

## Summing up of economy matters at the manufacturing unit

It is possible to analyze other environmental aspects in the same way as demonstrated above. As a final document of the results, a diagram showing the results from year to year ought to be issued. This summing up is a good argument for convincing the management team to continue with the efforts in the environmental field.

The interest in approving investments concerning environmental matters is increased if it is possible to demonstrate good economical results.

The table below demonstrates year after year the development of the different aspects and the result they generate.

### Total cost reductions per year as below :

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Regular waste	36	107	121	112	153	204	214	252	348	308	316
Consumption of white paper	0	13	-14	10	38	110	38	82	125	121	175
Reduced amounts of scrapped copper	94	-508	1 376	766	2 389	1 849	1 827	1 431	284	1 036	2 997
Negotiated new prices of metallic scrap	592	491	538	511	401	463	426	321	717	678	806
Increased recycling	62	194	241	209	213	283	308	314	468	451	730
New formula to calculate need of copper	0	2 726	3 036	2 625	2 680	1 913	2 023	2 074	2 530	2 483	3 012
Delivered amount the same as ordered amount	0	1 066	1 187	1 027	1 048	1 315	1 391	1 426	1 740	1 740	2 071
Copper with 40% recycled material	0	0	0	174	178	223	236	242	295	289	351
Influence from indexing of copper scrap	0	77	97	115	79	126	134	210	556	1 299	2 181
More copper due to different product mix	0	0	0	0	0	0	603	618	755	741	898
Influence from indexing of silicon steel scrap	0	0	0	-34	19	68	124	188	1 466	883	2 011
Reduced used content of silicon steel in new product	0	0	0	0	4	6	7	6	6	6	6
Influence from indexing of general steel scrap	0	0	0	10	-19	-9	0	23	67	76	189
Electrical energy	763	2 819	3 684	4 387	4 774	6 231	7 663	9 188	10 734	10 672	12 838
District heating	0	857	836	830	1 738	2 393	2 686	2 829	3 935	3 356	3 840
Emissions to air - reduced utilization of chemicals	439	303	490	184	294	747	835	1 069	1 631	2 466	1 627
Emissions to water	0	465	517	447	457	573	606	621	758	744	902
Consumption of fresh water	11	7	32	30	47	74	67	74	106	83	139
Spill oil	-13	30	35	28	29	8	48	11	53	41	48
Barrier water	8	-4	50	25	45	78	71	78	95	70	125
Better agreement for hazardous waste	0	0	164	142	145	182	192	197	530	518	626
Cutting agent	-7	-79	35	-19	110	153	183	196	265	270	303
Transports	0	0	0	0	0	2 168	2 205	1 828	2 375	2 375	2 375
<b>Total reduced costs KSEK/year</b>	<b>1 985</b>	<b>8 564</b>	<b>12 427</b>	<b>11 580</b>	<b>14 821</b>	<b>16 989</b>	<b>21 888</b>	<b>23 277</b>	<b>29 839</b>	<b>30 705</b>	<b>38 567</b>
<b>Total reduced costs accumulated KSEK</b>	<b>1 985</b>	<b>10 549</b>	<b>22 976</b>	<b>34 555</b>	<b>49 377</b>	<b>66 366</b>	<b>88 254</b>	<b>111 531</b>	<b>141 369</b>	<b>172 074</b>	<b>210 642</b>

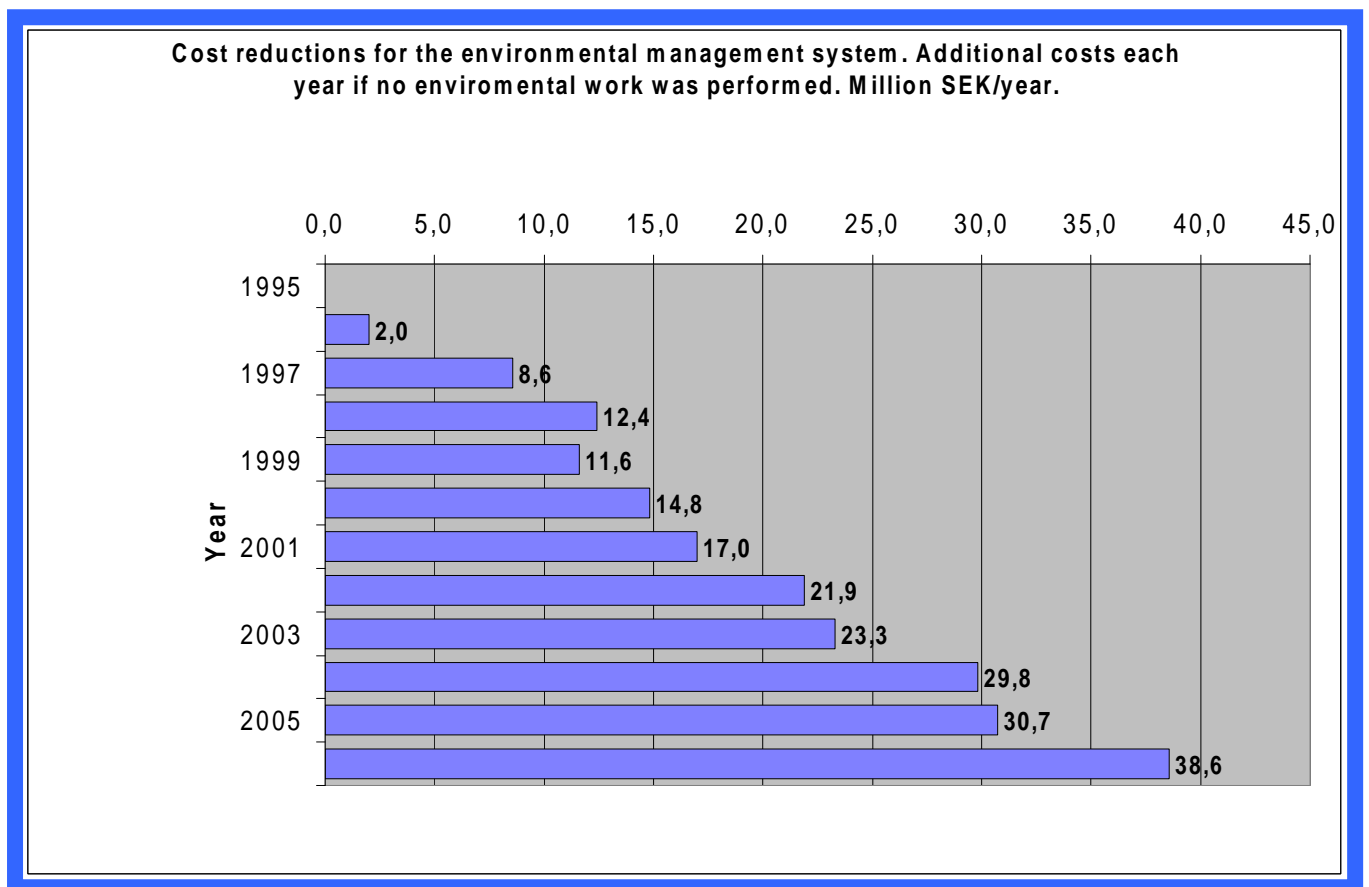
Here you can see that the unit Motor Division could have had additional costs year 2004 of 23,5 million SEK if we had not worked with environmental matters in an efficient way.

Such a summing up is possible to do in a diagram in EXCEL that is linked to the previous calculus in the same chart. Such a diagram may look like below :

As an information it may be mentioned that the result was a saving of 1,8 MSEK already during the first year (1996) during the implementation phase of the project. The result for the next year (1997) was 6,9 MSEK and for 1998 it was 9,8 MSEK.

The economical result went better year after year. 2004 it was an annual saving of 23,5 million SEK which is 1,7 million USD/year for a factory with 350 employees.

Such a summing up is possible to do in a diagram in EXCEL that is linked to the previous calculus in the same chart. Such a diagram may look like below :



In part 5.2 it is demonstrated a Pay Back calculus for the environmental management system of the Motor division. There it is demonstrated a Pay Back of 0,3 years as an average figure during 10 years.

### **A summing up of Pay Back for the environmental management system ISO 14001 :**

**Influenced reduced annual cost KSEK year 2006 : 38 600**

**Annual costs 2006 to keep the system alive : -500**

**Total net reduced annual cost 2006 : 38 100**

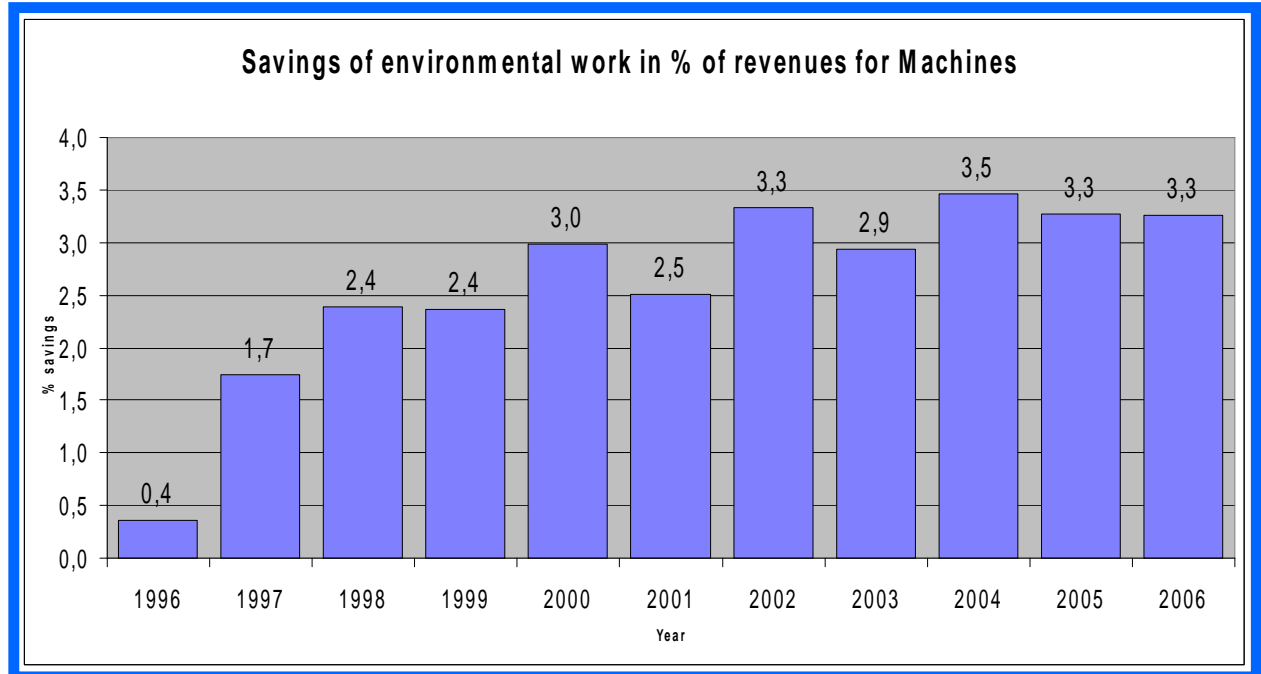
**Ackumulated investment until 2006 : 10 100**

**Pay Back on Investment :  $10\ 100/38\ 100 = 0,3$  years**

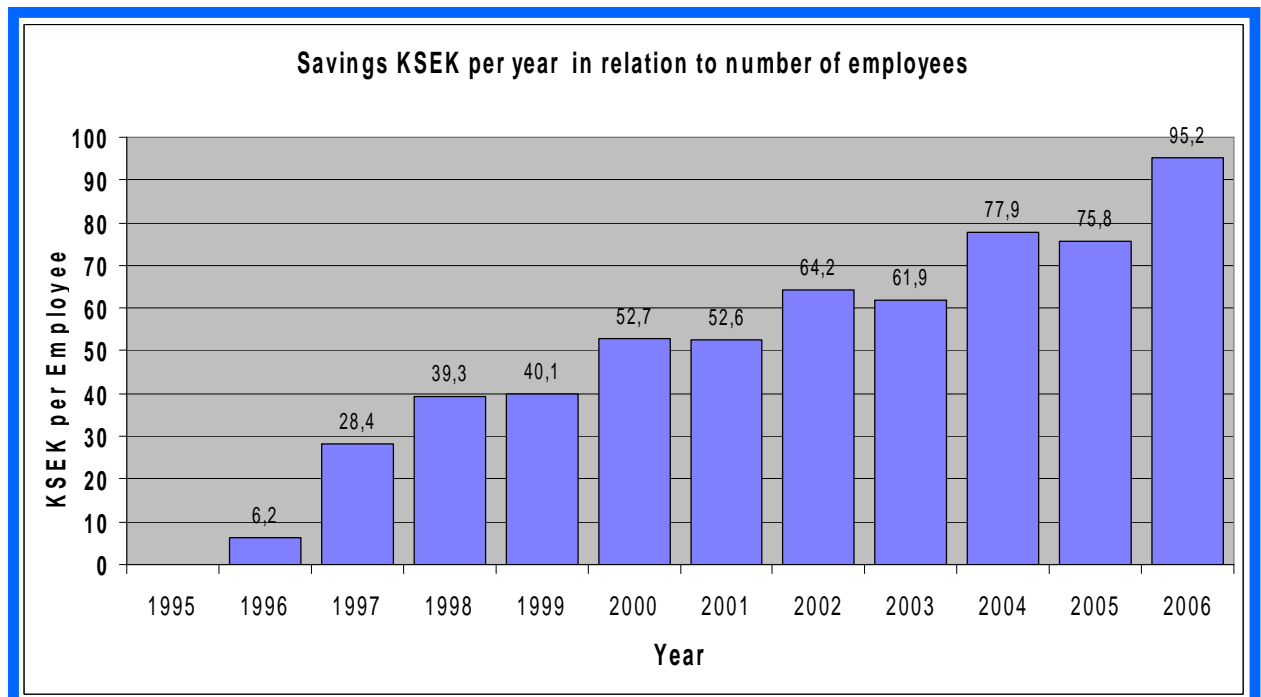
**Tingsrättsdom om miljöinvesteringar sätter hårdare press på företagen. Enligt miljöbalken ska en industri genomföra miljöförbättrande åtgärder så länge åtgärderna inte är orimliga. Södra Cell Värö har testat gränserna att samma avkastningskrav skulle gälla som vid vilken investering som helst, det vill säga 15 procent av kapitalkostnaden. Vänersborgs tingsrätt dömde att 6 procents avkastning gäller.**

## 5.15 Result of the environmental work in relation to functional units

The reduced annual cost 2006 is 3,3% of revenues.

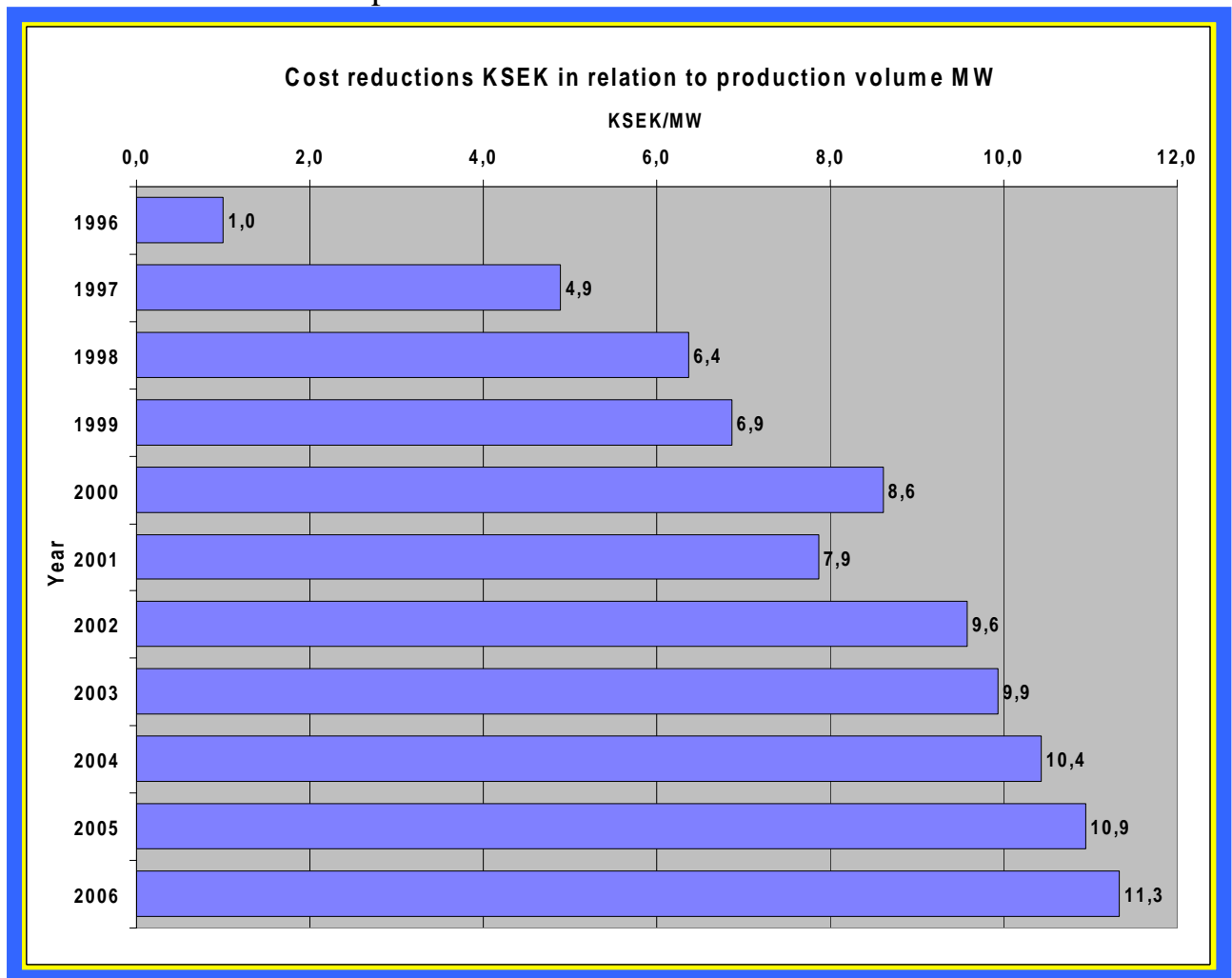


This also means a saving of 95 000 SEK/year and person. See development below :



Above the savings are related to revenues and number of employees.

There are other possibilities. One good relation is to see the saving per MW delivered machines or per tonnes delivered machines etc.



The real savings in reality are much higher due to that the efficient chemical management and the good order results in very few injuries of personnel. This means of course less human suffering, but also reduces costs for the production unit. Each % of absence means a loss of 3,3 million SEK per year. See further concerning OHSAS 18001 in point 5.16 and also in Chapter 7

**This benefit is not included in the figure above.**