

BREAKDOWN OF TRANSPORT WORK WITHIN THE ROTTNEROS GROUP

M TONNE-KM		Road	Rail	Sea	Proportion of total transport work, %
2018	Pulp wood, %	40	3	57	23
	Other input goods, %	100	–	–	1
	Pulp, %	21	16	63	76
	Proportion of total transport work, %	25	13	62	100
2017	Pulp wood, %	60	1	39	20
	Other input goods, %	100	–	–	1
	Pulp, %	17	9	74	79
	Proportion of total transport work, %	25	8	67	100

The concept "Other input goods" includes process chemicals, bale wrapping paper, steel wire, fossil fuels, etc. The distance applies from supplier to mill.

ENERGY CONSUMPTION

GWh	Rottneros Mill	Vallvik Mill	Total		
2018	Biofuels incl. black liquor	77	1,609	1,686	
	Fossil fuels	33	27	59	
	Total energy consumption excl. electricity	109	1,636	1,745	
	– Proportion of biofuels, %	71	98	97	
	Electricity generated at mills	–	124	124	
	– Of which green electricity	–	122	122	
	Electricity purchased	271	48	319	
	Total electricity consumption	271	172	443	
	– Proportion produced at mills, %	–	72	28	
	2017	Biofuels incl. black liquor	63	1,628	1,691
		Fossil fuels	52	13	65
Total energy consumption excl. electricity		115	1,641	1,756	
– Proportion of biofuels, %		55	99	96	
Electricity generated at mills		–	137	137	
– Of which green electricity		–	136	136	
Electricity purchased		268	41	309	
Total electricity consumption		268	178	446	
– Proportion produced at mills, %		–	77	31	

CARBON DIOXIDE EMISSIONS

Tonnes/year	Rottneros Mill	Vallvik Mill	Total	
2018	Fossil fuels*	8,941	7,353	16,294
	Biofuels	31,053	619,198	650,251
	Biofuels, %	78	99	98
2017	Fossil fuels*	14,361	3,477	17,838
	Biofuels	35,415	628,886	664,301
	Biofuels, %	71	99	97

* Only fossil fuels contribute to the greenhouse effect.

EMISSIONS TO WATER AND AIR

	Rottneros Mill	Vallvik Mill		
2018	Production, tonnes	174,000	219,600	
	Sulphur, tonnes/year	27	90	
	Permit, tonnes/year	–	190	
	NOx, tonnes/year	22	344	
	Permit, tonnes/year	–	420	
	Suspended substances	163 tonnes/year	1.3 tonnes/day	
	Permit	375 tonnes/year	2.5 tonnes/day	
			ECF	UKP
	COD	3,903 tonnes/year	12.3 tonnes/day	5.9 tonnes/day
	Permit	4,000 tonnes/year	15 tonnes/day	6.5 tonnes/day
	BOD7	818 tonnes/year	1.9 tonnes/day	
	Permit	–	–	
	AOX, kg/tonne ECF	–	0.1	
	Permit	–	0.25	
Phosphorus	1.4 tonnes/year	17 kg/day		
Permit	2.2 tonnes/year	25 kg/day		
Nitrogen	29 tonnes/year	90 kg/day		
Permit	42 tonnes/year	175 kg/day		
Chlorate kg/tonne ECF	–	0.4		
Permit	–	0.6		

2017	Production, tonnes	172,600	228,600	
	Sulphur, tonnes/year	22	22	
	Permit, tonnes/year	–	80	
	NOx, tonnes/year	31	368	
	Permit, tonnes/year	–	420	
	Suspended substances	208 tonnes/year	1.3 tonnes/day	
	Permit	375 tonnes/year	2.5 tonnes/day	
			ECF	UKP
	COD	3,842 tonnes/year	12.1 tonnes/day	5.3 tonnes/day
	Permit	4,000 tonnes/year	15 tonnes/day	6.5 tonnes/day
	BOD7, tonnes/day	3.1	1.5	
	Permit	–	–	
	AOX, kg/tonne ECF	–	0.08	
	Permit	–	0.25	
Phosphorus	0.9 tonnes/year	16.5 kg/day		
Permit	2.2 tonnes/year	25 kg/day		
Nitrogen	28 tonnes/year	80 kg/day		
Permit	42 tonnes/year	175 kg/day		
Chlorate kg/tonne ECF	–	0.3		
Permit	–	0.6		

EMISSION ALLOWANCES FOR CARBON DIOXIDE

Tonnes/year	Allocation/year 2013-2020	Emissions 2018	Emissions 2017
Rottneros Mill	19,668*	8,941	14,361
Vallvik Mill	11,355*	7,353	3,477
Total	31,023*	16,294	17,838

* The allocation will gradually be reduced during the period so that it is 12% lower in 2020.