

Performance indicators – environmental

Key performance indicators		2009 (restated)	2015 (restated)	2016
Energy				
Energy (GJ)	Direct energy (from primary sources ¹)		1,710,783	1,738,381
	Indirect energy: purchased electricity & steam		951,689	1,014,835
	Total energy		2,662,451	2,753,216
Energy efficiency (GJ/tonne of production)	Direct energy efficiency		4.46	4.37
	Indirect energy efficiency		2.48	2.55
	Total energy		6.94	6.92
CO₂ emissions				
CO₂ emissions (tonnes)²	Scope 1: from direct energy sources		99,865	100,592
	Scope 2: from indirect energy sources		86,032	82,054
	Total CO₂ emissions		185,897	182,646
CO₂ emissions efficiency (tonnes CO₂/tonne of production)	Scope 1: from direct energy sources		0.26	0.25
	Scope 2: from indirect energy sources		0.22	0.21
	Total CO₂ emissions		0.48	0.46
Waste				
Hazardous waste (tonnes)	Incinerated		8,677	9,489
	Incinerated with energy recovery ³		4,252	4,093
	Land-filled		318	108
	Recycled		14,997	14,384
	Total hazardous waste		23,992	23,981
Non-hazardous waste (tonnes)	Incinerated		2,253	2,541
	Incinerated with energy recovery ³		1,100	716
	Land-filled		6,412	6,704
	Recycled		27,840	28,578
	Total non-hazardous waste		36,505	37,824
Total incinerated and land-filled waste (HZ and NHZ)			17,661	18,843
One-off waste (tonnes)			2,219	1,367
Waste efficiency⁴ (kg of waste/tonne of production)			46.0	47.3

Key performance indicators		2009	2015	2016
Water intake				
Water intake (m³)	Municipal water	2,290,556	2,363,071	2,524,905
	Ground water	1,136,049	1,390,267	1,307,576
	Total municipal and groundwater	3,426,606	3,753,338	3,832,481
	Surface water	7,432,649	5,006,361	5,225,273
	Total water⁵	10,859,255	8,759,699	9,057,754
Water efficiency⁶ (m³/tonne of production)		11.11	9.77	9.60
Water discharge				
Water discharge (m³)	To the environment w/o biological treatment	-	4,584,657	4,634,189
	To the environment after biological treatment	-	1,883,521	2,005,856
	To external treatment facility w/o pre-treatment	-	429,375	401,784
	To external treatment facility with pre-treatment	-	1,723,944	1,703,562
	Total discharged water	-	8,621,496	8,745,392
COD (tonnes)	Of waste water discharged to the environment	-	467	488
Other data				
	Nitrogen oxides – NO _x tonnes ⁷	-	79.77	80.19
	Sulphur dioxide – SO ₂ tonnes ⁷	-	1.11	0.96
	VOC (tonnes)	-	475	521
	CFC inventory (kg)	-	10,340	11,639
	CFC 11 equivalent inventory (kg)	-	643	645
	CFC loss-replacement (kg)	-	1,701	1,335
	CFC 11 equivalent loss/replacement (kg)	-	99.01	73.44
Production				
	Production quantities (tonnes)	308,560	383,728	398,104

¹ Includes natural gas (0.0345 GJ/m³), light fuel (36.12 GJ/m³), heavy fuel (39.77 GJ/m³), liquid petroleum gas (22.65 GJ/m³), town gas (0.0186 GJ/m³).

² Greenhouse gas data are limited to CO₂ emissions.

³ Among the quantity of HW and non-HW incinerated, this is the quantity incinerated with energy recovery (in tonnes) on condition that at least 75% of energy is recovered.

⁴ Includes incinerated and land-filled waste (HZ and NHZ).

⁵ Includes sanitary, cooling and process water.

⁶ Includes municipal and groundwater.

⁷ Quantity is calculated by multiplying the annual fuel consumption by the corresponding emission factor for fuel type.

Performance indicators – restatement table

	Key performance indicators	2009 (as published in 2015 SR)	2009 (corrected in 2016)	% change 2009	2015 (published in 2016)	2015 (current values 01/02/17)	% change 2015
Energy (GJ)	Direct energy				1,712,690	1,710,783	-0.11%
	Indirect energy: purchased electricity & steam				950,117	951,669	0.16%
	Total energy				2,662,807	2,662,451	-0.01%
Energy efficiency (GJ/tonne of production)	Direct energy efficiency				4.47	4.46	-0.21%
	Total energy				6.95	6.94	-0.11%
CO₂ emissions (tonnes)	Scope 1				99,740	99,865	0.13%
	Scope 2				86,019	86,032	0.01%
	Total CO₂ emissions				185,759	185,897	0.07%
One-off waste (tonnes)					2,178	2,219	1.91%
Hazardous waste (tonnes)	Incinerated				8,521	8,677	1.83%
	Incinerated with energy recovery ¹				4,129	4,252	2.99%
	Land-filled				396	318	-19.65%
	Total hazardous waste				23,914	23,992	0.33%
Non-hazardous waste (tonnes)	Incinerated				2,146	2,253	5.02%
	Incinerated with energy recovery ¹				949	1,100	15.90%
	Recycled				27,911	27,840	-0.25%
	Total non-hazardous waste				36,468	36,505	0.10%
	Total incinerated & land-filled waste (HZ and NHZ)				17,475	17,661	1.06%
Waste efficiency (kg of waste/tonne of production)	Total waste				45.6	46.0	0.97%
Water intake (m³)	Municipal water	2,286,999	2,290,556	0.16%	2,340,554	2,363,071	0.96%
	Ground water	1,074,035	1,136,050	5.77%	1,405,028	1,390,267	-1.05%
	Total municipal and groundwater	3,361,034	3,426,606	1.95%	3,745,582	3,753,338	0.21%
	Total water	10,793,683	10,859,255	0.61%	8,751,943	8,759,699	0.09%
Water discharge (m³)	To external treatment facility with pre-treatment				1,725,231	1,723,944	-0.07%
Water efficiency (m³/tonne of production)	Total water	10.91	11.11	1.78%	9.77	9.78	0.1%
Other data	Nitrogen oxides – NO _x tonnes				79.76	79.57	-0.24%
	Sulphur oxide – SO ₂ tonnes				1.12	1.11	-0.89%
Production (tonnes)	Production quantities	308,050	308,560	0.17%	383,353	383,728	0.10%
CFCs	CFC inventory (kg)				10,018	10,340	3.21%
	CFC 11 equivalent inventory (kg)				625	643	2.83%

¹ Among the quantity of HW and non-HW incinerated, this is the quantity incinerated with energy recovery (in tonnes) on condition that at least 75% of energy is recovered.