

# Energy use and carbon dioxide emission for the industrial operations 2009

EN 3-4 Direct and indirect energy use and EN 16 Emissions of green house gases.

	Sweden	France	Netherlands	Poland	Russia	Argentina	Brazil	Total
Number of employees	11,019	515	1,170	719	115	478	3,468	17,484
<b>EN 3-4 Direct and Indirect energy consumption, MWh</b>	<b>382,079</b>	<b>6,478</b>	<b>31,339</b>	<b>7,430</b>	<b>3,659</b>	<b>26,780</b>	<b>41,273</b>	<b>499,038</b>
<b>EN 3 Direct energy consumption, MWh</b>	<b>62,967</b>	<b>3,791</b>	<b>16,459</b>	<b>0</b>	<b>2,528</b>	<b>11,478</b>	<b>6,576</b>	<b>103,799</b>
Fossil fuel, MWh	16,796	3,791	16,459	0	2,528	11,478	5,116	56,168
Diesel, engine testing, MWh	46,171	0	0	0	0	0	1,461	47,632
<b>EN 4 Indirect energy consumption, MWh</b>	<b>319,112</b>	<b>2,687</b>	<b>14,880</b>	<b>7,430</b>	<b>1,131</b>	<b>15,302</b>	<b>34,697</b>	<b>395,238</b>
Electricity, MWh	225,153	2,687	14,880	2,713	1,131	15,302	34,697	296,562
Municipal heating, MWh	93,959	0		4,717	0	0	0	98,676
<b>EN 16 Emission of CO<sub>2</sub>, tonnes</b>	<b>35,918</b>	<b>979</b>	<b>10,226</b>	<b>2,772</b>	<b>1,071</b>	<b>6,506</b>	<b>4,139</b>	<b>61,610</b>
<b>Direct CO<sub>2</sub>, tonnes</b>	<b>17,061</b>	<b>758</b>	<b>3,292</b>	<b>0</b>	<b>506</b>	<b>2,298</b>	<b>1,432</b>	<b>25,347</b>
Fossil fuel, tonnes	4,133	758	3,292	0	506	2,298	1,023	12,010
Diesel, engine testing, tonnes	12,928	0	0	0	0	0	409	13,337
<b>Indirect CO<sub>2</sub>, tonnes</b>	<b>18,857</b>	<b>220</b>	<b>6,934</b>	<b>2,772</b>	<b>566</b>	<b>4,208</b>	<b>2,706</b>	<b>36,263</b>
Electricity, tonnes	13,284	220	6,934	1,357	566	4,208	2,706	29,275
Municipal heating, tonnes	5,573	0	0	1,415	0	0	0	6,988

Carbon dioxide emissions have been calculated based on the emission factors shown in the below table.

Fossil fuel	Tonnes CO <sub>2</sub> /MWh	Municipal heating	Tonnes CO <sub>2</sub> /MWh	Electricity	Tonnes CO <sub>2</sub> /MWh
Oil	0.28	Luleå	0	Sweden	0.059
Natural gas	0.20	Slupsk	0.30	Netherlands	0.466
Liquefied petroleum gas	0.23	Oskarshamn	0.045	France	0.082
Diesel	0.28			Brazil	0.078
				Argentina	0.275
				Others	0.500

**Boundary:** The report covers energy use and carbon dioxide emission and includes all 10 industrial operations units within Scania AB. The local environmental coordinators report in Scania environmental reporting system. Transport of goods that belong to the production cover transport to and between all production units (except Tucuman in Argentina) as well as delivery of products to the commercial operation. To calculate the carbon dioxide emissions from transport a calculation tool developed by NTM (Network for Transport and Environment) has been used.

**Limitations on the scope:** The report covers only Ferruform AB and Scania Omni AB. For other subsidiaries see page 122-124 in the annual report. Energy use and carbon dioxide emission are not reported for the latter. Distribution of parts include only transports to the service network within Europe and Brazil.

EN 3-4, EN 16 Direct and indirect energy use and carbon dioxide emissions including EN 29 Gods transport

	2009	2008
<b>EN 3-4 Energy use, GWh</b>	<b>500</b>	<b>660</b>
EN 3 Direct energy consumption, MWh	104	157
EN 4 Indirect energy consumption, MWh	395	503
Per vehicle, MWh	14	8,3
<b>EN 16+29 Emissions of CO<sub>2</sub>, kton</b>	<b>123</b>	<b>194</b>
<b>EN 16 Direct and indirect CO<sub>2</sub> emissions, kton</b>	<b>62</b>	<b>85</b>
Per vehicle	1.7	1.1
<b>EN 29 Carbon dioxide emissions from Gods transport, kton</b>	<b>60</b>	<b>108</b>
Gods transport within production, kton	56	108
Gods transport within parts distribution, kton	4	-