14	14
Mining and Quarrying	1	1	0	1	1	1	1	1	1	1	1	1	1	2
Food, Beverages and Tobacco	3	4	4	4	3	3	2	2	2	5	4	5	4	4
Pulp, Paper and Printing	1	1	1	2	1	1	2	1	1	1	2	1	2	2
Wood and Wood Products	0	0	0	1	0	0	0	0	0	1	1	1	1	1
Construction	23	30	9	10	11	9	8	7	7	9	13	6	6	7
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	1	1	1	1	1	1	0	1	1	0	1	1	1
<b>Total Other Sectors</b>	<b>50</b>	<b>68</b>	<b>101</b>	<b>100</b>	<b>97</b>	<b>90</b>	<b>68</b>	<b>59</b>	<b>64</b>	<b>79</b>	<b>81</b>	<b>81</b>	<b>105</b>	<b>111</b>
Commerce - Public Services	32	47	80	76	73	61	34	19	21	31	32	27	52	54
Residential	16	19	19	22	22	26	31	36	39	43	44	50	48	52
Agriculture	2	2	2	2	2	3	3	4	4	4	5	4	4	4
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

Table 25: National Energy Balance 1990-2003. Refinery Gas [1000 tons].

<b>308A Refinery Gas</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Refinery Gross Output	373	327	339	319	341	305	359	351	348	341	312	328	306	273
Refinery Fuel	373	327	339	319	341	305	359	351	348	338	310	326	306	273
Total Imports (Balance)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Exports (Balance)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
International Marine Bunkers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

308A Refinery Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petrochemical Industry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	0	0	0	0	0	0	2	2	1	0	0
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
International Civil Aviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Air Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	2	2	1	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	2	2	1	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0



## Natural Gas

Table 26: National Energy Balance 1990-2003. Natural Gas [TJ NCV].

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	46 376	47 729	51 722	53 559	48 776	53 336	53 701	51 404	56 440	62 524	64 826	62 194	67 541	75 094
Total Imports (Balance)	187 917	184 138	183 846	193 697	179 430	229 114	236 579	216 911	224 009	219 484	222 784	225 593	234 797	1 204 894
Total Exports (Balance)														953
	0	0	12	0	189	576	0	0	698	0	633	14 713	19 139	335
Stock Change (National Territory)	-15 054	-73 -7 946	-7 946 -7 212	-7 212 18 891	18 891 290	-12 290	-3 340 8 236	8 236 4 168	4 168 6 867	6 867 295	-11 295	19 095	12 287	-7 163
Gross Inland Deliveries (Obs.)	219 239	231 794	227 610	240 044	246 908	269 583	286 941	276 551	283 920	288 876	275 681	292 169	295 485	319 491
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Transformation Sector							108		100					107
	74 710	76 968	74 215	80 159	94 010	95 817	680	87 682	569	99 236	83 076	82 051	88 953	087
Public Electricity	28 100	25 602	20 818	20 129	23 477	21 731	36 919	19 485	35 366	30 144	23 854	24 379	24 784	35 673
Public Combined Heat and Power	23 810	24 752	24 529	25 628	27 342	30 757	33 803	31 061	29 381	32 247	28 673	31 456	38 694	46 208
Public Heat Plants	7 552	7 200	7 148	8 135	7 517	9 579	9 022	8 641	8 780	7 282	8 926	5 375	7 417	6 574
Auto Producers of Electricity	9 596	12 218	13 670	16 532	22 453	21 241	18 211	20 694	19 173	18 436	12 715	14 655	6 814	5 330
Auto Producers for CHP	5 651	7 195	8 050	9 735	13 222	12 509	10 725	7 801	7 870	10 457	8 454	6 014	11 237	12 033
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	669	454	172	6	1 269
Gas Works (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conversion to Liquids	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Energy Sector	13 411	13 437	12 495	13 238	12 156	13 351	10 257	11 608	10 294	8 951	9 384	10 135	9 339	10 396
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas Extraction	5 339	5 396	5 027	5 255	5 228	5 746	3 022	3 709	2 989	1 612	3 028	2 915	2 810	3 129
Inputs to Oil Refineries	8 045	8 041	7 469	7 983	6 928	7 606	7 236	7 898	7 305	7 339	6 356	7 220	6 528	7 267
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	28	1	0	0	0	0	0	0	0	0	0	0	0	0



# Austria's National Inventory Report 2005 – ANNEX 4: National Energy Balance

Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	2 726	3 352	3 259	2 303	2 904	5 293	1 449	920	2 702	4 818	2 256	2 751	6 244	6 951
<b>Final Consumption</b>	113	122	126	129	127	144	155	165	159	165	170	187	180	183
	479	072	906	338	802	603	775	673	801	227	461	288	614	778
<b>Total Transport</b>	4 050	4 065	3 968	3 865	3 780	4 092	4 216	4 199	6 344	7 808	9 650	8 255	9 175	8 808
Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Transport	4 050	4 065	3 968	3 865	3 780	4 092	4 216	4 199	6 344	7 808	9 650	8 255	9 175	8 808
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	69 005	66 695	66 153	64 995	67 840	73 737	78 192	90 314	82 184	72 340	86 569	90 376	92 905	89 195
Iron and Steel	10 521	9 568	9 546	9 524	10 606	11 282	12 178	15 939	14 504	13 604	13 482	13 672	12 433	11 936
Chemical (incl. Petro- Chemical)	7 708	7 123	7 405	7 571	7 694	8 278	8 374	11 062	10 066	14 103	15 055	14 938	14 510	13 930
Non ferrous Metals	1 352	1 205	1 579	1 919	2 049	2 161	2 026	2 587	2 354	2 149	2 296	2 584	2 650	2 544
Non metallic Mineral Products	10 082	10 277	9 370	9 734	10 246	11 136	11 989	14 487	13 183	9 139	9 560	9 585	11 175	10 729
Transportation Equipment	1 534	1 772	1 930	2 093	2 409	2 564	2 421	1 271	1 157	752	938	1 480	1 182	1 135
Machinery	4 347	4 394	4 773	5 059	5 608	6 154	6 316	6 037	5 494	4 581	5 109	5 552	5 053	4 851
Mining and Quarrying	2 630	2 481	1 825	1 849	2 013	2 528	2 652	2 760	2 512	1 677	2 282	2 527	2 624	2 520
Food, Beverages and Tobacco	8 877	8 860	8 247	7 815	8 808	9 451	9 229	10 535	9 587	8 996	14 388	14 197	17 508	16 809
Pulp, Paper and Printing	12 858	12 226	12 283	10 082	8 916	9 817	10 976	18 431	16 772	10 219	15 965	17 404	16 828	16 156
Wood and Wood Products	1 717	1 701	1 790	1 675	1 941	2 051	2 262	1 812	1 648	1 770	1 671	1 898	1 659	1 593
Construction	731	709	877	1 221	1 402	1 538	1 483	601	547	1 640	1 420	1 790	3 105	2 981
Textiles and Leather	3 507	3 260	3 509	3 314	3 020	3 407	3 718	2 629	2 392	2 621	3 164	3 400	2 743	2 634
Non Specified (Industry)	3 142	3 119	3 018	3 140	3 128	3 370	4 569	2 162	1 967	1 089	1 239	1 350	1 435	1 377
<b>Total Other Sectors</b>	40 424	51 312	56 784	60 478	56 182	66 774	73 367	71 160	71 273	85 079	74 243	88 657	78 534	85 775
Commerce - Public Services	7 711	12 070	18 183	18 121	15 949	23 440	24 732	20 971	19 083	29 591	19 171	27 772	18 631	17 887
Residential	32 346	38 802	38 167	41 881	39 782	42 847	48 088	49 626	51 604	54 864	54 452	60 200	59 230	67 125
Agriculture	368	441	434	476	452	487	547	564	586	624	619	685	673	763
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Non-Energy Use</b>	14 913	15 965	10 735	15 006	10 036	10 518	10 781	10 669	10 554	10 644	10 504	9 945	10 336	11 278



## Renewable Fuels

Table 27: National Energy Balance 1990-2003. Fuel Wood [TJ].

111A Fuel Wood	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	61	66	63	64	60	65	70	65	63	64	58	66	64	70
	401	501	235	028	260	763	726	357	416	483	610	530	380	187
Total Imports (Balance)	2 288	2 832	2 421	3 064	2 382	1 623	2 423	2 017	1 604	1 486	1 803	1 803	2 104	2 530
Total Exports (Balance)	28	80	57	29	73	222	107	114	140	34	180	180	379	931
Stock Change (National Territory)	-545	706	382	113	-179	189	243	-54	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	63	69	65	67	62	67	73	67	64	65	60	68	66	71
	116	960	982	176	390	354	285	206	881	936	233	153	105	787
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	0	0	0	210	0	0	0	0	0
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	210	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	63	69	65	67	62	67	73	67	64	65	60	68	66	71
	116	960	982	176	390	354	285	206	672	936	233	153	104	787
<b>Total Transport</b>	2	2	1	1	1	1	1	0	0	0	0	0	0	0
Rail	2	2	1	1	1	1	1	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	661	734	706	802	904	1 074	783	272	151	1 830	927	1 123	1 402	1 536
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	10	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	47	44	43	41	42	62	7	1	1	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	47	52	60	51	52	62	12	17	9	37	40	42	40	43
Mining and Quarrying	0	9	0	0	0	0	2	0	0	1	1	1	1	1

Food, Beverages and Tobacco	121	114	77	144	94	93	23	15	8	17	16	20	19	20
Pulp, Paper and Printing	9	26	0	0	0	0	54	1	1	0	0	0	0	0
Wood and Wood Products	233	253	221	226	291	300	319	76	42	1 576	678	831	1 117	1 226
Construction	0	0	102	113	156	289	142	79	44	105	101	116	122	132
Textiles and Leather	19	26	17	21	21	21	5	0	0	2	2	3	2	3
Non Specified (Industry)	186	210	187	195	249	248	219	83	46	93	88	111	101	110
<b>Total Other Sectors</b>	62	69	65	66	61	66	72	66	64	64	59	67	64	70
	454	225	275	374	485	278	501	934	520	105	306	029	702	251
Commerce - Public Services	1 330	1 294	1 177	1 145	1 091	1 167	1 063	873	486	479	438	499	486	538
Residential	57	63	60	61	56	61	67	62	60	59	55	62	60	65
	500	902	298	361	812	250	202	144	237	853	377	585	408	579
Agriculture	3 625	4 028	3 801	3 868	3 581	3 861	4 236	3 917	3 797	3 773	3 491	3 945	3 808	4 134
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 28: National Energy Balance 1990-2003. Wood Waste [TJ].

116A Wood waste; Other	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	13 66	14	15	18	18	18	20	27	23	33	32	38	38	44
	8	819	705	136	456	739	571	344	219	992	152	399	553	824
Total Imports (Balance)	1 864	2 437	2 536	2 116	2 418	2 144	1 744	2 838	2 344	2 641	2 819	4 095	4 472	4 472
Total Exports (Balance)	2 072	2 116	2 240	1 517	2 221	2 617	2 819	5 181	5 034	6 137	6 509	7 978	6 855	6 855
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	13	15	16	18	18	18	19	25	20	30	28	34	36	42
	461	139	001	736	653	265	496	001	529	496	462	515	170	441
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>							10	13		12	13	14	17	19
	2 452	3 888	4 348	7 460	9 204	8 874	038	040	9 180	168	964	398	851	482
Public Electricity	0	0	0	0	0	0	0	0	13	17	9	517	1 377	1 155
Public Combined Heat and Power	0	0	0	0	0	0	47	101	98	81	130	624	736	1 013
Public Heat Plants												10	11	13
	2 045	3 020	3 404	3 515	3 714	4 332	5 988	5 904	6 616	6 886	8 854	751	555	402
Auto Producers of Electricity	0	0	0	0	0	189	2 493	3 041	272	2 713	1 872	824	2 502	2 371
Auto Producers for CHP	407	868	944	3 945	5 490	4 353	1 510	3 921	2 102	2 379	3 016	1 522	1 554	1 403
Auto Producer Heat Plants	0	0	0	0	0	0	0	72	79	92	83	159	125	139
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0





<b>Final Consumption</b>	11 009	11 251	11 653	11 275	9 449	9 391	9 458	11 962	11 349	18 328	14 498	20 118	18 319	22 959
<b>Total Transport</b>	79	87	113	165	171	233	250	272	291	340	367	404	402	399
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	79	87	113	165	171	233	250	272	291	340	367	404	402	399
<b>Total Industry</b>	9 243	9 116	9 460	8 826	7 133	6 699	6 584	7 576	6 458	11 753	11 749	10 510	10 967	14 476
Iron and Steel	0	0	0	0	0	0	20	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	2 898	2 902	3 258	2 173	1 808	1 722	2 062	2 413	1 575	1 884	714	1 387	1 202	1 925
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	2	0	0	0	0	0	7	7
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	22	18	17	42	41	123	109	114
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	10	10	10	9	9	9	6	1	1	156	146	184	134	138
Pulp, Paper and Printing	3 660	3 468	3 920	4 527	3 582	3 901	2 502	2 761	3 746	3 552	628	1 197	2 530	4 740
Wood and Wood Products	2 569	2 620	2 185	2 035	1 652	968	1 810	2 076	910	5 335	5 265	7 663	6 085	6 625
Construction	39	39	29	28	28	27	47	71	55	279	286	349	267	276
Textiles and Leather	0	0	0	0	0	0	0	0	0	4	4	5	4	4
Non Specified (Industry)	68	78	58	55	55	72	114	236	154	500	412	603	629	648
<b>Total Other Sectors</b>	1 687	2 048	2 080	2 284	2 144	2 459	2 624	4 114	4 600	6 235	6 636	8 204	6 951	8 084
Commerce - Public Services	765	854	793	731	736	698	581	1 425	1 351	1 656	1 580	2 008	1 728	2 000
Residential	551	739	804	1 009	996	1 137	1 330	1 795	2 198	3 182	3 509	4 333	3 609	4 254
Agriculture	371	455	483	545	412	624	713	894	1 051	1 397	1 547	1 863	1 614	1 831
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 29: National Energy Balance 1990-2003. Black Liquor [TJ].

<b>215A Black Liquor</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Indigenous Production	17 799	17 737	18 067	18 544	19 606	21 392	21 174	21 675	22 916	23 647	24 121	23 299	22 968	23 552
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	17 799	17 737	18 067	18 544	19 606	21 392	21 174	21 675	22 916	23 647	24 121	23 299	22 968	23 552
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	5 260	5 670	6 076	7 091	8 897	9 267	9 505	8 580	11 354	10 234	7 635	7 612	9 961	11 036
Public Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	2 618	2 822	3 024	4 033	5 060	5 271	5 406	5 140	8 867	6 156	2 001	3 116	2 782	6 647



Auto Producers for CHP	2 642	2 848	3 052	3 058	3 837	3 997	4 099	3 440	2 487	4 079	5 635	4 496	7 179	4 390
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	12	12	11	11	10	12	11	13	11	13	16	15	13	12
	540	067	991	453	709	125	669	094	562	413	486	687	007	515
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	12	12	11	11	10	12	11	13	11	13	16	15	13	12
	540	067	991	453	709	125	669	094	562	413	486	687	007	515
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	12	12	11	11	10	12	11	13	11	13	16	15	12	12
	540	067	991	453	709	125	669	094	562	367	425	626	955	455
Wood and Wood Products	0	0	0	0	0	0	0	0	0	46	61	61	50	59
Construction	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Table 30: National Energy Balance 1990-2003. Biogas [TJ].

309A Biogas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	0	0	35	39	48	27	350	337	253	281	512
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	0	0	0	0	0	35	39	48	27	350	337	253	281	512
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	35	39	48	27	130	184	149	204	199
Public Electricity	0	0	0	0	0	0	0	0	0	13	20	20	0	0
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	29	69	64	106	106
Auto Producers for CHP	0	0	0	0	0	35	39	48	27	88	95	64	98	93
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	0	0	0	0	0	0	220	152	104	77	314
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	220	152	104	77	314
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	206	130	85	29	187
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	14	0	7	21	21
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	22	12	27	105
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 31: National Energy Balance 1990-2003. Sewage Sludge Gas [TJ].

309B Sewage sludge gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	631	638	619	668	691	715	714	791	725	721	745
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	0	0	0	631	638	619	668	691	715	714	791	725	721	745
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	631	638	619	668	691	715	714	791	725	721	745
Public Electricity	0	0	0	0	0	10	31	52	50	17	49	52	57	49
Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Heat Plants	0	0	0	0	0	0	0	4	2	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	39	40	0	0
Auto Producers for CHP	0	0	0	631	638	609	637	635	663	696	703	632	664	696
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 32: National Energy Balance 1990-2003. Landfill Gas [TJ].

310A Landfill Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	0	0	0	77	88	195	307	524	527	524	457	859	381	527
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	0	0	0	77	88	195	307	524	527	524	457	859	381	527
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	0	0	0	0	0	146	271	519	520	524	457	859	381	527
Public Electricity	0	0	0	0	0	0	0	0	0	43	58	63	58	207
Public Combined Heat and Power	0	0	0	0	0	29	31	27	30	0	0	4	0	18
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	117	240	492	490	481	399	752	298	266
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	39	26	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	37
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	77	88	49	36	5	7	0	0	0	0	0
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	77	88	49	36	5	7	0	0	0	0	0
Commerce - Public Services	0	0	0	77	88	49	36	5	7	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 33: National Energy Balance 1990-2003. Municipal Solid Waste [TJ].

114B Municipal Solid Waste	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production	2 414	2 899	3 485	3 759	3 823	3 911	4 769	4 895	4 782	4 519	4 520	4 609	4 915	5 785
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>	2 414	2 899	3 485	3 759	3 823	3 911	4 769	4 895	4 782	4 519	4 520	4 609	4 915	5 785
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	2 414	2 899	3 485	3 759	3 823	3 911	4 769	4 895	4 782	4 519	4 520	4 609	4 915	5 785
Public Electricity	0	0	0	0	0	0	0	0	0	513	595	595	667	1 551
Public Combined Heat and Power	1 724	2 179	2 314	2 157	2 243	2 318	2 499	2 594	2 579	2 340	2 233	2 235	2 283	2 426
Public Heat Plants	690	720	1 170	1 603	1 580	1 593	2 269	2 301	2 203	1 666	1 692	1 779	1 965	1 807
Auto Producers of Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers for CHP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Machinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood and Wood Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles and Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Industry)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Other Sectors</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commerce - Public Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 34: National Energy Balance 1990-2003. Industrial Waste [TJ].

115A Industrial Waste	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Indigenous Production													11	11
	6 576	7 180	8 525	6 015	6 704	7 005	9 246	8 227	7 502	9 598	8 454	8 908	320	065
Total Imports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports (Balance)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock Change (National Territory)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Gross Inland Deliveries (Obs.)</b>													11	11
	6 576	7 180	8 525	6 015	6 704	7 005	9 246	8 227	7 502	9 598	8 454	8 908	320	065
Statistical Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Transformation Sector</b>	2 542	1 941	2 945	1 841	1 927	1 929	4 735	3 614	2 152	3 614	1 966	1 905	2 902	2 922
Public Electricity	0	0	0	0	0	0	0	0	0	133	134	134	796	1 164



Public Combined Heat and Power	0	0	0	0	0	0	0	0	0	0	0	937	1 047	812
Public Heat Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Producers of Electricity	0	0	0	0	0	0	1 613	1 274	543	1 152	814	193	466	294
Auto Producers for CHP	2 542	1 941	2 945	1 841	1 927	1 929	3 122	2 340	1 609	2 329	1 018	591	593	605
Auto Producer Heat Plants	0	0	0	0	0	0	0	0	0	0	0	50	0	46
<b>Total Energy Sector</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patent Fuel Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coke Ovens (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blast Furnaces (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Works (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKB (Transformation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum refineries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Final Consumption</b>	4 034	5 239	5 580	4 174	4 777	5 076	4 511	4 614	5 351	5 984	6 488	7 002	8 418	8 144
<b>Total Transport</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inland Waterways	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Transport)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Industry</b>	2 924	4 269	4 888	3 845	4 266	4 556	3 958	4 031	4 738	5 379	5 933	6 372	7 800	7 100
Iron and Steel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical (incl. Petro-Chemical)	1 567	2 024	2 303	1 502	1 648	1 908	989	1 168	1 102	1 627	1 387	965	1 629	1 945
Non ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non metallic Mineral Products	1 311	1 665	1 876	1 819	1 935	1 976	2 165	2 101	2 664	2 877	3 557	4 545	4 965	3 715
Transportation Equipment	0	9	9	0	9	10	6	7	7	1	1	0	0	0
Machinery	0	0	0	0	0	0	1	1	2	0	0	0	1	1
Mining and Quarrying	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food, Beverages and Tobacco	0	0	0	0	0	0	5	6	6	0	0	0	0	0
Pulp, Paper and Printing	0	0	0	0	0	0	60	66	70	136	131	113	94	112
Wood and Wood Products	37	478	580	441	573	553	645	587	787	692	813	688	1 048	1 251
Construction	0	9	18	9	9	10	8	9	10	16	16	22	23	27
Textiles and Leather	0	0	0	0	9	10	5	6	6	5	5	9	7	8
Non Specified (Industry)	9	83	101	74	83	90	73	81	85	24	24	30	34	41
<b>Total Other Sectors</b>	1 110	970	692	329	512	520	553	582	613	605	555	630	618	1 044
Commerce - Public Services	1 110	970	692	329	512	520	553	582	613	605	555	630	618	1 044
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Specified (Others)	0	0	0	0	0	0	0	0	0	0	0	0	0	0





## Net Calorific Values

At the following the selected net calorific values of each fuel are presented.

Table 35 presents the net calorific values from [IEA JQ 2004] which are used for unit conversion.

*Table 35: Net calorific values for 1990-2003 in [MJ/kg], [MJ/m<sup>3</sup>] taken from [IEA JQ 2004].*

Fuel Code	Fuel Name		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
101A	Coking Coal	T	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07	29.07
102A	Hard Coal	FC	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	26.65	27.94	27.99	27.50	27.50
		T	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	27.23	28.00	28.09	27.37	27.43
104A	Hard Coal Briquettes	A	-	-	-	-	-	-	-	31.00	31.00	31.00	31.00	31.00	31.00	31.00
105A	Brown Coal	FC	10.90	10.90	10.90	10.90	10.90	10.90	9.90	9.90	9.90	9.77	9.82	9.82	9.82	9.82
		T	10.90	10.90	10.90	10.90	10.90	10.90	9.90	9.90	9.90	9.77	9.84	9.70	9.74	9.48
106A	Brown Coal Briquettes	T	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30	19.30
107A	Coke Oven Coke	T	28.20	28.20	28.20	28.50	28.50	28.50	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
113A	Peat	FC	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80
304A	Coke Oven Gas	P	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52
305A	Blast Furnace Gas	P	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
110A	Petrol Coke	A	34.30	34.30	34.30	34.30	30.55	28.35	32.15	32.80	33.99	33.92	33.93	33.93	33.93	33.93
201A	Crude Oil	A	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.51	42.50	42.52	42.52	42.50	42.50	42.62
203X	Residual Fuel Oil	A	41.00	41.10	41.10	41.30	41.30	40.46	40.33	40.28	40.27	40.69	41.67	41.78	41.77	41.42
204A	Gasoil	A	42.60	42.60	42.60	42.60	42.60	42.70	42.80	42.80	42.80	42.80	42.80	42.80	42.75	42.80
2050	Diesel	A	42.60	42.60	42.60	42.60	42.60	42.70	42.70	42.70	42.70	42.80	42.80	42.80	42.80	42.80
206A	Petroleum	A	43.60	43.60	43.60	43.60	43.60	43.30	43.39	43.41	43.41	43.31	43.30	43.30	43.30	43.30
206B	Kerosene	A	43.60	43.60	43.60	43.60	43.60	43.30	43.39	43.41	43.41	43.31	43.30	43.30	43.30	43.30
207A	Aviation Gasoline	A	41.60	41.60	41.60	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.52	42.49	42.49
2080	Motor Gasoline	A	41.60	41.60	41.60	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.52	42.49	42.49
217A	Refinery Feedstocks	A	42.24	42.31	42.10	42.38	42.46	42.49	43.07	42.24	42.27	42.52	42.57	42.59	41.93	42.47
219A	Lubricants	A	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	43.83	43.49	43.84	43.91	43.95
220A	White	A	41.60	41.60	41.60	42.50	42.50	42.50	42.50	42.50	42.50	44.10	44.10	44.10	44.10	44.10

Spirit																
222A	Bitumen	A	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	44.04	43.62	43.84	44.15	43.95
224A	Other	FC	30.55	28.35	32.15	32.80	33.99	33.92	33.93	33.93	33.93	33.93	30.55	28.35	32.15	32.80
	Petroleum Products	NE U	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	41.80	44.04	43.62	43.84	44.15	43.95
302A	Natural Gas Liquids (NGL)	A	42.50	42.50	42.50	42.50	42.50	42.50	42.50	42.51	42.50	42.52	42.52	42.50	42.50	42.52
303A	Liquified Petroleum Gas (LPG)	A	46.30	46.20	46.20	46.20	46.20	46.30	46.32	46.31	46.32	46.00	46.00	46.00	46.00	46.00
308A	Refinery Gas	A	49.00	49.00	49.00	49.00	49.00	49.00	49.00	49.00	49.00	42.23	45.93	45.93	45.93	45.93
301A	Natural Gas	A	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	35.85	35.85	35.85	35.85	35.85

Legend: A:....Average; T:....Transformation; FC: ... Final Consumption; P:.....Production; NEU:....non-energy use;

Table 36 presents the net calorific values from STATISTIK AUSTRIA which are used for unit conversion.

Table 36: Net calorific values from STATISTIK AUSTRIA.

Fuel Name	NCV	Unit
Municipal Waste / renewable	8.93	MJ/kg
Municipal Waste / non renewable	9.14	MJ/kg
Industrial Waste	15.76	MJ/kg
Fuel Wood	15.50	MJ/kg
Wood Wastes	11.36	MJ/kg
Bark	7.54	MJ/kg
Sewage Sludge	3.64	MJ/kg
Black Liquor	7.92	MJ/kg
Carcass meal	17.30	MJ/kg
Adipose	36.59	MJ/kg
Liquid Biofuels	42.00	MJ/kg
Biogas	22.06	MJ/m <sup>3</sup>
Gas from Waste Disposal Site	17.00	MJ/m <sup>3</sup>

Table 37 presents IPCC default values of net calorific values of gaseous biofuels which are used for unit conversion.

Table 37: Net calorific values from IPCC Guidelines.

Fuel Name	NCV	Unit
Sewage Sludge Gas	27.00	MJ/m <sup>3</sup>



## **ANNEX 5: CRF FOR 2003**

This Annex includes the CRF-Tables for the year 2003 as included in Austria's data submission 2005 to the UNFCCC.







**TABLE 1 SECTORAL REPORT FOR ENERGY**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	(Gg)						
<b>Total Energy</b>	<b>67.857,30</b>	<b>31,11</b>	<b>2,65</b>	<b>222,58</b>	<b>767,35</b>	<b>82,08</b>	<b>32,87</b>
<b>A. Fuel Combustion Activities (Sectoral Approach)</b>	<b>67.624,26</b>	<b>15,82</b>	<b>2,65</b>	<b>222,58</b>	<b>767,35</b>	<b>78,63</b>	<b>32,72</b>
<b>1. Energy Industries</b>	<b>16.030,35</b>	<b>0,31</b>	<b>0,22</b>	<b>15,64</b>	<b>4,35</b>	<b>0,74</b>	<b>8,43</b>
a. Public Electricity and Heat Production	13.291,77	0,30	0,21	11,62	3,59	0,73	4,71
b. Petroleum Refining	2.526,31	0,00	0,01	3,44	0,72	IE	3,69
c. Manufacture of Solid Fuels and Other Energy Industries	212,28	0,01	0,00	0,58	0,04	0,00	0,03
<b>2. Manufacturing Industries and Construction</b>	<b>14.163,39</b>	<b>0,47</b>	<b>0,53</b>	<b>33,49</b>	<b>168,82</b>	<b>3,69</b>	<b>11,90</b>
a. Iron and Steel	5.143,34	0,04	0,06	4,67	147,24	0,10	5,14
b. Non-Ferrous Metals	210,55	0,00	0,00	0,19	0,03	0,00	0,08
c. Chemicals	1.251,18	0,09	0,03	2,50	2,55	0,42	2,45
d. Pulp, Paper and Print	1.857,07	0,11	0,06	4,55	4,61	0,77	1,10
e. Food Processing, Beverages and Tobacco	1.262,17	0,03	0,01	1,12	0,16	0,02	0,34
f. Other ( <i>please specify</i> )	4.439,08	0,20	0,38	20,44	14,23	2,38	2,78
Industry not included in 1 A 2 a to 1 A 2 e	4.439,08	0,20	0,38	20,44	14,23	2,38	2,78
<b>3. Transport</b>	<b>22.692,33</b>	<b>1,07</b>	<b>0,91</b>	<b>135,69</b>	<b>186,73</b>	<b>23,64</b>	<b>2,24</b>
a. Civil Aviation	66,75	0,00	0,00	0,21	1,77	0,10	0,02
b. Road Transportation	21.882,82	1,04	0,87	131,75	181,56	22,64	2,10
c. Railways	174,05	0,01	0,02	1,65	0,46	0,22	0,10
d. Navigation	84,25	0,01	0,02	0,75	2,85	0,67	0,02
e. Other Transportation ( <i>please specify</i> )	484,47	0,01	0,00	1,32	0,09	0,00	0,00
Pipeline Compressors	484,47	0,01	0,00	1,32	0,09	0,00	NA

**TABLE 1 SECTORAL REPORT FOR ENERGY**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	(Gg)						
<b>4. Other Sectors</b>	<b>14.702,00</b>	<b>13,96</b>	<b>0,98</b>	<b>37,70</b>	<b>407,23</b>	<b>50,54</b>	<b>10,14</b>
a. Commercial/Institutional	1.822,85	0,50	0,04	2,12	10,51	1,41	1,05
b. Residential	11.087,45	12,40	0,47	15,99	350,48	39,72	8,32
c. Agriculture/Forestry/Fisheries	1.791,70	1,06	0,47	19,60	46,24	9,42	0,77
<b>5. Other (please specify) <sup>(1)</sup></b>	<b>36,19</b>	<b>0,00</b>	<b>0,00</b>	<b>0,08</b>	<b>0,21</b>	<b>0,01</b>	<b>0,01</b>
a. Stationary 	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>
b. Mobile 	36,19	0,00	0,00	0,08	0,21	0,01	0,01
Military	36,19	0,00	0,00	0,08	0,21	0,01	0,01
<b>B. Fugitive Emissions from Fuels</b>	<b>233,04</b>	<b>15,29</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>3,45</b>	<b>0,15</b>
<b>1. Solid Fuels</b>	<b>0,00</b>	<b>0,39</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
a. Coal Mining	0,00	0,39	NA	NA	NA	NA	
b. Solid Fuel Transformation	IE	IE	IE	IE	IE	IE	IE
c. Other (please specify) 	NO	NO	0,00	0,00	0,00	0,00	0,00
<b>2. Oil and Natural Gas</b>	<b>233,04</b>	<b>14,91</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>3,45</b>	<b>0,15</b>
a. Oil	133,00	4,20		NA	NA	3,27	NA
b. Natural Gas	100,04	10,71				0,18	0,15
c. Venting and Flaring	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Venting	IE	IE				IE	IE
Flaring	IE	IE	IE	IE	IE	IE	IE
d. Other (please specify) 	NO	NO	NO	0,00	0,00	0,00	0,00
<b>Memo Items: <sup>(2)</sup></b>							
<b>International Bunkers</b>	<b>1.451,90</b>	<b>0,02</b>	<b>0,05</b>	<b>4,64</b>	<b>1,43</b>	<b>0,61</b>	<b>0,46</b>
Aviation	1.451,90	0,02	0,05	4,64	1,43	0,61	0,46
Marine	NO	NO	NO	NO	NO	NO	NO
<b>Multilateral Operations</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>14.665,91</b>						

<sup>(1)</sup> Include military fuel use under this category.

<sup>(2)</sup> Please do not include in energy totals.

**TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fuel Combustion Activities - Sectoral Approach**  
**(Sheet 1 of 4)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>			EMISSIONS		
	Consumption		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	(TJ)	( <sup>(1)</sup> )	(t/TJ)	(kg/TJ)	(kg/TJ)	(Gg)	(Gg)	(Gg)
<b>I.A. Fuel Combustion</b>	<b>1.107.073,05</b>	NCV				<b>67.624,26</b>	<b>15,82</b>	<b>2,65</b>
Liquid Fuels	516.003,63	NCV	73,97	2,71	3,55	38.166,22	1,40	1,83
Solid Fuels	131.133,89	NCV	92,51	5,81	1,28	12.130,75	0,76	0,17
Gaseous Fuels	301.260,95	NCV	55,00	1,17	0,40	16.569,35	0,35	0,12
Biomass	139.820,05	NCV	104,89	93,53	3,55 <sup>(3)</sup>	14.665,91	13,08	0,50
Other Fuels	18.854,52	NCV	40,20	12,00	1,40	757,95	0,23	0,03
<b>I.A.1. Energy Industries</b>	<b>242.572,29</b>	NCV				<b>16.030,35</b>	<b>0,31</b>	<b>0,22</b>
Liquid Fuels	44.724,35	NCV	70,83	0,36	0,62	3.168,05	0,02	0,03
Solid Fuels	70.886,57	NCV	97,53	0,18	1,29	6.913,32	0,01	0,09
Gaseous Fuels	100.840,64	NCV	55,00	1,22	0,24	5.546,24	0,12	0,02
Biomass	16.355,52	NCV	109,88	2,44	3,89 <sup>(3)</sup>	1.797,10	0,04	0,06
Other Fuels	9.765,21	NCV	41,24	12,00	1,40	402,75	0,12	0,01
a. Public Electricity and Heat Production	199.467,61	NCV				13.291,77	0,30	0,21
Liquid Fuels	14.005,62	NCV	79,30	1,13	1,20	1.110,69	0,02	0,02
Solid Fuels	70.886,57	NCV	97,53	0,18	1,29	6.913,32	0,01	0,09
Gaseous Fuels	88.454,69	NCV	55,00	1,33	0,26	4.865,01	0,12	0,02
Biomass	16.355,52	NCV	109,88	2,44	3,89 <sup>(3)</sup>	1.797,10	0,04	0,06
Other Fuels	9.765,21	NCV	41,24	12,00	1,40	402,75	0,12	0,01
b. Petroleum Refining	39.279,31	NCV				2.526,31	0,00	0,01
Liquid Fuels	30.636,89	NCV	66,94	0,00	0,36	2.050,97	IE	0,01
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Gaseous Fuels	8.642,43	NCV	55,00	0,00	0,10	475,33	IE	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
c. Manufacture of Solid Fuels and Other Energy Industries	3.825,37	NCV				212,28	0,01	0,00
Liquid Fuels	81,84	NCV	78,00	2,00	1,00	6,38	0,00	0,00
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Gaseous Fuels	3.743,52	NCV	55,00	1,50	0,10	205,89	0,01	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> Activity data should be calculated using net calorific values (NCV) as specified by the IPCC Guidelines. If gross calorific values (GCV) were used, please indicate this by replacing "NCV" with "GCV" in this column.

<sup>(2)</sup> Accurate estimation of CH<sub>4</sub> and N<sub>2</sub>O emissions depends on combustion conditions, technology, and emission control policy, as well as fuel characteristics. Therefore, caution should be used when comparing the implied emission factors.

<sup>(3)</sup> Carbon dioxide emissions from biomass are reported under Memo Items. The content of the cells is not included in the totals.

**Note:** For the coverage of fuel categories, please refer to the IPCC Guidelines (Volume 1. Reporting Instructions - Common Reporting Framework, section 1.2, p. 1.19). If some derived gases (e.g. gas work gas, coke oven gas, blast gas, oxygen steel furnace gas, etc.) are considered, Parties should provide information on the allocation of these derived gases under the above fuel categories (liquid, solid, gaseous, biomass, other fuels) in the documentation box at the end of sheet 4 of this table.

**TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fuel Combustion Activities - Sectoral Approach**  
**(Sheet 2 of 4)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>			EMISSIONS		
	Consumption		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	(TJ)	(1)	(t/TJ)	(kg/TJ)	(kg/TJ)	(Gg)	(Gg)	(Gg)
<b>I.A.2 Manufacturing Industries and Construction</b>	<b>255,762,38</b>	<b>NCV</b>				<b>14,163,39</b>	<b>0,47</b>	<b>0,53</b>
Liquid Fuels	45,033,41	NCV	76,66	1,72	7,52	3,452,32	0,08	0,34
Solid Fuels	53,076,85	NCV	85,64	1,26	1,11	4,545,26	0,07	0,06
Gaseous Fuels	105,837,12	NCV	55,00	1,38	0,10	5,821,04	0,15	0,01
Biomass	43,769,32	NCV	109,73	1,99	2,56 <sup>(3)</sup>	4,802,92	0,09	0,11
Other Fuels	8,045,68	NCV	42,85	12,00	1,40	344,76	0,10	0,01
<b>a. Iron and Steel</b>	<b>67,567,29</b>	<b>NCV</b>				<b>5,143,34</b>	<b>0,04</b>	<b>0,06</b>
Liquid Fuels	7,197,22	NCV	77,97	0,66	1,00	561,18	0,00	0,01
Solid Fuels	43,946,60	NCV	83,71	0,42	1,05	3,678,88	0,02	0,05
Gaseous Fuels	16,423,29	NCV	55,00	0,73	0,10	903,28	0,01	0,00
Biomass	0,18	NCV	110,00	2,00	4,00 <sup>(3)</sup>	0,02	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
<b>b. Non-Ferrous Metals</b>	<b>3,490,61</b>	<b>NCV</b>				<b>210,55</b>	<b>0,00</b>	<b>0,00</b>
Liquid Fuels	897,83	NCV	73,00	0,88	0,82	65,55	0,00	0,00
Solid Fuels	48,96	NCV	104,00	2,00	1,40	5,09	0,00	0,00
Gaseous Fuels	2,543,82	NCV	55,00	1,50	0,10	139,91	0,00	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
<b>c. Chemicals</b>	<b>31,752,59</b>	<b>NCV</b>				<b>1,251,18</b>	<b>0,09</b>	<b>0,03</b>
Liquid Fuels	1,463,77	NCV	76,70	0,72	0,76	112,27	0,00	0,00
Solid Fuels	2,694,16	NCV	94,38	4,88	1,40	254,28	0,01	0,00
Gaseous Fuels	15,578,16	NCV	55,00	1,50	0,10	856,80	0,02	0,00
Biomass	9,233,33	NCV	110,07	1,98	2,01 <sup>(3)</sup>	1,016,34	0,02	0,02
Other Fuels	2,783,18	NCV	10,00	12,00	1,40	27,83	0,03	0,00
<b>d. Pulp, Paper and Print</b>	<b>55,339,71</b>	<b>NCV</b>				<b>1,857,07</b>	<b>0,11</b>	<b>0,06</b>
Liquid Fuels	2,415,93	NCV	77,32	1,75	0,95	186,80	0,00	0,00
Solid Fuels	3,298,39	NCV	94,96	5,64	1,40	313,21	0,02	0,00
Gaseous Fuels	24,644,78	NCV	55,00	1,50	0,10	1,355,46	0,04	0,00
Biomass	24,820,68	NCV	110,01	2,00	2,22 <sup>(3)</sup>	2,730,58	0,05	0,06
Other Fuels	159,93	NCV	10,00	12,00	1,40	1,60	0,00	0,00
<b>e. Food Processing, Beverages and Tobacco</b>	<b>21,741,94</b>	<b>NCV</b>				<b>1,262,17</b>	<b>0,03</b>	<b>0,01</b>
Liquid Fuels	3,388,20	NCV	76,04	0,73	0,79	257,65	0,00	0,00
Solid Fuels	100,82	NCV	103,99	2,01	1,40	10,48	0,00	0,00
Gaseous Fuels	18,073,37	NCV	55,00	1,50	0,10	994,04	0,03	0,00
Biomass	179,55	NCV	109,10	1,94	3,64 <sup>(3)</sup>	19,59	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
<b>f. Other (please specify )</b>	<b>75,870,25</b>	<b>NCV</b>				<b>4,439,08</b>	<b>0,20</b>	<b>0,38</b>
Liquid Fuels	29,670,47	NCV	76,47	2,16	10,94	2,268,88	0,06	0,32
Solid Fuels	2,987,92	NCV	94,82	5,42	1,40	283,31	0,02	0,00
Gaseous Fuels	28,573,70	NCV	55,00	1,50	0,10	1,571,55	0,04	0,00
Biomass	9,535,58	NCV	108,69	2,00	3,96 <sup>(3)</sup>	1,036,39	0,02	0,04
Other Fuels	5,102,57	NCV	61,80	12,00	1,40	315,33	0,06	0,01



**TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fuel Combustion Activities - Sectoral Approach**  
(Sheet 3 of 4)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>			EMISSIONS		
	Consumption		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	(TJ)	<sup>(1)</sup>	(t/TJ)	(kg/TJ)	(kg/TJ)	(Gg)	(Gg)	(Gg)
<b>I.A.3 Transport</b>	<b>309.768,14</b>	NCV				<b>22.692,33</b>	<b>1,07</b>	<b>0,91</b>
Gasoline	92.616,21	NCV	74,06	9,58	5,76	6.859,03	0,89	0,53
Diesel	208.320,17	NCV	73,67	0,82	1,78	15.346,62	0,17	0,37
Natural Gas	8.808,47	NCV	55,00	1,50	0,10	484,47	0,01	0,00
Solid Fuels	23,29	NCV	95,00	6,83	6,83	2,21	0,00	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
a. Civil Aviation	917,49	NCV				66,75	0,00	0,00
Aviation Gasoline	88,33	NCV	72,72	0,00	0,00	6,42	0,00	0,00
Jet Kerosene	829,17	NCV	72,75	5,19	3,18	60,32	0,00	0,00
b. Road Transportation	296.544,12	NCV				21.882,82	1,04	0,87
Gasoline	91.578,50	NCV	74,07	9,53	5,80	6.783,36	0,87	0,53
Diesel Oil	204.965,61	NCV	73,67	0,80	1,63	15.099,46	0,16	0,33
Natural Gas	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels (please specify) ---	0,00	NCV				0,00	0,00	0,00
		NCV	0,00	0,00	0,00			
c. Railways	2.355,37	NCV				174,05	0,01	0,02
Solid Fuels	23,29	NCV	95,00	6,83	6,83	2,21	0,00	0,00
Liquid Fuels	2.332,07	NCV	73,69	2,22	7,78	171,84	0,01	0,02
Other Fuels (please specify) ---	0,00	NCV				0,00	0,00	0,00
		NCV	0,00	0,00	0,00			
d. Navigation	1.142,70	NCV				84,25	0,01	0,02
Coal	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Residual Oil	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Gas/Diesel Oil	1.022,48	NCV	73,67	1,55	17,39	75,32	0,00	0,02
Other Fuels (please specify) ---	120,21	NCV				8,92	0,01	0,00
Gasoline	120,21	NCV	74,21	89,01	2,00	8,92	0,01	0,00
		NCV	0,00	0,00	0,00			
e. Other Transportation	8.808,47	NCV				484,47	0,01	0,00
Liquid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Gaseous Fuels	8.808,47	NCV	55,00	1,50	0,10	484,47	0,01	0,00

**TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fuel Combustion Activities - Sectoral Approach**  
**(Sheet 4 of 4)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>			EMISSIONS		
	Consumption		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	(TJ)	(1)	(t/TJ)	(kg/TJ)	(kg/TJ)	(Gg)	(Gg)	(Gg)
<b>I.A.4 Other Sectors</b>	<b>298.473,20</b>	NCV				<b>14.702,00</b>	<b>13,96</b>	<b>0,98</b>
Liquid Fuels	124.812,46	NCV	74,54	1,98	4,49	9.304,01	0,25	0,56
Solid Fuels	7.147,17	NCV	93,74	95,48	2,37	669,95	0,68	0,02
Gaseous Fuels	85.774,72	NCV	55,00	0,80	1,00	4.717,61	0,07	0,09
Biomass	79.695,22	NCV	101,21	162,49	4,02 <sup>(3)</sup>	8.065,89	12,95	0,32
Other Fuels	1.043,63	NCV	10,00	12,00	1,40	10,44	0,01	0,00
<b>a. Commercial/Institutional</b>	<b>34.126,10</b>	NCV				<b>1.822,85</b>	<b>0,50</b>	<b>0,04</b>
Liquid Fuels	11.041,69	NCV	72,83	0,85	0,89	804,15	0,01	0,01
Solid Fuels	255,05	NCV	95,96	90,00	2,76	24,47	0,02	0,00
Gaseous Fuels	17.887,05	NCV	55,00	0,80	1,00	983,79	0,01	0,02
Biomass	3.898,68	NCV	109,11	113,36	2,51 <sup>(3)</sup>	425,40	0,44	0,01
Other Fuels	1.043,63	NCV	10,00	12,00	1,40	10,44	0,01	0,00
<b>b. Residential</b>	<b>234.038,77</b>	NCV				<b>11.087,45</b>	<b>12,40</b>	<b>0,47</b>
Liquid Fuels	90.334,40	NCV	74,87	0,95	1,15	6.763,71	0,09	0,10
Solid Fuels	6.747,54	NCV	93,65	95,80	2,34	631,88	0,65	0,02
Gaseous Fuels	67.124,78	NCV	55,00	0,80	1,00	3.691,86	0,05	0,07
Biomass	69.832,05	NCV	100,61	166,30	4,08 <sup>(3)</sup>	7.025,74	11,61	0,29
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
<b>c. Agriculture/Forestry/Fisheries</b>	<b>30.308,34</b>	NCV				<b>1.791,70</b>	<b>1,06</b>	<b>0,47</b>
Liquid Fuels	23.436,38	NCV	74,08	6,45	19,05	1.736,14	0,15	0,45
Solid Fuels	144,59	NCV	94,05	90,00	2,77	13,60	0,01	0,00
Gaseous Fuels	762,89	NCV	55,00	0,80	1,00	41,96	0,00	0,00
Biomass	5.964,48	NCV	103,07	150,00	4,23 <sup>(3)</sup>	614,75	0,89	0,03
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
<b>I.A.5 Other (Not elsewhere specified) <sup>(4)</sup></b>	<b>497,03</b>	NCV				<b>36,19</b>	<b>0,00</b>	<b>0,00</b>
Liquid Fuels	497,03	NCV	72,80	2,42	6,23	36,19	0,00	0,00
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Gaseous Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(4)</sup> Include military fuel use under this category.

**Documentation Box:**

**I A 1 c Petroleum Refining:** CH<sub>4</sub> and NMVOC emissions are included in "I B 2 fugitive emissions from fuels".

**TABLE 1.A(b) SECTORAL BACKGROUND DATA FOR ENERGY**  
**CO<sub>2</sub> from Fuel Combustion Activities - Reference Approach (IPCC Worksheet 1-1)**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

FUEL TYPES			Unit	Production	Imports	Exports	International bunkers	Stock change	Apparent consumption	Conversion factor <sup>(1)</sup> (TJ/Unit)	<sup>(1)</sup>	Apparent consumption (TJ)	Carbon emission factor (t C/TJ)	Carbon content (Gg C)	Carbon stored (Gg C)	Net carbon emissions (Gg C)	Fraction of carbon oxidized	Actual CO <sub>2</sub> emissions (Gg CO <sub>2</sub> )
Liquid Fossil	Primary Fuels	Crude Oil	Gg	1,151,00	7,819,21	0,00		113,57	8,856,64	42,75	NCV	378,621,45	20,00	7,572,43	0,00	7,572,43	0,99	27,487,92
		Orimulsion	Gg	NO	NO	NO		NO	0,00		NCV	0,00		0,00		0,00		0,00
		Natural Gas Liquids	Gg	54,68	0,00	0,00		0,00	54,68	45,22	NCV	2,472,72	17,20	42,53	0,00	42,53	0,99	154,39
	Secondary Fuels	Gasoline	Gg		882,79	476,40	0,00	11,15	395,24	44,80	NCV	17,706,84	18,90	334,66	0,00	334,66	0,99	1,214,81
		Jet Kerosene	Gg		47,05	5,26	447,55	-3,60	-402,16	44,59	NCV	-17,932,47	19,50	-349,68	0,00	-349,68	0,99	-1,269,35
		Other Kerosene	Gg		3,77	0,00	0,00	0,33	3,44	44,75	NCV	153,98	19,60	3,02	0,00	3,02	0,99	10,96
		Shale Oil	Gg		NO	NO		NO	0,00		NCV	0,00		0,00		0,00		0,00
		Gas / Diesel Oil	Gg		4,350,87	539,57	0,00	-28,04	3,839,34	43,33	NCV	166,358,65	20,20	3,360,44	0,00	3,360,44	0,99	12,198,41
		Residual Fuel Oil	Gg		328,13	55,07	0,00	-7,87	280,94	40,19	NCV	11,290,90	21,10	238,24		238,24	0,99	864,80
		LPG	Gg		137,37	9,18		0,83	127,36	47,31	NCV	6,025,40	17,20	103,64	0,81	102,82	0,99	373,25
		Ethane	Gg		IE	IE		IE	0,00		NCV	0,00		0,00	0,00	0,00		0,00
		Naphtha	Gg		IE	IE		IE	0,00		NCV	0,00		0,00	0,00	0,00		0,00
		Bitumen	Gg		296,27	82,01		-1,43	215,69	40,19	NCV	8,668,42	22,00	190,71	542,30	-351,60	0,99	-1,276,30
		Lubricants	Gg		43,85	79,91	0,00	-4,46	-31,60	40,19	NCV	-1,269,92	20,00	-25,40	36,91	-62,31	0,99	-226,18
		Petroleum Coke	Gg		67,50	0,00		2,12	65,37	31,00	NCV	2,026,53	27,50	55,73	0,00	55,73	0,99	202,30
Refinery Feedstocks	Gg		374,90	25,11		148,25	201,54	42,50	NCV	8,565,58	20,00	171,31	0,00	171,31	0,99	621,86		
Other Oil	Gg		102,48	148,90		13,23	-59,65	40,19	NCV	-2,397,25	20,00	-47,95	423,72	-471,67	0,99	-1,712,15		
Liquid Fossil Totals											580,290,82		11,649,68	1,003,75	10,645,93		38,644,72	
Solid Fossil	Primary Fuels	Anthracite <sup>(2)</sup>	Gg	IE	IE	IE		IE	0,00		NCV	0,00		0,00		0,00		0,00
		Coking Coal	Gg	0,00	1,889,97	0,00		-7,90	1,897,87	28,00	NCV	53,140,33	25,80	1,371,02	54,60	1,316,42	0,98	4,730,32
		Other Bit. Coal	Gg	0,00	2,068,75	0,00	0,00	-326,84	2,395,59	28,00	NCV	67,076,60	25,80	1,730,58	0,54	1,730,03	0,98	6,216,58
		Sub-bit. Coal	Gg	NO	NO	NO	NO	NO	0,00		NCV	0,00		0,00		0,00		0,00
		Lignite	Gg	1,152,38	4,82	0,13		-489,95	1,647,01	10,90	NCV	17,952,44	27,60	495,49	0,00	495,49	0,98	1,780,45
		Oil Shale	Gg	NO	NO	NO		NO	0,00		NCV	0,00		0,00		0,00		0,00
		Peat	Gg	0,50	0,00	0,00		0,00	0,50	8,80	NCV	4,40	28,90	0,13	0,00	0,13	0,98	0,46
	Secondary Fuels	BKB & Patent Fuel	Gg		73,68	0,00		0,00	73,68	19,30	NCV	1,421,95	25,80	36,69	0,00	36,69	0,98	131,83
		Coke Oven/Gas Coke	Gg		903,75	2,49		-50,78	952,04	28,20	NCV	26,847,44	29,50	792,00	5,93	786,07	0,98	2,824,61
Solid Fuel Totals											166,443,17		4,425,90	61,08	4,364,82		15,684,24	
Gaseous Fossil		Natural Gas (Dry)	TJ	75,093,78	1,204,894,18	953,334,61		7,162,56	319,490,79	1,00	NCV	319,490,79	15,30	4,888,21	0,00	4,888,21	1,00	17,833,82
Total												1,066,224,78		20,963,78	1,064,83	19,898,95		72,162,78
Biomass total												139,564,59		4,172,98	0,00	4,172,98		13,486,34
		Solid Biomass	TJ	138,563,17	7,002,42	7,785,76		0,00	137,779,82	1,00	NCV	137,779,82	29,90	4,119,62	0,00	4,119,62	0,88	13,292,63
		Liquid Biomass	TJ	IE	IE	IE		IE	0,00		NCV	0,00		0,00		0,00		0,00
		Gas Biomass	TJ	1,784,76	0,00	0,00		0,00	1,784,76	1,00	NCV	1,784,76	29,90	53,36	0,00	53,36	0,99	193,71

<sup>(1)</sup> To convert quantities expressed in natural units to energy units, use net calorific values (NCV). If gross calorific values (GCV) are used in this table, please indicate this by replacing "NCV" with "GCV" in this column.

<sup>(2)</sup> If Anthracite is not separately available, include with Other Bituminous Coal.

**TABLE 1.A(c) COMPARISON OF CO<sub>2</sub> EMISSIONS FROM FUEL COMBUSTION**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

FUEL TYPES	Reference approach		National approach <sup>(1)</sup>		Difference <sup>(2)</sup>	
	Energy consumption (PJ)	CO <sub>2</sub> emissions (Gg)	Energy consumption (PJ)	CO <sub>2</sub> emissions (Gg)	Energy consumption (%)	CO <sub>2</sub> emissions (%)
Liquid Fuels (excluding international bunkers)	580,29	38.644,72	516,00	38.166,22	12,46	1,25
Solid Fuels (excluding international bunkers)	166,44	15.684,24	131,13	12.130,75	26,93	29,29
Gaseous Fuels	319,49	17.833,82	301,26	16.569,35	6,05	7,63
Other <sup>(3)</sup>	NE	NE	18,85	757,95	-100,00	-100,00
<b>Total <sup>(3)</sup></b>	<b>1.066,22</b>	<b>72.162,78</b>	<b>967,25</b>	<b>67.624,26</b>	<b>10,23</b>	<b>6,71</b>

<sup>(1)</sup> "National approach" is used to indicate the approach (if different from the Reference approach) followed by the Party to estimate its CO<sub>2</sub> emissions from fuel combustion reported in the national GHG inventory.

<sup>(2)</sup> Difference of the Reference approach over the National approach (i.e. difference = 100% x ((RA-NA)/NA), where NA = National approach and RA = Reference approach).

<sup>(3)</sup> Emissions from biomass are not included.

**Note:** In addition to estimating CO<sub>2</sub> emissions from fuel combustion by sector, Parties should also estimate these emissions using the IPCC Reference approach, as found in the IPCC Guidelines, Worksheet 1-1(Volume 2. Workbook). The Reference approach is to assist in verifying the sectoral data. Parties should also complete the above tables to compare the alternative estimates, and if the emission estimates lie more than 2 percent apart, should explain the source of this difference in the documentation box provided.

**Documentation Box:**

**Solid fuels:** Energy consumption: The sectoral approach doesn't include non-energy use

CO2 emissions: Reference Approach includes process emissions from blast furnaces which are included in category 2 C 1 and process emissions from carbide production which are included in category 2 B 4.

**Gaseous fuels:** Energy consumption: The sectoral approach doesn't include losses and non-energy-use.

CO2 emissions: National approach uses sector specific carbon contents and heating values (different from IPCC reference factors). Process emissions from ammonia-production are included in category 2 B 1.


**Liquid fuels:** Energy consumption: The sectoral approach doesn't include non-energy use and energy losses in refinery.

CO2 emissions: Heat values and carbon contents are sector and fuel specific. The reference approach considers a share of feedstocks used for plastics production and solvent production as non-carbon-stored. In the sectoral approach a share of emissions from waste incineration of plastics and solvents use (including imported products) is included in category 1A1a and category 3. In the sectoral approach a share of municipal solid waste without energy recovery is considered in category 6C for the years 1990 and 1991.

**Other fuels:** The sectoral approach considers waste as an additional fuel type (e.g. municipal solid waste and industrial fuel waste).

**TABLE 1.A(d) SECTORAL BACKGROUND DATA FOR ENERGY**  
**Feedstocks and Non-Energy Use of Fuels**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

FUEL TYPE <sup>(1)</sup>	ACTIVITY DATA AND RELATED INFORMATION		IMPLIED EMISSION FACTOR	ESTIMATE
	Fuel quantity  (TJ)	Fraction of carbon stored	Carbon emission factor  (t C/TJ)	of carbon stored in non-energy use of fuels  (Gg C)
Naphtha <sup>(2)</sup>	0,00	0,00	0,00	0,00
Lubricants	3.690,93	0,50	20,00	36,91
Bitumen	24.650,17	1,00	22,00	542,30
Coal Oils and Tars (from Coking Coal)	1.610,85	0,75	45,20	54,60
Natural Gas <sup>(2)</sup>	11.278,41	0,00	0,00	0,00
Gas/Diesel Oil <sup>(2)</sup>	0,00	0,50	0,00	0,00
LPG <sup>(2)</sup>	47,31	1,00	17,20	0,81
Butane <sup>(2)</sup>	0,00	0,75	0,00	0,00
Ethane <sup>(2)</sup>	0,00	0,00	0,00	0,00
Other (please specify) 				
Coke Oven Coke	28.720,57	0,01	29,50	5,93
Other Bituminous Coal	42,20	0,50	25,80	0,54
Gasoline	0,00	0,50	0,00	0,00
Other Oil Products	28.248,06	0,75	20,00	423,72
			0,00	

**Additional information <sup>(a)</sup>**

CO <sub>2</sub> not emitted  (Gg CO <sub>2</sub> )	Subtracted from energy sector (specify source category)
0,00	NA
135,33	NA
1.988,45	NA
200,22	NA
0,00	NA
0,00	NA
2,98	NA
0,00	NA
0,00	NA
0,00	NA
21,75	NA
2,00	NA
0,00	NA
1.553,64	NA
0,00	


<sup>(1)</sup> Where fuels are used in different industries, please enter in different rows.

<sup>(2)</sup> Enter these fuels when they are used as feedstocks.

<sup>(a)</sup> The fuel lines continue from the table to the left.


**Note:** The table is consistent with the IPCC Guidelines. Parties that take into account the emissions associated with the use and disposal of these feedstocks could continue to use their methodology, and provide explanation notes in the documentation box below.

**Documentation box:** A fraction of energy carriers is stored in such products as plastics or asphalt. The non-stored fraction of the carbon in the energy carrier or product is oxidized, resulting in carbon dioxide emissions, either during the use of the energy carriers in the industrial production (e.g. fertilizer production), or during the use of the products (e.g. solvents, lubricants), or in both (e.g. monomers). To report associated emissions use the above table, filling an extra "Additional information" table, as shown below.

Associated CO <sub>2</sub> emissions (Gg)	Allocated under (Specify source category) <sup>(a)</sup> 
	<sup>(a)</sup> e.g. Industrial Processes, Waste Incineration, etc.

**TABLE 1.B.1 SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fugitive Emissions from Solid Fuels**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR		EMISSIONS	
	Amount of fuel produced <sup>(1)</sup>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>
	(Mt)	(kg/t)	(kg/t)	(Gg)	(Gg)
<b>1. B. 1. a. Coal Mining and Handling</b>	1,81			0,39	0,00
i. Underground Mines <sup>(2)</sup>	NO	0,00	0,00	<u>NO</u>	<u>NO</u>
Mining Activities		0,00	0,00	NO	NO
Post-Mining Activities		0,00	0,00	NO	NO
ii. Surface Mines <sup>(2)</sup>	1,81	<u>0,21</u>	<u>0,00</u>	0,39	0,00
Mining Activities		<u>0,21</u>	<u>0,00</u>	0,39	NA
Post-Mining Activities		<u>0,00</u>	<u>0,00</u>	IE	NA
<b>1. B. 1. b. Solid Fuel Transformation</b>	1,40	<u>0,00</u>	<u>0,00</u>	IE	IE
<b>1. B. 1. c. Other (please specify) <sup>(3)</sup></b> 				<u>NO</u>	<u>NO</u>
		0,00	0,00		

<sup>(1)</sup> Use the documentation box to specify whether the fuel amount is based on the run-of-mine (ROM) production or on the saleable production.

<sup>(2)</sup> Emissions both for Mining Activities and Post-Mining Activities are calculated with the activity data in lines Underground Mines and Surface Mines respectively.

<sup>(3)</sup> Please click on the button to enter any other solid fuel related activities resulting in fugitive emissions, such as emissions from abandoned mines and waste piles.

**Note:** There are no clear references to the coverage of 1.B.1.b. and 1.B.1.c. in the IPCC Guidelines. Make sure that the emissions entered here are not reported elsewhere. If they are reported under another source category, indicate this (IE) and make a reference in Table 9 (completeness) and/or in the documentation box.

Documentation box:
1 B 1 b: Emissions from coke ovens are included in 1 A 2 a Iron and Steel
1 B 1 a ii: emissions from Post-Mining are included in Mining

**Additional information <sup>(a)</sup>**

Description	Value
Amount of CH <sub>4</sub> drained (recovered) and utilized or flared (Gg)	0,00
Number of active underground mines	0,00
Number of mines with drainage (recovery) systems	NE

<sup>(a)</sup> For underground mines.

**TABLE 1.B.2 SECTORAL BACKGROUND DATA FOR ENERGY**  
**Fugitive Emissions from Oil and Natural Gas**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTORS			EMISSIONS		
	Description <sup>(1)</sup>	Unit	Value	CO <sub>2</sub> (kg/unit) <sup>(2)</sup>	CH <sub>4</sub> (kg/unit) <sup>(2)</sup>	N <sub>2</sub> O (kg/unit) <sup>(2)</sup>	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
<b>1. B. 2. a. Oil <sup>(3)</sup></b>							<b>133,00</b>	<b>4,20</b>	
i. Exploration	(e.g. number of wells drilled)			0,00	0,00		IE	IE	
ii. Production <sup>(4)</sup>	Oil throughput	Mt	1,02	131.034,482,76	3.862,068,97		133,00	3,92	
iii. Transport	(e.g. PJ oil loaded in tankers)			0,00	0,00		NE	NE	
iv. Refining / Storage	Oil refined (SNAP 0401)	Mt	8.874,30	0,00	31,66		NA	0,28	
v. Distribution of oil products	Gasoline Consumption (SNAP 050)	Mt	2,22	0,00	0,00		NA	NA	
vi. Other				0,00	0,00		NE	NE	
<b>1. B. 2. b. Natural Gas</b>							<b>100,04</b>	<b>10,71</b>	
Exploration				0,00	0,00		IE	IE	
i. Production <sup>(4)</sup> / Processing	Gas throughput (a)	Mm3 G	2.030,00	49,261,08	0,00		100,00	IE	
ii. Transmission	Pipelines length (km)	km	1.430,00	24,50	2,900,00		0,04	4,15	
Distribution	Gas Consumption	Mm3 G	8.912,00	0,00	735,96		IE	6,56	
iii. Other Leakage	(e.g. PJ gas consumed)		789,43	0,00	0,00		NE	NE	
at industrial plants and power stations				0,00	0,00		NE	NE	
in residential and commercial sectors				0,00	0,00		NE	NE	
<b>1. B. 2. c. Venting <sup>(5)</sup></b>							<b>IE</b>	<b>IE</b>	
i. Oil	(e.g. PJ oil produced)			0,00	0,00		IE	IE	
ii. Gas	(e.g. PJ gas produced)			0,00	0,00		IE	IE	
iii. Combined				0,00	0,00		IE	IE	
<b>Flaring</b>							<b>IE</b>	<b>IE</b>	<b>IE</b>
i. Oil	(e.g. PJ gas consumption)			0,00	0,00	0,00	IE	IE	IE
ii. Gas	(e.g. PJ gas consumption)			0,00	0,00	0,00	IE	IE	IE
iii. Combined				0,00	0,00	0,00	IE	IE	IE
<b>1.B.2.d. Other (please specify) <sup>(6)</sup></b>	---						<b>NO</b>	<b>NO</b>	<b>NO</b>
				0,00	0,00	0,00			

**Additional information**

Description	Value	Unit
Pipelines length (km)	1.430,00	km
Number of oil wells	746,00	NUMBER
Number of gas wells	206,00	NUMBER
Gas throughput <sup>(a)</sup>	2.030,00	Mm3 GAS
Oil throughput <sup>(a)</sup>	1,02	Mt
Other relevant information (specify)	---	

<sup>(a)</sup> In the context of oil and gas production, throughput is a measure of the total production, such as barrels per day of oil, or cubic meters of gas per year. Specify the units of the reported value in the unit column. Take into account that these values should be consistent with the activity data reported under the production rows of the main table.

<sup>(1)</sup> Specify the activity data used and fill in the activity data description column, as given in the examples in brackets. Specify the unit of the activity data in the unit column. Use the document box to specify whether the fuel amount is based on the raw material production or on the saleable production. Note cases where more than one variable is used as activity data.

<sup>(2)</sup> The unit of the implied emission factor will depend on the units of the activity data used, and is therefore not specified in this column. The unit of the implied emission factor for each activity will be kg/unit of activity data.

<sup>(3)</sup> Use the category also to cover emissions from combined oil and gas production fields. Natural gas processing and distribution from these fields should be included under 1.B.2.b.ii and 1.B.2.b.iii, respectively.

<sup>(4)</sup> If using default emission factors these categories will include emissions from production other than venting and flaring.

<sup>(5)</sup> If using default emission factors, emissions from Venting and Flaring from all oil and gas production should be accounted for here. Parties using the IPCC software could report those emissions together, indicating so in the documentation box.

<sup>(6)</sup> For example, fugitive CO<sub>2</sub> emissions from production of geothermal power could be reported here.

**Documentation box:**

1 B 2 a i, 1 B 2 b Exploration and 1 B 2 b i except CO<sub>2</sub> emissions from processing of sour gas are included in 1 B 2 a ii.  
1 B 2 a v also includes storage in storage tanks and refinery dispatch station - only NMVOC emissions are estimated.  
1 B 2 a iv CO<sub>2</sub> is included in 1 A 1 b, flaring in the refinery is also included in 1 A 1 b.  
1 B 2 b ii Transmission includes fugitive and venting.

**TABLE 1.C SECTORAL BACKGROUND DATA FOR ENERGY**  
**International Bunkers and Multilateral Operations**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS			EMISSIONS		
	Consumption (TJ)	CO <sub>2</sub> (t/TJ)	CH <sub>4</sub> (kg/TJ)	N <sub>2</sub> O (kg/TJ)	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
<b>Marine Bunkers</b>	<b>0,00</b>				<b>NO</b>	<b>NO</b>	<b>NO</b>
Gasoline	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Gas/Diesel Oil	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Residual Fuel Oil	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Lubricants	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Coal	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Other (please specify) ...	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		0,00	0,00	0,00			
<b>Aviation Bunkers</b>	<b>19.956,46</b>				<b>1.451,90</b>	<b>0,02</b>	<b>0,05</b>
Jet Kerosene	19.956,46	72,75	1,25	2,66	1.451,90	0,02	0,05
Gasoline	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Multilateral Operations <sup>(1)</sup></b>	<b>0,00</b>				<b>IE</b>	<b>IE</b>	<b>IE</b>

**Additional information**

Fuel consumption	Allocation <sup>(a)</sup> (percent)	
	Domestic	International
Marine	100,00	0,00
Aviation	4,40	95,60

<sup>(a)</sup> For calculating the allocation of fuel consumption, use the sums of fuel consumption by domestic navigation and aviation (Table 1.A(a)) and by international bunkers (Table 1.C).

<sup>(1)</sup> Parties may choose to report or not report the activity data and emission factors for multilateral operation consistent with the principle of confidentiality stated in the UNFCCC reporting guidelines on inventories. In any case, Parties should report the emissions from multilateral operations, where available, under the Memo Items section of the Summary tables and in the Sectoral report table for energy.

**Note:** In accordance with the IPCC Guidelines, international aviation and marine bunker fuel emissions from fuel sold to ships or aircraft engaged in international transport should be excluded from national totals and reported separately for informational purposes only.

<b>Documentation box:</b> Please explain how the consumption of international marine and aviation bunkers fuels was estimated and separated from the domestic consumption. Kerosene consumption in Austria is divided into national and international traffic by using national LTO-statistics.
--



**TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total Industrial Processes</b>	<b>8,151,09</b>	<b>0,35</b>	<b>2,85</b>	<b>2,311,71</b>	<b>1,308,22</b>	<b>380,59</b>	<b>102,54</b>	<b>0,03</b>	<b>0,02</b>	<b>1,66</b>	<b>23,82</b>	<b>15,71</b>	<b>1,21</b>
<b>A. Mineral Products</b>	<b>3,060,20</b>	<b>0,00</b>	<b>0,00</b>							<b>0,00</b>	<b>9,78</b>	<b>0,00</b>	<b>0,00</b>
1. Cement Production	1,735,65												NA
2. Lime Production	546,61												
3. Limestone and Dolomite Use	269,71												
4. Soda Ash Production and Use	18,78												
5. Asphalt Roofing	IE										9,78	IE	
6. Road Paving with Asphalt	IE									NA	NA	IE	NA
7. Other (please specify) ...	489,45	0,00	0,00							0,00	0,00	0,00	0,00
Bricks and Tiles (decarbonizing)	115,92	NA	NA							NA	NA	NA	NA
MgCO <sub>3</sub> Sinter Plants	373,53	NA	NA							NA	NA	NA	NA
<b>B. Chemical Industry</b>	<b>558,88</b>	<b>0,34</b>	<b>2,85</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,69</b>	<b>11,09</b>	<b>12,34</b>	<b>0,77</b>
1. Ammonia Production	493,59	0,05								0,23	0,03	IE	NA
2. Nitric Acid Production	0,41		2,85							0,38			
3. Adipic Acid Production			NO							NO	NO	NO	
4. Carbide Production	40,64	NE									NA	NA	NA
5. Other (please specify) ...	24,25	0,30	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,08	11,07	12,34	0,77
Other Chemical Products	24,25	0,30	NA	NA	NA	NA	NA	NA	NA	0,08	11,07	12,34	0,77
<b>C. Metal Production</b>	<b>4,532,01</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,09</b>	<b>2,30</b>	<b>0,41</b>	<b>0,45</b>
1. Iron and Steel Production	4,513,10	0,00								0,07	2,00	0,25	0,05
2. Ferroalloys Production	18,90	NA								NA	NA	NA	NA
3. Aluminium Production	NO	NO					NO			NO	NO	NO	NO
4. SF <sub>6</sub> Used in Aluminium and Magnesium Foundries									0,00				
5. Other (please specify) ...	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,31	0,17	0,40
SNAP 040309 Processes in non-ferrous metal industries	NA	NA	NA	NA	NA	NA	NA	NA	NA	0,02	0,31	0,17	0,40

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines. A = Actual emissions based on Tier 2 approach of the IPCC Guidelines. This only applies in sectors where methods exist for both tiers.

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

**TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>D. Other Production</b>	NA									0,88	0,64	2,96	0,00
1. Pulp and Paper										0,88	0,64	0,64	NA
2. Food and Drink <sup>(2)</sup>	NA											2,32	
<b>E. Production of Halocarbons and SF<sub>6</sub></b>					NO		NO		NO				
1. By-product Emissions					NO		NO		NO				
Production of HCFC-22					NO								
Other					NO		NO		NO				
2. Fugitive Emissions					NO		NO		NO				
3. Other (please specify) ...					NO		NO		NO				
<b>F. Consumption of Halocarbons and SF<sub>6</sub></b>				2.311,71	1.308,22	380,59	102,54	0,03	0,02				
1. Refrigeration and Air Conditioning Equipment				IE	463,16	IE	NO	IE	NO				
2. Foam Blowing				IE	814,78	IE	NO	IE	NO				
3. Fire Extinguishers				IE	26,39	IE	0,35	IE	NO				
4. Aerosols/ Metered Dose Inhalers				IE	NO	IE	NO	IE	NO				
5. Solvents				IE	NO	IE	NO	IE	NO				
6. Semiconductor Manufacture				IE	3,88	IE	102,19	IE	0,02				
7. Electrical Equipment				IE	NO	IE	NO	IE	0,00				
8. Other (please specify) ...				NO	NO	NO	NO	NO	0,01				
<b>G. Other (please specify) ...</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	0,00	0,00	0,00	0,00

<sup>(2)</sup> CO<sub>2</sub> from Food and Drink Production (e.g. gasification of water) can be of biogenic or non-biogenic origin. Only information on CO<sub>2</sub> emissions of non-biogenic origin should be reported.

TABLE 2(I).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES

Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O

(Sheet 1 of 2)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS			EMISSIONS <sup>(2)</sup>					
	Production/Consumption quantity		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O	
	Description <sup>(1)</sup>	(kt)	(t/t)	(t/t)	(t/t)	(Gg)	(2)	(Gg)	(2)	(Gg)	(2)
<b>A. Mineral Products</b>						<b>3,060,20</b>		<b>0,00</b>		<b>0,00</b>	
1. Cement Production	Clinker Production [kt]	3,118,23	0,56			1,735,65					
2. Lime Production	Lime Produced [kt]	719,25	0,76			546,61					
3. Limestone and Dolomite Use	Limestone and Dolomite used [kt]	612,50	0,44			269,71					
4. Soda Ash						18,78					
Soda Ash Production	Soda Ash Production	NE	0,00			IE					
Soda Ash Use	Soda Ash Used [kt]	45,26	0,42			18,78					
5. Asphalt Roofing	Roofing Material Production [Mio m <sup>2</sup> ]	27,95	0,00			IE					
6. Road Paving with Asphalt	Asphalt Production [kt]	416,55	0,00			IE					
7. Other (please specify) ...						489,45		0,00		0,00	
Bricks and Tiles (decarbonizing)	Bricks Production [kt]	1,904,14	0,06			115,92					
MgCO <sub>3</sub> Sinter Plants	MgCO <sub>3</sub> sintered [kt]	307,77	1,21	0,00	0,00	373,53					
			0,00	0,00	0,00						
<b>B. Chemical Industry</b>						<b>558,88</b>		<b>0,34</b>		<b>2,85</b>	
1. Ammonia Production <sup>(3)</sup>	Ammonia Production [kt]	510,89	0,97	0,00	0,00	493,59		0,05		NA	
2. Nitric Acid Production	Nitric Acid Production [kt]	558,23			0,01	0,41				2,85	
3. Adipic Acid Production	Adipic Acid Production	NO			0,00					NO	
4. Carbide Production	Carbide Production	31,37	1,30	0,00		40,64		NE			
Silicon Carbide	Silicon Carbide Production	NO	0,00	0,00		NO		NO			
Calcium Carbide	Calcium Carbide Production	31,37	1,30	0,00		40,64		NE			
5. Other (please specify) ...						24,25		0,30		0,00	
Carbon Black	Carbon Black Production	NE		0,00				NE			
Ethylene	Ethylene Production [kt]	NE	0,00	0,00	0,00	NE		NE		NE	
Dichloroethylene	Dichloroethylene Production	NO		0,00				NO			
Styrene	Styrene Production [kt]	NO		0,00				NO			
Methanol	Methanol Production	NE		0,00				NE			
Other Chemical Products	Other Chemical Products [kt]	NA	0,00	0,00	0,00	24,25		0,30		NA	
			0,00	0,00	0,00						

<sup>(1)</sup> Where the IPCC Guidelines provide options for activity data, e.g. cement or clinker for estimating the emissions from Cement Production, specify the activity data used (as shown in the example in brackets) in order to make the choice of emission factor more transparent and to facilitate comparisons of implied emission factors.

<sup>(2)</sup> Enter cases in which the final emissions are reduced with the quantities of emission recovery, oxidation, destruction, transformation. Adjusted emissions are reported and the quantitative information on recovery, oxidation, destruction, and transformation should be given in the additional columns provided.

<sup>(3)</sup> To avoid double counting make offsetting deductions from fuel consumption (e.g. natural gas) in Ammonia Production, first for feedstock use of the fuel, and then to a sequestering use of the feedstock.

TABLE 2(I).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES

Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O

(Sheet 2 of 2)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS			EMISSIONS <sup>(2)</sup>					
	Production/Consumption Quantity		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O	
	Description <sup>(1)</sup>	(kt)	(t/t)	(t/t)	(t/t)	(Gg)	(2)	(Gg)	(2)	(Gg)	(2)
<b>C. Metal Production<sup>(4)</sup></b>						<b>4.532,01</b>		<b>0,00</b>		<b>0,00</b>	
1. Iron and Steel Production			0,00			4.513,10		<b>0,00</b>			
Steel	Steel Production [kt]	6.275,18	0,11			684,62		0,00			
Pig Iron	Iron Production [kt]	4.676,74	<b>0,82</b>	<b>0,00</b>		3.828,48		NE			
Sinter	Sinter Production [kt]	3.527,74	<b>0,00</b>	<b>0,00</b>		IE		NE			
Coke	Coke Production [kt]	1,40	<b>0,00</b>	<b>0,00</b>		IE		NE			
Other (please specify) ...						0,00		0,00			
			0,00	0,00	0,00						
2. Ferroalloys Production	Ferroalloys Production [kt]	13,90	<b>1,36</b>	<b>0,00</b>		18,90		NA			
3. Aluminium Production	Aluminium production [kt]	NO	<b>0,00</b>	<b>0,00</b>		NO		NO			
4. SF <sub>6</sub> Used in Aluminium and Magnesium Foundries											
5. Other (please specify) ...						0,00		0,00		0,00	
SNAP 040309 Processes in non-ferrous	Non-ferrous metal Production	123,37	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	NA		NA		NA	
			0,00	0,00	0,00						
<b>D. Other Production</b>						<b>0,00</b>					
1. Pulp and Paper											
2. Food and Drink	Beer, Spirits Production [kt]	1.495,16	<b>0,00</b>			NA					
<b>G. Other (please specify) ...</b>						<b>NO</b>		<b>NO</b>		<b>NO</b>	
			0,00	0,00	0,00						

<sup>(4)</sup> More specific information (e.g. data on virgin and recycled steel production) could be provided in the documentation box.

**Note:** In case of confidentiality of the activity data information, the entries should provide aggregate figures but there should be a note in the documentation box indicating this

#### Documentation box:

Emissions from Sinter and Coke Production is included in 1 A 2 a Iron and Steel.

Emissions from 2A5 Asphalt Roofing and 2A6 Road Paving with Asphalt are included in the Solvent Sector.

Soda ash is produced in the Solvay process only which is CO<sub>2</sub>-neutral except for coke used for calcination of limestone. This coke used in soda ash production is considered as fuel in the energy sector (subcategory 1 A 2 c), that's why CO<sub>2</sub> emissions of soda ash production is reported as "IE".

TABLE 2(II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF<sub>6</sub>

(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Total HFCs <sup>(1)</sup>	CF <sub>4</sub>	C <sub>2</sub> F <sub>6</sub>	C <sub>3</sub> F <sub>8</sub>	C <sub>4</sub> F <sub>10</sub>	c-C <sub>4</sub> F <sub>8</sub>	C <sub>5</sub> F <sub>12</sub>	C <sub>6</sub> F <sub>14</sub>	Total PFCs <sup>(1)</sup>	SF <sub>6</sub>
	(t) <sup>(2)</sup>																						
Total Actual Emissions of Halocarbons (by chemical) and SF <sub>6</sub>	2,23	4,11	0,00	0,00	41,51	0,00	738,60	519,09	0,00	33,21	1,43	0,00	0,00		6,90	5,14	1,44	0,05	0,00	0,00	0,00		24,83
<b>C. Metal Production</b>															0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
Aluminium Production															0,00	0,00	0,00	0,00	0,00	0,00	0,00		
SF <sub>6</sub> Used in Aluminium Foundries																							0,00
SF <sub>6</sub> Used in Magnesium Foundries																							0,00
<b>E. Production of Halocarbons and SF<sub>6</sub></b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO
1. By-product Emissions	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO
Production of HCFC-22	NO																						
Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO
2. Fugitive Emissions	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO
3. Other (please specify) ---	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		0,00
<b>F(a). Consumption of Halocarbons and SF<sub>6</sub> (actual emissions - Tier 2)</b>	2,23	4,11	NO	NO	41,51	NO	738,60	519,09	NO	33,21	1,43	NO	NO		6,90	5,14	1,44	0,05	NO	NO	NO		24,83
1. Refrigeration and Air Conditioning Equipment	0,00	4,11	0,00	0,00	41,51	0,00	167,66	0,78	0,00	33,21	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
2. Foam Blowing	0,00	0,00	0,00	0,00	0,00	0,00	570,94	518,31	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
3. Fire Extinguishers	1,90	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,43	0,00	0,00		0,00	0,00	0,00	0,05	0,00	0,00	0,00		0,00
4. Aerosols/Metered Dose Inhalers	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
5. Solvents	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
6. Semiconductor Manufacture	0,33	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		6,90	5,14	1,44	0,00	0,00	0,00	0,00		15,77
7. Electrical Equipment																							1,32
8. Other (please specify) ---	NO	NO	NO	NO	NO	NO	0,00	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		7,74
research and other use	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		1,64
Noise insulating windows	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		6,11
<b>G. Other (please specify) ---</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO

<sup>(1)</sup> Although shaded, the columns with HFCs and PFCs totals on sheet 1 are kept for consistency with sheet 2 of the table.<sup>(2)</sup> Note that the units used in this table differ from those used in the rest of the Sectoral report tables, i.e. [t] instead of [Gg].**Note:** Where information is confidential the entries should provide aggregate figures but there should be a note indicating this in the relevant documentation boxes of the Sectoral background data tables or as a comment to the corresponding cell.

Gases with GWP not yet agreed upon by the COP, should be reported in Table 9 (Completeness), sheet 2.

**TABLE 2(II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF<sub>6</sub>**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ea	Total HFCs	CF <sub>4</sub>	C <sub>2</sub> F <sub>6</sub>	C <sub>3</sub> F <sub>8</sub>	C <sub>4</sub> F <sub>10</sub>	c-C <sub>4</sub> F <sub>8</sub>	C <sub>5</sub> F <sub>12</sub>	C <sub>6</sub> F <sub>14</sub>	Total PFCs	SF <sub>6</sub>
	(t) <sup>(2)</sup>																						
<b>F(p). Total Potential Emissions of Halocarbons (by chemical) and SF<sub>6</sub></b> <sup>(3)</sup>	6,65	13,78	0,00	0,00	119,80	0,00	1,223,58	519,48	0,00	106,15	8,13	0,00	0,00		25,45	22,17	1,60	0,01	NO	NO	NO		34,02
Production <sup>(4)</sup>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	NO		NO
Import:	6,65	13,78	0,00	0,00	119,80	0,00	1,223,58	519,48	0,00	106,15	8,13	0,00	0,00		25,45	22,17	1,60	0,01	NO	NO	NO		34,02
In bulk	6,65	13,78	NO	NO	119,80	NO	1,223,58	519,48	NO	106,15	8,13	NO	NO		25,45	22,17	1,60	0,01	NO	NO	NO		34,02
In products <sup>(5)</sup>	IE	IE	NE	NE	IE	NE	IE	IE	NE	IE	IE	NE	NE		NO	NO	NO	NO	NO	NO	NO		IE
Export:	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	NO	NO	NO		0,00
In bulk	IE	IE	NO	NO	IE	NO	IE	IE	NO	IE	IE	NO	NO		IE	IE	IE	IE	NO	NO	NO		IE
In products <sup>(5)</sup>	IE	IE	NE	NE	IE	NE	IE	IE	NE	IE	IE	NE	NE		NO	NO	NO	NO	NO	NO	NO		IE
Destroyed amount	NE	NE	NO	NO	NE	NO	NE	NE	NO	NE	NE	NO	NO		NE	NE	NE	NE	NO	NO	NO		NE
<b>GWP values used</b>	11700	650	150	1300	2800	1000	1300	140	300	3800	2900	6300	560		6500	9200	7000	7000	8700	7500	7400		23900
<b>Total Actual Emissions</b> <sup>(6)</sup> (Gg CO <sub>2</sub> eq.)	26,13	2,67	0,00	0,00	116,23	0,00	960,18	72,67	0,00	126,19	4,14	0,00	0,00	1,308,22	44,85	47,26	10,08	0,36	0,00	0,00	0,00	102,54	593,52
C. Metal Production															0,00	0,00	0,00	0,00	0,00	0,00	0,00	NO	0,00
E. Production of Halocarbons and SF <sub>6</sub>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F(a). Consumption of Halocarbons and SF <sub>6</sub>	26,13	2,67	NO	NO	116,23	NO	960,18	72,67	NO	126,19	4,14	NO	NO	1,308,22	44,85	47,26	10,08	0,36	NO	NO	NO	102,54	593,52
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Ratio of Potential/Actual Emissions from Consumption of Halocarbons and SF<sub>6</sub></b>																							
Actual emissions - F(a) (Gg CO <sub>2</sub> eq.)	26,13	2,67	NO	NO	116,23	NO	960,18	72,67	NO	126,19	4,14	NO	NO	1,308,22	44,85	47,26	10,08	0,36	NO	NO	NO	102,54	593,52
Potential emissions - F(p) (7) (Gg CO <sub>2</sub> eq.)	77,82	8,96	0,00	0,00	335,45	0,00	1,590,65	72,73	0,00	403,39	23,56	0,00	0,00	2,512,56	165,40	203,92	11,20	0,07	NO	NO	NO	380,59	812,96
Potential/Actual emissions ratio	2,98	3,35	0,00	0,00	2,89	0,00	1,66	1,00	0,00	3,20	5,69	0,00	0,00	1,92	3,69	4,32	1,11	0,20	0,00	0,00	0,00	3,71	1,37

<sup>(3)</sup> Potential emissions of each chemical of halocarbons and SF<sub>6</sub> estimated using Tier 1a or Tier 1b of the IPCC Guidelines (Volume 3. Reference Manual, pp. 2.47-2.50). When potential emissions estimates are available in a disaggregated manner corresponding to the subsectors for actual emissions defined on sheet 1 of this table, these should be reported in an annex to sheet 2, using the format of sheet 1, sector F(a). Use Summary 3 of this common reporting format to indicate whether Tier 1a or Tier 1b was used.

<sup>(4)</sup> Production refers to production of new chemicals. Recycled substances could be included here, but it should be ensured that double counting of emissions is avoided. Relevant explanations should be provided as a comment to the corresponding cell.

<sup>(5)</sup> Relevant just for Tier 1b.

<sup>(6)</sup> Sums of the actual emissions of each chemical of halocarbons and SF<sub>6</sub> from the source categories given in sheet 1 of the table multiplied by the corresponding GWP values.

<sup>(7)</sup> Potential emissions of each chemical of halocarbons and SF<sub>6</sub> taken from row F(p) multiplied by the corresponding GWP values.

**Note:** As stated in the revised UNFCCC guidelines, Parties should report actual emissions of HFCs, PFCs and SF<sub>6</sub>, where data are available, providing disaggregated data by chemical and source category in units of mass and in CO<sub>2</sub> equivalents. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

**TABLE 2(II). C, E SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES**  
**Metal Production; Production of Halocarbons and SF<sub>6</sub>**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>	EMISSIONS <sup>(2)</sup>	
	Description <sup>(1)</sup>	(t)	(kg/t)	(t)	(3)
<b>C. PFCs and SF<sub>6</sub> from Metal Production</b>					
PFCs from Aluminium Production					
CF <sub>4</sub>	Aluminium production [kt]	NO	0,00	0,00	
C <sub>2</sub> F <sub>6</sub>	Aluminium production [kt]	NO	0,00	0,00	
SF <sub>6</sub>				0,00	
Aluminium Foundries	cast Aluminium [t]	C	0,00	0,00	
Magnesium Foundries	cast Magnesium [t]	3.600,00	0,00	0,00	
<b>E. Production of Halocarbons and SF<sub>6</sub></b>					
<b>1. By-product Emissions</b>					
Production of HCFC-22					
HFC-23	HFC-23 production	NO	0,00	NO	
Other (specify chemical) <input type="text"/>			0,00		
<b>2. Fugitive Emissions</b>					
HFCs (specify chemical) <input type="text"/>			0,00		
PFCs (specify chemical) <input type="text"/>			0,00		
SF <sub>6</sub>	NO	NO	0,00	NO	
<b>3. Other (please specify) <input type="text"/></b>			0,00		

<sup>(1)</sup> Specify the activity data used as shown in the examples within brackets. Where applying Tier 1b (for C), Tier 2 (for E) and country specific methods, specify any other relevant activity data used in the documentation box below.

<sup>(2)</sup> Emissions and implied emission factors are after recovery.

<sup>(3)</sup> Enter cases in which the final emissions are reported after subtracting the quantities of emission recovery, oxidation, destruction, transformation. Enter these quantities in the specified column and use the documentation box for further explanations.









**Note:** Where the activity data are confidential, the entries should provide aggregate figures, but there should be a note in the documentation box indicating this.

**Documentation box:**

"Import in products" and "Exports in products" and "Exports in bulk" are included in "Import in bulk" because emission calculation is based on consumption data of halocarbons and SF<sub>6</sub> or products (net import/export).

**TABLE 2(II).F SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES**  
**Consumption of Halocarbons and SF<sub>6</sub>**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA <i>Amount of fluid</i>			IMPLIED EMISSION FACTORS			EMISSIONS		
	Filled in new manufactured products	In operating systems (average annual stocks)	Remained in products at decommissioning <sup>(1)</sup>	Product manufacturing factor	Product life factor	Disposal loss factor	From manufacturing	From stocks	From disposal
	(t)	(t)	(t)	(% per annum)	(% per annum)	(% per annum)	(t)	(t)	(t)
<b>1 Refrigeration</b>									
<b>Air Conditioning Equipment</b>									
Domestic Refrigeration ( <i>Specify chemical</i> ) <sup>(2)</sup> 									
HFC-134a	0,00	65,35	NE	NE	1,50	NE	NE	0,98	NE
<b>Commercial Refrigeration</b> 									
HFC-134a	0,00	32,90	NE	NE	1,50	NE	NE	0,49	NE
<b>Transport Refrigeration</b> 									
HFC-134a	5,00	40,72	NE	NE	10,00	NE	NE	4,07	NE
<b>Industrial Refrigeration</b> 									
HFC-152a	1,17	9,70	NE	NE	8,00	NE	NE	0,78	NE
HFC-32	3,68	15,08	NE	NE	8,00	NE	IE	1,21	NE
HFC-143a	105,04	410,51	NE	NE	8,00	NE	NE	32,84	NE
HFC-125	107,88	475,55	NE	NE	8,00	NE	NE	38,04	NE
HFC-134a	126,40	710,18	NE	NE	8,00	NE	NE	56,81	NE
<b>Stationary Air-Conditioning</b> 									
HFC-32	10,10	40,44	NE	NE	7,18	NE	IE	2,90	NE
HFC-143a	1,11	6,70	NE	NE	5,48	NE	NE	0,37	NE
HFC-125	11,92	65,08	NE	NE	5,33	NE	NE	3,47	NE
HFC-134a	36,62	269,20	NE	NE	5,24	NE	NE	14,10	NE
<b>Mobile Air-Conditioning</b> 									
HFC-134a	149,02	690,87	NE	NE	13,20	NE	NE	91,20	NE
<b>2 Foam Blowing</b>									
<b>Hard Foam</b> 									
HFC-152a	518,31	0,00	NA	100,00	NA	NA	518,31	0,00	NA
HFC-134a	345,54	1.292,53	NE	NE	1,56	NE	NE	20,14	NE
<b>Soft Foam</b> 									
HFC-134a	561,00	552,50	0,00	NE	99,69	NA	NE	550,80	0,00

<sup>(1)</sup> Parties should use the documentation box to provide information on the amount of the chemical recovered (recovery efficiency) and other relevant information used in the emission estimation.








<sup>(2)</sup> Please click on the button to specify the chemical consumed, as given in the example. If needed, new rows could be added for reporting the disaggregated chemicals from a source by clicking on the corresponding button.

**Note:** Table 2.(II).F provides for reporting of the activity data and emission factors used to calculate actual emissions from consumption of halocarbons and SF<sub>6</sub> using the "bottom-up approach" (based on the total stock of equipment and estimated emission rates from this equipment). Some Parties may prefer to estimate their actual emissions following the alternative "top-down approach" (based on annual sales of equipment and/or gas). These Parties should provide the activity data used in the current format and any other relevant information in the documentation box at the end of Table2(II).Fs2. Data these Parties should provide includes (1) the amount of fluid used to fill new products, (2) the amount of fluid used to service existing products, (3) the amount of fluid originally used to fill retiring products (the total nameplate capacity of retiring products), (4) the product lifetime, and (5) the growth rate of product sales, if this has been used to calculate the amount of fluid originally used to fill retiring products. Alternatively, Parties may provide alternative formats with equivalent information. These formats may be considered for future versions of the common reporting format after the trial period.



**TABLE 2(II).F SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES**  
**Consumption of Halocarbons and SF<sub>6</sub>**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTORS			EMISSIONS		
	Amount of fluid			Product manufacturing factor	Product life factor	Disposal loss factor	From manufacturing	From stocks	From disposal
	Filled in new manufactured products	In operating systems (average annual stocks)	Remained in products at decommissioning <sup>(1)</sup>						
	(t)								
3 Fire Extinguishers 									
C4F10	0,00	1,00	NE	NE	5,00	NE	NE	0,05	NE
HFC-227ea	8,13	28,57	NE	NE	5,00	NE	NE	1,43	NE
HFC-23	5,38	38,03	NE	NE	5,00	NE	NE	1,90	NE
4 Aerosols									
Metered Dose Inhalers 									
Other 									
5 Solvents 									
6 Semiconductors 									
C3F8	C	NA	NA	C	NA	NA	0,00	NA	NA
C4F10	C	NA	NA	C	NA	NA	1,44	NA	NA
SF6	C	NA	NA	C	NA	NA	15,77	NA	NA
C2F6	C	NA	NA	C	NA	NA	5,14	NA	NA
CF4	C	NA	NA	C	NA	NA	6,90	NA	NA
HFC-23	C	NA	NA	C	NA	NA	0,33	NA	NA
7 Electric Equipment 									
SF6	6,55	131,65	NE	NE	1,00	NE	NE	1,32	NE
8 Other (please specify) 									
research and other use	0,17	1,48	NA	NE	NA	NA	NE	1,64	NA
Noise insulating windows	11,12	294,43	0,00	25,00	1,13	NE	2,78	3,33	0,00

**Note:** Where the activity data are confidential, the entries should provide aggregate figures, but there should be a note indicating this and explanations in the documentation box.

<b>Documentation box:</b>

**TABLE 3 SECTORAL REPORT FOR SOLVENT AND OTHER PRODUCT USE**  
**(Sheet 1 of 1)**

Austria

2003

submission 2005


GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	N <sub>2</sub> O	NM VOC
	(Gg)		
<b>Total Solvent and Other Product Use</b>	<b>193,60</b>	<b>0,75</b>	<b>82,63</b>
<b>A. Paint Application</b>	<b>59,60</b>	<b>NA</b>	<b>23,48</b>
<b>B. Degreasing and Dry Cleaning</b>	<b>25,64</b>	<b>NA</b>	<b>9,58</b>
<b>C. Chemical Products, Manufacture and Processing</b>	<b>25,84</b>		<b>11,77</b>
<b>D. Other (please specify) ...</b>	<b>82,52</b>	<b>0,75</b>	<b>37,80</b>
Use of N2O for Anaesthesia	NA	0,35	NA
N2O from Fire Extinguishers	NA	NE	NA
N2O from Aerosol Cans	NA	0,40	NA
Other Solvent Use	82,52	NA	37,80

Please account for the quantity of carbon released in the form of NMVOC in both the NMVOC and the CO<sub>2</sub> columns.

**Note:** The IPCC Guidelines do not provide methodologies for the calculation of emissions of N<sub>2</sub>O from Solvent and Other Product Use. If reporting such data, Parties should provide additional information (activity data and emission factors) used to make these estimates in the documentation box to Table 3.A-D.

**TABLE 3.A-D SECTORAL BACKGROUND DATA FOR SOLVENT AND OTHER PRODUCT USE**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS	
	Description	(kt)	CO <sub>2</sub> (t/t)	N <sub>2</sub> O (t/t)
<b>A. Paint Application</b>	Solvents used [kt]	53,16	1,12	0,00
<b>B. Degreasing and Dry Cleaning</b>	Solvents used [kt]	17,77	1,44	0,00
<b>C. Chemical Products, Manufacture and Processing</b>	Solvents used [kt]	97,37		
<b>D. Other (please specify) <sup>(1)</sup></b> 				
Use of N2O for Anaesthesia	Use of N2O for Anaesthesia [kt]	0,35	0,00	1,00
N2O from Fire Extinguishers	N2O from Fire Extinguishers	NE	0,00	0,00
N2O from Aerosol Cans	N2O from Aerosol Cans	0,40	0,00	1,00
Other Solvent Use	Solvents used [kt]	52,23	1,58	0,00


<sup>(1)</sup> Some probable sources are provided in brackets. Complement the list with other relevant sources. Make sure that the order is the same as in Table 3.

**Note:** The table follows the format of the IPCC Sectoral Report for Solvent and Other Product Use, although some of the source categories are not relevant to the direct GHG emissions.

<b>Documentation box:</b>






**TABLE 4 SECTORAL REPORT FOR AGRICULTURE**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NMVOC
	(Gg)				
<b>Total Agriculture</b>	<b>189,97</b>	<b>10,84</b>	<b>4,76</b>	<b>1,12</b>	<b>1,76</b>
<b>A. Enteric Fermentation</b>	<b>147,32</b>				
1. Cattle	137,51				
Dairy Cattle	58,85				
Non-Dairy Cattle	78,65				
2. Buffalo	NO				
3. Sheep	2,60				
4. Goats	0,27				
5. Camels and Llamas	NO				
6. Horses	1,57				
7. Mules and Asses	IE				
8. Swine	4,87				
9. Poultry	0,17				
10. Other (please specify) 	0,33				
Deer	0,33				
<b>B. Manure Management</b>	<b>42,16</b>	<b>2,27</b>			<b>NE</b>
1. Cattle	21,41				
Dairy Cattle	10,64				
Non-Dairy Cattle	10,77				
2. Buffalo	NO				
3. Sheep	0,06				
4. Goats	0,01				
5. Camels and Llamas	NO				
6. Horses	0,12				
7. Mules and Asses	IE				
8. Swine	19,54				
9. Poultry	1,02				

**TABLE 4 SECTORAL REPORT FOR AGRICULTURE**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NMVOC
	(Gg)				
<b>B. Manure Management (continued)</b>					
10. Anaerobic Lagoons		NO			NE
11. Liquid Systems		0,06			NE
12. Solid Storage and Dry Lot		2,12			NE
13. Other (please specify) 	0,01	0,08			0,00
Manure without bedding		0,08			NE
Deer	0,01				
<b>C. Rice Cultivation</b>	<b>NO</b>				<b>NO</b>
1. Irrigated	NO				NO
2. Rainfed	NO				NO
3. Deep Water	NO				NO
4. Other (please specify) 	NO				0,00
<b>D. Agricultural Soils <sup>(1)</sup></b>	<b>0,43</b>	<b>8,57</b>	<b>4,73</b>		<b>1,63</b>
1. Direct Soil Emissions	NA	4,56			1,63
2. Animal Production	NA	0,70			NA
3. Indirect Emissions	NA	3,28			NA
4. Other (please specify) 	0,43	0,03			0,00
Sewage sludge	0,43	0,03			NE
<b>E. Prescribed Burning of Savannas</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>F. Field Burning of Agricultural Residues</b>	<b>0,06</b>	<b>0,00</b>	<b>0,03</b>	<b>1,12</b>	<b>0,13</b>
1. Cereals	0,04	0,00	0,03	0,90	0,07
2. Pulse	NO	NO	NO	NO	NO
3. Tuber and Root	NO	NO	NO	NO	NO
4. Sugar Cane	NO	NO	NO	NO	NO
5. Other (please specify) 	0,02	0,00	0,00	0,22	0,05
Vine	0,02	0,00	0,00	0,22	0,05
<b>G. Other (please specify) </b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<sup>(1)</sup> See footnote 4 to Summary 1.A of this common reporting format. Parties which choose to report CO<sub>2</sub> emissions and removals from agricultural soils under 4.D. Agricultural Soils category of the sector Agriculture should indicate the amount [Gg] of these emissions or removals in the documentation box to Table 4.D. Additional information (activity data, implied emissions factors) should also be provided using the relevant documentation box to Table 4.D. This table is not modified for reporting the CO<sub>2</sub> emissions and removals for the sake of consistency with the IPCC tables (i.e. IPCC Sectoral Report for Agriculture).

**Note:** The IPCC Guidelines do not provide methodologies for the calculation of CH<sub>4</sub> emissions, CH<sub>4</sub> and N<sub>2</sub>O removals from agricultural soils, or CO<sub>2</sub> emissions from savanna burning or agricultural residues burning. If you have reported such data, you should provide additional information (activity data and emission factors) used to make these estimates using the relevant documentation boxes of the Sectoral background data tables.

**TABLE 4.A SECTORAL BACKGROUND DATA FOR AGRICULTURE**  
**Enteric Fermentation**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA <sup>(1)</sup> AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS
	Population size <sup>(2)</sup> (1000 head)	Average daily feed intake (MJ/day)	CH <sub>4</sub> conversion (%)	CH <sub>4</sub> (kg CH <sub>4</sub> /head/yr)
1. Cattle	2.052	200,9	6,00	67,01
Dairy Cattle <sup>(3)</sup>	558	268,1	6,00	105,50
Non-Dairy Cattle	1.494	133,8	6,00	52,64
2. Buffalo	NO	NO	NO	0,00
3. Sheep	325	NE	NE	8,00
4. Goats	55	NE	NE	5,00
5. Camels and Llamas	NO	NO	NO	0,00
6. Horses	87	NE	NE	18,00
7. Mules and Asses	IE	IE	IE	0,00
8. Swine	3.245	NE	NE	1,50
9. Poultry	13.027	2,2	0,09	0,01
10. Other (please specify) ...				
Deer	41	NE	NE	8,00
				0,00

**Additional information (for Tier 2)<sup>(a)</sup>**

Disaggregated list of animals <sup>(b)</sup>		Dairy Cattle	Non-Dairy Cattle	Other (specify)	
				...	
<b>Indicators:</b>					
Weight	(kg)	642,00	408,28		
Feeding situation <sup>(c)</sup>		NE	NE		
Milk yield	(kg/day)	15,45	NO		
Work	(hrs/day)	0,00	0,00		
Pregnant	(%)	NE	NE		
Digestibility of feed	(%)	74,33	71,50		

<sup>(a)</sup> Compare to Tables A-1 and A-2 of the IPCC Guidelines (Volume 3. Reference Manual, pp. 4.31-4.34). These data are relevant if Parties do not have data on average feed intake.

<sup>(b)</sup> Disaggregate to the split actually used. Add columns to the table if necessary.

<sup>(c)</sup> Specify feeding situation as pasture, stall fed, confined, open range, etc.

<sup>(1)</sup> In the documentation boxes to all Sectoral background data tables for Agriculture, Parties should provide information on whether the activity data is one year or a 3-year average.

<sup>(2)</sup> Parties are encouraged to provide detailed livestock population data by animal type and region in a separate table below the documentation box. This consistent set of animal population statistics should be used to estimate CH<sub>4</sub> emissions from enteric fermentation, CH<sub>4</sub> and N<sub>2</sub>O from manure management, N<sub>2</sub>O direct emissions from soil and N<sub>2</sub>O emissions associated with manure production, as well as emissions from the use of manure as fuel, and sewage-related emissions reported in the waste sector.

<sup>(3)</sup> Including data on dairy heifers, if available.

Documentation box:
Population statistics are on a yearly basis. Population size of category 4 A 8 Swine includes young swine.

**TABLE 4.B(a) SECTORAL BACKGROUND DATA FOR AGRICULTURE**  
**CH<sub>4</sub> Emissions from Manure Management**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS  CH <sub>4</sub>  (kg CH <sub>4</sub> /head/yr)
	Population size ( <sup>(1)</sup> )  (1000 head)	Allocation by climate region <sup>(2)</sup>			Typical animal mass  (kg)	VS <sup>(3)</sup> daily excretion  (kg dm/head/yr)	CH <sub>4</sub> producing potential (Bo) <sup>(3)</sup>  (CH <sub>4</sub> m <sup>3</sup> /kg VS)	
		Cool	Temperate	Warm				
1. Cattle	2.052	100,0	0,0	0,0	524,4	1.054,7	0,2	10,43
Dairy Cattle <sup>(4)</sup>	558	100,0	0,0	0,0	642,0	1.446,1	0,2	19,07
Non-Dairy Cattle	1.494	100,0	0,0	0,0	408,3	663,2	0,2	7,21
2. Buffalo	NO	NO	NO	NO	NO	NO	NO	0,00
3. Sheep	325	100,0	0,0	0,0	43,0	146,0	0,2	0,19
4. Goats	55	100,0	0,0	0,0	30,0	102,2	0,2	0,12
5. Camels and Llamas	NO	NO	NO	NO	NO	NO	NO	0,00
6. Horses	87	100,0	0,0	0,0	238,0	627,8	0,3	1,39
7. Mules and Asses	IE	IE	IE	IE	238,0	627,8	0,3	0,00
8. Swine	1.578	100,0	0,0	0,0	82,0	146,6	0,5	12,38
9. Poultry	13.027	100,0	0,0	0,0	1,1	36,5	0,3	0,08

<sup>(1)</sup> See footnote 1 to Table 4.A of this common reporting format.

<sup>(2)</sup> Climate regions are defined in terms of annual average temperature as follows: Cool=less than 15°C; Temperate=15°C to 25°C inclusive; and Warm=greater than 25°C (see Table 4.2 of the IPCC Guidelines (Volume 3, Reference Manual, p. 4.8)).

<sup>(3)</sup> VS=Volatile Solids; Bo=maximum methane producing capacity for manure IPCC Guidelines (Volume 3, Reference Manual, p.4.23 and p. 4.15).

<sup>(4)</sup> Including data on dairy heifers, if available.

**Documentation Box:**

Population statistics are on a yearly basis

4 B 7 Mules and Asses" are included in "4 B 6 Horses"

Population size of category 4 B 8 Swine does not include young swine because the emission factor of breeding sows considers young swine.

**Additional information (for Tier 2)**

Animal category <sup>(a)</sup>	Indicator	Climate region	Animal waste management system					
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range paddock	Other
Dairy Cattle	Allocation (%)	Cool	0,00	18,95	0,00	70,40	10,65	0,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO
	MCF <sup>(b)</sup>	Cool	90,00	39,00	0,00	1,00	1,00	1,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO
Non-Dairy Cattle	Allocation (%)	Cool	0,00	24,31	0,00	66,14	9,56	0,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO
	MCF <sup>(b)</sup>	Cool	90,00	39,00	0,00	1,00	1,00	1,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO
Swine	Allocation (%)	Cool	0,00	71,50	0,00	28,50	0,00	0,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO
	MCF <sup>(b)</sup>	Cool	90,00	39,00	0,00	1,00	1,00	1,00
		Temperate	NO	NO	NO	NO	NO	NO
		Warm	NO	NO	NO	NO	NO	NO

<sup>(a)</sup> Copy the above table as many times as necessary.

<sup>(b)</sup> MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3, Reference Manual, p. 4.9)). In the case of use of other climate region categorization, please replace the entries in the cells with the climate regions for which the MCFs are specified.

**TABLE 4.B(b) SECTORAL BACKGROUND DATA FOR AGRICULTURE**  
**N<sub>2</sub>O Emissions from Manure Management**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION								IMPLIED EMISSION FACTORS	
	Population size (1) (1000s)	Nitrogen excretion (kg N/head/yr)	Nitrogen excretion per animal waste management system (kg N/yr)						Emission factor per animal waste management system	
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range and paddock	Other	(kg N <sub>2</sub> O-N/kg N)	
Non-Dairy Cattle	1.494	34,5	NO	12.369.534,1	NO	32.867.678,7	6.269.899,1	NO	Anaerobic lagoon	0,000
Dairy Cattle	558	67,6	NO	7.161.552,8	NO	26.535.437,9	3.995.392,6	NO	Liquid system	0,001
Sheep	325	20,0	NO	NO	NO	130.198,0	5.663.613,0	716.089,0	Solid storage and dry lot	0,020
Swine	1.578	17,5	NO	19.709.873,6	NO	7.940.681,5	NO	NO	Other	0,005
Poultry	13.027	0,9	NO	1.459.777,9	NO	112.290,6	224.581,2	9.432.410,7		
Other (please specify) ...										
Goats	55	20,0	NO	NO	NO	NO	1.048.454,4	43.685,6		
Horses	87	50,0	NO	NO	NO	NO	4.179.456,0	174.144,0		
Deer	41	20,0	NO	NO	NO	NO	790.848,0	32.952,0		
<b>Total per AWMS<sup>(2)</sup></b>			<b>0,0</b>	<b>40.700.738,4</b>	<b>0,0</b>	<b>67.586.286,7</b>	<b>22.172.244,3</b>	<b>10.399.281,3</b>		

<sup>(1)</sup> See footnote 1 to Table 4.A of this common reporting format.

<sup>(2)</sup> AWMS - Animal Waste Management System.

**Documentation box:**

Population statistics are on a yearly basis

4 B 7 Mules and Asses" are included in "4 B 6 Horses"

Population size of category 4 B 8 Swine does not include young swine because the emission factor of breeding sows considers young swine.




**TABLE 4.C SECTORAL BACKGROUND DATA FOR AGRICULTURE**
**Rice Cultivation**

(Sheet 1 of 1)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR <sup>(1)</sup>	EMISSIONS
		Harvested area <sup>(2)</sup> (10 <sup>-9</sup> m <sup>2</sup> /yr)	Organic amendments added <sup>(3)</sup> :		CH <sub>4</sub> (g/m <sup>2</sup> )	CH <sub>4</sub> (Gg)
			type	(t/ha)		
<b>1. Irrigated</b>						<b>NO</b>
Continuously Flooded		NO			0,00	NO
Intermittently Flooded	Single Aeration	NO			0,00	NO
	Multiple Aeration	NO			0,00	NO
<b>2. Rainfed</b>						<b>NO</b>
Flood Prone		NO			0,00	NO
Drought Prone		NO			0,00	NO
<b>3. Deep Water</b>						<b>NO</b>
Water Depth 50-100 cm		NO			0,00	NO
Water Depth > 100 cm		NO			0,00	NO
<b>4. Other (please specify)</b> 						<b>NO</b>
		NO			0,00	NO
Upland Rice <sup>(4)</sup>		NO				
Total <sup>(4)</sup>		0,00				

<sup>(1)</sup> The implied emission factor takes account of all relevant corrections for continuously flooded fields without organic amendment plus the correction for the organic amendments, if used, as well as of the effect of different soil characteristics, if taken into account, on methane emissions.

<sup>(2)</sup> Harvested area is the cultivated area multiplied by the number of cropping seasons per year.

<sup>(3)</sup> Specify dry weight or wet weight for organic amendments.

<sup>(4)</sup> These rows are included to allow comparison with the international statistics. Upland rice emissions are assumed to be zero and are ignored in the emission calculations.

**Documentation box:**

When disaggregating by more than one region within a country, provide additional information in the documentation box.

Where available, provide activity data and scaling factors by soil type and rice cultivar.

There is no rice cultivation in Austria

**TABLE 4.D SECTORAL BACKGROUND DATA FOR AGRICULTURE**

**Agricultural Soils<sup>(1)</sup>**

**(Sheet 1 of 1)**

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS		EMISSIONS (Gg N <sub>2</sub> O)
	Description	Value	Unit		
<b>Direct Soil Emissions</b>	<b>N input to soils (kg N/yr)</b>				<b>4,56</b>
Synthetic Fertilizers	Use of synthetic fertilizers (kg N/yr)	96.942.250	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,013	1,90
Animal Wastes Applied to Soils	Nitrogen input from manure applied to soils (kg N/yr)	92.042.066	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,013	1,81
N-fixing Crops	pulses and soybeans produced (kg N fixed/yr)	19.933.080	(kg N <sub>2</sub> O-N/kg dry biomass) <sup>(2)</sup>	0,013	0,39
Crop Residue	N-input from Dry production of other crops (kg N/yr)	23.331.181	(kg N <sub>2</sub> O-N/kg dry biomass) <sup>(2)</sup>	0,012	0,46
Cultivation of Histosols	Area of cultivated organic soils (ha)	NO	(kg N <sub>2</sub> O-N/ha) <sup>(2)</sup>	0,000	NO
<b>Animal Production</b>	N excretion on pasture range and paddock (kg N/yr)	22.172.244	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,020	0,70
<b>Indirect Emissions</b>					<b>3,28</b>
Atmospheric Deposition	Volatilized N (NH <sub>3</sub> and NO <sub>x</sub> ) from fertilizers and animal wastes (kg N/yr)	31.740.639	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,010	0,50
Nitrogen Leaching and Run-off	N from fertilizers and animal wastes that is lost through leaching and run off (kg N/yr)	70.735.515	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,025	2,78
<b>Other (please specify)</b>					<b>0,03</b>
Sewage sludge	N from sewage sludge spreading (kg N/yr)	1.555.320	(kg N <sub>2</sub> O-N/kg N) <sup>(2)</sup>	0,013	0,03
				0,000	

<sup>(1)</sup> See footnote 4 to Summary 1.A. of this common reporting format. Parties which choose to report CO<sub>2</sub> emissions and removals from agricultural soils under 4.D. Agricultural Soils category should indicate the amount [Gg] of these emissions or removals and relevant additional information (activity data, implied emissions factors) in the documentation box.

<sup>(2)</sup> To convert from N<sub>2</sub>O-N to N<sub>2</sub>O emissions, multiply by 44/28.

**Additional information**




Fraction <sup>(a)</sup>	Description	Value
Frac <sub>BURN</sub>	Fraction of crop residue burned	0,003
Frac <sub>FUEL</sub>	Fraction of livestock N excretion in excrements burned for fuel	0,000
Frac <sub>GASF</sub>	Fraction of synthetic fertilizer N applied to soils that volatilizes as NH <sub>3</sub> and NO <sub>x</sub>	0,031
Frac <sub>GASM</sub>	Fraction of livestock N excretion that volatilizes as NH <sub>3</sub> and NO <sub>x</sub>	0,203
Frac <sub>GRAZ</sub>	Fraction of livestock N excreted and deposited onto soil during grazing	0,157
Frac <sub>LEACH</sub>	Fraction of N input to soils that is lost through leaching and runoff	0,300
Frac <sub>NCRBF</sub>	Fraction of N in non-N-fixing crop	0,005
Frac <sub>NCRO</sub>	Fraction of N in N-fixing crop	0,015
Frac <sub>R</sub>	Fraction of crop residue removed from the field as crop	0,341

<sup>(a)</sup> Use the fractions as specified in the IPCC Guidelines (Volume 3. Reference Manual, pp. 4.92 - 4.113).

**Documentation box:**

**TABLE 4.E SECTORAL BACKGROUND DATA FOR AGRICULTURE**  
**Prescribed Burning of Savannas**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION					IMPLIED EMISSION FACTORS		EMISSIONS	
	Area of savanna burned (k ha/yr)	Average aboveground biomass density (t dm/ha)	Fraction of savanna burned	Biomass burned (Gg dm)	Nitrogen fraction in biomass	(kg/t dm)		(Gg)	
						CH <sub>4</sub>	N <sub>2</sub> O	CH <sub>4</sub>	N <sub>2</sub> O
(specify ecological zone) 								NO	NO
	NO					0,00	0,00	NO	NO

**Additional information**

	Living	Dead
Fraction of aboveground biomass		
Fraction oxidized		
Carbon fraction		

**Documentation box:**

No occurrence of savannas in Austria

TABLE 4.F SECTORAL BACKGROUND DATA FOR AGRICULTURE





## Field Burning of Agricultural Residues

(Sheet 1 of 1)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		EMISSIONS	
	Crop production	Residue/ Crop ratio	Dry matter fraction	Fraction burned in fields	Biomass burned (Gg dm)	Nitrogen fraction in biomass of residues	CH <sub>4</sub>	N <sub>2</sub> O	CH <sub>4</sub>	N <sub>2</sub> O
	(t)						(kg/t dm)	(kg/t dm)	(Gg)	(Gg)
<b>1. Cereals</b>									<b>0,04</b>	<b>0,00</b>
Wheat	4.245.756,82	1,30	0,86	0,00	14,74	IE	2,91	0,06	0,04	0,00
NA	NA	NA	NA	NA	IE	NA	0,00	0,00	IE	IE
Maize	NA	NA	NA	NA	IE	NA	0,00	0,00	IE	IE
Oats	NA	NA	NA	NA	IE	NA	0,00	0,00	IE	IE
Rye	NA	NA	NA	NA	IE	NA	0,00	0,00	IE	IE
Rice	NO	NO	NO	NO	NO	NO	0,00	0,00	NO	NO
Other (please specify) 									0,00	0,00
							0,00	0,00		
<b>2. Pulse <sup>(1)</sup></b>									<b>NO</b>	<b>NO</b>
Dry bean	NO	NO	NO	NO	NO	NO	0,00	0,00	NO	NO
Peas	NO	NO	NO	NO	NO	NO	0,00	0,00	NO	NO
Soybeans	NO	NO	NO	NO	NO	NO	0,00	0,00	NO	NO
Other (please specify) 									0,00	0,00
							0,00	0,00		
<b>3 Tuber and Root</b>									<b>NO</b>	<b>NO</b>
Potatoes	NO	NO	NO	NO	NO	NO	0,00	0,00	NO	NO
Other (please specify) 									0,00	0,00
							0,00	0,00		
<b>4 Sugar Cane</b>	NO	NO	NO	NO	NO	NO	<b>0,00</b>	<b>0,00</b>	<b>NO</b>	<b>NO</b>
<b>5 Other (please specify) </b>									<b>0,02</b>	<b>0,00</b>
Vine	NE	NE	NE	NE	87,28	NE	0,21	0,00	0,02	0,00

<sup>(1)</sup> To be used in Table 4.D of this common reporting format.**Documentation Box:**

Wheat includes cereals total

**TABLE 5 SECTORAL REPORT FOR LAND-USE CHANGE AND FORESTRY**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	Net CO <sub>2</sub> emissions/ removals	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO
	(Gg)						
<b>Total Land-Use Change and Forestry</b>	<b>0,00</b>	<b>0,00</b>	<b>-12.772,55</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>A. Changes in Forest and Other Woody Biomass Stocks</b>	0,00	0,00	0,00				
1. Tropical Forests			0,00				
2. Temperate Forests			0,00				
3. Boreal Forests			0,00				
4. Grasslands/Tundra			0,00				
5. Other (please specify) ...	0,00	0,00	0,00				
Harvested Wood <sup>(1)</sup>			0,00				
			0,00				
<b>B. Forest and Grassland Conversion <sup>(2)</sup></b>	0,00			0,00	0,00	0,00	0,00
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other (please specify) ...	0,00			0,00	0,00	0,00	0,00
<b>C. Abandonment of Managed Lands</b>	0,00	0,00	0,00				
1. Tropical Forests			0,00				
2. Temperate Forests			0,00				
3. Boreal Forests			0,00				
4. Grasslands/Tundra			0,00				
5. Other (please specify) ...	0,00	0,00	0,00				
			0,00				
<b>D. CO<sub>2</sub> Emissions and Removals from Soil</b>	0,00	0,00	0,00				
Cultivation of Mineral Soils			0,00				
Cultivation of Organic Soils			0,00				
Liming of Agricultural Soils			0,00				
Forest Soils			0,00				
Other (please specify) <sup>(3)</sup> ...	0,00	0,00	0,00				
			0,00				
<b>E. Other (please specify) ...</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00
			0,00				

<sup>(1)</sup> Following the IPCC Guidelines, the harvested wood should be reported under Changes in Forest and Other Woody Biomass Stocks (Volume 3. Reference Manual, p.5.17).

<sup>(2)</sup> Include only the emissions of CO<sub>2</sub> from Forest and Grassland Conversion. Associated removals should be reported under section D.

<sup>(3)</sup> Include emissions from soils not reported under sections A, B and C.

**Note:** See footnote 4 to Summary 1.A of this common reporting format.

**TABLE 5.A SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE  
AND FORESTRY**

**Changes in Forest and Other Woody Biomass Stocks**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES			ACTIVITY DATA		IMPLIED EMISSION FACTORS	ESTIMATES
			Area of forest/biomass stocks	Average annual growth rate	Implied carbon uptake factor	Carbon uptake increment
			(kha)	(t dm/ha)	(t C/ha)	(Gg C)
Tropical	Plantations	<i>Acacia spp.</i>			0,00	
		<i>Eucalyptus spp.</i>			0,00	
		<i>Tectona grandis</i>			0,00	
		<i>Pinus spp</i>			0,00	
		<i>Pinus caribaea</i>			0,00	
		Mixed Hardwoods			0,00	
		Mixed Fast-Growing Hardwoods			0,00	
		Mixed Softwoods			0,00	
	Other Forests	Moist			0,00	
		Seasonal			0,00	
		Dry			0,00	
	Other (specify) ...				0,00	
					0,00	
Temperate	Plantations				0,00	
					0,00	
	Commercial	Evergreen			0,00	
		Deciduous			0,00	
	Other (specify) ...				0,00	
Boreal					0,00	
			Number of trees (1000s of trees)	Annual growth rate (kt dm/1000 trees)	Carbon uptake factor (t C/tree)	Carbon uptake increment (Gg C)
Non-Forest Trees (specify type) ...						0,00
					0,00	
Total annual growth increment (Gg C)						0,00
Gg CO <sub>2</sub>						0,00

	Amount of biomass removed (kt dm)	Carbon emission factor (t C/t dm)	Carbon release (Gg C)
Total biomass removed in Commercial Harvest		0,00	
Traditional Fuelwood Consumed		0,00	
Total Other Wood Use		0,00	
Total Biomass Consumption from Stocks <sup>(1)</sup> (Gg C)			0,00
Other Changes in Carbon Stocks <sup>(2)</sup> (Gg C)			
Gg CO <sub>2</sub>			0,00

Net annual carbon uptake (+) or release (-) (Gg C)	0,00
Net CO <sub>2</sub> emissions (-) or removals (+) (Gg CO <sub>2</sub> )	0,00

<sup>(1)</sup> Make sure that the quantity of biomass burned off-site is subtracted from this total.

<sup>(2)</sup> The net annual carbon uptake/release is determined by comparing the annual biomass growth versus annual harvest, including the decay of forest products and slash left during harvest. The IPCC Guidelines recommend default assumption that all carbon removed in wood and other biomass from forests is oxidized in the year of removal. The emissions from decay could be included under Other Changes in Carbon Stocks.


**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

**Documentation box:**

Emissions and removals from Land Use Change and Forestry are reported by the new LULUCF-Format.

**TABLE 5.B SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY**  
**Forest and Grassland Conversion**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS					EMISSIONS				
		On and off site burning				Decay of above-ground biomass <sup>(1)</sup>			Burning				Decay	Burning				Decay
		Area converted annually	Annual net loss of biomass	Quantity of biomass burned		Average area converted	Average annual net loss of biomass	Average quantity of biomass left to decay	On site			Off site		On site			Off site	
				On site	Off site				CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O			CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O		
		(kha)	(kt dm)	(kt dm)	(kt dm)	(kha)	(t dm/ha)	(kt dm)	(t/ha)					(Gg)				
Tropical	Wet/Very Moist								0,00	0,00	0,00	0,00	0,00					
	Moist, short dry season								0,00	0,00	0,00	0,00	0,00					
	Moist, long dry season								0,00	0,00	0,00	0,00	0,00					
	Dry								0,00	0,00	0,00	0,00	0,00					
	Montane Moist								0,00	0,00	0,00	0,00	0,00					
	Montane Dry								0,00	0,00	0,00	0,00	0,00					
Tropical Savanna/Grasslands									0,00	0,00	0,00	0,00	0,00					
Temperate	Coniferous								0,00	0,00	0,00	0,00	0,00					
	Broadleaf								0,00	0,00	0,00	0,00	0,00					
	Mixed Broadleaf/ Coniferous								0,00	0,00	0,00	0,00	0,00					
Grasslands									0,00	0,00	0,00	0,00	0,00					
Boreal	Mixed Broadleaf/ Coniferous								0,00	0,00	0,00	0,00	0,00					
	Coniferous								0,00	0,00	0,00	0,00	0,00					
	Forest-tundra								0,00	0,00	0,00	0,00	0,00					
Grasslands/Tundra									0,00	0,00	0,00	0,00	0,00					
Other <i>(please specify)</i> 									0,00	0,00	0,00	0,00	0,00					
									0,00	0,00	0,00	0,00	0,00					
Total																		

<sup>(1)</sup> Activity data are for default 10-year average. Specify the average decay time which is appropriate for the local conditions, if other than 10 years.

Emissions/Removals	On site	Off site
Immediate carbon release from burning		
Total On site and Off site (Gg C)		
Delayed emissions from decay (Gg C)		
Total annual carbon release (Gg C)		
Total annual CO <sub>2</sub> emissions (Gg CO <sub>2</sub> )		

#### Additional information

Fractions	On site	Off site
Fraction of biomass burned (average)		
Fraction which oxidizes during burning (average)		
Carbon fraction of aboveground biomass (average)		
Fraction left to decay (average)		
Nitrogen-carbon ratio		

**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

#### Documentation box:

Emissions and removals from Land Use Change and Forestry are reported by the new LULUCF-Format.

TABLE 5.C SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY


## Abandonment of Managed Lands

(Sheet 1 of 1)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		ESTIMATES	
		Total area abandoned and regrowing <sup>(1)</sup>		Annual rate of aboveground biomass growth		Carbon fraction of aboveground biomass		Rate of aboveground biomass carbon uptake		Annual carbon uptake in aboveground biomass	
		first 20 years (kha)	>20 years (kha)	first 20 years (t dm/ha)	>20 years (t dm/ha)	first 20 years	>20 years	first 20 years (t C/ha/yr)	>20 years (t C/ha/yr)	first 20 years (Gg C/yr)	>20 years (Gg C/yr)
Original natural ecosystems											
Tropical	Wet/Very Moist							0,00	0,00		
	Moist, short dry season							0,00	0,00		
	Moist, long dry season							0,00	0,00		
	Dry							0,00	0,00		
	Montane Moist							0,00	0,00		
	Montane Dry							0,00	0,00		
Tropical Savanna/Grasslands								0,00	0,00		
Temperate	Mixed Broadleaf/Coniferous							0,00	0,00		
	Coniferous							0,00	0,00		
	Broadleaf							0,00	0,00		
Grasslands								0,00	0,00		
Boreal	Mixed Broadleaf/Coniferous							0,00	0,00		
	Coniferous							0,00	0,00		
	Forest-tundra							0,00	0,00		
Grasslands/Tundra								0,00	0,00		
Other (please specify) 								0,00	0,00		
								0,00	0,00		
Total annual carbon uptake (Gg C)									0,00		
Total annual CO <sub>2</sub> removal (Gg CO <sub>2</sub> )									0,00		

<sup>(1)</sup> If lands are regenerating to grassland, then the default assumption is that no significant changes in above-ground biomass occur.

**Note:** Sectoral background data tables on Land-use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

**Documentation box:**

Emissions and removals from Land Use Change and Forestry are reported by the new LULUCF-Format.



**TABLE 5.D SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY**  
**CO<sub>2</sub> Emissions and Removals from Soil**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	ESTIMATES
	Land area (Mha)	Average annual rate of soil carbon uptake/removal (Mg C/ha/yr)	Net change in soil carbon in mineral soils (Tg C over 20 yr)
<b>Cultivation of Mineral Soils <sup>(1)</sup></b>	NE		<b>0,00</b>
High Activity Soils		0,00	
Low Activity Soils		0,00	
Sandy		0,00	
Volcanic		0,00	
Wetland (Aquic)		0,00	
Other (please specify) ...			0,00
		0,00	
	Land area (ha)	Annual loss rate (Mg C/ha/yr)	Carbon emissions from organic soils (Mg C/yr)
<b>Cultivation of Organic Soils</b>			<b>0,00</b>
<b>Cool Temperate</b>			<b>0,00</b>
Upland Crops		0,00	
Pasture/Forest		0,00	
<b>Warm Temperate</b>			<b>0,00</b>
Upland Crops		0,00	
Pasture/Forest		0,00	
<b>Tropical</b>			<b>0,00</b>
Upland Crops		0,00	
Pasture/Forest		0,00	
	Total annual amount of lime (Mg)	Carbon conversion factor	Carbon emissions from liming (Mg C)
<b>Liming of Agricultural Soils</b>			<b>0,00</b>
Limestone Ca(CO <sub>3</sub> )		0,00	
Dolomite CaMg(CO <sub>3</sub> ) <sub>2</sub>		0,00	
Total annual net carbon emissions from agriculturally impacted soils (Gg C)			0,00
Total annual net CO <sub>2</sub> emissions from agriculturally impacted soils (Gg CO <sub>2</sub> )			0,00

**Additional information**

Additional information								
Year	Climate <sup>(a)</sup>	land-use/ management system <sup>(a)</sup>	Soil type					
			High activity soils	Low activity soils	Sandy	Volcanic	Wetland (Aquic)	Organic soil
			percent distribution (%)					
20 years prior								
inventory year								

<sup>(a)</sup> These should represent the major types of land management systems per climate regions presented in the country as well as ecosystem types which were either converted to agriculture (e.g., forest, savanna, grassland) or have been derived from previous agricultural land-use (e.g., abandoned lands, reforested lands). Systems should also reflect differences in soil carbon stocks that can be related to differences in management (IPCC Guidelines (Volume 2. Workbook, Table 5-9, p. 5.26, and Appendix (pp. 5-31 - 5.38)).

<sup>(1)</sup> The information to be reported under Cultivation of Mineral Soils aggregates data per soil type over all land-use/management systems. This refers to land area data and to the emission estimates and implied emissions factors accordingly.

**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

<b>Documentation Box:</b>
Emissions and removals from Land Use Change and Forestry are reported by the new LULUCF-Format.

**TABLE 6 SECTORAL REPORT FOR WASTE**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	(Gg)						
<b>Total Waste</b>	<b>11,27</b>	<b>150,31</b>	<b>0,80</b>	<b>0,03</b>	<b>9,49</b>	<b>0,13</b>	<b>0,05</b>
<b>A. Solid Waste Disposal on Land</b>	<b>0,00</b>	<b>134,71</b>		<b>0,00</b>	<b>9,48</b>	<b>0,13</b>	
1. Managed Waste Disposal on Land	NA	134,71		NA	9,48	0,13	
2. Unmanaged Waste Disposal Sites	NO	NO		NO	NO	NO	
3. Other (please specify) ...	0,00	0,00		0,00	0,00	0,00	
<b>B. Wastewater Handling</b>		<b>14,42</b>	<b>0,62</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	
1. Industrial Wastewater		4,90	0,14	NA	NA	NA	
2. Domestic and Commercial Wastewater		9,51	0,48	NA	NA	NA	
3. Other (please specify) ...		0,00	0,00	0,00	0,00	0,00	
<b>C. Waste Incineration</b>	<b>11,27</b>	<b>0,00</b>	<b>0,00</b>	<b>0,03</b>	<b>0,01</b>	<b>0,00</b>	<b>0,05</b>
<b>D. Other (please specify) ...</b>	<b>0,00</b>	<b>1,19</b>	<b>0,18</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
Compost production	NA	1,19	0,18	NA	NA	NA	NA

<sup>(1)</sup> Note that CO<sub>2</sub> from Waste Disposal and Incineration source categories should only be included if it stems from non-biological or inorganic waste sources.

**TABLE 6.A SECTORAL BACKGROUND DATA FOR WASTE**  
**Solid Waste Disposal**  
**(Sheet 1 of 1)**

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION				IMPLIED EMISSION FACTOR		EMISSIONS <sup>(1)</sup>	
	Annual MSW at the SWDS (Gg)	MCF	DOC degraded (Gg)	CH <sub>4</sub> recovery <sup>(2)</sup> (Gg)	CH <sub>4</sub> (t/t MSW)	CO <sub>2</sub> (t/t MSW)	CH <sub>4</sub> (Gg)	CO <sub>2</sub> <sup>(3)</sup> (Gg)
1 Managed Waste Disposal on Land	2,212.75	NA	165.07	21.73	0.06	0.00	134.71	NA
2 Unmanaged Waste Disposal Sites	NO	NO	NO	NO	0.00	0.00	NO	NO
- deep (>5 m)	NO	NO	NO	NO	0.00	0.00	NO	NO
- shallow (<5 m)	NO	NO	NO	NO	0.00	0.00	NO	NO
3 Other (please specify) ***							0.00	0.00
					0.00	0.00		

**Additional information**

Description	Value
Total population (1000s) <sup>(a)</sup>	8,053,11
Urban population (1000s) <sup>(a)</sup>	5,369,00
Waste generation rate (kg/capita/day)	0,75
Fraction of MSW disposed to SWDS	0,29
Fraction of DOC in MSW	0,12
Fraction of wastes incinerated	0,15
Fraction of wastes recycled	0,34
CH <sub>4</sub> oxidation factor (b)	0,10
CH <sub>4</sub> fraction in landfill gas	0,55
Number of SWDS recovering CH <sub>4</sub>	54,00
CH <sub>4</sub> generation rate constant (k) <sup>(c)</sup>	NA
Time lag considered (yr) <sup>(c)</sup>	NA
Composition of landfilled waste (%)	
Paper and paperboard	14,00
Food and garden waste	20,40
Plastics	15,00
Glass	3,00
Textiles	4,20
Other (specify) ***	
other - inert	NA
other - organic	NA
other - sanitary products	12,00
other - metals	4,60
other - unspecified	26,80

<sup>(a)</sup> Specify whether total or urban population is used and the rationale for doing so.

<sup>(b)</sup> See IPCC Guidelines (Volume 3. Reference Manual, p. 6.9).

<sup>(c)</sup> For Parties using Tier 2 methods.

**TABLE 6.C SECTORAL BACKGROUND DATA FOR WASTE**  
**Waste Incineration**  
**(Sheet 1 of 1)**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA Amount of incinerated wastes (Gg)	IMPLIED EMISSION FACTOR			EMISSIONS		
		CO <sub>2</sub> (kg/t waste)	CH <sub>4</sub> (kg/t waste)	N <sub>2</sub> O (kg/t waste)	CO <sub>2</sub> <sup>(3)</sup> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
Waste Incineration (please specify) ***	3,00				11,27	0,00	0,00
(biogenic) <sup>(3)</sup>	NA	0,00	0,00	0,00	NA	NA	NA
(plastics and other non-biogenic waste) <sup>(3)</sup>	NA	0,00	0,00	0,00	NA	NA	NA
Incineration of corpses [Number]	9,136,00	0,18	0,00	0,00	1,60	NA	NA
municipal solid waste [Gg]	NO	0,00	0,00	0,00	NO	NO	NO
waste oil [Gg]	3,00	3,224,00	0,00	0,02	9,67	0,00	0,00
		0,00	0,00	0,00			
		0,00	0,00	0,00			
		0,00	0,00	0,00			

MSW - Municipal Solid Waste, SWDS - Solid Waste Disposal Site, MCF - Methane Correction Factor, DOC - Degradable Organic Carbon

(IPCC Guidelines (Volume 3. Reference Manual, section 6.2.4)). MSW includes household waste, yard/garden waste, commercial/market waste and organic industrial solid waste. MSW should not include inorganic industrial waste such as construction or demolition materials.

<sup>(1)</sup> Actual emissions (after recovery).

<sup>(2)</sup> CH<sub>4</sub> recovered and flared or utilized.

<sup>(3)</sup> Under Waste Disposal, CO<sub>2</sub> emissions should be reported only when the disposed wastes are combusted at the disposal site which might constitute a management practice. CO<sub>2</sub> emissions from non-biogenic wastes are included in the totals, while the CO<sub>2</sub> emissions from biogenic wastes are not included in the totals.

<b>Documentation box:</b> All relevant information used in calculation should be provided in the additional information box and in the documentation box. Parties that use country specific models should note this with a brief rationale in the documentation box and fill the relevant cells only. Recycling and treatment of waste from households and similar establishments: 34.3% recycling 15.4% recycling biogenous waste 0.8% treatment in plants for hazardous waste 6.3% mechanic-biological pre-treatment 14.7% thermal treatment (incineration) 28.5% direct depositions at landfills  MSW not considered in category 6A and 6C but in category 6D - other - compost production: mechanical biological treated residual waste: 294Gg/a composted waste: 1349Gg/a composted sludge: 53Gg/a
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**TABLE 6.B SECTORAL BACKGROUND DATA FOR WASTE**  
**Wastewater Handling**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND RELATED INFORMATION <sup>(1)</sup>				IMPLIED EMISSION FACTOR			EMISSIONS <sup>(2)</sup>		
	Total organic product		CH <sub>4</sub> recovered and/or flared		CH <sub>4</sub>		N <sub>2</sub> O <sup>(3)</sup> (kg/kg DC)	CH <sub>4</sub>		N <sub>2</sub> O <sup>(3)</sup> (Gg)
	Wastewater	Sludge	Wastewater	Sludge	Wastewater (kg/kg DC)	Sludge (kg/kg DC)		Wastewater (Gg)	Sludge (Gg)	
	(Gg DC <sup>(1)</sup> /yr)		(Gg)							
Industrial Wastewater	NA	NA	NA	NA	0,00	0,00	NA	4,90	IE	0,14
Domestic and Commercial Wastewater	NA	NA	NA	NA	0,00	0,00	NA	9,51	IE	0,00
Other (please specify) ***								0,00	0,00	0,00
					0,00	0,00				

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR	EMISSIONS
	Population <sup>(4)</sup> (1000s)	Protein consumption (protein in kg/person/yr)	N fraction (kg N/kg protein)	N <sub>2</sub> O (kg N <sub>2</sub> O-N/kg sewage N produced)	N <sub>2</sub> O (Gg)
N <sub>2</sub> O from human sewage <sup>(3)</sup>	8.053	40,00	0,16	0,01	0,48

<sup>(1)</sup> DC - degradable organic component. DC indicators are COD (Chemical Oxygen Demand) for industrial wastewater and BOD (Biochemical Oxygen Demand) for Domestic/Commercial wastewater/sludge (IPCC Guidelines (Volume 3. Reference Manual, pp. 6.14, 6.18)).

<sup>(2)</sup> Actual emissions (after recovery).

<sup>(3)</sup> Parties using other methods for estimation of N<sub>2</sub>O emissions from human sewage or wastewater treatment should provide corresponding information on methods, activity data and emission factors used in the documentation box. Use the table to provide aggregate data.

<sup>(4)</sup> Specify whether total or urban population is used in the calculations and the rationale for doing so. Provide explanation in the documentation box.

<b>Documentation box:</b>
N2O from human sewage: 10 g N / person / day is released into wastewater. 75 % of wastewater is treated in sewage plants. 10 % of N is denitrified. 1 % of denitrified N reacts to N2O. IE: CH4-Emissions from sludge are reported under emissions from wastewater.

Additional information		
	Domestic	Industrial
Total wastewater (1000 m <sup>3</sup> ):	1.068.000,00	NE
Treated wastewater (%):	68%	NE

Wastewater streams:	Wastewater output (m <sup>3</sup> )	DC (kg COD/m <sup>3</sup> )
Industrial wastewater	NE	NE
Iron and steel	NE	NE
Non-ferrous	NE	NE
Fertilizers	NE	NE
Food and beverage	NE	NE
Paper and pulp	NE	NE
Organic chemicals	NE	NE
Other (specify) ***	NE	NE
DC (kg BOD/1000 person/yr)		
Domestic and Commercial	NE	
Other ***	NE	

Handling systems:	Industrial wastewater treated (%)	Ind. sludge treated (%)	Domestic wastewater treated (%)	Domestic sludge treated (%)
Aerobic	NE	NE	NE	NE
Anaerobic	NE	NE	NE	NE
Other (specify) ***	NE	NE	NE	NE

**SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)**

(Sheet 1 of 3)

 Austria  
 2003  
 submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
		emissions	removals			P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total National Emissions and Removals</b>		<b>76,213,26</b>	<b>-12,772,55</b>	<b>371,74</b>	<b>17,88</b>	<b>2,311,71</b>	<b>1,308,22</b>	<b>380,59</b>	<b>102,54</b>	<b>0,03</b>	<b>0,02</b>	<b>229,03</b>	<b>801,78</b>	<b>182,30</b>	<b>34,14</b>
<b>1. Energy</b>		<b>67,857,30</b>		<b>31,11</b>	<b>2,65</b>							<b>222,58</b>	<b>767,35</b>	<b>82,08</b>	<b>32,87</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	72.162,78													
	Sectoral Approach <sup>(2)</sup>	67.624,26		15,82	2,65							222,58	767,35	78,63	32,72
1. Energy Industries		16.030,35		0,31	0,22							15,64	4,35	0,74	8,43
2. Manufacturing Industries and Construction		14.163,39		0,47	0,53							33,49	168,82	3,69	11,90
3. Transport		22.692,33		1,07	0,91							135,69	186,73	23,64	2,24
4. Other Sectors		14.702,00		13,96	0,98							37,70	407,23	50,54	10,14
5. Other		36,19		0,00	0,00							0,08	0,21	0,01	0,01
B. Fugitive Emissions from Fuels		233,04		15,29	0,00							0,00	0,00	3,45	0,15
1. Solid Fuels		0,00		0,39	0,00							0,00	0,00	0,00	0,00
2. Oil and Natural Gas		233,04		14,91	0,00							0,00	0,00	3,45	0,15
<b>2. Industrial Processes</b>		<b>8,151,09</b>		<b>0,35</b>	<b>2,85</b>	<b>2,311,71</b>	<b>1,308,22</b>	<b>380,59</b>	<b>102,54</b>	<b>0,03</b>	<b>0,02</b>	<b>1,66</b>	<b>23,82</b>	<b>15,71</b>	<b>1,21</b>
A. Mineral Products		3.060,20		0,00	0,00							0,00	9,78	0,00	0,00
B. Chemical Industry		558,88		0,34	2,85	0,00	0,00	0,00	0,00	0,00	0,00	0,69	11,09	12,34	0,77
C. Metal Production		4.532,01		0,00	0,00				0,00		0,00	0,09	2,30	0,41	0,45
D. Other Production <sup>(3)</sup>		NA										0,88	0,64	2,96	0,00
E. Production of Halocarbons and SF <sub>6</sub>							NO		NO		NO				
F. Consumption of Halocarbons and SF <sub>6</sub>						2.311,71	1.308,22	380,59	102,54	0,03	0,02				
G. Other		NO		NO	NO	NO	NO	NO	NO	NO	NO	0,00	0,00	0,00	0,00

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach. Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

**Note:** The numbering of footnotes to all tables containing more than one sheet continue to the next sheet. Common footnotes are given only once at the first point of reference.

**SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)**

(Sheet 2 of 3)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions	removals			P	A	P	A	P	A				
	(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>3. Solvent and Other Product Use</b>	<b>193,60</b>			<b>0,75</b>							<b>0,00</b>	<b>0,00</b>	<b>82,63</b>	0,00
<b>4. Agriculture</b>	<b>0,00</b>	<b>0,00</b>	<b>189,97</b>	<b>10,84</b>							4,76	1,12	1,76	0,00
A. Enteric Fermentation			147,32											
B. Manure Management			42,16	2,27									NE	
C. Rice Cultivation			NO										NO	
D. Agricultural Soils	<sup>(4)</sup> NA	<sup>(4)</sup> NA	0,43	8,57							4,73		1,63	
E. Prescribed Burning of Savannas			NO	NO							NO	NO	NO	
F. Field Burning of Agricultural Residues			0,06	0,00							0,03	1,12	0,13	0,00
G. Other			NO	NO							NO	NO	NO	0,00
<b>5. Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>0,00</b>	<sup>(5)</sup> #####	<b>0,00</b>	<b>0,00</b>							<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
A. Changes in Forest and Other Woody Biomass Stocks	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00												
B. Forest and Grassland Conversion	0,00		0,00	0,00							0,00	0,00	NO	
C. Abandonment of Managed Lands	<sup>(5)</sup> 0,00	<sup>(5)</sup> <b>IE</b>												
D. CO <sub>2</sub> Emissions and Removals from Soil	<sup>(5)</sup> 0,00	<sup>(5)</sup> <b>NE</b>												
E. Other	<sup>(5)</sup> 0,00	<sup>(5)</sup> <b>NO</b>	0,00	0,00							0,00	0,00	NO	NO
<b>6. Waste</b>	<b>11,27</b>		<b>150,31</b>	<b>0,80</b>							<b>0,03</b>	<b>9,49</b>	<b>0,13</b>	<b>0,05</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 0,00		134,71									9,48	0,13	
B. Wastewater Handling			14,42	0,62							0,00	0,00	0,00	
C. Waste Incineration	<sup>(6)</sup> 11,27		0,00	0,00							0,03	0,01	0,00	0,05
D. Other	0,00		1,19	0,18							0,00	0,00	0,00	0,00
<b>7. Other (please specify) ...</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

<sup>(4)</sup> According to the IPCC Guidelines (Volume 3. Reference Manual, pp. 4.2, 4.87), CO<sub>2</sub> emissions from agricultural soils are to be included under Land-Use Change and Forestry (LUCF). At the same time, the Summary Report 7A (Volume 1. Reporting Instructions, Tables.27) allows for reporting CO<sub>2</sub> emissions or removals from agricultural soils, either in the Agriculture sector, under D. Agricultural Soils or in the Land-Use Change and Forestry sector under D. Emissions and Removals from Soil. Parties may choose either way to report emissions or removals from this source in the common reporting format, but the way they have chosen to report should be clearly indicated, by inserting explanatory comments to the corresponding cells of Summary 1.A and Summary 1.B. Double-counting of these emissions or removals should be avoided. Parties should include these emissions or removals consistently in Table8(a) (Recalculation - Recalculated data) and Table10 (Emission trends).

<sup>(5)</sup> Please do not provide an estimate of both CO<sub>2</sub> emissions and CO<sub>2</sub> removals. "Net" emissions (emissions - removals) of CO<sub>2</sub> should be estimated and a single number placed in either the CO<sub>2</sub> emissions or CO<sub>2</sub> removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(6)</sup> Note that CO<sub>2</sub> from Waste Disposal and Incineration source categories should only be included if it stems from non-biogenic or inorganic waste streams.

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)  
(Sheet 3 of 3)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
					P	A	P	A	P	A				
	(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)					
Memo Items: <sup>(7)</sup>														
International Bunkers	1,451,90		0,02	0,05							4,64	1,43	0,61	0,46
Aviation	1,451,90		0,02	0,05							4,64	1,43	0,61	0,46
Marine	NO		NO	NO							NO	NO	NO	NO
Multilateral Operations	IE		IE	IE							IE	IE	IE	IE
CO <sub>2</sub> Emissions from Biomass	14,665,91													

<sup>(7)</sup> Memo Items are not included in the national totals.

**SUMMARY 1.B SHORT SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7B)**

(Sheet 1 of 1)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
					P	A	P	A	P	A				
	(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total National Emissions and Removals</b>	<b>76.213,26</b>	<b>-12.772,55</b>	<b>371,74</b>	<b>17,88</b>	<b>2.311,71</b>	<b>1.308,22</b>	<b>380,59</b>	<b>102,54</b>	<b>0,03</b>	<b>0,02</b>	<b>229,03</b>	<b>801,78</b>	<b>182,30</b>	<b>34,14</b>
<b>1. Energy</b>	<b>67.857,30</b>		<b>31,11</b>	<b>2,65</b>							<b>222,58</b>	<b>767,35</b>	<b>82,08</b>	<b>32,87</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	72.162,78												
	Sectoral Approach <sup>(2)</sup>	67.624,26		15,82	2,65						222,58	767,35	78,63	32,72
B. Fugitive Emissions from Fuels		233,04		15,29	0,00						0,00	0,00	3,45	0,15
<b>2. Industrial Processes</b>	<b>8.151,09</b>		<b>0,35</b>	<b>2,85</b>	<b>2.311,71</b>	<b>1.308,22</b>	<b>380,59</b>	<b>102,54</b>	<b>0,03</b>	<b>0,02</b>	<b>1,66</b>	<b>23,82</b>	<b>15,71</b>	<b>1,21</b>
<b>3. Solvent and Other Product Use</b>	<b>193,60</b>			<b>0,75</b>							<b>0,00</b>	<b>0,00</b>	<b>82,63</b>	<b>0,00</b>
<b>4. Agriculture<sup>(3)</sup></b>	<b>0,00</b>	<b>0,00</b>	<b>189,97</b>	<b>10,84</b>							<b>4,76</b>	<b>1,12</b>	<b>1,76</b>	<b>0,00</b>
<b>5. Land-Use Change and Forestry</b>	<sup>(4)</sup> <b>0,00</b>	<sup>(4)</sup> <b>-12.772,55</b>	<b>0,00</b>	<b>0,00</b>							<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
<b>6. Waste</b>	<b>11,27</b>		<b>150,31</b>	<b>0,80</b>							<b>0,03</b>	<b>9,49</b>	<b>0,13</b>	<b>0,05</b>
<b>7. Other</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>Memo Items:</b>														
<b>International Bunkers</b>	<b>1.451,90</b>		<b>0,02</b>	<b>0,05</b>							<b>4,64</b>	<b>1,43</b>	<b>0,61</b>	<b>0,46</b>
Aviation	1.451,90		0,02	0,05							4,64	1,43	0,61	0,46
Marine	NO		NO	NO							NO	NO	NO	NO
<b>Multilateral Operations</b>	<b>IE</b>		<b>IE</b>	<b>IE</b>							<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>14.665,91</b>													

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in document box of Table 1.A(c). Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

<sup>(3)</sup> See footnote 4 to Summary 1.A.

<sup>(4)</sup> Please do not provide an estimate of both CO<sub>2</sub> emissions and CO<sub>2</sub> removals. "Net" emissions (emissions - removals) of CO<sub>2</sub> should be estimated and a single number placed in either the CO<sub>2</sub> emissions or CO<sub>2</sub> removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).



**SUMMARY 2 SUMMARY REPORT FOR CO<sub>2</sub> EQUIVALENT EMISSIONS**  
(Sheet 1 of 1)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	Total
	CO <sub>2</sub> equivalent (Gg )						
<b>Total (Net Emissions)<sup>(1)</sup></b>	<b>63.440,70</b>	<b>7.806,62</b>	<b>5.542,26</b>	<b>1.308,22</b>	<b>102,54</b>	<b>593,52</b>	<b>78.793,87</b>
<b>1. Energy</b>	<b>67.857,30</b>	<b>653,33</b>	<b>820,00</b>				<b>69.330,63</b>
A. Fuel Combustion (Sectoral Approach)	67.624,26	332,14	820,00				68.776,41
1. Energy Industries	16.030,35	6,50	68,38				16.105,23
2. Manufacturing Industries and Construction	14.163,39	9,96	164,77				14.338,12
3. Transport	22.692,33	22,50	280,75				22.995,58
4. Other Sectors	14.702,00	293,15	305,15				15.300,30
5. Other	36,19	0,03	0,96				37,17
B. Fugitive Emissions from Fuels	233,04	321,19	0,00				554,22
1. Solid Fuels	0,00	8,14	0,00				8,14
2. Oil and Natural Gas	233,04	313,04	0,00				546,08
<b>2. Industrial Processes</b>	<b>8.151,09</b>	<b>7,30</b>	<b>883,38</b>	<b>1.308,22</b>	<b>102,54</b>	<b>593,52</b>	<b>11.046,05</b>
A. Mineral Products	3.060,20	0,00	0,00				3.060,20
B. Chemical Industry	558,88	7,23	883,38	0,00	0,00	0,00	1.449,49
C. Metal Production	4.532,01	0,07	0,00		0,00	0,00	4.532,08
D. Other Production	NA						0,00
E. Production of Halocarbons and SF <sub>6</sub>				NO	NO	NO	0,00
F. Consumption of Halocarbons and SF <sub>6</sub>				1.308,22	102,54	593,52	2.004,28
G. Other	NO	NO	NO	NO	NO	NO	0,00
<b>3. Solvent and Other Product Use</b>	<b>193,60</b>		<b>232,50</b>				<b>426,10</b>
<b>4. Agriculture</b>	<b>0,00</b>	<b>3.989,38</b>	<b>3.359,68</b>				<b>7.349,06</b>
A. Enteric Fermentation		3.093,65					3.093,65
B. Manure Management		885,35	703,64				1.589,00
C. Rice Cultivation		0,00					0,00
D. Agricultural Soils <sup>(2)</sup>	NA	9,09	2.655,72				2.664,80
E. Prescribed Burning of Savannas		0,00	0,00				0,00
F. Field Burning of Agricultural Residues		1,29	0,32				1,61
G. Other		0,00	0,00				0,00
<b>5. Land-Use Change and Forestry<sup>(1)</sup></b>	<b>-12.772,55</b>	<b>0,00</b>	<b>0,00</b>				<b>-12.772,55</b>
<b>6. Waste</b>	<b>11,27</b>	<b>3.156,61</b>	<b>246,70</b>				<b>3.414,59</b>
A. Solid Waste Disposal on Land	0,00	2.828,85					2.828,85
B. Wastewater Handling		302,76	192,43				495,19
C. Waste Incineration	11,27	0,00	0,02				11,29
D. Other	0,00	25,00	54,25				79,25
<b>7. Other (please specify) ---</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
							0,00
<b>Memo Items:</b>							
<b>International Bunkers</b>	<b>1.451,90</b>	<b>0,52</b>	<b>16,47</b>				<b>1.468,89</b>
Aviation	1.451,90	0,52	16,47				1.468,89
Marine	NO	NO	NO				0,00
<b>Multilateral Operations</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>				<b>0,00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>14.665,91</b>						<b>14.665,91</b>

<sup>(1)</sup> For CO<sub>2</sub> emissions from Land-Use Change and Forestry the net emissions are to be reported. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	Net CO <sub>2</sub> emissions / removals	CH <sub>4</sub>	N <sub>2</sub> O	Total emissions
<b>Land-Use Change and Forestry</b>	CO <sub>2</sub> equivalent (Gg )					
A. Changes in Forest and Other Woody Biomass Stocks	0,00	0,00	0,00			0,00
B. Forest and Grassland Conversion	0,00		0,00	0,00	0,00	0,00
C. Abandonment of Managed Lands	0,00	0,00	0,00			0,00
D. CO <sub>2</sub> Emissions and Removals from Soil	0,00	0,00	0,00			0,00
E. Other	0,00	0,00	0,00	0,00	0,00	0,00
<b>Total CO<sub>2</sub> Equivalent Emissions from Land-Use Change and Forestry</b>	<b>0,00</b>	<b>0,00</b>	<b>-12.772,55</b>	<b>0,00</b>	<b>0,00</b>	<b>-12.772,55</b>

Total CO <sub>2</sub> Equivalent Emissions without Land-Use Change and Forestry <sup>(a)</sup>	91.566,42
Total CO <sub>2</sub> Equivalent Emissions with Land-Use Change and Forestry <sup>(a)</sup>	78.793,87

<sup>(a)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry.

**SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>	
	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>
<b>1. Energy</b>	NA	NA	NA	NA	NA	NA						
A. Fuel Combustion	NA	NA	NA	NA	NA	NA						
1. Energy Industries	C	CS	C	CS	C	CS						
2. Manufacturing Industries and Construction	C	CS	C	CS	C	CS						
3. Transport	M, CS	CS	M, T1	CS	M, T1	CS						
4. Other Sectors	C	CS	C	CS	C	CS						
5. Other	M, CS	CS	M, T1	CS	M, T1	CS						
B. Fugitive Emissions from Fuels	NA	NA	NA	NA	NA	NA						
1. Solid Fuels	NA	NA	T1	D	NA	NA						
2. Oil and Natural Gas	T1, CS	D, CS, PS	T1, CS	CS, D	NA	NA						
<b>2. Industrial Processes</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
A. Mineral Products	T2	D, CS	NA	NA	NA	NA						
B. Chemical Industry	PS	PS	PS	PS	PS	PS	NA	NA	NA	NA	NA	NA
C. Metal Production	C, T2	D, CS, PS	C	CS	NA	NA			NA	NA	NA	NA
D. Other Production	NA	NA										
E. Production of Halocarbons and SF <sub>6</sub>							NA	NA	NA	NA	NA	NA
F. Consumption of Halocarbons and SF <sub>6</sub>							CS	CS	CS	CS	CS	CS
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<sup>(1)</sup> Use the following notation keys to specify the method applied: D (IPCC default), RA (Reference Approach), T1 (IPCC Tier 1), T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively), T2 (IPCC Tier 2), T3 (IPCC Tier 3), C (CORINAIR), CS (Country Specific), M (Model). If using more than one method, enumerate the relevant methods. Explanations of any modifications to the default IPCC methods, as well as information on the proper use of methods per source category where more than one method is indicated, and explanations on the country specific methods, should be provided in the documentation box of the relevant Sectoral background data table.

<sup>(2)</sup> Use the following notation keys to specify the emission factor used: D (IPCC default), C (CORINAIR), CS (Country Specific), PS (Plant Specific), M (Model). Where a mix of emission factors has been used, use different notations in one and the same cells with further explanation in the documentation box of the relevant Sectoral background data table.

**SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED**  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>	
	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>
<b>3. Solvent and Other Product Use</b>	C, CS	CS			CS	CS						
<b>4. Agriculture</b>	NA	NA	NA	NA	NA	NA						
A. Enteric Fermentation			T1, T2	D, CS								
B. Manure Management			T1, T2	D, CS								
C. Rice Cultivation			NA	NA								
D. Agricultural Soils	NA	NA	CS	CS	T1	D						
E. Prescribed Burning of Savannas			NA	NA	NA	NA						
F. Field Burning of Agricultural Residues			CS	CS	CS	CS						
G. Other	NA	NA	NA	NA	NA	NA						
<b>5. Land-Use Change and Forestry</b>	T3	CS	NA	NA	NA	NA						
A. Changes in Forest and Other Woody Biomass Stocks	NA	NA										
B. Forest and Grassland Conversion	NA	NA	NA	NA	NA	NA						
C. Abandonment of Managed Lands	NA	NA										
D. CO <sub>2</sub> Emissions and Removals from Soil	NA	NA										
E. Other	NA	NA	NA	NA	NA	NA						
<b>6. Waste</b>	NA	NA	NA	NA	NA	NA						
A. Solid Waste Disposal on Land	NA	NA	CS	CS								
B. Wastewater Handling			CS	CS	T1	D, CS						
C. Waste Incineration	C	CS	C	CS	C	CS						
D. Other	NA	NA	C, CS	CS	NA	NA						
<b>7. Other (please specify)</b> ---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**TABLE 7 OVERVIEW TABLE<sup>(1)</sup> FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)**  
(Sheet 1 of 3)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>		CO		NMVOC		SO <sub>2</sub>	
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality
<b>Total National Emissions and Removals</b>																				
<b>1 Energy</b>																				
A. Fuel Combustion Activities																				
Reference Approach	ALL	H																		
Sectoral Approach	ALL	H	ALL	L	ALL	M							ALL	L	ALL	L	ALL	L	ALL	M
1. Energy Industries	ALL	H	ALL	L	ALL	L							ALL	M	ALL	M	ALL	L	ALL	H
2. Manufacturing Industries and Construction	ALL	H	ALL	L	ALL	L							ALL	L	ALL	L	ALL	L	ALL	H
3. Transport	ALL	H	ALL	M	ALL	M							ALL	M	ALL	M	ALL	M	ALL	H
4. Other Sectors	ALL	H	ALL	L	ALL	L							ALL	L	ALL	L	ALL	L	ALL	M
5. Other	ALL	H	ALL	M	ALL	M							ALL	M	ALL	M	ALL	M	ALL	H
B. Fugitive Emissions from Fuels																				
1. Solid Fuels	NA	NA	ALL	L	NA	NA														
2. Oil and Natural Gas	PART	L	PART	L	PART	L							PART	L	PART	L	PART	L	PART	L
<b>2 Industrial Processes</b>																				
A. Mineral Products	ALL	H	NA	NA	NA	NA							ALL	M	PART	M	ALL	M	ALL	M
B. Chemical Industry	ALL	H	PART	H	ALL	H	NA	NA	NA	NA			ALL	M	PART	M	ALL	M	ALL	M
C. Metal Production	ALL	M	PART	L	NA	NA			NA	NA	ALL	M	ALL	M	PART	M	ALL	M	ALL	M
D. Other Production	NO	NO											ALL	M	ALL	M	ALL	M	NE	NE
E. Production of Halocarbons and SF <sub>6</sub>							NO	NO	NO	NO	NO	NO								

<sup>(1)</sup> This table is intended to be used by Parties to summarize their own assessment of completeness (e.g. partial, full estimate, not estimated) and quality (high, medium, low) of major source/sink inventory estimates. The latter could be understood as a quality assessment of the uncertainty of the estimates. This table might change once the IPCC completes its work on managing uncertainties of GHG inventories. The title of the table was kept for consistency with the current table in the IPCC Guidelines.

**Note:** To fill in the table use the notation key as given in the IPCC Guidelines (Volume 1. Reporting Instructions, Tables. 37).

**TABLE 7 OVERVIEW TABLE FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)**  
(Sheet 2 of 3)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>		CO		NMVOC		SO <sub>2</sub>	
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality
<b>2 Industrial Processes (continued)</b>																				
F. Consumption of Halocarbons and SF <sub>6</sub>																				
Potential <sup>(2)</sup>							ALL	M	ALL	M	ALL	M								
Actual <sup>(3)</sup>							ALL	M	ALL	M	ALL	M								
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>3 Solvent and Other Product Use</b>	ALL	M			ALL	L							NA	NA	NA	NA	ALL	M	NA	NA
<b>4 Agriculture</b>																				
A. Enteric Fermentation			ALL	M																
B. Manure Management			ALL	M	ALL	M											NE	NE		
C. Rice Cultivation			NO	NO													NO	NO		
D. Agricultural Soils	NA	NA	ALL	M	ALL	M											ALL	L		
E. Prescribed Burning of Savannas			NO	NO	NO	NO							NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues			ALL	L	ALL	L							ALL	L	ALL	L	ALL	L	ALL	L
G. Other			NO	NO	NO	NO							NO	NO	NO	NO	NO	NO	NO	NO
<b>5 Land-Use Change and Forestry</b>	PART	H	NE	NE	NE	NE							NE	NE	NE	NE	NE	NE	NE	NE
A. Changes in Forest and Other Woody Biomass Stocks	NA	NA																		
B. Forest and Grassland Conversion	NA	NA	NA	NA	NA	NA							NA	NA	NA	NA	NA	NA		

<sup>(2)</sup> Potential emissions based on Tier 1 approach of the IPCC Guidelines.

<sup>(3)</sup> Actual emissions based on Tier 2 approach of the IPCC Guidelines.

**TABLE 7 OVERVIEW TABLE FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)**  
(Sheet 3 of 3)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>		CO		NMVOC		SO <sub>2</sub>	
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality
<b>5 Land-Use Change and Forestry (continued)</b>																				
C. Abandonment of Managed Lands	IE	IE																		
D. CO <sub>2</sub> Emissions and Removals from Soil	NE	NE																		
E. Other	NO	NO	NO	NO	NO	NO							NO	NO	NO	NO	NO	NO	NO	NO
<b>6 Waste</b>																				
A. Solid Waste Disposal on Land	NE	NE	ALL	L											ALL	M	ALL	L		
B. Wastewater Handling			ALL	L	ALL	L							NE	NE	NE	NE	NE	NE		
C. Waste Incineration	ALL	L	ALL	M	ALL	L							ALL	M	ALL	M	ALL	L	ALL	H
D. Other	NE	NE	ALL	M	NE	NE							NE	NE	NE	NE	NE	NE	NE	NE
<b>7 Other (please specify) ---</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Memo Items:</b>																				
<b>International Bunkers</b>	ALL	H	ALL	M	ALL	M							ALL	M	ALL	M	ALL	M	ALL	H
Aviation	ALL	H	ALL	M	ALL	M							ALL	M	ALL	M	ALL	M	ALL	H
Marine	NO	NO	NO	NO	NO	NO							NO	NO	NO	NO	NO	NO	NO	NO
<b>Multilateral Operations</b>	IE	IE	IE	IE	IE	IE							IE	IE	IE	IE	IE	IE	IE	IE
<b>CO<sub>2</sub> Emissions from Biomass</b>	ALL	L																		

TABLE 8(a) RECALCULATION - RECALCULATED DATA

Recalculated

year: 2003

(Sheet 1 of 2)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO <sub>2</sub>			CH <sub>4</sub>			N <sub>2</sub> O		
		Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>
		CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)
<b>Total National Emissions and Removals</b>		<b>0,00</b>	<b>63.440,70</b>	<b>0,00</b>		<b>7.806,62</b>	<b>0,00</b>		<b>5.542,26</b>	<b>0,00</b>
<b>1. Energy</b>			<b>67.857,30</b>	<b>0,00</b>		<b>653,33</b>	<b>0,00</b>		<b>820,00</b>	<b>0,00</b>
1.A.	Fuel Combustion Activities		67.624,26	0,00		332,14	0,00		820,00	0,00
1.A.1.	Energy Industries		16.030,35	0,00		6,50	0,00		68,38	0,00
1.A.2.	Manufacturing Industries and Construction		14.163,39	0,00		9,96	0,00		164,77	0,00
1.A.3.	Transport		22.692,33	0,00		22,50	0,00		280,75	0,00
1.A.4.	Other Sectors		14.702,00	0,00		293,15	0,00		305,15	0,00
1.A.5.	Other		36,19	0,00		0,03	0,00		0,96	0,00
1.B.	Fugitive Emissions from Fuels		233,04	0,00		321,19	0,00		IE	0,00
1.B.1.	Solid fuel		NA	0,00		8,14	0,00		NA	0,00
1.B.2.	Oil and Natural Gas		233,04	0,00		313,04	0,00		IE	0,00
<b>2. Industrial Processes</b>			<b>8.151,09</b>	<b>0,00</b>		<b>7,30</b>	<b>0,00</b>		<b>883,38</b>	<b>0,00</b>
2.A.	Mineral Products		3.060,20	0,00		NA	0,00		NA	0,00
2.B.	Chemical Industry		558,88	0,00		7,23	0,00		883,38	0,00
2.C.	Metal Production		4.532,01	0,00		0,07	0,00		IE	0,00
2.D.	Other Production		NA	0,00						
2.G.	Other		NO	0,00		NO	0,00		NO	0,00
<b>3. Solvent and Other Product Use</b>			<b>193,60</b>	<b>0,00</b>					<b>232,50</b>	<b>0,00</b>
<b>4. Agriculture</b>			<b>NA</b>	<b>0,00</b>		<b>3.989,38</b>	<b>0,00</b>		<b>3.359,68</b>	<b>0,00</b>
4.A.	Enteric Fermentation		NA			3.093,65	0,00			
4.B.	Manure Management		NA			885,35	0,00		703,64	0,00
4.C.	Rice Cultivation		NO			NO	0,00			
4.D.	Agricultural Soils <sup>(2)</sup>		NA	0,00		9,09	0,00		2.655,72	0,00
4.E.	Prescribed Burning of Savannas		NO			NO	0,00		NO	0,00
4.F.	Field Burning of Agricultural Residues		NA			1,29	0,00		0,32	0,00
4.G.	Other		NO			NO	0,00		NO	0,00
<b>5. Land-Use Change and Forestry (net)</b>			<b>-12.772,55</b>	<b>0,00</b>	<b>NE</b>	<b>NE</b>	<b>0,00</b>	<b>NE</b>	<b>NE</b>	<b>0,00</b>
5.A.	Changes in Forest and Other Woody Biomass Stocks	NA	NA	0,00						
5.B.	Forest and Grassland Conversion	NA	NA	0,00	NA	NA	0,00	NA	NA	0,00
5.C.	Abandonment of Managed Lands	NA	NA	0,00						
5.D.	CO <sub>2</sub> Emissions and Removals from Soil	NA	NA	0,00						
5.E.	Other	NA	NA	0,00	NA	NA	0,00	NA	NA	0,00

<sup>(1)</sup> Estimate the percentage change due to recalculation with respect to the previous submission (Percentage change = 100% x [(LS-PS)/PS], where LS = Latest submission and PS = Previous submission.

All cases of recalculation of the estimate of the source/sink category, should be addressed and explained in Table 8(b) of this common reporting format.

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

TABLE 8(a) RECALCULATION - RECALCULATED DATA

Recalculated

year:

2003

(Sheet 2 of 2)

Austria

2003

submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO <sub>2</sub>			CH <sub>4</sub>			N <sub>2</sub> O		
		Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>
		CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)
6. Waste			11,27	0,00		3.156,61	0,00		246,70	0,00
6.A.	Solid Waste Disposal on Land		NA	0,00		2.828,85	0,00			
6.B.	Wastewater Handling					302,76	0,00		192,43	0,00
6.C.	Waste Incineration		11,27	0,00		0,00	0,00		0,02	0,00
6.D.	Other		NA	0,00		25,00	0,00		54,25	0,00
7. Other (please specify) ---		NO	NO	0,00	NO	NO	0,00	NO	NO	0,00
				0,00			0,00			0,00
Memo Items:										
International Bunkers			1.451,90	0,00		0,52	0,00		16,47	0,00
Multilateral Operations			IE	0,00		IE	0,00		IE	0,00
CO <sub>2</sub> Emissions from Biomass			15.829,15	0,00						

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		HFCs			PFCs			SF <sub>6</sub>		
		Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>
		CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)	CO <sub>2</sub> equivalent (Gg)		(%)
Total Actual Emissions			1.308,22	0,00		102,54	0,00		593,52	0,00
2.C.3.	Aluminium Production					NE	0,00		NE	0,00
2.E.	Production of Halocarbons and SF <sub>6</sub>	NO	NO	0,00	NO	NO	0,00	NO	NO	0,00
2.F.	Consumption of Halocarbons and SF <sub>6</sub>		1.308,22	0,00		102,54	0,00		593,52	0,00
	Other	NO	NO	0,00	NO	NO	0,00	NO	NO	0,00
Potential Emissions from Consumption of HFCs/PFCs and SF <sub>6</sub>			2.311,71			380,59			812,96	
				Previous submission		Latest submission		Difference <sup>(1)</sup>		
						CO <sub>2</sub> equivalent (Gg)		(%)		
Total CO <sub>2</sub> Equivalent Emissions with Land-Use Change and Forestry <sup>(3)</sup>				0,00		66.021,32		0,00		
Total CO <sub>2</sub> Equivalent Emissions without Land-Use Change and Forestry <sup>(3)</sup>				0,00		78.793,87		0,00		

<sup>(3)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry.



**TABLE 8(b) RECALCULATION - EXPLANATORY INFORMATION**  
(Sheet 1 of 1)

Austria  
2003  
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Specify the sector and source/sink category <sup>(1)</sup> where changes in estimates have occurred:		GHG	RECALCULATION DUE TO			
			CHANGES IN:			Addition/removal/ replacement of source/sink categories
			Methods <sup>(2)</sup>	Emission factors <sup>(2)</sup>	Activity data <sup>(2)</sup>	
1 A 1 a	Public electricity and heat production	CO2, CH4, N2O		CO2 emissions factor for municipal waste is updated according to information from plant operators.	Energy statistics is revised by STATISTIK AUSTRIA. Details are provided in the NIR. Activity data reported due to emission declarations for plants > 50 MWth are completed for the year 2002.	
1 A 1 b	Petroleum Refining	CO2, CH4, N2O	The methodology is now more transparent and consistent regarding activity data and selection of emission factors.	Plant Specific emission factors are used. In the previous submission the CO2-emissions were reported by the plant operator and disaggregated to fuels from the energy statistics.	1990 to 2002: Energy statistics is revised by STATISTIK AUSTRIA.	
1 A 1 c	Combustion of natural gas for Oil/Gas extraction	CO2, CH4, N2O			1990 to 2002: Energy statistics is revised by STATISTIK AUSTRIA. Details are provided in the NIR.	Removal: Emissions from LPG used in gas works were double counted with gas works gas.
1 A 2	Fuel combustion in industry-stationary	CO2, CH4, N2O			Energy statistics is revised for all subcategories by STATISTIK AUSTRIA. Details are provided in the NIR.	
1 A 2	Fuel combustion in industry-mobile	CO2, CH4, N2O			Updated by national transport model.	
1 A 3 b	Road transport	CO2, CH4, N2O		Emission factors have been updated using the new handbook of emission factors (version 2.1). The handbook is the result of new measurements.	Updated by national transport model.	
1 A 3 e	Pipeline compressors	CO2, CH4, N2O			Energy statistics is revised by STATISTIK AUSTRIA. Details are provided in the NIR.	
1 A 4	Other Sectors-stationary	CO2, CH4, N2O			Energy statistics is revised by STATISTIK AUSTRIA. Details are provided in the NIR.	
1 A 4	Other Sectors-mobile	CO2, CH4, N2O			Updated by national transport model.	
1 B 1 a	Coal Mining				Updated for 2002	
1 B 2 a	Oil refining and storage				Updated for 2002	
1 B 2 b ii	Natural Gas Distribution				Updated for whole time series by means of revised energy balance	
2 C 1	Iron and Steel	CO2	process specific CO2 emissions from pig iron production have been recalculated as the underlying activity data used for the calculation (non-energy use of coke) has been updated in the national energy balance	for calculating CO2 emissions electric arc furnaces now a country specific emission factor is used (previously an emission factor taken from a swiss publication was applied).	Update for 2002	
2 C 2	Ferroalloys	CO2				Addition of CO2 emissions
2 C 3	Aluminium Production	PFC, CO2			Activity data used for calculation of PFC and CO2 emissions from Aluminium Pro-duction has been harmonized	
2 A 1	Cement Production	CO2		emission data for CO2 emissions from Cement Production 1998-2002 have been updated using data from a study based on plant specific data		
2 A 4	Soda Ash Production and Use	CO2				CO2 Emissions from Soda Ash Production are now reported as "IE", as coke used in the process is already considered as fuel in the Energy Sector (1 A 2 c Chemical In-dustries).
2 A 5	2 A 5 Asphalt Roofing					Removal: emissions are now reported as "IE", as emissions are already included in the Sol-vents Sector.

Specify the sector and source/sink category <sup>(1)</sup> where changes in estimates have occurred:		GHG	RECALCULATION DUE TO			
			CHANGES IN:			Addition/removal/ replacement of source/sink categories
			Methods <sup>(2)</sup>	Emission factors <sup>(2)</sup>	Activity data <sup>(2)</sup>	
2 A 6	Road Paving with Asphalt					Removal: emissions are now reported as “IE”, as emissions are already included in the Sol-vents Sector.
2 A 7 a	Bricks				Updated for 2002	
2 B 5	Chemical Industries - Other	CO2	CO2 emissions from fertilizer production for 1992-1994 have been updated using information from Industry. As indicated in the NIR 2004, the time series for CH4 emissions from urea production was inconsistent; Time series has been recalculated to improve time series consistency.	Emissions from 1990-1991 were recalculated using the average EF from 1993-2003		
2 F	Consumption of Halocarbons and SF6		During an extensive Audit several mistakes and inconsistencies were identified and corrected and the data quality could be improved for some sub-sectors using information from industry. Furthermore emissions from 2001 and 2002 were updated by using extrapolation techniques (following recommendations from the ERT) and data from industries.			
4 A 1	Non Dairy Cattle	CH4			The S&A report 2004 noticed high inter-annual variations in the N2O IEF values between 1992/1993 and 1993/1994. An error regarding activity data of non-dairy cattle for the year 1993 was identified and corrected in this submission.	
4 A 10	Other animals: Deer	CH4			As recommended in the centralized review (October 2004), in this inventory for the years 1990 to 1992 the animal number of 1993 was used.	Addition: for 1990 to 1992
4 B 1	Diary Cattle	CH4		In the last submissions, the Nex and VSex values from 1999 to 2003 were extrapo-lated on the basis of the published Nex and VSex data with a corresponding milk yield of 5000 kg. In this year’s calculations also the corresponding Nex and VSex values of a milk yield of 6000 kg published in [GRUBER & STEINWIDDER, 1996] were con-sidered. The values were calculated via interpolation.		
4 B 1	Non Dairy Cattle	CH4			The S&A report 2004 noticed high inter-annual variations in the N2O IEF values between 1992/1993 and 1993/1994. An error regarding activity data of non-dairy cattle for the year 1993 was identified and corrected in this submission.	
4 B 13	Other animals: Deer	CH4			As recommended in the centralized review (October 2004), in this inventory for the years 1990 to 1992 the animal number of 1993 was used.	Addition: for 1990 to 1992
4 D	Non Dairy Cattle	N2O			The S&A report 2004 noticed high inter-annual variations in the N2O IEF values between 1992/1993 and 1993/1994. An error regarding activity data of non-dairy cattle for the year 1993 was identified and corrected in this submission.	

Specify the sector and source/sink category <sup>(1)</sup> where changes in estimates have occurred:		GHG	RECALCULATION DUE TO			
			CHANGES IN:			Addition/removal/ replacement of source/sink categories
			Methods <sup>(2)</sup>	Emission factors <sup>(2)</sup>	Activity data <sup>(2)</sup>	
4 D 1	Direct Soil Emissions	N2O			The S&A report 2004 noticed high inter-annual variations in N2O emissions. These variations are caused by effects of storage as well as the difference between the calendar year and the agricultural economic year: the amounts of synthetic fertilizers over the years reflect the amounts sold in one calendar year. However, the economic year for the farmer does not correspond to the calendar year. Not the whole amount purchased is applied in the year of purchase. Considering these effects, in this submission the arithmetic average of each two years was used as fertilizer application data.	
4 D 3	Atmospheric nitrogen deposition	N2O	Following a recommendation of the centralized review (October 2004), in contrast to the last submission also N volatilized in housing, storage and pasture was taken into account. Now, in accordance with the IPCC good practice, the value FracGASM re-lates to N excreted by livestock and not to Nex left for spreading			
4 F	Feld Burning	CH4, N2O	As recommended in the Centralized Review 2003 the IPCC methodology using de-fault values was applied			
5	LUCF	CO2			Forest area updated based upon new forest inventory from 1997 on.	Addition: land use conversion from and to forests. New estimates for subsectors.
6 A 1	Managed Waste disposal	CH4		As recommended in the Centralized Review 2004 the IPCC default CH4 oxidation factor (0.1) was applied.	Update of disposed waste by information from new reporting obligation of disposal site operators.	
6 B	Waste Water Handling	N2O, CH4	Emissions of N2O have been recalculated taking into account the increasing amount of waste water treated in waste water treatment plants and the increasing amount of denitrification. The data were taken from the Austrian reports on water pollution control (GEWÄSSERSCHUTZBERICHTE 1993 –1996).		The number of inhabitants and the daily protein intake were updated according to STATISTIK AUSTRIA and FAO statistics respectively	
6 C	Waste Incineration-Waste oil	CH4				Addition of CH4 emissions from waste oil incineration
6 D	OTHER WASTE - compost production	CH4, N2O			Activity data was updated and interpolated for years where no data was available	









<sup>(1)</sup> Enter the identification code of the source/sink category (e.g. 1.B.1) in the first column and the name of the category (e.g. Fugitive Emissions from Solid Fuels) in the second column of the table (see Table 8(a)) .

<sup>(2)</sup> Explain changes in methods, emission factors and activity data that have resulted in recalculation of the estimate of the source/sink as indicated in Table 8(a). Include relevant changes in the assumptions and coefficients under the "Methods" column.

**Documentation box:** Use the documentation box to report the justifications of the changes as to improvements in the accuracy, completeness and consistency of the inventory.  
For Justification of recalculations refer to the relevant sector-chapters in the NIR

**TABLE 9 COMPLETENESS**  
(Sheet 1 of 2)

Austria  
2003  
submission 2005

Sources and sinks not reported (NE) <sup>(1)</sup>				
GHG	Sector <sup>(2)</sup>	Source/sink category <sup>(2)</sup>	Explanation	
CO <sub>2</sub> 				
	1 B 2 a	Transport and Distribution of Oil Products	CO2 emissions are assumed to be negligible. Only NMVOC Emissions	
CH <sub>4</sub> 				
	1 B 2 a	Transport and Distribution of Oil Products	CH4 emissions are assumed to be negligible. Only NMVOC Emissions are estimated from this source.	
	2 B 5	Carbon Black/Methanol/Ethylene	CH4 emissions from that source are included in the NMVOC estimate. The share of CH4 in these emissions is not known.	
N <sub>2</sub> O 				
HFCs 				
PF <sub>6</sub> 				
SF <sub>6</sub> 				
Sources and sinks reported elsewhere (IE) <sup>(3)</sup>				
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
CO 				
	Oil Exploration, Gas Exploration, Gas Production/Processing	1 B 2 a i, 1 B 2 b Exploration, 1 B 2 b i	1 B 2 a ii Oil Production	As all oil fields are combined oil and gas production fields, total emissions together with emissions from gas production fields are reported here (total figures are reported from the Association of Oil Industry).
	Refining/Storage	1 B 2 b iv	1 A 1 b Petroleum Refining	The emission declaration of the refinery includes all emissions from the plant.
	Venting and Flaring	1 B 2 c	1 A 1 b Petroleum Refining	The emission declaration of the refinery includes all emissions from the plant.
	Multilateral Operations	Memo Item: Multilateral Operations	1 A 4 Other Sectors	No explicit information in the national energy statistics about multilateral operations. Since the emissions of this sector are very low they are included in the residential/commercial sector.
CH <sub>4</sub> 				
	Petroleum Refining	1 A 1 b	1 B 2 fugitive emissions from fuels	Total CH4 emissions from petroleum refining are estimated. CH4 emissions from fuel combustion are a minor source of total CH4 emissions from refinery.

	Oil Exploration, Gas Exploration, Production/Processing	1 B 2 a i, 1 B 2 b Exploration, 1 B 2 b i	1 B 2 a i l Oil Production	As all oil fields are combined oil and gas production fields, total emissions together with emissions from gas production fields are reported here (total figures are reported from the Association of Oil Industry).
	Venting and Flaring	1 B 2 c	1 B 2 b iv Refining Storage	The emission declaration of the refinery includes all emissions from the plant.
	Multilateral Operations	Memo Item: Multilateral Operations	1 A 4 Other Sectors	see explanation for CO <sub>2</sub> .
	Enteric Fermentation - Mules and Asses	4 A 7 Enteric Fermentation - Mules and Asses	4 A 6 Enteric Fermentation - Horses	In the national statistics mules, asses and horses are published together.
	Manure Managment - Mules and Asses	4 B 7 Manure Managment - Mules and Asses	4 B 6 Manure Managment - Horses	In the national statistics mules, asses and horses are published together.
	Emissions from sewage sludge	6 B 1, 6 B 2 emissions from sludge, Table 6.B	6 B 1, 6 B 2 emissions from wastewater, Table 6.B	Emissions from sewage sludge are included in emissions from wastewater handling. The country specific method does not separate between the two emission sources.
N <sub>2</sub> O				
	Multilateral Operations	Memo Item: Multilateral Operations	1 A 4 Other Sectors	see explanation for CO <sub>2</sub> .
	Venting and Flaring	1 B 2 c	1 A 1 b Petroleum Refining	see explanation for CO <sub>2</sub> .
HFCs				
HFCs	Consumption of HFCs - Potential Emissions By Sectors	2 F 1 to 2 F 8	2 F Consumption of Halocarbons and SF <sub>6</sub>	No detailed information about potential emissions of HFCs.
HFCs	Potential Emissions of HFCs - Import in Products	2 F(p) Import in Products	2 F(p) Import in Bulk	No detailed information about import of HFCs in bulk.
PF <sub>5</sub>				
PFCs	Consumption of PFCs - Potential Emissions By Sectors	2 F 1 to 2 F 8	2 F Consumption of Halocarbons and SF <sub>6</sub>	see explanation for HFCs.
PFCs	Potential Emissions of PFCs - Import in Products	2 F(p) Import in Products	2 F(p) Import in Bulk	see explanation for HFCs.
SF <sub>6</sub>				
	Consumption of SF <sub>6</sub> -Potential Emissions By Sectors	2 F 1 to 2 F 8	2 F Consumption of Halocarbons and SF <sub>6</sub>	see explanation for HFCs.
	Potential Emissions of SF <sub>6</sub> - Import in Products	2 F(p) Import in Products	2 F(p) Import in Bulk	see explanation for HFCs.


<sup>(1)</sup> Please, clearly indicate sources and sinks which are considered in the IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for excluding these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the indicator "NE" is entered in the sectoral tables.

<sup>(2)</sup> Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Wastewater Handling).

<sup>(3)</sup> Please clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the indicator "IE" is used in the sectoral tables.

TABLE 9 COMPLETENESS  
(Sheet 2 of 2)

Austria  
2003  
submission 2005

Additional GHG emissions reported <sup>(4)</sup>						
GHG 	Source category	Emissions (Gg)	Estimated GWP value (100-year horizon)	Emissions CO <sub>2</sub> equivalent (Gg)	Reference to the data source of GWP value	Explanation

<sup>(4)</sup> Parties are encouraged to provide information on emissions of greenhouse gases whose GWP values have not yet been agreed upon by the COP. Please include such gases in this table if they are considered in the submitted inventory. Provide additional information on the estimation methods used.

**TABLE 10 EMISSIONS TRENDS (CO<sub>2</sub>)**  
(Sheet 1 of 5)

Austria  
2003  
submission 2005

	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	(Gg)														
<b>1. Energy</b>	<b>53,527.09</b>	<b>53,527.09</b>	<b>57,236.98</b>	<b>52,425.77</b>	<b>53,037.84</b>	<b>53,027.87</b>	<b>55,667.06</b>	<b>59,430.39</b>	<b>58,797.95</b>	<b>58,807.61</b>	<b>57,399.85</b>	<b>57,616.58</b>	<b>61,475.09</b>	<b>62,586.99</b>	<b>67,857.30</b>
A. Fuel Combustion (Sectoral Approach)	53,425.06	53,425.06	57,125.96	52,305.74	52,925.81	52,900.34	55,540.03	59,359.36	58,677.44	58,665.78	57,229.31	57,452.05	61,292.36	62,419.95	67,624.26
1. Energy Industries	13,622.41	13,622.41	14,416.96	11,346.25	11,384.60	11,644.66	12,677.57	13,762.22	13,371.32	12,897.76	12,258.63	12,275.76	13,423.01	13,347.79	16,030.35
2. Manufacturing Industries and Construction	12,970.71	12,970.71	13,379.09	12,274.18	12,813.11	13,817.64	13,904.54	13,777.76	16,121.87	14,589.73	13,556.77	14,298.68	14,064.14	14,394.72	14,163.39
3. Transport	12,404.87	12,404.87	13,997.14	13,941.35	14,119.23	14,081.96	14,466.30	16,042.44	14,977.02	17,182.90	16,596.33	17,735.29	18,886.06	20,973.52	22,692.33
4. Other Sectors	14,392.05	14,392.05	15,295.67	14,710.26	14,569.45	13,314.49	14,459.03	15,738.00	14,170.10	13,952.94	14,775.96	13,097.37	14,882.92	13,662.92	14,702.00
5. Other	35.02	35.02	37.11	33.70	39.43	41.60	32.59	38.94	37.13	42.45	41.62	44.95	36.23	41.00	36.19
B. Fugitive Emissions from Fuels	102.03	102.03	111.03	120.03	112.03	127.53	127.03	71.03	120.51	141.83	170.53	164.53	182.73	167.03	233.04
1. Solid Fuels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2. Oil and Natural Gas	102.03	102.03	111.03	120.03	112.03	127.53	127.03	71.03	120.51	141.83	170.53	164.53	182.73	167.03	233.04
<b>2. Industrial Processes</b>	<b>7,432.16</b>	<b>7,432.16</b>	<b>7,259.88</b>	<b>6,727.09</b>	<b>6,665.95</b>	<b>6,994.08</b>	<b>7,248.43</b>	<b>6,948.86</b>	<b>7,528.56</b>	<b>7,226.96</b>	<b>7,044.61</b>	<b>7,645.23</b>	<b>7,599.70</b>	<b>8,202.61</b>	<b>8,151.09</b>
A. Mineral Products	3,242.73	3,242.73	3,100.60	3,118.54	3,052.83	3,166.86	2,825.81	2,738.24	2,938.01	2,784.78	2,770.53	2,928.28	2,946.53	3,055.39	3,060.20
B. Chemical Industry	464.46	464.46	471.67	450.80	469.98	429.52	514.86	516.90	507.83	555.63	524.86	532.29	509.05	510.25	558.88
C. Metal Production	3,724.97	3,724.97	3,687.60	3,157.75	3,143.14	3,397.69	3,907.75	3,693.72	4,082.72	3,886.54	3,749.22	4,184.65	4,144.13	4,636.97	4,532.01
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF <sub>6</sub>															
F. Consumption of Halocarbons and SF <sub>6</sub>															
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>3. Solvent and Other Product Use</b>	<b>282.67</b>	<b>282.67</b>	<b>236.77</b>	<b>187.74</b>	<b>187.35</b>	<b>171.54</b>	<b>189.88</b>	<b>172.81</b>	<b>190.09</b>	<b>172.24</b>	<b>158.37</b>	<b>181.02</b>	<b>193.60</b>	<b>193.60</b>	<b>193.60</b>
<b>4. Agriculture</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
A. Enteric Fermentation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Manure Management	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils <sup>(2)</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Land-Use Change and Forestry <sup>(3)</sup></b>	<b>-9,013.33</b>	<b>-9,013.33</b>	<b>-11,773.04</b>	<b>-8,434.82</b>	<b>-8,760.71</b>	<b>-7,639.93</b>	<b>-7,046.36</b>	<b>-5,191.59</b>	<b>-11,690.45</b>	<b>-12,707.10</b>	<b>-12,637.45</b>	<b>-13,645.91</b>	<b>-13,344.77</b>	<b>-11,310.96</b>	<b>-12,772.55</b>
A. Changes in Forest and Other Woody Biomass Stocks	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Forest and Grassland Conversion	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Abandonment of Managed Lands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. CO <sub>2</sub> Emissions and Removals from Soil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>6. Waste</b>	<b>20.70</b>	<b>20.70</b>	<b>18.45</b>	<b>7.55</b>	<b>8.50</b>	<b>9.75</b>	<b>10.09</b>	<b>10.40</b>	<b>10.70</b>	<b>10.99</b>	<b>11.31</b>	<b>11.28</b>	<b>11.24</b>	<b>11.27</b>	<b>11.27</b>
A. Solid Waste Disposal on Land	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Waste-water Handling	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Waste Incineration	20.70	20.70	18.45	7.55	8.50	9.75	10.09	10.40	10.70	10.99	11.31	11.28	11.24	11.27	11.27
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>7. Other (please specify)</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>Total Emissions/Removals with LUCF <sup>(4)</sup></b>	<b>52,249.29</b>	<b>52,249.29</b>	<b>52,979.04</b>	<b>50,913.32</b>	<b>51,138.93</b>	<b>52,563.31</b>	<b>56,069.09</b>	<b>61,370.87</b>	<b>54,836.85</b>	<b>53,510.71</b>	<b>51,976.69</b>	<b>51,808.21</b>	<b>55,934.87</b>	<b>59,683.51</b>	<b>63,440.70</b>
<b>Total Emissions without LUCF <sup>(4)</sup></b>	<b>61,262.62</b>	<b>61,262.62</b>	<b>64,752.08</b>	<b>59,348.14</b>	<b>59,899.64</b>	<b>60,203.24</b>	<b>63,115.45</b>	<b>66,562.46</b>	<b>66,527.30</b>	<b>66,217.81</b>	<b>64,614.14</b>	<b>65,454.12</b>	<b>69,279.64</b>	<b>70,994.47</b>	<b>76,213.26</b>
<b>Memo Items:</b>															
<b>International Bunkers</b>	<b>885.97</b>	<b>885.97</b>	<b>993.88</b>	<b>1,077.44</b>	<b>1,139.98</b>	<b>1,185.65</b>	<b>1,327.42</b>	<b>1,466.42</b>	<b>1,525.57</b>	<b>1,578.21</b>	<b>1,541.67</b>	<b>1,674.93</b>	<b>1,647.45</b>	<b>1,526.14</b>	<b>1,451.90</b>
Aviation	885.97	885.97	993.88	1,077.44	1,139.98	1,185.65	1,327.42	1,466.42	1,525.57	1,578.21	1,541.67	1,674.93	1,647.45	1,526.14	1,451.90
Marine	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Multilateral Operations</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>	<b>1E</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>9,750.10</b>	<b>9,750.10</b>	<b>10,612.24</b>	<b>10,367.55</b>	<b>10,923.44</b>	<b>10,553.40</b>	<b>11,217.02</b>	<b>11,940.19</b>	<b>12,022.34</b>	<b>11,436.51</b>	<b>12,734.05</b>	<b>12,017.13</b>	<b>13,410.61</b>	<b>13,296.77</b>	<b>14,665.91</b>

<sup>(1)</sup> Fill in the base year adopted by the Party under the Convention, if different from 1990.

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

<sup>(3)</sup> Take the net emissions as reported in Summary 1.A of this common reporting format. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(4)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO<sub>2</sub> emissions and removals from Land-Use Change and Forestry.

**TABLE 10 EMISSIONS TRENDS (CH<sub>4</sub>)**  
(Sheet 2 of 5)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	(Gg)														
<b>Total Emissions</b>	<b>466,56</b>	<b>466,56</b>	<b>464,76</b>	<b>450,50</b>	<b>448,84</b>	<b>440,84</b>	<b>435,37</b>	<b>426,61</b>	<b>413,40</b>	<b>407,48</b>	<b>398,37</b>	<b>387,92</b>	<b>381,93</b>	<b>374,11</b>	<b>371,74</b>
<b>1. Energy</b>	<b>35,56</b>	<b>35,56</b>	<b>37,09</b>	<b>34,97</b>	<b>34,65</b>	<b>32,43</b>	<b>33,46</b>	<b>35,35</b>	<b>30,76</b>	<b>30,15</b>	<b>30,32</b>	<b>28,89</b>	<b>30,27</b>	<b>29,70</b>	<b>31,11</b>
A. Fuel Combustion (Sectoral Approach)	22,34	22,34	23,70	21,65	20,98	19,01	19,51	20,43	15,94	15,36	15,32	14,31	15,53	14,82	15,82
1. Energy Industries	0,15	0,15	0,17	0,16	0,16	0,16	0,16	0,19	0,19	0,19	0,16	0,17	0,19	0,21	0,31
2. Manufacturing Industries and Construction	0,39	0,39	0,43	0,43	0,43	0,45	0,45	0,46	0,50	0,47	0,46	0,47	0,47	0,49	0,47
3. Transport	2,91	2,91	2,88	2,61	2,40	2,19	1,99	1,82	1,63	1,56	1,40	1,29	1,19	1,14	1,07
4. Other Sectors	18,88	18,88	20,21	18,45	18,00	16,21	16,90	17,96	13,63	13,13	13,30	12,38	13,68	12,98	13,96
5. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
B. Fugitive Emissions from Fuels	13,22	13,22	13,40	13,31	13,67	13,42	13,96	14,92	14,82	14,80	15,01	14,58	14,74	14,88	15,29
1. Solid Fuels	0,52	0,52	0,45	0,37	0,36	0,29	0,28	0,24	0,24	0,24	0,24	0,27	0,26	0,39	0,39
2. Oil and Natural Gas	12,70	12,70	12,95	12,94	13,31	13,13	13,68	14,68	14,58	14,55	14,76	14,31	14,49	14,49	14,91
<b>2. Industrial Processes</b>	<b>0,36</b>	<b>0,36</b>	<b>0,35</b>	<b>0,32</b>	<b>0,35</b>	<b>0,36</b>	<b>0,34</b>	<b>0,35</b>	<b>0,36</b>	<b>0,39</b>	<b>0,35</b>	<b>0,35</b>	<b>0,32</b>	<b>0,36</b>	<b>0,35</b>
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	0,35	0,35	0,35	0,31	0,35	0,36	0,33	0,34	0,35	0,38	0,34	0,35	0,32	0,35	0,34
C. Metal Production	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF <sub>6</sub>															
F. Consumption of Halocarbons and SF <sub>6</sub>															
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>3. Solvent and Other Product Use</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>4. Agriculture</b>	<b>219,15</b>	<b>219,15</b>	<b>216,17</b>	<b>208,14</b>	<b>208,72</b>	<b>210,63</b>	<b>211,77</b>	<b>208,45</b>	<b>206,11</b>	<b>205,52</b>	<b>201,19</b>	<b>197,73</b>	<b>195,49</b>	<b>191,25</b>	<b>189,97</b>
A. Enteric Fermentation	170,15	170,15	167,85	160,53	160,56	162,74	164,02	161,60	159,25	158,15	156,28	154,15	151,58	148,74	147,32
B. Manure Management	48,60	48,60	47,93	47,23	47,63	47,42	47,25	46,34	46,35	46,86	44,39	43,06	43,41	42,02	42,16
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	0,33	0,33	0,33	0,31	0,47	0,40	0,44	0,45	0,45	0,45	0,45	0,45	0,43	0,43	0,43
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	0,07	0,07	0,07	0,06	0,06	0,06	0,07	0,06	0,07	0,07	0,07	0,07	0,06	0,07	0,06
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Land-Use Change and Forestry</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
A. Changes in Forest and Other Woody Biomass Stocks	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Forest and Grassland Conversion	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Abandonment of Managed Lands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. CO <sub>2</sub> Emissions and Removals from Soil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>6. Waste</b>	<b>211,49</b>	<b>211,49</b>	<b>211,14</b>	<b>207,08</b>	<b>205,12</b>	<b>197,42</b>	<b>189,80</b>	<b>182,46</b>	<b>176,17</b>	<b>171,42</b>	<b>166,51</b>	<b>160,94</b>	<b>155,84</b>	<b>152,80</b>	<b>150,31</b>
A. Solid Waste Disposal on Land	197,34	197,34	196,82	192,51	190,26	182,35	174,64	167,23	160,94	156,13	151,14	145,55	140,39	137,27	134,71
B. Waste-water Handling	13,64	13,64	13,77	13,93	14,04	14,09	14,12	14,14	14,15	14,17	14,19	14,23	14,28	14,36	14,42
C. Waste Incineration	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
D. Other	0,52	0,52	0,54	0,65	0,82	0,98	1,04	1,09	1,08	1,12	1,18	1,16	1,17	1,17	1,19
<b>7. Other (please specify)</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>Memo Items:</b>															
<b>International Bunkers</b>	<b>0,01</b>	<b>0,01</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,02</b>	<b>0,03</b>	<b>0,03</b>	<b>0,03</b>	<b>0,03</b>	<b>0,03</b>	<b>0,03</b>	<b>0,02</b>
Aviation	0,01	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,03	0,03	0,03	0,03	0,02
Marine	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Multilateral Operations</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>															



**TABLE 10 EMISSIONS TRENDS (N<sub>2</sub>O)**  
(Sheet 3 of 5)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	(Gg)														
<b>Total Emissions</b>	<b>18,43</b>	<b>18,43</b>	<b>19,55</b>	<b>18,41</b>	<b>17,94</b>	<b>19,47</b>	<b>19,80</b>	<b>18,69</b>	<b>19,00</b>	<b>19,27</b>	<b>18,73</b>	<b>18,58</b>	<b>18,49</b>	<b>18,18</b>	<b>17,88</b>
<b>1. Energy</b>	<b>2,17</b>	<b>2,17</b>	<b>2,43</b>	<b>2,49</b>	<b>2,60</b>	<b>2,67</b>	<b>2,68</b>	<b>2,73</b>	<b>2,71</b>	<b>2,73</b>	<b>2,67</b>	<b>2,55</b>	<b>2,64</b>	<b>2,63</b>	<b>2,65</b>
A. Fuel Combustion (Sectoral Approach)	2,17	2,17	2,43	2,49	2,60	2,67	2,68	2,73	2,71	2,73	2,67	2,55	2,64	2,63	2,65
1. Energy Industries	0,15	0,15	0,17	0,14	0,14	0,15	0,16	0,16	0,15	0,17	0,17	0,18	0,20	0,20	0,22
2. Manufacturing Industries and Construction	0,51	0,51	0,54	0,53	0,53	0,56	0,55	0,54	0,59	0,57	0,58	0,55	0,55	0,55	0,53
3. Transport	0,55	0,55	0,76	0,88	0,98	1,03	1,02	1,00	0,94	0,99	0,91	0,89	0,88	0,91	0,91
4. Other Sectors	0,95	0,95	0,95	0,94	0,94	0,93	0,94	1,03	1,03	0,99	1,01	0,93	1,00	0,96	0,98
5. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
B. Fugitive Emissions from Fuels	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Solid Fuels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2. Oil and Natural Gas	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
<b>2. Industrial Processes</b>	<b>2,94</b>	<b>2,94</b>	<b>2,99</b>	<b>2,70</b>	<b>2,83</b>	<b>2,66</b>	<b>2,77</b>	<b>2,82</b>	<b>2,78</b>	<b>2,89</b>	<b>2,98</b>	<b>3,07</b>	<b>2,54</b>	<b>2,60</b>	<b>2,85</b>
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	2,94	2,94	2,99	2,70	2,83	2,66	2,77	2,82	2,78	2,89	2,98	3,07	2,54	2,60	2,85
C. Metal Production	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF <sub>6</sub>															
F. Consumption of Halocarbons and SF <sub>6</sub>															
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>3. Solvent and Other Product Use</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>	<b>0,75</b>
<b>4. Agriculture</b>	<b>12,43</b>	<b>12,43</b>	<b>13,24</b>	<b>12,31</b>	<b>11,57</b>	<b>13,13</b>	<b>13,26</b>	<b>11,97</b>	<b>12,31</b>	<b>12,36</b>	<b>11,73</b>	<b>11,52</b>	<b>11,77</b>	<b>11,41</b>	<b>10,84</b>
A. Enteric Fermentation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Manure Management	2,54	2,54	2,51	2,41	2,43	2,46	2,50	2,45	2,43	2,42	2,38	2,34	2,32	2,28	2,27
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	9,90	9,90	10,73	9,89	9,14	10,66	10,76	9,52	9,88	9,93	9,34	9,18	9,44	9,13	8,57
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Land-Use Change and Forestry</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
A. Changes in Forest and Other Woody Biomass Stocks	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Forest and Grassland Conversion	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Abandonment of Managed Lands	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. CO <sub>2</sub> Emissions and Removals from Soil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>6. Waste</b>	<b>0,13</b>	<b>0,13</b>	<b>0,14</b>	<b>0,16</b>	<b>0,18</b>	<b>0,26</b>	<b>0,34</b>	<b>0,42</b>	<b>0,45</b>	<b>0,54</b>	<b>0,61</b>	<b>0,68</b>	<b>0,79</b>	<b>0,79</b>	<b>0,80</b>
A. Solid Waste Disposal on Land	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Waste-water Handling	0,05	0,05	0,06	0,06	0,06	0,12	0,19	0,26	0,30	0,38	0,44	0,51	0,62	0,62	0,62
C. Waste Incineration	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
D. Other	0,08	0,08	0,08	0,10	0,12	0,14	0,15	0,16	0,15	0,16	0,17	0,17	0,17	0,17	0,18
<b>7. Other (please specify)</b> ...	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>Memo Items:</b>															
<b>International Bunkers</b>	<b>0,03</b>	<b>0,03</b>	<b>0,03</b>	<b>0,04</b>	<b>0,04</b>	<b>0,04</b>	<b>0,05</b>	<b>0,05</b>	<b>0,05</b>	<b>0,06</b>	<b>0,05</b>	<b>0,06</b>	<b>0,06</b>	<b>0,05</b>	<b>0,05</b>
Aviation	0,03	0,03	0,03	0,04	0,04	0,04	0,05	0,05	0,05	0,06	0,05	0,06	0,06	0,05	0,05
Marine	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Multilateral Operations</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>	<b>IE</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>															

**TABLE 10 EMISSION TRENDS ( HFCs, PFCs and SF<sub>6</sub> )**  
(Sheet 4 of 5)

Austria  
2003  
submission 2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	(Gg)														
<b>Emissions of HFCs<sup>(5)</sup> - CO<sub>2</sub> equivalent (Gg)</b>	<b><u>555.26</u></b>	<b><u>219.16</u></b>	<b><u>334.57</u></b>	<b><u>386.59</u></b>	<b><u>444.24</u></b>	<b><u>505.20</u></b>	<b><u>555.26</u></b>	<b><u>637.15</u></b>	<b><u>729.62</u></b>	<b><u>812.53</u></b>	<b><u>866.99</u></b>	<b><u>1,019.00</u></b>	<b><u>1,122.34</u></b>	<b><u>1,218.92</u></b>	<b><u>1,308.22</u></b>
HFC-23	0,0011	0,0002	0,0003	0,0004	0,0006	0,0009	0,0011	0,0014	0,0015	0,0012	0,0014	0,0017	0,0019	0,0021	0,0022
HFC-32	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001	0,0002	0,0004	0,0007	0,0010	0,0019	0,0026	0,0034	0,0041
HFC-41	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
HFC-43-10mee	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
HFC-125	0,0015	0,0000	0,0000	0,0000	0,0000	0,0000	0,0015	0,0057	0,0110	0,0143	0,0151	0,0198	0,0276	0,0349	0,0415
HFC-134	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
HFC-134a	0,4128	0,1671	0,2550	0,2940	0,3363	0,3808	0,4128	0,4576	0,5068	0,5594	0,5941	0,6348	0,6720	0,7065	0,7386
HFC-152a	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001	0,0003	0,0006	0,0007	0,0006	0,4897	0,4991	0,5085	0,5191
HFC-143	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
HFC-143a	0,0004	0,0000	0,0000	0,0000	0,0000	0,0000	0,0004	0,0025	0,0056	0,0079	0,0089	0,0125	0,0200	0,0269	0,0332
HFC-227ea	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001	0,0002	0,0004	0,0005	0,0008	0,0011	0,0014
HFC-236fa	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
HFC-245ca	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
<b>Emissions of PFCs<sup>(5)</sup> - CO<sub>2</sub> equivalent (Gg)</b>	<b><u>68.74</u></b>	<b><u>1,079.24</u></b>	<b><u>1,087.08</u></b>	<b><u>462.67</u></b>	<b><u>52.92</u></b>	<b><u>58.65</u></b>	<b><u>68.74</u></b>	<b><u>66.27</u></b>	<b><u>96.83</u></b>	<b><u>44.75</u></b>	<b><u>64.54</u></b>	<b><u>72.33</u></b>	<b><u>82.15</u></b>	<b><u>86.87</u></b>	<b><u>102.54</u></b>
CF <sub>4</sub>	0,0060	0,1410	0,1414	0,0592	0,0050	0,0052	0,0060	0,0058	0,0085	0,0027	0,0048	0,0063	0,0063	0,0064	0,0069
C <sub>2</sub> F <sub>6</sub>	0,0032	0,0177	0,0182	0,0084	0,0022	0,0027	0,0032	0,0031	0,0045	0,0029	0,0036	0,0033	0,0044	0,0041	0,0051
C <sub>3</sub> F <sub>8</sub>	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0011	0,0014
C <sub>4</sub> F <sub>10</sub>	0,0001	0,0000	0,0000	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001
c-C <sub>4</sub> F <sub>8</sub>	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
C <sub>5</sub> F <sub>12</sub>	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
C <sub>6</sub> F <sub>14</sub>	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
<b>Emissions of SF<sub>6</sub><sup>(5)</sup> - CO<sub>2</sub> equivalent (Gg)</b>	<b><u>1,139.16</u></b>	<b><u>502.58</u></b>	<b><u>653.36</u></b>	<b><u>697.85</u></b>	<b><u>793.71</u></b>	<b><u>985.70</u></b>	<b><u>1,139.16</u></b>	<b><u>1,218.05</u></b>	<b><u>1,120.15</u></b>	<b><u>907.99</u></b>	<b><u>683.96</u></b>	<b><u>633.31</u></b>	<b><u>636.62</u></b>	<b><u>640.83</u></b>	<b><u>593.52</u></b>
SF <sub>6</sub>	0,05	0,02	0,03	0,03	0,03	0,04	0,05	0,05	0,05	0,04	0,03	0,03	0,03	0,03	0,02

Chemical	GWP
HFCs	
HFC-23	11700
HFC-32	650
HFC-41	150
HFC-43-10mee	1300
HFC-125	2800
HFC-134	1000
HFC-134a	1300
HFC-152a	140
HFC-143	300
HFC-143a	3800
HFC-227ea	2900
HFC-236fa	6300
HFC-245ca	560
PFCs	
CF <sub>4</sub>	6500
C <sub>2</sub> F <sub>6</sub>	9200
C <sub>3</sub> F <sub>8</sub>	7000
C <sub>4</sub> F <sub>10</sub>	7000
c-C <sub>4</sub> F <sub>8</sub>	8700
C <sub>5</sub> F <sub>12</sub>	7500
C <sub>6</sub> F <sub>14</sub>	7400
SF <sub>6</sub>	23900

<sup>(5)</sup> Enter information on the actual emissions. Where estimates are only available for the potential emissions, specify this in a comment to the corresponding cell. Only in this row the emissions are expressed as CO<sub>2</sub> equivalent emissions in order to facilitate data flow among spreadsheets.

**TABLE 10 EMISSION TRENDS (SUMMARY)**  
(Sheet 5 of 5)

Austria  
2003  
submission 2005

GREENHOUSE GAS EMISSIONS	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	CO <sub>2</sub> equivalent (Gg)														
Net CO <sub>2</sub> emissions/removals	52.249,29	52.249,29	52.979,04	50.913,32	51.138,93	52.563,31	56.069,09	61.370,87	54.836,85	53.510,71	51.976,69	51.808,21	55.934,87	59.683,51	63.440,70
CO <sub>2</sub> emissions (without LUCF) <sup>(6)</sup>	61.262,62	61.262,62	64.752,08	59.348,14	59.899,64	60.203,24	63.115,45	66.562,46	66.527,30	66.217,81	64.614,14	65.454,12	69.279,64	70.994,47	76.213,26
CH <sub>4</sub>	9.797,69	9.797,69	9.759,88	9.460,60	9.425,66	9.257,72	9.142,84	8.958,72	8.681,40	8.557,07	8.365,73	8.146,25	8.020,50	7.856,28	7.806,62
N <sub>2</sub> O	5.711,76	5.711,76	6.060,03	5.706,80	5.561,46	6.034,88	6.137,65	5.794,74	5.890,80	5.973,57	5.807,59	5.758,53	5.730,53	5.636,41	5.542,26
HFCs	555,26	219,16	334,57	386,59	444,24	505,20	555,26	637,15	729,62	812,53	866,99	1.019,00	1.122,34	1.218,92	1.308,22
PFCs	68,74	1.079,24	1.087,08	462,67	52,92	58,65	68,74	66,27	96,83	44,75	64,54	72,33	82,15	86,87	102,54
SF <sub>6</sub>	1.139,16	502,58	653,36	697,85	793,71	985,70	1.139,16	1.218,05	1.120,15	907,99	683,96	633,31	636,62	640,83	593,52
<b>Total (with net CO<sub>2</sub> emissions/removals)</b>	<b>69.521,89</b>	<b>69.559,72</b>	<b>70.873,96</b>	<b>67.627,81</b>	<b>67.416,92</b>	<b>69.405,45</b>	<b>73.112,74</b>	<b>78.045,80</b>	<b>71.355,65</b>	<b>69.806,62</b>	<b>67.765,51</b>	<b>67.437,64</b>	<b>71.527,01</b>	<b>75.122,83</b>	<b>78.793,87</b>
<b>Total (without CO<sub>2</sub> from LUCF) <sup>(6)</sup></b>	<b>78.535,22</b>	<b>78.573,05</b>	<b>82.647,00</b>	<b>76.062,64</b>	<b>76.177,63</b>	<b>77.045,38</b>	<b>80.159,10</b>	<b>83.237,39</b>	<b>83.046,10</b>	<b>82.513,72</b>	<b>80.402,96</b>	<b>81.083,55</b>	<b>84.871,78</b>	<b>86.433,79</b>	<b>91.566,42</b>

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	CO <sub>2</sub> equivalent (Gg)														
1. Energy	54.945,90	54.945,90	58.769,48	53.932,46	54.573,05	54.536,96	57.200,73	61.019,19	60.283,20	60.287,29	58.865,23	59.014,77	62.927,72	64.026,01	69.330,63
2. Industrial Processes	10.114,82	10.152,65	10.269,45	9.118,31	8.842,87	9.376,47	9.875,84	9.751,84	10.345,24	9.897,07	9.590,82	10.328,82	10.234,05	10.963,93	11.046,05
3. Solvent and Other Product Use	515,17	515,17	469,27	420,24	419,85	404,04	422,38	405,31	422,59	404,74	390,87	413,52	426,10	426,10	426,10
4. Agriculture	8.456,23	8.456,23	8.643,69	8.187,31	7.970,20	8.492,49	8.557,75	8.089,34	8.144,83	8.146,26	7.860,19	7.724,46	7.753,92	7.552,64	7.349,06
5. Land-Use Change and Forestry <sup>(7)</sup>	-9.013,33	-9.013,33	-11.773,04	-8.434,82	-8.760,71	-7.639,93	-7.046,36	-5.191,59	-11.690,45	-12.707,10	-12.637,45	-13.645,91	-13.344,77	-11.310,96	-12.772,55
6. Waste	4.503,10	4.503,10	4.495,12	4.404,33	4.371,66	4.235,43	4.102,39	3.971,72	3.850,23	3.778,36	3.695,85	3.601,98	3.529,99	3.465,11	3.414,59
7. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

<sup>(6)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO<sub>2</sub> emissions and removals from Land-Use Change and Forestry.

<sup>(7)</sup> Net emissions.

TABLE 11 CHECK LIST OF REPORTED INVENTORY INFORMATION <sup>(1)</sup>							
<b>Party:</b>		Austria		<b>Year:</b>		2003	
<b>Contact info:</b>	Focal point for national GHG inventories:	Manfred Ritter					
	Address:	Spittelauer Lände 5, A-1090 Vienna, Austria					
	Telephone:	++43+1-31304-5951	Fax:	++43+1-31304-5959	E-mail:	manfred.ritter@umweltbundesamt.at	
	Main institution preparing the inventory:	Umweltbundesamt GmbH					
<b>General info:</b>	Date of submission:	15.01.2005					
	Base years:	1990	PFCs, HFCs, SF <sub>6</sub> :				1995
	Year covered in the submission:	2003					
	Gases covered:	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, PFCs, HFCs, SF <sub>6</sub> , NOX, CO, NMVOC, SO <sub>2</sub>					
	Omissions in geographic coverage:	None					
<b>Tables:</b>		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	Sectoral report tables:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sectoral background data tables:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Summary 1 (IPCC Summary tables):	IPCC Table 7A:		<input checked="" type="checkbox"/>	IPCC Table 7B:		<input checked="" type="checkbox"/>
	Summary 2 (CO <sub>2</sub> equivalent emissions):			<input checked="" type="checkbox"/>			
	Summary 3 (Methods/Emission factors):			<input checked="" type="checkbox"/>			
	Uncertainty:	IPCC Table 8A:		<input checked="" type="checkbox"/>	National information:		<input checked="" type="checkbox"/>
	Recalculation tables:			<input checked="" type="checkbox"/>			
	Completeness table:			<input checked="" type="checkbox"/>			
	Trend table:			<input checked="" type="checkbox"/>			
<b>CO<sub>2</sub></b>	Comparison of CO <sub>2</sub> from fuel combustion:	Worksheet 1-1		Percentage of difference		Explanation of differences	
		<input checked="" type="checkbox"/>		6,71		<input checked="" type="checkbox"/>	
<b>Recalculation:</b>		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	CO <sub>2</sub>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH <sub>4</sub>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	N <sub>2</sub> O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HFCs, PFCs, SF <sub>6</sub>		<input checked="" type="checkbox"/>				
	Explanations:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Recalculation tables for all recalculated years:			<input checked="" type="checkbox"/>			
Full CRF for the recalculated base year:			<input checked="" type="checkbox"/>				
<b>HFCs, PFCs, SF<sub>6</sub></b>		HFCs		PFCs		SF <sub>6</sub>	
	Disaggregation by species:	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	Production of Halocarbons/SF <sub>6</sub> :	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	Consumption of Halocarbons/SF <sub>6</sub> :	Actual	Potential	Actual	Potential	Actual	Potential
	Potential/Actual emission ratio:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		1,92		3,71		1,37	
Reference to National Inventory Report and/or national inventory web site:		Umweltbundesamt, OLI 2003 <a href="http://www.umweltbundesamt.at">http://www.umweltbundesamt.at</a>					

CRF - Common Reporting Format.  
LUCF - Land-Use Change and Forestry.

<sup>(1)</sup> For each omission, give an explanation for the reasons by inserting a comment to the corresponding cell.

TABLE 5 SECTORAL REPORT FOR LAND USE, LAND-USE CHANGE AND FORESTRY  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/ removals <sup>(1), (2)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO
	(Gg)				
<b>Total Land-Use Categories</b>	-12772,55	0,00	0,00	0,00	0,00
<b>A. Forest Land</b>	-13059,89	0,00	0,00	0,00	0,00
1. Forest Land remaining Forest Land	-13010,81	0,00	NE	NE	NE
2. Land converted to Forest Land	-49,08	0,00	NE	NE	NE
<b>B. Cropland</b>	116,30	0,00	0,00	0,00	0,00
1. Cropland remaining Cropland	3,99	0,00	0,00	NE	NE
2. Land converted to Cropland	4,82	0,00	0,00	NE	NE
<b>C. Grassland</b>	131,22	0,00	0,00	0,00	0,00
1. Grassland remaining Grassland	81,06	0,00	0,00	NE	NE
2. Land converted to Grassland	50,16	0,00	0,00	NE	NE
<b>D. Wetlands<sup>(3)</sup></b>	2,86	0,00	0,00	0,00	0,00
1. Wetlands remaining Wetlands	0,00	0,00	0,00	NE	NE
2. Land converted to Wetlands	2,86	0,00	0,00	NE	NE
<b>E. Settlements<sup>(3)</sup></b>	14,28	0,00	0,00	0,00	0,00
1. Settlements remaining Settlements	0,00	NE	NE	NE	NE
2. Land converted to Settlements	14,28	NE	NE	NE	NE
<b>F. Other Land<sup>(4)</sup></b>	22,67	0,00	0,00	0,00	0,00
1. Other Land remaining Other Land		NE	NE	NE	NE
2. Land converted to Other Land	22,67	NE	NE	NE	NE
<b>G. Other (please specify)<sup>(5)</sup></b>	NE	NE	NE	NE	NE
<i>Harvested Wood Products<sup>(6)</sup></i>	NE	NE	NE	NE	NE
<b>Information items<sup>(7)</sup></b>					
Forest Land converted to Other Land-Use Categories	94,79	NE	NE	NE	NE
Grassland converted to Other Land-Use Categories	NE	NE	NE	NE	NE

<sup>(1)</sup> According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO<sub>2</sub> by multiplying C by 44/12 and by changing the sign for net CO<sub>2</sub> removals to be negative (-) and for net CO<sub>2</sub> emissions to be positive (+).

<sup>(2)</sup> CO<sub>2</sub> emissions from liming and biomass burning are included in this column.

<sup>(3)</sup> Parties do not have to prepare estimates for categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish and report in this row.

<sup>(4)</sup> Parties do not have to prepare estimates for this category contained in Chapter 3.7 of the IPCC good practice guidance for LULUCF, although they may do so if they wish and report in this row. This land-use category is to allow the total of identified land area to match the national area.

<sup>(5)</sup> May include other non-specified sources and sinks.

<sup>(6)</sup> Parties do not have to prepare estimates for this category contained in appendix 3a.1 of the IPCC good practice guidance for LULUCF, although they may do so if they wish and report in this row.

<sup>(7)</sup> These items are listed for information only and will not be added to the totals, because they are already included in subcategories 5.A.2 to 5.F.2.

**Note:** The totals for N<sub>2</sub>O (5.A and 5.D), CO<sub>2</sub> (5.B and 5.C) and CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O (5.E and 5.F) may not equal the summation of the subcategories included in this table, because these totals include data from tables 5(II), 5(IV) and 5(V), where the subcategories are not available. Emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O from 5.G Other are estimated based on the information provided in the background data tables.

**Documentation box:**

- Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- If estimates are reported under 5.G Other, use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

For category 5 B 1 and 5 C 1 an estimate was performed for the year 1990 only and extrapolated for the remaining time series.

TABLE 5.A SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY  
Forest Land  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS				
Land-Use Category	Sub-division <sup>(1)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(2,3)</sup>			Net carbon stock change in dead organic matter per area <sup>(3)</sup>	Net carbon stock change in soils per area <sup>(3)</sup>	Carbon stock change in living biomass <sup>(2,3)</sup>			Net carbon stock change in dead organic matter <sup>(3)</sup>	Net carbon stock change in soils <sup>(3)</sup>
			Increase	Decrease	Net change (Mg C/ha)			Increase	Decrease	Net change (Gg C)		
<b>A. Total Forest Land</b>		3373,69	2,77	-1,71	1,06	0,00	0,00	9331,66	-5769,87	3561,79	0,00	0,00
1. Forest Land remaining Forest Land		3362,31	2,77	-1,72	1,06	0,00	0,00	9318,27	-5769,87	3548,40	0,00	0,00
	Coniferous	2481,38	2,77	-1,88	0,89	NE	NE	6879,78	-4662,51	2217,27	NE	NE
	Deciduous	880,93	2,77	-1,26	1,51	NE	NE	2438,49	-1107,36	1331,13	NE	NE
2. Land converted to Forest Land <sup>(4)</sup>		11,38	1,18	0,00	1,18	0,00	0,00	13,38	0,00	13,38	0,00	0,00
2.1 Cropland converted to Forest Land		1,82	1,18	0,00	1,18	0,00	0,00	2,14	0,00	2,14	0,00	0,00
	Total	1,82	1,18	0,00	1,18	NE	NE	2,14	0,00	2,14	NE	NE
2.2 Grassland converted to Forest Land		6,72	1,18	0,00	1,18	0,00	0,00	7,90	0,00	7,90	0,00	0,00
	Total	6,72	1,18	0,00	1,18	NE	NE	7,90	0,00	7,90	NE	NE
2.3 Wetlands converted to Forest Land		0,57	1,18	0,00	1,18	0,00	0,00	0,67	0,00	0,67	0,00	0,00
	Total	0,57	1,18	0,00	1,18	NE	NE	0,67	0,00	0,67	NE	NE
2.4 Settlements converted to Forest Land		1,59	1,18	0,00	1,18	0,00	0,00	1,87	0,00	1,87	0,00	0,00
	Total	1,59	1,18	0,00	1,18	NE	NE	1,87	0,00	1,87	NE	NE
2.5 Other Land converted to Forest Land		0,68	1,18	0,00	1,18	0,00	0,00	0,80	0,00	0,80	0,00	0,00
	Total	0,68	1,18	0,00	1,18	NE	NE	0,80	0,00	0,80	NE	NE

<sup>(1)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.

<sup>(2)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except where, due to the methods used, it is technically impossible to separate information on increases and decreases.

<sup>(3)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).

<sup>(4)</sup> A Party may report aggregate estimates for all conversions of land to forest land when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for g provided in table 5 as an information item.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the and/or further details are needed to understand the content of this table.

TABLE 5.B SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Austria

Cropland

2003

(Sheet 1 of 1)

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS				
Land-Use Category	Sub-division <sup>(1)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(2), (3)</sup>			Net carbon stock change in dead organic matter per area <sup>(3)</sup>	Net carbon stock change in soils per area <sup>(3)</sup>	Carbon stock change in living biomass <sup>(2), (3), (4)</sup>			Net carbon stock change in dead organic matter <sup>(3,5)</sup>	Net carbon stock change in soils <sup>(3)</sup>
			Increase	Decrease	Net change			Increase	Decrease	Net change		
			(Mg C/ha)					(Gg C)				
B. Total Cropland		1480,62	0,02	0,00	0,02	0,00	-0,03	36,17	-1,31	34,86	0,00	-37,26
1. Cropland remaining Cropland		1480,35	0,02	0,00	0,02	0,00	-0,03	36,17	0,00	36,17	0,00	-37,26
		1480,35	0,02	0,00	0,02	0,00	-0,03	36,17	0,00	36,17	0,00	-37,26
2. Land converted to Cropland <sup>(6)</sup>		0,27	0,00	-4,87	-4,87	0,00	0,00	0,00	-1,31	-1,31	0,00	0,00
2.1 Forest Land converted to Cropland		0,27	0,00	-4,87	-4,87	0,00	0,00	0,00	-1,31	-1,31	0,00	0,00
		0,27	0,00	-4,87	-4,87	NE	NE	0,00	-1,31	-1,31	NE	NE
2.2 Grassland converted to Cropland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.3 Wetlands converted to Cropland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.4 Settlements converted to Cropland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.5 Other Land converted to Cropland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE	NE

<sup>(1)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.

<sup>(2)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on increases and decreases.

<sup>(3)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).

<sup>(4)</sup> For category 5.B.1 Cropland remaining Cropland this column only includes changes in perennial woody biomass.

<sup>(5)</sup> No reporting on dead organic matter pools is required for category 5.B.1. Cropland remaining Cropland.

<sup>(6)</sup> A Party may report aggregate estimates for all land conversions to cropland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land converted to cropland should be reported as an information item.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the details are needed to understand the content of this table.

TABLE 5.C SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Grassland  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS				
Land-Use Category	Sub-division <sup>(1)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(2), (3)</sup>			Net carbon stock change in dead organic matter per area <sup>(2)</sup>	Net carbon stock change in soils per area <sup>(2)</sup>	Carbon stock change in living biomass <sup>(2), (3), (4)</sup>			Net carbon stock change in dead organic matter <sup>(2), (5)</sup>	Net carbon stock change in soils <sup>(2)</sup>
			Increase	Decrease	Net change			Increase	Decrease	Net change		
			(Mg C/ha)					(Gg C)				
C. Total Grassland		1941,81	0,00	-0,01	-0,01	0,00	-0,01	0,00	-13,68	-13,68	0,00	-22,11
1. Grassland remaining Grassland		1939,00	0,00	0,00	0,00	0,00	-0,01	0,00	0,00	0,00	0,00	-22,11
		1939,00	NA	NA	0,00	NA	-0,01	NA	NA	0,00	NA	-22,11
2. Land converted to Grassland <sup>(6)</sup>		2,81	0,00	-4,87	-4,87	0,00	0,00	0,00	-13,68	-13,68	0,00	0,00
2.1 Forest Land converted to Grassland		2,81	0,00	-4,87	-4,87	0,00	0,00	0,00	-13,68	-13,68	0,00	0,00
		2,81	0,00	-4,87	-4,87	NE	NE	0,00	-13,68	-13,68	NE	NE
2.2 Cropland converted to Grassland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.3 Wetlands converted to Grassland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.4 Settlements converted to Grassland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO	NO
2.5 Other Land converted to Grassland		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE	NE

- <sup>(1)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.
- <sup>(2)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).
- <sup>(3)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on increases and decreases.
- <sup>(4)</sup> For category 5.C.1 Grassland remaining Grassland this column only includes changes in perennial woody biomass.
- <sup>(5)</sup> No reporting on dead organic matter pools is required for category 5.C.1 Grassland remaining Grassland.
- <sup>(6)</sup> A Party may report aggregate estimates for all land conversions to grassland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest item.

<b>Documentation box:</b> Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the needed to understand the content of this table.



TABLE 5.D   SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Wetlands <sup>(1)</sup>  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS				
Land-Use Category	Sub-division <sup>(2)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(3), (4)</sup>			Net carbon stock change in dead organic matter per area <sup>(4)</sup>	Net carbon stock change in soils per area <sup>(4)</sup>	Carbon stock change in living biomass <sup>(3), (4)</sup>			Net carbon stock change in dead organic matter <sup>(4)</sup>	Net carbon stock change in soils <sup>(4)</sup>
			Increase	Decrease	Net change			Increase	Decrease	Net change		
			(Mg C/ha)					(Gg C)				
D. Total Wetlands		0.16	0.00	-4.87	-4.87	0.00	0.00	0.00	-0.78	-0.78	0.00	0.00
1. Wetlands remaining Wetlands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO
2. Land converted to Wetlands <sup>(5)</sup>		0.16	0.00	-4.87	-4.87	0.00	0.00	0.00	-0.78	-0.78	0.00	0.00
2.1 Forest Land converted to Wetlands		0.16	0.00	-4.87	-4.87	0.00	0.00	0.00	-0.78	-0.78	0.00	0.00
		0.16	0.00	-4.87	-4.87	NE	NE	0.00	-0.78	-0.78	NE	NE
2.2 Cropland converted to Wetlands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO
2.3 Grassland converted to Wetlands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO
2.4 Settlements converted to Wetlands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO
2.5 Other Land converted to Wetlands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO

- <sup>(1)</sup> Parties do not have to prepare estimates for categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.
- <sup>(2)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.
- <sup>(3)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on increases and decreases.
- <sup>(4)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).
- <sup>(5)</sup> A Party may report aggregate estimates for all land conversions to wetlands, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for fo

Documentation box:  
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if content of this table.

TABLE 5.E SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Settlements<sup>(1)</sup>  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS				
Land-Use Category	Sub-division <sup>(2)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(3), (4)</sup>			Net carbon stock change in dead organic matter per area <sup>(4)</sup>	Net carbon stock change in soils per area <sup>(4)</sup>	Carbon stock change in living biomass <sup>(3), (4) (5)</sup>			Net carbon stock change in dead organic matter <sup>(4)</sup>	Net carbon stock change in soils <sup>(4)</sup>
			Increase	Decrease	Net change (Mg C/ha)			Increase	Decrease	Net change (Gg C)		
E. Total Settlements		0.80	0.00	-4.87	-4.87	0.00	0.00	0.00	-3.89	-3.89	0.00	0.00
1. Settlements remaining Settlements		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NO	NO	NO	NO	NO	NO	NO	NO	0.00	NO	NO
2. Land converted to Settlements <sup>(6)</sup>		0.80	0.00	-4.87	-4.87	0.00	0.00	0.00	-3.89	-3.89	0.00	0.00
2.1 Forest Land converted to Settlements		0.80	0.00	-4.87	-4.87	0.00	0.00	0.00	-3.89	-3.89	0.00	0.00
		0.80	0.00	-4.87	-4.87	NE	NE	0.00	-3.89	-3.89	NE	NE
2.2 Cropland converted to Settlements		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NE	NE	NE	NE	NE	NE	NE	NE	0.00	NE	NE
2.3 Grassland converted to Settlements		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NE	NE	NE	NE	NE	NE	NE	NE	0.00	NE	NE
2.4 Wetlands converted to Settlements		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NE	NE	NE	NE	NE	NE	NE	NE	0.00	NE	NE
2.5 Other Land converted to Settlements		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		NE	NE	NE	NE	NE	NE	NE	NE	0.00	NE	NE

<sup>(1)</sup> Parties do not have to prepare estimates for categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

<sup>(2)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.

<sup>(3)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on increases and decreases.

<sup>(4)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).

<sup>(5)</sup> For category 5.E.1 Settlements remaining Settlements this column only includes changes in perennial woody biomass.

<sup>(6)</sup> A Party may report aggregate estimates for all land conversions to settlements, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for as an information item.

**Documentation box:**  
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the are needed to understand the content of this table.

TABLE 5.F SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Other land<sup>(1)</sup>  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS					EMISSIONS/REMOVALS					
Land-Use Category	Sub-division <sup>(2)</sup>	Total area (kha)	Carbon stock change in living biomass per area <sup>(3), (4)</sup>			Net carbon stock change in dead organic matter per area <sup>(4)</sup>	Net carbon stock change in soils per area <sup>(4)</sup>	Carbon stock change in living biomass <sup>(3), (4)</sup>			Net carbon stock change in dead organic matter <sup>(4)</sup>	Net carbon stock change in soils <sup>(4)</sup>	
			Increase	Decrease	Net change			Increase	Decrease	Net change			
			(Mg C/ha)						(Gg C)				
F. Total Other Land		1,27	0,0000	-4,8686	-4,8686	0,0000	0,0000	0,00	-6,18	-6,18	0,00	0,00	
1. Other Land remaining Other Land		NE											
2. Land converted to Other Land <sup>(5)</sup>		1,27	0,0000	-4,8686	-4,8686	0,0000	0,0000	0,00	-6,18	-6,18	0,00	0,00	
2.1 Forest Land converted to Other Land		1,27	0,00	-4,87	-4,87	0,00	0,00	0,00	-6,18	-6,18	0,00	0,00	
		1,27	0,00	-4,87	-4,87	NE	NE	0,00	-6,18	-6,18	NE	NE	
2.2 Cropland converted to Other Land		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
2.3 Grassland converted to Other Land		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
2.4 Wetlands converted to Other Land		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
2.5 Settlements converted to Other Land		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	

<sup>(1)</sup> Parties do not have to prepare estimates for this category contained in Chapter 3.7 of the IPCC good practice guidance for LULUCF, although they may do so if they wish. This land-use category is to allow the total of identified land area to match the

<sup>(2)</sup> Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zones or national land classification.

<sup>(3)</sup> CO<sub>2</sub> emissions and removals (carbon stock increase and decrease) should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on increases and decreases.

<sup>(4)</sup> The signs for estimates of increases in carbon stocks are positive (+) and of decreases in carbon stocks are negative (-).

<sup>(5)</sup> A Party may report aggregate estimates for all land conversions to other land, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for an information item.

<b>Documentation box:</b> Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the needed to understand the content of this table.

TABLE 5 (I) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Austria

Direct N<sub>2</sub>O emissions from N fertilization <sup>(1)</sup>

2003

(Sheet 1 of 1)

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS
Land-Use Category <sup>(2)</sup>	Total amount of fertilizer applied	N <sub>2</sub> O-N emissions per unit of fertilizer	N <sub>2</sub> O
	(Gg N/yr)	(kg N <sub>2</sub> O-N/kg N) <sup>(3)</sup>	(Gg)
<b>Total for all Land Use Categories</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>A. Forest Land <sup>(4), (5)</sup></b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
1. Forest Land remaining Forest Land	NO	NO	NO
2. Land converted to Forest Land	NO	NO	NO
<b>G. Other (please specify)</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
		0,00	

<sup>(1)</sup> Direct N<sub>2</sub>O emissions from fertilization are estimated using equations 3.2.17 and 3.2.18 of the IPCC good practice guidance for LULUCF based on the amount of fertilizers applied to forest land. The indirect N<sub>2</sub>O emissions from forest land are estimated as part of the total indirect emissions (Agriculture sector and Forest Land) in the Agriculture sector based on the total fertilizers used in the country.

<sup>(2)</sup> N<sub>2</sub>O emissions from N fertilization of cropland and grassland are reported in the Agriculture sector; therefore only forest land is included in this table.

<sup>(3)</sup> In the calculation of the implied emission factor, N<sub>2</sub>O emissions are converted to N<sub>2</sub>O-N by multiplying by 28/44.

<sup>(4)</sup> If a Party is not able to separate the fertilizer applied to forest land from that applied to agriculture, it may report all N<sub>2</sub>O emissions from fertilization in the Agriculture sector. This should be explicitly indicated in the documentation box.

<sup>(5)</sup> A Party may report aggregate estimates for all N fertilization on forest land when data are not available to report forest land remaining forest land and land conversion to forest land separately.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (II) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

N<sub>2</sub>O emissions from drainage of soils <sup>(1)</sup>

(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS
Land-Use Category <sup>(2)</sup>	Sub-division <sup>(3)</sup>	Area of drained soils	N <sub>2</sub> O-N per area drained <sup>(4)</sup>	N <sub>2</sub> O
		(kha)	(kg N <sub>2</sub> O-N/ha)	(Gg)
<b>Total all Land-Use Categories</b>		<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
<b>A. Forest Land</b>		0,00	0,00	0,00
Organic Soil		0,00	0,00	0,00
	NO	NO	NO	NO
Mineral Soil		0,00	0,00	0,00
	NO	NO	NO	NO
<b>D. Wetlands</b>		0,00	0,00	0,00
Organic Soil		0,00	0,00	0,00
		NE	NE	NE
Mineral Soil		0,00	0,00	0,00
		NE	NE	NE
<b>G. Other (please specify)</b>		<b>NE</b>	NE	<b>NE</b>
			0,00	

<sup>(1)</sup> Methodologies for estimating N<sub>2</sub>O emissions from drainage of soils are not addressed in the Revised 1996 IPCC Guidelines, but are addressed for forest soils in Appendix 3a.2 of the IPCC good practice guidance for LULUCF (equation 3a.2.1) and for wetland soils in appendix 3a.3.

<sup>(2)</sup> N<sub>2</sub>O emissions from drained cropland and grassland soils are covered in the Agriculture tables of the CRF under Cultivation of Histosols.

<sup>(3)</sup> A Party should report further disaggregations of drained soils corresponding to the methods used. Tier 1 disaggregates soils into "nutrient rich" and "nutrient poor" areas, whereas higher-tier methods can further disaggregate into different peatland types, soil fertility or tree species.

<sup>(4)</sup> In the calculation of the implied emission factor, N<sub>2</sub>O emissions are converted to N<sub>2</sub>O-N by multiplying by 28/44.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (III) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

N<sub>2</sub>O emissions from disturbance associated with land-use conversion to cropland <sup>(1)</sup>

(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS
Land-Use Category <sup>(2)</sup>	Land area converted	N <sub>2</sub> O-N emissions per area converted <sup>(3)</sup>	N <sub>2</sub> O
	(kha)	(kg N <sub>2</sub> O-N/ha)	(Gg)
<b>Total all Land-Use Categories <sup>(4)</sup></b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
<b>B. Cropland</b>	0,00	0,00	0,00
2. Lands converted to Cropland <sup>(5)</sup>	0,00	0,00	0,00
Organic Soils	0,00	0,00	0,00
Mineral Soils	0,00	0,00	0,00
2.1 Forest Land converted to Cropland	0,00	0,00	0,00
Organic Soils	NE	NE	NE
Mineral Soils	NE	NE	NE
2.2 Grassland converted to Cropland	0,00	0,00	0,00
Organic Soils	NE	NE	NE
Mineral Soils	NE	NE	NE
2.3 Wetlands converted to Cropland <sup>(6)</sup>	0,00	0,00	0,00
Organic Soils	NE	NE	NE
Mineral Soils	NE	NE	NE
2.5 Other Land converted to Cropland	0,00	0,00	0,00
Organic Soils	NE	NE	NE
Mineral Soils	NE	NE	NE
<b>G. Other (please specify)</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
		0,00	

<sup>(1)</sup> Methodologies for N<sub>2</sub>O emissions from disturbance associated with land-use conversion are based on equations 3.3.14 and 3.3.15 of the IPCC good practice guidance for LULUCF. N<sub>2</sub>O emissions from fertilization in the preceding land use and new land use should not be reported.

<sup>(2)</sup> According to the IPCC good practice guidance for LULUCF N<sub>2</sub>O emissions from disturbance of soils are only relevant for land conversions to cropland. N<sub>2</sub>O emissions from cropland remaining cropland are included in the Agriculture sector of the good practice guidance. The good practice guidance provides methodologies only for mineral soils.

<sup>(3)</sup> In the calculation of the implied emission factor, N<sub>2</sub>O emissions are converted to N<sub>2</sub>O-N by multiplying by 28/44.

<sup>(4)</sup> Parties can separate between organic and mineral soils, if they have data available.

<sup>(5)</sup> If activity data cannot be disaggregated to all initial land uses, Parties may report some initial land uses aggregated under other lands converted to cropland (indicate in the documentation box what this category includes).

<sup>(6)</sup> Parties should avoid double counting with N<sub>2</sub>O emissions from drainage and from cultivation of organic soils reported in Agriculture under Cultivation of Histosols.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF Sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (IV) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Carbon emissions from agricultural lime application <sup>(1)</sup>

(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS
Land-Use Category	Total amount of lime applied	Carbon emissions per unit of lime	Carbon
	(Mg/yr)	(Mg C/Mg)	(Gg)
<b>Total all Land-Use Categories</b> <sup>(2), (3), (4)</sup>	244300,00	0,12	29,32
<b>B. Cropland</b> <sup>(4)</sup>	244300,00	0,12	29,32
Limestone CaCO <sub>3</sub>	244300,00	0,12	29,32
Dolomite CaMg(CO <sub>3</sub> ) <sub>2</sub>	NE	NE	NE
		0,00	
<b>C. Grassland</b> <sup>(4)</sup>	0,00	0,00	0,00
Limestone CaCO <sub>3</sub>	NE	NE	NE
Dolomite CaMg(CO <sub>3</sub> ) <sub>2</sub>	NE	NE	NE
		0,00	
<b>G. Other (please specify)</b> <sup>(4), (5)</sup>	NE	NE	NE
Limestone CaCO <sub>3</sub>	NE	NE	NE
Dolomite CaMg(CO <sub>3</sub> ) <sub>2</sub>	NE	NE	NE
		0,00	

<sup>(1)</sup> Carbon emissions from agricultural lime application are addressed in equation 3.3.6 and 3.4.11 of the IPCC good practice guidance for LULUCF.

<sup>(2)</sup> If Parties are not able to separate liming application for different land-use categories, they should include liming for all land-use categories in the total.

<sup>(3)</sup> Parties that are able to provide data for lime application to forest land should provide this information under 5.G Other and specify in the documentation box that forest land application is included in this category.

<sup>(4)</sup> A Party may report aggregate estimates for total lime applications when data are not available for limestone and dolomite.

<sup>(5)</sup> If a Party has data broken down to limestone and dolomite at national level, it can report these data under 5.G Other.

**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (V) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Biomass Burning <sup>(1)</sup>  
(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTOR			EMISSIONS		
	Description <sup>(3)</sup>	Unit	Values	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> <sup>(4)</sup>	CH <sub>4</sub>	N <sub>2</sub> O
Land-Use Category <sup>(2)</sup>		(ha or kg dm)		(Mg/activity data unit)			(Gg)		
<b>Total for Land-Use Categories</b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>A. Forest Land</b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Forest land remaining Forest Land	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NE	IE	NE	NE	IE	NE	NE
2. Land converted to Forest Land	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>B. Cropland</b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Cropland remaining Cropland <sup>(5)</sup>									
Controlled Burning									
Wildfires									
2. Land converted to Cropland	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
2.1. Forest Land converted to Cropland	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
<b>C. Grassland</b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Grassland remaining grassland <sup>(6)</sup>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
2. Land converted to Grassland	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
2.1. Forest Land converted to Grassland	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
<b>D. Wetlands <sup>(7)</sup></b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Wetlands remaining Wetlands	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
2. Land converted to Wetlands	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
2.1. Forest Land converted to Wetlands	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Controlled Burning	area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	area burned	ha	NO	NO	NO	NO	NO	NO	NO
<b>E. Settlements <sup>(7)</sup></b>	area burned	ha	NO	NO	NO	NO	NO	NO	NO
<b>F. Other Land <sup>(8)</sup></b>	area burned	ha	NO	NO	NO	NO	NO	NO	NO
<b>G. Other (please specify)</b>	area burned	ha	0,00	0,00	0,00	0,00	0,00	0,00	0,00
			NO	NO	NO	NO	NO	NO	NO

<sup>(1)</sup> Methodological guidance on burning can be found in sections 3.2.1.4 and 3.4.1.3 of the IPCC good practice guidance for LULUCF.<sup>(2)</sup> Parties should report both Controlled/Prescribed Burning and Wildfires emissions, where appropriate, in a separate manner.<sup>(3)</sup> For each category activity data should be selected between area burned or biomass burned. Units for area will be ha and for biomass burned kg dm. The implied emission factor will refer to the selected activity data with an automatic change in the unit<sup>(4)</sup> If CO<sub>2</sub> emissions from biomass burning are not already included in tables 5.A - 5.F, they should be reported here. This should be clearly documented in the documentation box and in the NIR. Double counting should be avoided. Parties that include all carbon stock the carbon stock tables (5.A, 5.B, 5.C, 5.D, 5.E and 5.F), should report IE (included elsewhere) in this column.<sup>(5)</sup> Biomass burning on cropland remaining cropland is reported in the Agriculture sector.<sup>(6)</sup> Only includes emissions from controlled biomass burning on grasslands outside the tropics (prescribed savanna burning is reported under the Agriculture sector).<sup>(7)</sup> Parties do not have to prepare estimates for categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.<sup>(8)</sup> Parties do not have to prepare estimates for this category contained in Chapter 3.7 of the IPCC good practice guidance for LULUCF, although they may do so if they wish. This land-use category is to allow the total of identified land area to match the**Documentation box:**

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the additional information and/or further details are needed to understand the content of this table.



SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/ removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
5. Land Use, Land-Use Change and Forestry	<sup>(5)</sup> -12772,55	0,00	0,00							0,00	0,00	0,00	0,00
A. Forest Land	<sup>(5)</sup> -13059,89	0,00	0,00							0,00	0,00		
B. Cropland	<sup>(5)</sup> 116,30	0,00	0,00							0,00	0,00		
C. Grassland	<sup>(5)</sup> 131,22	0,00	0,00							0,00	0,00		
D. Wetlands	<sup>(5)</sup> 2,86	0,00	0,00							0,00	0,00		
E. Settlements	<sup>(5)</sup> 14,28	0,00	0,00							0,00	0,00		
F. Other Land	<sup>(5)</sup> 22,67	0,00	0,00							0,00	0,00		
G. Other	<sup>(5)</sup> NE	NE	NE							NE	NE		

<sup>(5)</sup> Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

## SUMMARY 2 SUMMARY REPORT FOR CO<sub>2</sub> EQUIVALENT EMISSIONS

(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(2)</sup>	PFCs <sup>(2)</sup>	SF <sub>6</sub> <sup>(2)</sup>	Total
	CO <sub>2</sub> equivalent (Gg )						
<b>5. Land Use, Land-Use Change and Forestry</b> <sup>(1)</sup>	-12772,55	0,00	0,00				-12772,55
A. Forest Land	-13059,89	0,00	0,00				-13059,89
B. Cropland	116,30	0,00	0,00				116,30
C. Grassland	131,22	0,00	0,00				131,22
D. Wetlands	2,86	0,00	0,00				2,86
E. Settlements	14,28	0,00	0,00				14,28
F. Other Land	22,67	0,00	0,00				22,67
G. Other	NE	NE	NE				0,00

<sup>(1)</sup> For CO<sub>2</sub> emissions from Land-Use Change and Forestry the net emissions/removals are to be reported. Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED  
(Sheet 1 of 1)

Austria  
2003  
2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>	
	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
S. Land Use, Land-Use Change and Forestry												
A. Forest Land	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
B. Cropland	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
C. Grassland	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
D. Wetlands	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Settlements	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
F. Other Land	T3	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Use the following notation keys to specify the method applied:

- D** (IPCC default)  
**RA** (Reference Approach)  
**T1** (IPCC Tier 1)
- T1a, T1b, T1c** (IPCC Tier 1a, Tier 1b and Tier 1c, respectively)  
**T2** (IPCC Tier 2)  
**T3** (IPCC Tier 3)
- CR** (CORINAIR)  
**CS** (Country Specific)  
**OTH** (Other)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different source category where more than one method is indicated, should be provided in the documentation box. Also use the documentation box to explain the use of notation OTH.

Use the following notation keys to specify the emission factor used:

- D** (IPCC default)  
**CR** (CORINAIR)
- CS** (Country Specific)  
**PS** (Plant Specific)
- OTH** (Other)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

<b>Documentation box:</b> <ul style="list-style-type: none"><li>Parties should provide the full information on methodological issues, such as methods and emission factors used, in the relevant sections of Chapters 3 to 9 (see section 2.2 of each of Chapters 3 - 9) of the NIR. Use this documentation box to provide r and further details are needed to understand the content of this table.</li><li>Where a mix of methods/emission factors has been used within one source category, use this documentation box to specify those methods/emission factors for the various sub-sources where they have been applied.</li><li>Where the notation OTH (Other) has been entered in this table, use this documentation box to specify those other methods/emission factors.</li></ul>
--

**TABLE 7 SUMMARY OVERVIEW FOR KEY CATEGORIES**  
(Sheet 1 of 1)

Austria  
2003  
2005

KEY CATEGORIES OF EMISSIONS AND REMOVALS	GAS	CRITERIA USED FOR KEY CATEGORY IDENTIFICATION			Key category excluding LULUCF <sup>(1)</sup>	Key category including LULUCF <sup>(1)</sup>	COMMENTS <sup>(1)</sup>
		L	T	Q			
<i>Specify key categories according to the national level of disaggregation used:</i>							

**Note:** L = Level assessment; T = Trend assessment; Q = Qualitative assessment.

<sup>(1)</sup> The term “key categories” refers to both the key source categories as addressed in the IPCC good practice guidance and the key categories as addressed in the IPCC good practice guidance for LULUCF.

<sup>(2)</sup> For estimating key categories Parties may chose the disaggregation level presented as an example in table 7.1 of the IPCC good practice guidance (page 7.6) and table 5.4.1 (page 5.31) of the IPCC good practice guidance for LULUCF, the level used in table Summary 1.A of the common reporting format or any other disaggregation level that the Party used to determine its key categories.

**Documentation box:**

Parties should provide the full information on methodologies used for identifying key categories and the quantitative results from the level and trend assessments (according to tables 7.1–7.3 of the IPCC good practice guidance and tables 5.4.1–5.4.3 of the IPCC good practice guidance for LULUCF) in Annex 1 to the NIR.

**TABLE 9 COMPLETENESS - (INFORMATION ON NOTATION KEYS)**  
(Sheet 1 of 1)

Austria  
2003  
2005

Sources and sinks not reported (NE) <sup>(1)</sup>				
GHG	Sector <sup>(2)</sup>	Source/sink category <sup>(2)</sup>	Explanation	
CO <sub>2</sub>				
	5.F.2.1	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
	5.E.2.1	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
	5.D.2.1	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
	5.C.2.1	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
	5.B.2.1	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
	5.A	Net carbon stock change in dead organic matter and soils	Up to now there were no reassessments of the soil inventories in Austria. Therefore it is not possible to give estimate on the C stock changes in the soils which are based on measured data. It is planned to carry out such reassessments in the near future which will allow to provide figures for this sector.	
CH <sub>4</sub>	5		At current no sufficient data available for estimating this emission source.	
N <sub>2</sub> O	5		At current no sufficient data available for estimating this emission source.	
Sources and sinks reported elsewhere (IE) <sup>(3)</sup>				
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
CO <sub>2</sub>	5.A.1	Wildfires	Forest Land remaining Forest land	The share of yearly wildfires on total forest area is about 0,001%. Carbon stock change due to wildfires at forest land is included in figures of table 5.A Sektor 5.A.1. It is planned to provide estimates by the next submission.
CH <sub>4</sub>				
N <sub>2</sub> O				

<sup>(1)</sup> Clearly indicate sources and sinks which are considered in the IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for excluding these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the notation key NE (not estimated) is entered in the sectoral tables.

<sup>(2)</sup> Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Waste-Water Handling).

<sup>(3)</sup> Clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the notation key IE (included elsewhere) is used in the sectoral tables.

TABLE 10 EMISSIONS TRENDS (CO<sub>2</sub>)

(Sheet 1 of 1)

Austria

2003

2005

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Change from 1990 <sup>(1)</sup> to latest reported year
	(Gg)															(%)
<b>CO<sub>2</sub></b> <sup>(2)</sup>	-9,013,33	-9,013,33	-11,773,04	-8,434,82	-8,760,71	-7,639,93	-7,046,36	-5,191,59	-11,690,45	-12,707,10	-12,637,45	-13,645,91	-13,344,77	-11,310,96	-12,772,55	41,71
A. Forest Land	-9,271,23	-9,271,23	-12,084,65	-8,746,43	-9,072,33	-7,951,54	-7,357,97	-5,503,20	-11,977,78	-12,994,43	-12,924,78	-13,933,24	-13,632,10	-11,598,29	-13,059,89	40,86
B. Cropland	114,72	114,72	117,38	117,38	117,38	117,38	117,38	117,38	116,30	116,30	116,30	116,30	116,30	116,30	116,30	1,38
C. Grassland	115,69	115,69	144,25	144,25	144,25	144,25	144,25	144,25	131,22	131,22	131,22	131,22	131,22	131,22	131,22	13,42
D. Wetlands	1,96	1,96	3,57	3,57	3,57	3,57	3,57	3,57	2,86	2,86	2,86	2,86	2,86	2,86	2,86	45,45
E. Settlements	9,82	9,82	17,85	17,85	17,85	17,85	17,85	17,85	14,28	14,28	14,28	14,28	14,28	14,28	14,28	45,45
F. Other Land	15,71	15,71	28,56	28,56	28,56	28,56	28,56	28,56	22,67	22,67	22,67	22,67	22,67	22,67	22,67	44,32
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
<b>CH<sub>4</sub></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Forest Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
B. Cropland	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
C. Grassland	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
<b>N<sub>2</sub>O</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Forest Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
B. Cropland	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
C. Grassland	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
D. Wetlands	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
<b>Land Use, Land-Use Change and Forestry <sup>(2)</sup></b> (Gg CO <sub>2</sub> equivalent)	-9,013,33	-9,013,33	-11,773,04	-8,434,82	-8,760,71	-7,639,93	-7,046,36	-5,191,59	-11,690,45	-12,707,10	-12,637,45	-13,645,91	-13,344,77	-11,310,96	-12,772,55	41,71

<sup>(1)</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate change in the final column of this table.

<sup>(2)</sup> Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

**Documentation box:**

• Parties should provide detailed explanations on emissions trends in Chapter 2: Trends in Greenhouse Gas Emissions and, as appropriate, in the corresponding Chapters 3 - 9 of the NIR. Use this documentation box to provide references to relevant sections if any additional information and further details are needed to understand the content of this table.



## ANNEX 6: EXTRACTS FROM AUSTRIAN LEGISLATION

Extracts from Austrian legislation, which regulate monitoring, reporting and verification of emissions at plant level

### Cement production

#### **BGBI 1993/ 63 Verordnung für Anlagen zur Zementerzeugung**

§ 5. Der Betriebsanlageninhaber hat

1. kontinuierliche Messungen der Emissionskonzentrationen an Gesamtstaub, SO<sub>2</sub> und Stickstoffoxiden (berechnet als NO<sub>2</sub>) der Ofenanlage entsprechend der Z 1 der Anlage zu dieser Verordnung durchzuführen ...

Zur Durchführung der Messungen gemäß Z 2 und 3 sind Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, heranzuziehen.

§ 6 Die Ergebnisse der Messungen gemäß § 5 sind in einem Messbericht festzuhalten, welcher

1. bei Messungen gemäß § 5 Z 1 die Messwerte in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes und die gemäß § 4 Abs. 1 zu führenden Aufzeichnungen über Grenzwertüberschreitungen,

zu enthalten hat. Der Messbericht ist mindestens fünf Jahre in der Betriebsanlage derart aufzubewahren, dass er den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden kann.

Anlage

(§ 5)

### Emissionsmessungen

1. Kontinuierliche Messungen

- a) Die Datenaufzeichnung hat durch automatisch registrierende Messgeräte in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat.
- b) Registrierende Emissionsmessgeräte sind im Abnahmeversuch und alle drei Jahre durch einen Sachverständigen aus dem im § 5 letzter Satz angeführten Personenkreis zu kalibrieren.
- c) Jährlich ist eine Funktionskontrolle an registrierenden Emissionsmessgeräten durch Sachverständige aus dem im § 5 letzter Satz angeführten Personenkreis vorzunehmen.

### Foundries

#### **BGBI 1994/ 447 Verordnung für Gießereien**

§ 5 (1) Der Betriebsanlageninhaber hat Einzelmessungen der Emissionskonzentration der im § 3 Abs. 1 angeführten Stoffe entsprechend der Z 1 lit. A bis c der Anlage 2 dieser Verordnung in

regelmäßigen, drei Jahre nicht übersteigenden Zeitabständen durchführen zu lassen (wiederkehrende Emissionsmessungen).

(2) Der Betriebsanlageninhaber hat kontinuierliche Messungen der Emissionskonzentrationen ... entsprechend der Z2 der Anlage 2 zu dieser Verordnung durchzuführen.

(3) Zur Durchführung der Messungen gemäß Abs. 1 sowie zur Funktionskontrolle und Kalibrierung von Messgeräten für Messungen gemäß Abs. 2 sind Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, oder akkreditierte Stellen im Rahmen des fachlichen Umfangs ihrer Akkreditierung (§ 11 Abs. 2 des Akkreditierungsgesetzes, BGBl Nr 468/ 1992) heranzuziehen.

§ 6 Die Ergebnisse der Messungen gemäß § 5 sind in einem Messbericht festzuhalten, welcher

1. bei Messungen gemäß § 5 Abs. 1 die Messwerte und die Betriebsbedingungen während der Messungen (Betriebszustand, Verbrauch an Brennstoff, Rohmaterial und Zuschlagstoffen),

2. bei Messungen gemäß § 5 Abs. 2 die Messwerte in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes und die gemäß § 4 Abs. 2 zu führenden Aufzeichnungen über Grenzwertüberschreitungen, zu enthalten hat. Der Messbericht ist mindestens drei Jahre, bei Messungen gemäß § 5 Abs. 1 jedenfalls bis zur jeweils nächsten Messung, in der Betriebsanlage derart aufzubewahren, dass er den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden kann.

## Anlage 2

(§ 5)

### **Emissionsmessungen**

#### *1. Einzelmessungen*

a) Einzelmessungen sind für alle im § 3 Abs. 1 angeführten Stoffe bei jenem Betriebszustand durchzuführen, in dem nachweislich die Anlagen vorwiegend betrieben werden. Die Durchführung der Messungen hat nach den Regeln der Technik zu erfolgen.

c) Die Abgasmessungen sind an einer repräsentativen Entnahmestelle im Kanalquerschnitt, die vor Aufnahme der Messungen zu bestimmen ist, vorzunehmen. Es sind innerhalb eines Zeitraumes von drei Stunden drei Messwerte als Halbstundenmittelwerte zu bilden, deren einzelne Ergebnisse zu beurteilen sind.

#### *2. Kontinuierliche Messungen*

a) Die Datenaufzeichnung hat durch automatisch registrierende Messgeräte in Form von Halbstundenmittelwerte unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat.

b) Registrierende Emissionsmessgeräte sind im Abnahmeversuch und alle drei Jahre durch einen Sachverständigen aus dem im § 5 Abs. 3 angeführten Personenkreis zu kalibrieren.

c) Jährlich ist eine Funktionskontrolle an registrierenden Emissionsmessgeräten durch Sachverständige aus dem im § 5 Abs. 3 angeführten Personenkreis vorzunehmen.



## Glass production

### **BGBI 1994/ 498 Verordnung für Anlagen zur Glaserzeugung**

§ 5 (2) Zur Kontrolle der Einhaltung der im § 3 festgelegten Emissionsgrenzwerte sind unter Beachtung des § 4 jeweils mindestens drei Messwerte als Halbstundenmittelwerte zu bestimmen.

(4) Die Durchführung der Emissionsmessungen hat nach den Regeln der Technik (z.B. nach den vom Verein deutscher Ingenieure herausgegebenen und beim Österreichischen Normungsinstitut, Heinestraße 38, 1021 Wien, erhältlichen Richtlinien VDI 2268, Blätter 1, 2 und 4, VDI 2462, Blätter 1 bis 5 und 8, und VDI 2456, Blätter 1, 2, 8 und 10) zu erfolgen.

§ 7 (1) Der Betriebsanlageninhaber hat in regelmäßigen, ein Jahr, bei Schmelzeinrichtungen gemäß § 3 Z 5 lit. D drei Jahre, nicht übersteigenden Zeitabständen Messungen zur Kontrolle der Einhaltung der im § 3 festgelegten Emissionsgrenzwerte entsprechend den §§ 4 bis 6 durchführen zu lassen.

(2) Zur Durchführung der Messungen sind Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, oder akkreditierte Stellen im Rahmen des fachlichen Umfangs ihrer Akkreditierung (§ 11 Abs. 2 des Akkreditierungsgesetzes, BGBl Nr 468/ 1992) heranzuziehen.

(3) Die Messwerte für die im § 3 angeführten Stoffe sowie der während der Messung herrschenden Betriebszustände sind zusammen mit den Kriterien, nach denen der Zeitraum für die Messung, der stärksten Emission festgelegt worden ist, in einem Messbericht festzuhalten. Im Messbericht sind auch die verwendeten Messverfahren zu beschreiben. Der Messbericht und sonstige zum Nachweis der Einhaltung der im § 3 festgelegten Emissionsgrenzwerte dienende Unterlagen sind bis zur nächsten Messung in der Betriebsanlage derart aufzubewahren, dass sie den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden können.

## Iron and steel production

### **BGBI II 1997/ 160 Verordnung für Anlagen zur Erzeugung von Eisen und Stahl**

§ 6 (1) Der Betriebsanlageninhaber hat, soweit die Absätze 3 und 4 nicht anderes bestimmen, Einzelmessungen der Emissionskonzentrationen der im § 3 Abs. 1 und im § 4 (mit Ausnahme des § 4 Abs. 3 lit. c) angeführten Stoffe entsprechend der Z 1 lit. a bis c der Anlage zu dieser Verordnung in regelmäßigen, drei Jahre nicht übersteigenden Zeitabständen, durchführen zu lassen (wiederkehrende Emissionsmessungen).

(3) Der Betriebsinhaber hat, soweit Abs. 4 oder 5 nicht anderes bestimmt. Entweder kontinuierliche Messungen der Emissionskonzentrationen ... entsprechend der Z 2 der Anlage zu dieser Verordnung durchzuführen oder kontinuierliche Funktionsprüfungen der rauchgas- und bzw. oder Abluftfilteranlagen von Einrichtungen gemäß § 4 durchzuführen, wenn sich durch diese Prüfungen mit hinreichender Sicherheit die Einhaltung der vorgeschriebenen Emissionsgrenzwerte für Staub festgestellt werden kann.

§ 6 (6) Zur Durchführung der Messungen gemäß Abs. 1 und 2 sowie zur Funktionskontrolle und Kalibrierung von Messgeräten für Messungen gemäß Abs. 3 sind akkreditierte Stellen im Rahmen des fachlichen Umfangs ihrer Akkreditierung (§ 11 Abs. 2 des Akkreditierungsgesetzes, BGBl Nr 468/ 1992), Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, heranzuziehen.

§ 7 Die Ergebnisse der Messungen gemäß § 6 sind in einem Messbericht festzuhalten, der zu enthalten hat:

1. bei Messungen gemäß § 6 Abs. 1 und 2 die Messwerte und die Betriebsbedingungen während der Messungen (Betriebszustand, Verbrauch Brennstoff, Rohmaterial und Zuschlagstoffen),
2. bei Messungen gemäß § 6 Abs. 3 und 4 die Messwerte in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes,
3. bei Funktionsprüfungen gemäß § 6 Abs. 3 die gemessenen Parameter in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes.

Der Messbericht ist mindestens drei Jahre, bei Messungen gemäß § 6 Abs. 1 und 2 jedenfalls bis zur jeweils nächsten Messung, in der Betriebsanlage derart aufzubewahren, dass er den behördlichen Organen zur Einsicht vorgewiesen werden kann.

Anlage

(§ 6)

## **Emissionsmessungen**

### **1. Einzelmessungen**

a) Einzelmessungen sind für alle im § 3 Abs. 1 und 3 und im § 4 angeführten Stoffe bei jenem Betriebszustand durchzuführen, in dem nachweislich die Anlagen vorwiegend betrieben werden. Die Durchführung der Messungen hat nach den Regeln der Technik zu erfolgen.

### **2. Kontinuierliche Messungen**

a) Die Datenaufzeichnung hat durch ein automatisch registrierendes Messgerät in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90% zu betragen. Als Bezugszeitraum gilt ein Monat.

b) Das registrierende Messgerät ist im Abnahmeversuch und alle drei Jahre durch einen Sachverständigen aus dem im § 6 Abs. 5 angeführten Personenkreis zu kalibrieren.

c) Jährlich ist eine Funktionskontrolle des registrierenden Messgerätes durch einen Sachverständigen aus dem im § 6 Abs. 5 angeführten Personenkreis vorzunehmen.

## **Sinter plants**

### **BGBI II 1997/ 163 Verordnung für Anlagen zum Sintern von Eisenerzen**

§ 5 (1) Der Betriebsanlageninhaber hat Einzelmessungen der Emissionskonzentration der im § 3 Abs. 1 Z 2 lit. a und b und Z 3 angeführten Stoffe entsprechend der Z 1 in der Anlage zu dieser Verordnung in regelmäßigen, drei Jahre nicht übersteigenden Zeitabständen, durchzuführen zu lassen (wiederkehrende Emissionsmessungen).

(2) Der Betriebsanlageninhaber hat kontinuierliche Messungen der Emissionskonzentrationen von Staub, Stickstoffoxiden und Schwefeldioxid entsprechend der Z 2 der Anlage dieser Verordnung durchzuführen.

(3) Zur Durchführung der Messungen gemäß Abs. 1 sowie zur Funktionskontrolle und Kalibrierung von Messgeräten für Messungen gemäß Abs. 2 sind akkreditierte Stellen im Rahmen des fachlichen Umfangs ihrer Akkreditierung (§ 11 Abs. 2 des



Akkreditierungsgesetzes, BGBl Nr 468/ 1992), Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, heranzuziehen.

§ 6 Die Ergebnisse der Messungen gemäß § 5 sind in einem Messbericht festzuhalten, der zu enthalten hat:

1. bei Messungen gemäß § 5 Abs. 1 die Messwerte und die Betriebsbedingungen während der Messungen (Betriebszustand, Verbrauch an Brennstoff und Einsatzmaterial),
2. bei Messungen gemäß § 5 Abs. 2 die Messwerte in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes.

Der Messbericht ist mindestens drei Jahre, bei Messungen gemäß § 5 Abs. 1 jedenfalls bis zur jeweils nächsten Messung, in der Betriebsanlage derart aufzubewahren, dass er den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden kann.

Anlage

(§ 5)

## **Emissionsmessungen**

### *1. Einzelmessungen*

a) Einzelmessungen sind für die im § 3 Abs. 1 Z 2 lit. a und b und Z 3 angeführten Stoffe bei jenem Betriebszustand durchzuführen, in dem nachweislich die Anlagen vorwiegend betrieben werden. Die Durchführung der Messungen hat nach den Regeln der Technik zu erfolgen.

### *2. Kontinuierliche Messungen*

a) Die Datenaufzeichnung hat durch ein automatisch registrierendes Messgerät in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat.

b) Das registrierende Messgerät ist im Abnahmeversuch und alle drei Jahre durch einen Sachverständigen aus dem im § 5 Abs. 3 angeführten Personenkreis zu kalibrieren. Die Kalibrierung hat nach den Regeln der Technik zu erfolgen.

c) Jährlich ist eine Funktionskontrolle des registrierenden Messgerätes durch einen Sachverständigen aus dem im § 5 Abs. 3 angeführten Personenkreis vorzunehmen.

## **Combustion plants**

### **BGBl II 1997/ 331 Feuerungsanlagen-Verordnung**

## **Emissionsmessungen**

§ 4 (1) Der Betriebsanlageninhaber hat Emissionsmessungen sowie die Bestimmung des Abgasverlustes entsprechend der Anlage 1 zu dieser Verordnung durchzuführen bzw. durchführen zu lassen.

(2) Zur Durchführung der Emissionseinzelmessungen sowie zur Bestimmung des Abgasverlustes ist ein Sachverständiger aus dem im § 2 Abs. 2 zweiter Satz genannten Personenkreis heranzuziehen.

§ 5 (1) Der Betriebsanlageninhaber hat, sofern in dieser Verordnung nicht anderes bestimmt ist,

1. kontinuierliche Messungen der Emissionskonzentrationen, abhängig von der jeweiligen Brennstoffwärmeleistung und dem eingesetzten Brennstoff, entsprechende der folgenden Tabelle durchzuführen

Brennstoff	Staub	CO	SO <sub>2</sub>	NO <sub>x</sub>	
fest	> 10	> 10	> 30	> 30	MW
flüssig	> 10	> 10	> 50	> 30	MW
gasförmig	-	> 10	-	> 30	MW

## Prüfungen

### *Erstmalige Prüfung*

§ 23 (1) Feuerungsanlagen sind anlässlich ihrer Inbetriebnahme einer erstmaligen Prüfung zu unterziehen.

(2) Die erstmalige Prüfung hat in der Erbringung des Nachweises zu bestehen, dass die Feuerungsanlage den Anforderungen dieser Verordnung entspricht.

### *Wiederkehrende Prüfungen*

§ 25 (1) Feuerungsanlagen sind jährlich zu prüfen. Bei dieser jährlichen Prüfung sind die Feuerungsanlagen hinsichtlich jener Anlagenteile, die für die Emissionen oder deren Begrenzung von Bedeutung sind, zu besichtigen und auf etwaige Mängel zu kontrollieren... Weiters sind jährlich die Ergebnisse der gemäß § 5 durchgeführten kontinuierlichen Messungen zu beurteilen.

### *Prüfbescheinigung*

§ 27 Das Ergebnis jeder Prüfung muss in einer Prüfbescheinigung festgehalten sein, die insbesondere festgestellte Mängel sowie Vorschläge zu deren Behebung zu enthalten hat. Die Prüfbescheinigung ist im Original in der Betriebsanlage zumindest fünf Jahre so aufzubewahren, dass sie den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden kann.

## Anlage 1

(§§ 4 und 25)

## Emissionsmessungen

1. Die Messungen sind

1.3 für gasförmige Emissionen nach den Regeln der Technik, oder nach einem diesen Verfahren gleichwertigen Verfahren durchzuführen.

2. Die Messstellen sind so festzulegen, dass eine repräsentative und messtechnisch einwandfreie Emissionsmessung gewährleistet ist.

### *3. Einzelmessungen*

3.2 Die Einzelmessungen sind an einer repräsentativen Entnahmestelle im Kanalquerschnitt vorzunehmen. Es sind innerhalb eines Zeitraumes von drei Stunden drei messwerte als Halbstundenmittelwerte zu bilden.

### *4. Kontinuierliche Messungen*



4.1 Die Datenaufzeichnung hat durch automatisch registrierende Messgeräte in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat. Die Messergebnisse müssen mit dem einzuhaltenden Grenzwert vergleichbar sein.

4.2 Registrierende Emissionsmessgeräte sind im Abnahmeversuch und mindestens alle drei Jahre durch einen Sachverständigen aus dem im § 2 Abs. 2 zweiter Satz angeführten Personenkreis zu kalibrieren. Die Kalibrierung hat nach den Regeln der Technik (z.B. nach den vom Verein Deutscher Ingenieure herausgegebenen und beim Österreichischen Normungsinstitut, Heinestraße 38, 1021 Wien, erhältlichen Richtlinien VDI 2066, Blatt 4 und Blatt 6, und VDI 3950, Blatt 1E) zu erfolgen.

4.3 Jährlich ist eine Funktionskontrolle an registrierenden Emissionsmessgeräten durch Sachverständige aus dem im § 2 Abs. 2 zweiter Satz angeführten Personenkreis vorzunehmen.

## **Non-ferrous metal production**

### **BGBI II 1998/ 1 Verordnung zur Erzeugung von Nichteisenmetallen**

§ 6 (1) Der Betriebsanlageninhaber hat Einzelmessungen der Emissionskonzentration der im § 3 Abs. 1 und im § 4 angeführten Stoffe entsprechend der Z 1 lit. a bis c der Anlage zu dieser Verordnung in regelmäßigen, drei Jahre nicht übersteigenden Zeitabständen durchführen zu lassen (wiederkehrende Emissionsmessungen).

(2) Der Betriebsanlageninhaber hat kontinuierliche Messungen ... entsprechend der Z 2 der Anlage zu dieser Verordnung reingasseitig (im Kamin) durchzuführen.

(3) Zur Durchführung der Messungen gemäß Abs. 1 sowie zur Funktionskontrolle und Kalibrierung von Messgeräten für Messungen gemäß Abs. 2 sind akkreditierte Stellen im Rahmen des fachlichen Umfangs ihrer Akkreditierung (§ 11 Abs. 2 des Akkreditierungsgesetzes, BGBl Nr 468/ 1992), Anstalten des Bundes oder eines Bundeslandes, staatlich autorisierte Anstalten, Ziviltechniker oder Gewerbebetreibende, jeweils im Rahmen ihrer Befugnisse, heranzuziehen.

§ 7 Die Ergebnisse der Messungen gemäß § 6 sind in einem Messbericht festzuhalten, der zu enthalten hat:

1. bei Messungen gemäß § 6 Abs. 1 die Messwerte und die Betriebsbedingungen während der Messungen (Betriebszustand, Verbrauch an Brennstoff, Rohmaterial und Zuschlagstoffen),
2. bei Messungen gemäß § 6 Abs. 2 die Messwerte in Form von Aufzeichnungen eines kontinuierlich registrierenden Messgerätes und die gemäß § 5 Abs. 2 zu führenden Aufzeichnungen über Grenzwertüberschreitungen.

Der Messbericht ist mindestens drei Jahre, bei Messungen gemäß § 6 Abs. 1 jedenfalls bis zur jeweils nächsten Messung, in der Betriebsanlage derart aufzubewahren, dass er den behördlichen Organen jederzeit zur Einsicht vorgewiesen werden kann.

Anlage

(§ 6)

**Emissionsmessungen***1. Einzelmessungen*

a) Einzelmessungen sind für alle im § 3 Abs. 1 und 4 angeführten Stoffe bei jenem Betriebszustand durchzuführen, in dem nachweislich die Anlagen vorwiegend betrieben werden. Die Durchführung der Messungen hat nach den Regeln der Technik zu erfolgen.

*2. Kontinuierliche Messungen*

a) Die Datenaufzeichnung hat durch ein automatisch registrierendes Messgerät in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle zu erfolgen. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat.

b) Das registrierende Messgerät ist im Abnahmeversuch und alle drei Jahre durch einen Sachverständigen aus dem im § 6 Abs. 3 angeführten Personenkreis zu kalibrieren.

c) Die Wartung des registrierenden Messgerätes ist durch einen Sachverständigen aus dem im § 6 Abs. 3 angeführten Personenkreis mindestens einmal jährlich vornehmen zu lassen.

**Steam boilers**

**BGBI 1988/ 380 idF (BGBI 1993/ 185, BGBI I 1997/ 115, BGBI I 1998/ 158)**  
**Luftreinhaltegesetz für Kesselanlagen**

***Überwachung***

§ 7 (1) Die in Betrieb befindlichen Dampfkesselanlagen ... sind einmal jährlich durch einen befugten Sachverständigen auf die Einhaltung der Bestimmungen dieses Bundesgesetzes zu überprüfen. Die Überprüfung umfasst die Besichtigung der Anlage und deren Komponenten, soweit sie für die Emissionen oder deren Begrenzung von Bedeutung sind, verbunden mit der Kontrolle vorhandener Messergebnisse oder Messregistrierungen.

§ 8 (1) Die Behörde hat im Genehmigungsbescheid festzulegen, ob und in welchem Umfang Abnahmemessungen sowie wiederkehrende Emissionsmessungen an der Dampfkesselanlage durchzuführen sind. Emissionsmessungen sind ferner durchzuführen, wenn der befugte Sachverständige anlässlich einer Überprüfung gemäß § 7 Grund zur Annahme hat, dass die einzuhaltenden Emissionsgrenzwerte im Betrieb überschritten werden.

***Pflichten des Betreibers***

§ 10 (3) Der Betreiber hat der Behörde oder dem hierzu beauftragten Sachverständigen während der Betriebszeit den Zutritt zu der Anlage zu gestatten und Einsicht in alle die Emissionen der Dampfkesselanlage betreffenden Aufzeichnungen zu gewähren, die in einem Dampfkesselanlagenbuch zusammenzufassen sind.

**BGBI 1989/ 19 idF (BGBI 1990/ 134, BGBI 1994/ 785, BGBI II 1997/ 324)**  
**Luftreinhalteverordnung für Kesselanlagen**

**Emissionseinzelmessungen**

§ 2 a (1) Die Durchführung der Emissionsmessungen hat nach den Regeln der Technik zu erfolgen.

(2) Die in Anlage 7 wiedergegebene ÖNORM M 9415-1, Ausgabe Mai 1991, und die in Anlage 8 wiedergegebene ÖNORM 9415-3, Ausgabe Mai 1991, sind verbindlich anzuwenden.

§ 3 (1) Emissionseinzelmessungen sind für jede Schadstoffkomponente bei jenem feuerungstechnisch stationären Betriebszustand durchzuführen, bei dem nachweislich die Anlage vorwiegend betrieben wird.

(2) Für die Durchführung der Emissionseinzelmessungen ist die in Anlage 9 wiedergegebene ÖNORM M 9415-2, Ausgabe Mai 1991, verbindlich anzuwenden.

**Kontinuierliche Emissionsmessungen**

§ 4 (3) Kontinuierliche Emissionsmessungen der Massekonzentration einer Emission (§ 8 Abs. 1 LRG-K) haben i der Regel in Halbstundenmittelwerten zu erfolgen.

(5) Die Messstellen sind auf Grund des Gutachtens eines befugten Sachverständigen (§ 7 Abs. 2 LRG-K) von der Behörde derart festzulegen, dass eine repräsentative und messtechnisch einwandfreie Emissionsmessung gewährleistet ist.

§ 5. Für kontinuierliche Emissionsmessungen hat die Datenaufzeichnung zu erfolgen:

1. Durch automatisch registrierende Messgeräte in Form von Halbstundenmittelwerten unter Angabe von Datum, Uhrzeit und Messstelle. Die Verfügbarkeit der Daten hat mindestens 90 % zu betragen. Als Bezugszeitraum gilt ein Monat.

3. Die Auswertung der Messdaten aus registrierenden Messgeräten hat mittels Auswertegeräten zu erfolgen, die dafür geeignet sind und die dem Stand der Technik entsprechen.

5. Registrierende Emissionsmessgeräte und Auswertegeräte sind im Abnahmeversuch und danach alle drei Jahre durch einen Sachverständigen zu kalibrieren. Die Kalibrierung hat nach den geltenden einschlägigen technischen Regelwerken zu erfolgen.

6. Jährlich ist eine Funktionskontrolle an registrierenden Emissionsmessgeräten durch Sachverständige vorzunehmen.

§ 7 (1) Der Betreiber hat während des Betriebes der Anlage an den Messgeräten mindestens einmal wöchentlich zu kontrollieren, ob der Nullpunkt einjustiert ist und die erforderliche Messfunktion gegeben ist.

(2) Die Messgeräte und alle dazuhörenden Komponenten sind mindestens alle drei Monate zu warten. Hierüber hat der Betreiber Aufzeichnungen zu führen.

(3) Der Sachverständige hat im Rahmen der Überwachung die Aufzeichnungen gemäß Abs. 2 zu kontrollieren und in begründeten Fällen die Richtigkeit der Anzeige der Messgeräte zu überprüfen.