





1998 at a glance:

- Our Environmental Performance Indicators show that products with the best environmental performance within White goods Europe accounted for 16% of total sales and 24% of gross margins.
- The phase-out of ozone depleting substances is proceeding in the New Markets. The decrease in use of substances with an ozone-depletion potential in refrigeration equipment as of 1998 was 60% due to product development and investments. Large parts of the product range in China and Brazil are now entirely free from both CFC and HCFC. The phase-out continues in 1999.
- A total of 35 production facilities have now certified their environmental management systems according to ISO 14001. The certification process has also started in Brazil and the USA.
- Our management of environmental issues was put to test with success during the release of the news that household ovens were claimed to emit dangerous substances.
- The 1997 Electrolux Environmental Report received a Swedish award for the best corporate environmental report in the manufacturing industry, for its ability to show the connection between environmental efforts and financial results.
- A Savings Potential Tool for the calculation of savings in annual operating costs for household appliances has been developed. It will be available to consumers in early summer 1999 via the Internet at www.electrolux.com/savings

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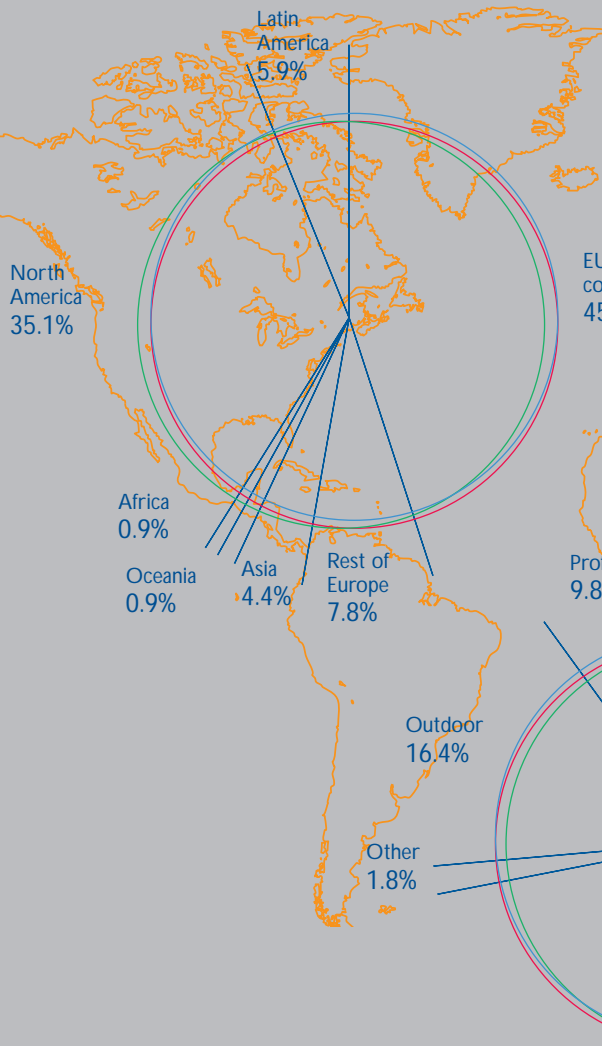
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Electrolux Environmental Report 1998 describes environmental activities conducted during the year, as well as strategies for the future. The main purpose of the report is to show the potential savings and earnings from our environmental work. The report is produced by Electrolux Environmental Affairs in cooperation with a network of environmental coordinators throughout the Group. For further information, see Contact us! at the end of this report.

Electrolux Today

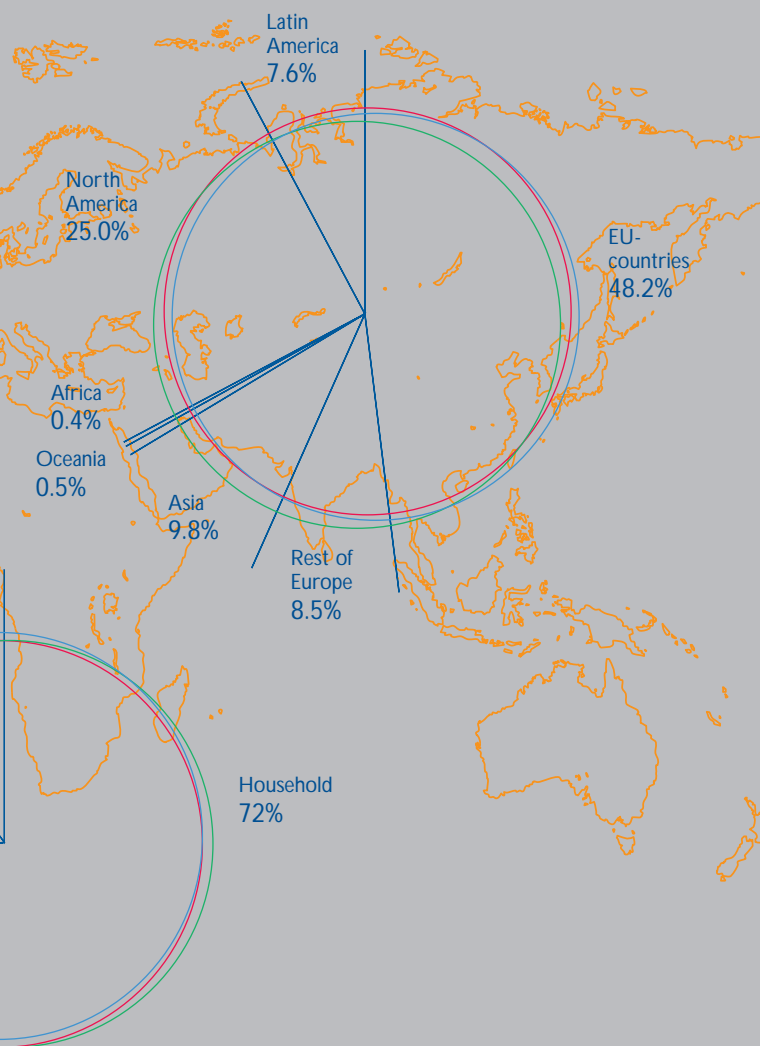
Share of net sales by region

Net sales in 1998:
117,524 SEKm

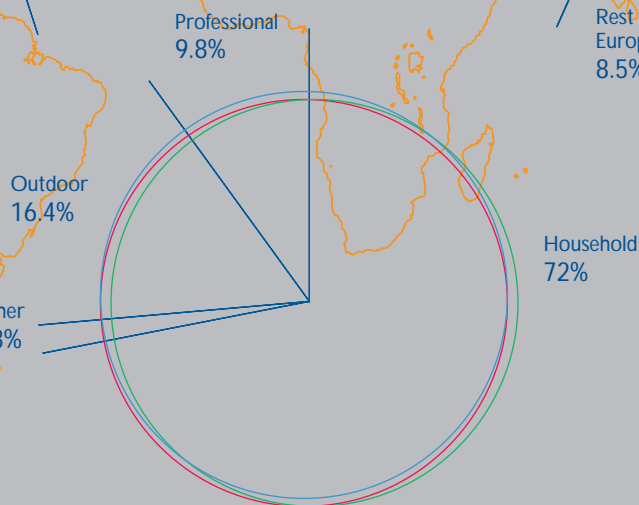


Share of number of employees by region

Average number of employees
in 1998: 99,322



Share of net sales by business area, 1998



Electrolux is one of the world's leading producers of household appliances for indoor and outdoor use, and of corresponding products for professional users. These products make daily tasks easier and more convenient for millions of people throughout the world. Every year, consumers in more than 100 countries buy more than 55 million Group products. Electrolux is the European market leader in white goods, and is the third largest white-goods company in the US. The Group is the world's largest producer of floor-care products, absorption refrigerators for caravans and hotel rooms, and compressors for refrigerators and freezers. Electrolux is also the largest or second largest company in the world for food-service equipment, professional laundry equipment, and forestry and garden equipment.



"We have chosen to not react passively, but to regard the environment as a business opportunity. And it works."

Michael Treschow

In Our Business Environment, Environment is Business

Like it or not, environmental problems exist and concern everyone. Likewise, no global company can afford to disregard the resulting demands from customers and legislators. The choice is between passively reacting and reluctantly adapting on the one hand, or being proactive and constructive, regarding challenges as a potential source of competitive advantage.

We have come a long way since the issue of the ozone layer and CFCs forced us to both act and rethink our strategy in the late 1980's. Today, Electrolux is a leading company, not only as the world's largest manufacturer of household appliances for indoor and outdoor use, and of the corresponding products for professional use. We are also global leaders with a strong environmental profile – and proof that this strategy is good business. We have chosen to not react passively, but to regard the environment as a business opportunity. And it works. The Electrolux Group is well-respected by legislators and environmental organizations as a discussion partner, and our strategy is studied by other companies and financial analysts. Our environmental performance indicators clearly show that the work has paid off.

And the trend is clear. The driving forces on which we base our strategy will not diminish – on the contrary,

Legislation will not be more lenient, but stricter.

The need to control and reduce costs will only increase both in terms of more resource-efficient manufacturing methods at our production sites, and as a demand for more resource-efficient appliances.

This demand will rise as awareness increases, both about environmental problems and about cost savings potentials in products with high environmental performance. More and more customers realize that by choosing these appliances, they're not only doing a good deed for the environment, but also for their own budget.

We will continue to take these factors seriously, and strive to remain in the lead by keeping a proactive and holistic perspective considering scientific findings and legislative trends as well as public demand and technological innovation. The goal is to make Electrolux an even more attractive and profitable company.

Although the trends are obvious and the logic behind our strategy may appear self-evident, my conviction is that our pioneering work is actually leading to a new perspective on how to do business; a perspective that is putting the customer in focus in a new way. Resource-efficient appliances are about saving money for the customer,

and our environmental work is to a large extent about helping the customer see savings potentials. To continue to build and maintain a trust in us as a conscientious and reliable supplier and business partner is the core of our continuous environmental work.

Corporate environmental work is not a luxury to be discontinued during hard times, but a tool both for survival, long-term competitive advantage and increased shareholder value.

A handwritten signature in blue ink that reads "Michael Treschow".

Michael Treschow

President and CEO
The Electrolux Group

"Consequently, the best thing we can do for the environment is get new, resource efficient appliances into as many households as possible."

Per Grunewald



The Consumer is the Winner

Measurement is a key component in the Electrolux culture. We constantly measure our own performance and follow up our work to ascertain that the strategies we choose actually lead to increased shareholder value. We have developed a set of Environmental Performance Indicators that are gradually being introduced into different business areas. In our largest business area, White goods Europe, the indicator Green Range was introduced three years ago. I'm glad to announce that this year too, the results clearly show that products with high environmental performance show higher profitability than the average range. The environmental top range of products from White goods Europe accounted for 16% of sales in 1998, and as much as 24% of gross margin. This is good news, for both business and environmental reasons. A Life Cycle Assessment of the sort of appliances we manufacture shows that most environmental impact occurs during use, mainly in the form of water and energy consumption. Consequently, the best thing we can do for the environment is get new, resource-efficient appliances into as many households as possible. But the beautiful thing is that environmental impact also goes hand in hand with the total, life cycle cost carried by the customer. For example, replacing ten year old white goods of an average London household could mean annual

savings of about £125. Resource-efficient products are also cost-efficient for the user.

This is maybe the most fundamental insight behind our strategy. There is a tremendous business potential, both for us and for retailers, in concentrating marketing efforts to show that environmental concern and products with low environmental impact are not a cost or a luxury, but actually a way of saving money.

This environmental work is now being fully integrated into the business sectors. All must meet certain minimum requirements, but each business sector decides on its own aims and methods. For White goods Europe, a strong ambition is to further show the link between resource-efficient products and cost-saving potential. Another priority is to actively engage in the ongoing discussions about producer responsibility for discarded products, in order to establish a market driven system which rewards environmentally proactive behavior.

The Environmental Report, now issued for the fourth consecutive year, has been widely appreciated both by customers and analysts, as well as environmental stakeholders. It was particularly encouraging to be recognized in 1998 by the prestigious Swedish business magazine *Affärsvärlden*, and the Institute for

Business Economics (Företagsekonomiska Institutet) for the best Corporate Environmental Report in the manufacturing industry. Our methods for reporting will change. As we have stated before, one ambition is to further integrate financially related environmental reporting with the overall financial reporting. We will also increase our use of the Internet. By reporting on-line we will have the opportunity to both update the information more frequently and to offer more specialized information to different audiences. Condensed written information, however, will also be offered.

I'd like to thank *Tomorrow* magazine for letting us reprint their article 'A Crisis in the Oven' on the next page. Findings early in the year about the emission of methyl isocyanate from new ovens became an, however unwanted, educational test case for our environmental organization and work. I am proud to conclude that everyone involved passed the test with top marks. Proactive environmental work really works!

A handwritten signature in blue ink, appearing to read 'Per Grunewald'.

Per Grunewald

Senior Vice President
Group Environmental Affairs

A Crisis in the Oven

Reprint

How to take a blow, roll with the punch – and win.

By Claes Sjöberg with Kim Loughran
From *Tomorrow* magazine, No. 6, Vol VIII

Earlier this year, Swedish white goods manufacturer Electrolux (one of this magazine's corporate partners) was informed that its ovens – and indeed those of several competitors – were releasing toxic gas. The gas was released on the first use of the oven. Subsequent uses gave no registrations. But the gas was methyl isocyanate (MIC), the same gas that killed 3,323 people at Bhopal, in India, in 1984. So it didn't matter much that the emissions were measurable only in millionths of a gram – this was a situation that demanded action. Electrolux did act, almost by the book:

1. All production of the faulty ovens was stopped. All ovens already delivered were serviced by local sales representatives to make them harmless or instructions were sent to purchasers.
2. Electrolux took full responsibility, even though the gas was coming from oven insulation made by several supplier companies.
3. Electrolux set up a crisis group to communicate with the media on a 24-hour basis.
4. The toxic insulation material was replaced and a general inspection order went out to check other substances and chemicals in the white goods production.

Electrolux's share price took an immediate dive on the first news, but started to regain immediately the company admitted fault. Electrolux dropped almost four million dollars in lost production and realignment costs. "It is a lot of money," said CEO Michael Treschow. "But our credibility as an environmentally proactive company was at stake.

Our customers cannot ever doubt that we take health and environment issues extremely seriously."

Replacing the insulation material at short notice was an expensive gamble, since more prolonged and rigorous studies might have shown no harmful effects, but it was a gamble with the Electrolux brand name and reputation at stake. And drawn-out debates on such sensitive subjects as

toxic gas releases most often leave indelible stains on company brands, whatever the scientific conclusion.

The company had also had crisis preparedness. A few years ago, Electrolux had picked a fight with science over chlorofluorocarbons and refused for some time to consider substitute refrigerants. Ultimately, science won, and Electrolux changed attitude to become the first white goods manufacturer to discard ozone-depleting gases throughout its product range. One of the by-products from

that time was a revamp of media communications. When disaster struck, there was a system in place to disseminate information to a large number of journalists simultaneously.

And Electrolux was dealt a lucky card. When head office admitted responsibility and took steps to fix the problem, the local media called off the hunt. With no stories emanating from Sweden for international news agencies to feed on, Electrolux companies in other countries were able to get on with damage control without media glare.

There were some hitches in internal communication. One hundred and fifty local managers were notified of the company's admission of fault as soon as the decision was taken. Not everyone was at their desk when the Intranet message came through.

As to lessons learned: Electrolux's Environment Manager Per Grunewald says that earlier scenario exercises taught the company that a 100% customer-oriented company has to let customer perception be the principal

guideline: "We can't wait for science to be completely in agreement before acting." Grunewald, who headed the crisis team, also says that however decentralized a company may become, in a crisis like the oven gas one, a "virtual, centralized company" must take over. And there must always be a striving to set new speed records for information dissemination.



Countdown:

Early February 1998: research scientists at the department of Occupational Medicine at Lund University, Sweden, contact the main Electrolux oven production unit to tell them about toxic gas leaks. The assembly factory contacts a supplier of the insulation, Gullfiber, which says it cannot verify the findings.

February 14-15: Electrolux asks the research team to redo their tests. The new tests confirm the MIC emissions.

February 18: first reports in the media that Electrolux ovens released methyl isocyanate. That same afternoon, a crisis meeting with Electrolux CEO, Michael Treschow, decides to stop production and admit responsibility.

Driving Forces Behind Our Strategy

Steadily growing populations and economies are the most fundamental factors behind threats to, and burden on, our environment. Although economic growth and technological development improve our standards of living and overall conditions for human life on earth, the same factors also carry with them threats and problems. For example, pressure on the environment in terms of resource consumption and emissions is much lower today than 50 years ago, per produced unit. However, as the total volume of production steadily increases so does pressure on the environment and thus the need to limit and decrease environmental impact.

Some problems and threats are of global and long-term proportions, e.g. the greenhouse effect and depletion of the ozone layer, while others, such as noise affect the individual directly. The individual consumer, if the market is not tampered with, feels scarcity of resources through the price mechanism. Air pollution by its nature knows no borders, but can be both nationally and internationally regulated or priced.

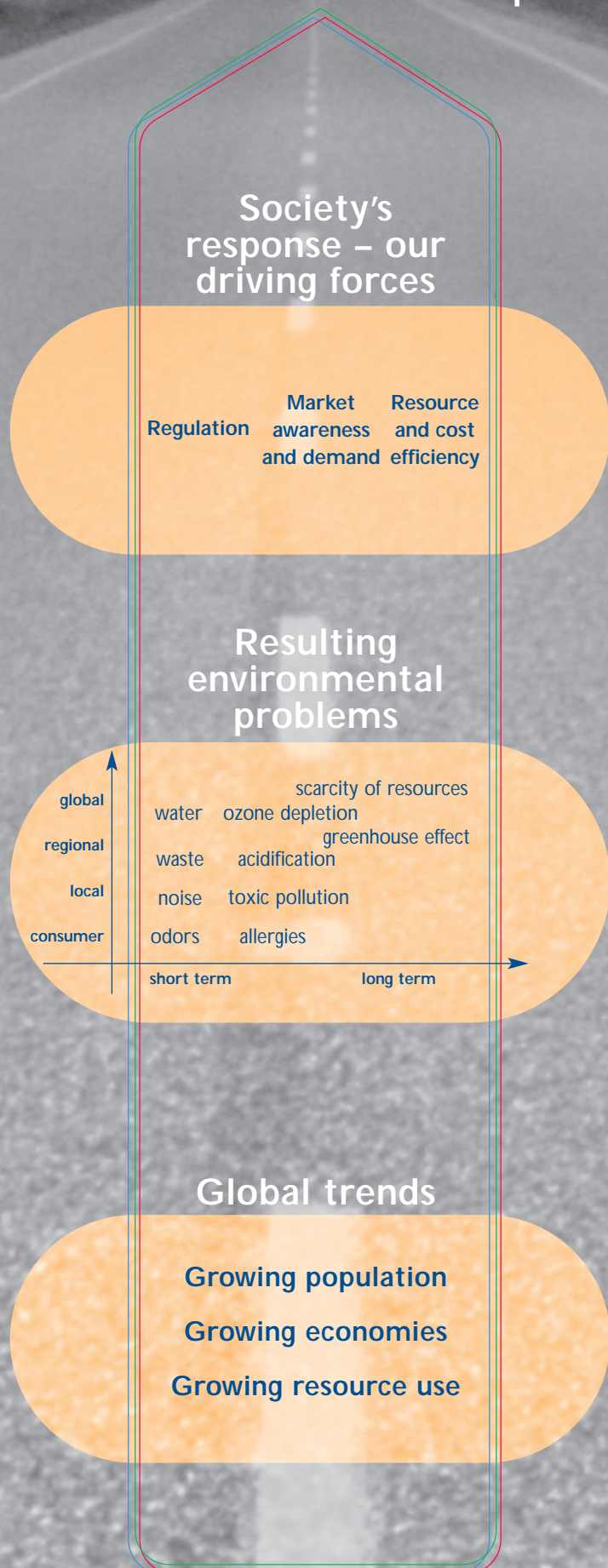
Society; governments, international bodies, NGOs and individuals all react to these threats in different ways. These reactions, most often intermingled, then become important driving forces on the market. Though not easily separated, these driving forces can be divided in three categories:

- **Market forces**
- **Resource and cost efficiency**
- **Regulation**

Market forces

As awareness of various environmental problems facing us increases, people in general – with regional and demographic variations – tend to become more environmentally responsible. This is also apparent in their consumption patterns. Though sensitivity varies from market to market, this creates an incentive for industry to behave in both an environmentally responsible way in production, administration and marketing, and to offer products with

Strategic direction for the Electrolux Group



reduced environmental impact. In many markets, this awareness is far ahead of legislation, e.g. it is impossible to sell products with ozone depleting potential in some markets where such products are not yet prohibited or regulated.

Another strong impetus for the appliance industry is the fact that the main environmental impact is usually greater in product use than during production, and furthermore is closely connected to the individual household economy. A life cycle assessment of a washing machine for example shows that about 80% of the total environmental impact consists of water, energy and detergent consumption during the use of the machine. A similar analysis of the total cost of the entire life cycle of the machine shows that the cost of water, energy and detergent consumption, exceeds the initial purchase price. For the customer, this means that choosing an appliance with a high environmental performance also means long-term savings. For the appliance industry this means making consumers aware of this connection. For the environment, replacement of inefficient, old white-goods with new generation, resource-efficient appliances is beneficial.

This is a strong driving force not only in developing more resource-efficient appliances, but also in concentrating marketing efforts towards

the importance of resource efficiency and in convincing customers to apply a life-cycle perspective in buying situations.

Resource efficiency

The relative scarcity of natural resources, such as fossil fuels and some metal ores, as well as the global water situation which includes water shortages in many parts of the world, generates a general need to reduce resource consumption. Even as new technology steadily provides more efficient methods of production, and recycling options improve, the increasing volume of production demands continuous improvement.

Regulators in different parts of the world have tackled the problem with restrictions, subsidies and taxes, sometimes with unintended consequences. In the long run, a shortage is felt globally, but as long as the pricing mechanism is at work, both industry and customers are immediately affected by this driving force. Scientists argue the long-term implications, but it should be noted that many believe there is a general need to decrease resource consumption by a factor of 4, or even 10.

On the production side, the challenge is to limit consumption of energy, water and raw materials, in order to cut costs and ease the

burden on the environment. This can be achieved by, for example, the introduction of new production techniques and environmental management systems. The Electrolux Group's achievements in this area are accounted for in the results section.

More important for the appliance industry is the driving force of customer demand for resource-efficient products. We can see huge geographical differences, but it's clear that the general trend is toward demand for resource-efficient products, as both a result of legislation and customer preferences encouraged by competition within the industry.

Regulation

Local and national governments, as well as international bodies, react to many environmental problems and threats with regulations, which can be international treaties, intended to be included in national legislation as for example, the Kyoto and Buenos Aires conferences on climate change, or the Montreal Protocol on ozone depleting substances. In the EU, directives for the energy consumption of different appliances have been introduced over the past years, and more are expected. There is also discussion on different levels about producer responsibility for the take-back of used appliances. Japan, Switzerland and Norway have

Examples of regulations affecting the appliance industry

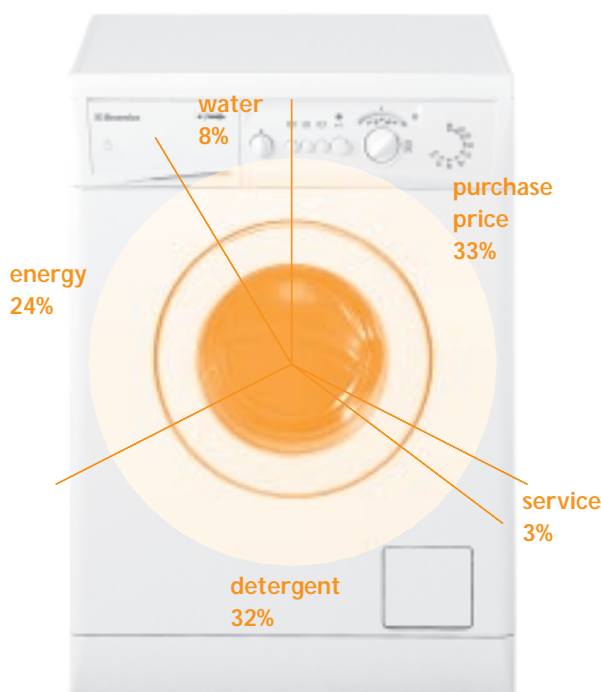
Examples of current and expected regulations on national and international level. These affect or will affect our operations in different business areas.

Area	Current and expected regulations	Affected business areas
Energy	energy standards in new markets, EU and USA	household appliances professional appliances
Producer responsibility	requirements in EU, Japan, Norway and Switzerland	all business areas
Emissions from combustion engines	requirements within EU and USA	outdoor products
Emissions to air and water, solid waste	EU and USA and new markets	all production facilities
Climate change	Kyoto Protocol	all business areas
Ozone depletion	Montreal Protocol regulations in EU and USA	household appliances professional appliances

Life Cycle Cost

Life Cycle Environmental Impact

– Washing Machine –



The purchase price is only a part of the total cost carried by the consumer. The disposal cost is not included in the chart.

Source: Group for Efficient Appliances, European Energy Network, 1995.



The environmental impact occurs mainly during use. The impact of recycling/reuse is not included in the chart.

introduced regulation, but the most important discussion is occurring on the EU level. The issue right now is not if such legislation will be introduced, but to what extent this will be a market-driven system with economic incentives to facilitate recycling. One of two major alternatives discussed is the “generation” solution, which would oblige anyone selling a product to take back a similar old one. The other is a “direct” market-driven system which keeps responsibility with the producer (more specifically, a responsibility for products of the same brand).

In the US and Canada on the other hand, producer responsibility seems not to be a preferred political solution for waste management at the present.

North America, the USA and California especially, are leading the way with ever-stricter limits on emissions from outdoor products. Maximum noise levels have been introduced in many areas. In most of the industrialized world, the threat

against the ozone layer is tackled through prohibition on substances with an ozone-depleting potential, most notably CFC and HCFC, so called Freons. Regulations vary between countries, regions, and, of course, types of appliances and can consist of taxes, levies, emission caps or downright prohibition (see illustration page 6).

The appliance industry can react, by following the law once it's passed, or act in a proactive way by participating in the development of legislation and adapting production and design before regulations are introduced. The Electrolux Group has chosen the proactive strategy.

The Electrolux answer to these driving forces

Electrolux bases its strategy on the driving forces; market forces, resource and cost efficiency, regulation. Electrolux strives to act in a responsible and proactive way. As can be seen above, the interactions between the driving forces

are difficult to separate. To be a leading company in the global appliance market, it is necessary to consider regulations, trends, market demands and environmental challenges. This is the holistic perspective we have adopted. We welcome mechanisms that reward environmental proactivity, such as a market-driven system for producer responsibility, and energy labeling to help consumers make informed decisions. An overall priority is to further improve the relationship between ecology and the economy. In the long run this is a strategy for sustainability, since good profitability generates resources for the development of technology that makes a dynamic contribution to a harmonious relationship between society and nature.

Environmental Vision, Policy and Strategy

Protection of the environment is a key to long-term survival for the individual, for corporations and for society in general. All our activities must be adapted with regard to the limits that nature can accept in the form of resource consumption and pollution. Care for the environment will be a continuous component of our operations, as well as the hallmark of our daily work.

Growth in consumption of non-renewable raw materials and natural resources cannot continue indefinitely. Our operations and our products must be integrated into a cycle, so that we can satisfy the needs of our customers without

jeopardising the prospects of future generations. The keywords for our operations are, therefore, resource efficiency and recycling. We are going to meet our customers' expectations for safe, environmentally sound products, and we will actively distribute information aimed at stimulating demand for these products.

Good profitability generates resources for the development of technology that makes a dynamic contribution to the harmonious relationship between society and nature. Resource efficient production and far-sighted product development will contribute to maintaining our competitive position in the future as well.

Vision

Responsibility

Our role as a company is to fulfil the needs of society that generate demand for our products. This involves a responsibility to contribute to sustainable development by continuously improving our products and our production processes from an environmental perspective.

Precaution

Precaution must be our guide for all development and production within the Group, in order to avoid irrevocable environmental impact. This requires a cautious approach to activities that might have a serious environmental impact.

Total approach

We must adopt a total approach in our operations, based on knowledge of every phase of the life cycles of our products, from raw materials and production, to use and recycling. We must choose the options that minimise negative environmental impact, as well as consumption of raw materials and energy.

Preparedness

Our business development must include an active commitment to development and marketing of products with the least possible environmental impact. As we continuously acquire more knowledge and promote our environmental efforts, we will also be prepared to meet future environmental needs.

Priorities

Our development will involve continuous, gradual reduction of the environmental impact of our operations. Our work must be goal-orientated and cost-effective. We will assign priority to our environmental investments on the basis of what is most appropriate in terms of ecology.

Market leader

Active, far-sighted research and development will enable us to continuously offer products that meet high environmental expectations. An active commitment to the environment, which integrates care for the environment in all our operations and involves a contribution from all our employees, will keep us competitive and strengthen our position as market leader.

Profitability

Effective use of resources will be a decisive criterion for profitability. Good profitability is a prerequisite for our environmental activities, as it generates resources for investment and development.

Every product line manager is responsible for preparing an action program to ensure that the above policy is carried out.

Electrolux Environmental Affairs is responsible for development and interpretation of this policy and for monitoring its implementation.

Policy

Electrolux will:

- Lead the development of environmentally sound products and processes
- Work to encourage demand for environmentally sound products

Strategy

Organization and Tools

The Electrolux environmental vision and policy are decided by Electrolux Group Management. Since the establishment of the environmental strategy in 1995 extensive groundwork has been laid and a series of tools developed and implemented. The environmental work is now fully integrated with business activities and responsibility for it lies within the different business sectors. Each business sector has an Environmental Responsible, who reports directly to the head of the business sector.

The foundation of daily environmental work is a network of environmental coordinators. These people (about 70) coordinate and implement the sector strategy, reporting to the Sector Environmental Responsible.

Minimum requirements

A set of Corporate Minimum Environmental Requirements, the same for all sectors and decided by Group Management, constitutes the common absolute minimum basis of the work. The requirements cover all activities within the Group, thereby setting a global standard (see illustration on page 10).

On the basis of the environmental policy, and taking into account the minimum requirements, each business sector formulates and works toward its own goals, considering its particular conditions as well as opportunities.

In the business sector White goods Europe, two goals are to have the largest market share of environmentally leading products, and to achieve market-driven systems for producer responsibility, where such arrangements are introduced.

Group Environmental Affairs

The Environmental Affairs unit on the Group level facilitates the environmental work. It provides strategies, tools and information and is responsible for corporate environmental information, e.g. the Environmental Report. The head of Environmental Affairs, Per Grunewald has an advisory function at the Group level, but is also Sector Environmental Responsible for White goods Europe.

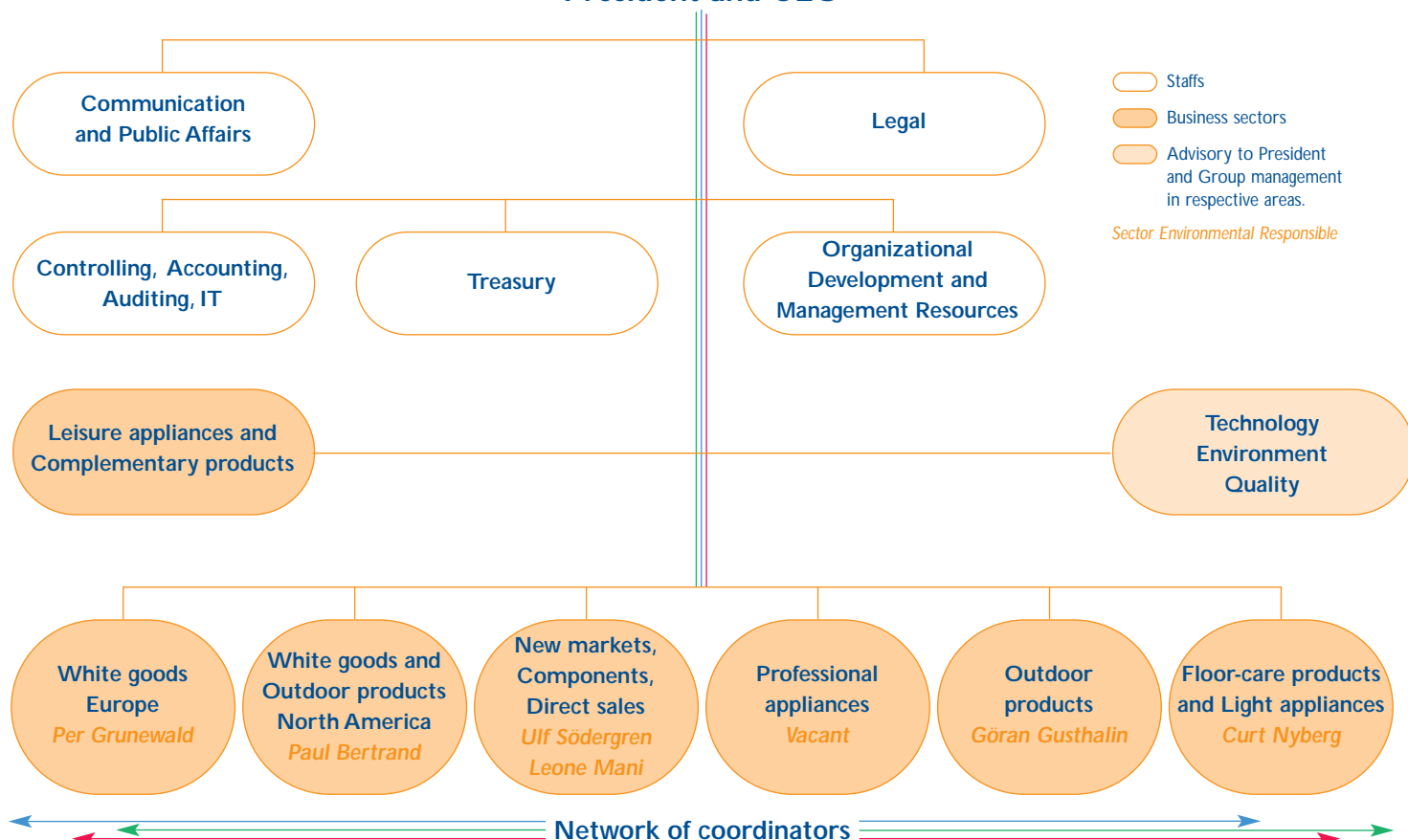
A number of tools have been developed by Environmental Affairs. They are described in this section. For the current status of implementation, see the Results section on pages 27-31.

Environmental Change Program

The Environmental Change Program (ECP), developed by Environmental Affairs, is an educational and planning tool based on scenarios that help identify

Environmental management organization

President and CEO



threats and opportunities. The ECP has also been recognized and marketed externally.

ENVA Network

An important tool for internal information and the exchange of experience is the database ENVA

Network, available on the Group intranet. Users are primarily the network of coordinators, but potentially, almost 20,000 team members with access to the intranet can get basic information about environmental policies, available tools, corporate minimum requirements and

accomplishments, as well as reports, updates and analyses of legislative and market developments trends.

Eco Know How

A tool in environmental skill building is the interactive database Eco Know How, designed and developed by

Corporate Minimum Environmental Requirements

What ?	Why ?	How ?
Environmental Management Systems	risk reduction, system and structure, cost reduction, continuous improvement	ISO 14001
Knowledge and skills	common level within the Group, credibility, prerequisite for leadership and strategic understanding	determine educational needs, roll out education
Experience exchange	learn and share the Group's total knowledge, strategic insight and preparedness	ENVA Network, functional networking, external input
Performance measurements	target and follow up, show financial benefits of environmental improvement	implement Group EPIs, identify and develop own measurements
Network of coordinators	a basis for activities common to the Group	responsibility of business sectors
Communication	influence the development, maintain dialogue with different stakeholders	Environmental and Annual Report, media and stakeholder relations

Environmental Affairs. Eco Know How consists of three modules – Basic Training, Electrolux and the Environment, and Environment at Work – and is available to all team members via the intranet. In addition to the main modules, an environmental glossary is also provided, as well as a quiz to help users test themselves. The main target group is those who are recognized as having a major influence on the environmental performance of our operations.

Eco Know How is currently available in English, French and Swedish. German and Italian versions are underway. Selected modules are also available on the Internet at www.electrolux.com

Environmental Management Systems

An environmental management system offers a structure for environmental work, guarantees management involvement and helps continuous improvement. It defines responsibilities, work methods, as well as processes and resources required to develop, implement, assess and maintain a company's environmental policy. Strict protocols for processes with a significant environmental impact minimize the risk of environmental incidents. An environmental management system is also an efficient

way of controlling and reducing costs at production units. The Group has chosen ISO 14001 as its standard, and is working towards having all production facilities certified before the end of year 2000. The certification work is described in the Results section.

Product Development

Product development within the Group follows the Integrated Product Development Process (IPDP), developed by the Group. Environmental assessment is an important part of this process. Eco-design handbooks have been developed for most of our product lines. They are used during IPDP as tools to assure that the right questions are asked and the right factors are considered during each step of the process.

Single entities within the Group have developed their own processes, often based on the idea of integrating skill on all levels. Our lawn mower manufacturer Flymo in Newton Aycliffe in the UK for example, has had success with the Product Introduction Control (PIC) process, which considers environmental aspects in both design and marketing.

Position statements

Certain environmental issues in relation to Electrolux's operations are addressed in Position Statements approved by Group Management. Three important statements, developed to guide company activities, are on Climate Change, on Ozone Depleting Substances and on Hydrocarbon Refrigerants (see the Results section for details). Position statements are important tools both to communicating the company's commitments and to making sure that it is implemented throughout the organization.

Environmental Performance Indicators

In order to show the link between environmental work and business result, and to monitor our goal alignment and performance, a set of Environmental Performance Indicators (EPIs) have been developed. Some have been used over enough time to make comparisons possible, others are still being developed.

Site Measurements are used to monitor the environmental performance at our production units. ISO 14001 is used as a framework and global standard for this.

Green Range is used to identify environmentally leading products in each product category and monitor



ENVA Network and Eco Know How are two of the tools accessible to all team members on the intranet. Environmental methods employed within Electrolux are described in ENVA Network. It contains a list of environmental coordinators and it offers opportunity for experience sharing. Eco Know How constitutes a part of the skill building program which ranges from basic environmental issues to guidelines possible to adopt in daily work.

their profitability. The Green Range is not based on an absolute standard, but defined as the top 10-15% in environmental standards on the market.

Fleet Average has been developed to monitor the overall standard improvement. It includes all manufactured products and calculates an average value for certain important environmental factors, such as energy and water consumption, and emissions.

The Recycling Index is used to relate the recycling value of products at their end-of-life to the latent value of material in the products. It takes into account the cost of labor, waste processing, etc.

Site Measurements for energy and water consumption have been collected and published over the past decade, the material balance for the past four years. Green Range has been calculated in White goods Europe for the past three years, well enough to make solid comparisons and identify trends. Fleet Average measurement began during the year in White goods Europe, while the Recycling Index is still being developed.

To monitor long-term profitability, different measurement systems within the Group are being integrated. For

example, non-financial items such as employee satisfaction and service call rate are being measured within some business sectors and parts of business sectors and compiled into balanced scorecards.

All results from the Environmental Performance Indicators are found in the Results section.

Environmental Declarations

Electrolux has developed a system for Environmental Product Declarations, which is still, after two years, unique in the business. The Environmental Declarations contain comprehensive information relevant to a product's environmental impact during its life cycle. Originally developed to meet demands from professional users, the system is offered today for White goods Europe, Laundry and Refrigeration equipment within the Professional appliances sector and, starting in 1999, the outdoor products from Husqvarna. The declarations, covering environmental aspects of manufacturing, transport, packaging, recycling and material content, can be accessed from a PC connected to the Electrolux intranet anywhere in Europe.

Energy labeling

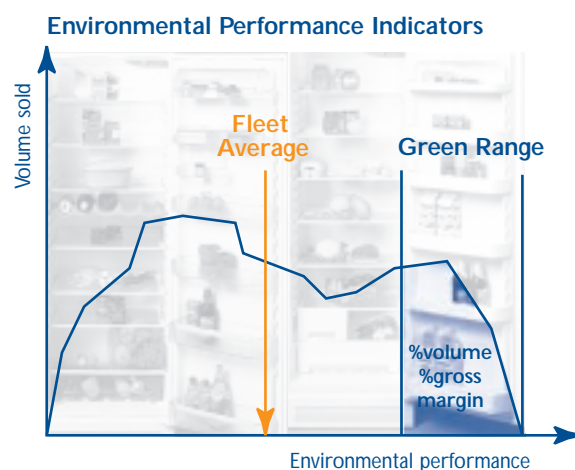
Energy labeling of white goods, launched by the European Union is a useful tool in marketing of environmentally leading appliances. The classification system, ranging from A for the most energy efficient, to G, was introduced for refrigerators and freezers in 1995 and for washing machines and tumble dryers one year later. Since about 15% of the total electricity consumption in Europe is attributable to use of household appliances, labeling is a good way of making customers focus on crucial environmental, as well as economic, issues. Though the process to implement the system has not been as quick as desired (even as the use of energy labels increases steadily), all statistics show a clear trend towards an increased demand for more energy efficient products.

Environmental labeling

There are also a number of environmental labels available on a national and international level. When used, they signal in an easy way that the product has fulfilled

Symbolism is a new concept proposed by Electrolux Industrial Design. Symbolism is an alternative method of cold storage without an external power source. Passive cooling uses the integrity of natural materials combined with water to create an environment sufficient for storing many types of foods at moderate temperatures. Drawing influence from the past and re-inventing the traditional food cellar, this along with six other concept products are part of a submission to the "Sustainable Kitchen" competition run by the United Nations in Germany.





Fleet Average and Green Range are two of the product-related Environmental Performance Indicators. Fleet Average indicates the average performance of all products in a specific category, for example refrigerators. Products with the highest environmental performance compared to competitors' products are internally called Green Range. Energy consumption, insulation material and refrigerants as well as noise level are used as parameters for refrigerators. Their part of the total number of products sold in the category, as well as percentage of gross margin are monitored.

the particular requirements for environmental performance as defined by the issuer. One example is the Nordic Swan, issued by the Nordic council and found for example on the last page of this report. Some of our products carry environmental labels.

Calculation tools

A special tool has been developed to calculate the lifetime cost of an appliance (The Eco Save Guide). This will help customers save money, as well as promote highly efficient appliances at retailers.

Another similar Savings Potential Tool has been developed during the year, and will be available on the Internet in early summer 1999 at www.electrolux.com/savings. This program combines information about the white-goods market with demography, electricity prices, related CO₂ emissions, costs for water, and efficiency of the new generation appliances. Through the program it

will be possible to calculate potential savings – in electricity, water and money – from the replacement of white goods in 22 European countries, at country, city and household level.

Environmental audits and reporting

Before all mergers or acquisitions, on e.g. new markets, an environmental audit is carried out to assess potential environmental problems, liabilities and investment needs. This process is described further on page 26. When required, for example at all units certified according to ISO 14001, external environmental audits are carried out. Often, these audits are part of the certification process.

This Environmental Report is the most comprehensive environmental information published annually on the Group level. All legal reporting required by governmental and local authorities is carried out locally.

All environmentally related financial information is available in the Annual

Report. Environmental investments are an integrated part of the Group's total investment in product development and production improvement. As for liabilities and reservations, these are also accounted for in the Annual Report.

Integration

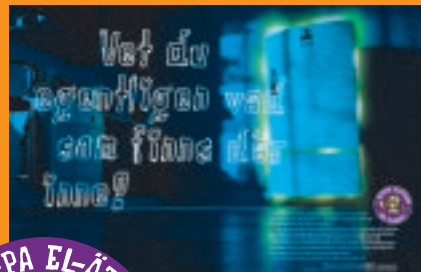
The environmental vision, policy and strategy is integrated gradually in all operations. This includes production and the implementation of environmental management systems, as well as calculation tools for marketing and considerations in product development. Other areas of interest where environmental aspects are integrated in the processes are for example logistics and transport. Environmental assessment of suppliers is another priority; something which also is a clear trend in the business.

External Communication and Cooperation



Electrolux participated in the consortium Sustainable Strategies for Value Creation together with, among others, Unilever, ICI and Volvo.

White goods manufacturers together with energy authorities and suppliers, launched the Electricity Eater campaign to raise awareness of household electricity costs and encourage early replacement of appliances.



Since the Electrolux Group is present all over the world, with different brands and products, many of our activities are purely local or regional. We cooperate with universities and other scientific institutions, as well as with branch organizations, government projects and environmental groups. The environmental strategy is present in all activities. This is a selection of various activities, local as well as global.

NGO and research institutes

Collaboration in the early 1990's with The Natural Step Foundation (Det Naturliga Steget) inspired the holistic approach to environmental management that we have adopted and developed. Another initial source of inspiration was the International Chamber of Commerce (ICC) business charter that we signed in 1989. We cooperate with the Center for Environmental Assessment of Product and Material Systems (CPM) at Chalmers Technical University, in Gothenburg, Sweden, where objective methods for assessing environmental impact of a product during its entire life cycle are developed. Environmental Affairs has also cooperation with the International Institute for Management Development in Lausanne, Switzerland.

In many countries we work together with the World Wide Fund for Nature (WWF). In Italy for example, a consumers guide, EcoGuida, was developed together with WWF.

Our AEG brand cooperates with

WWF in Germany with the Consensus 25 concept. AEG has committed to produce certain household appliances with a reduction in energy consumption of at least 25% during five years, starting in 1995.

Sponsoring

Our North American vacuum cleaner manufacturer Eureka initiated the Eureka World Vac Charities Program in September 1992. Since then Eureka has given more than \$2 million through World Vac Charities including \$1.4 million to the National Park Foundation. Starting in 1994, Eureka has provided a grant each year to the National Park Foundation to support the Harry Yount Park Ranger Award. Each year, the recipient has been honored and presented with this award at a White House reception attended by the President of the United States. A portion of the purchase price of each World Vac and each full-sized WhirlWind model vacuum cleaner is donated through World Vac Charities to the National Parks Foundation. A similar program is in place in Canada with the Canadian Parks Partnership.

The National Going for Green campaign in the UK, which encourages everyone to make changes in their lifestyle to protect the environment, is supported by Electrolux. The active participation of in particular the Spennymoor facility has been widely acclaimed. Says Professor Graham Ashwort, Chairman of the campaign:

"Electrolux is an excellent example of an organization committed to safeguarding the future of the environment. It has clearly embraced the principles of the Green Code and helped its workers to do something positive." In Finland, we sponsored an information package from the organization "Häll Skärgården Ren" (Keep the Archipelago Clean).

For the second year, our professional product line Food-service equipment has presented the Electrolux Eco Kitchen Prize to professional kitchens in Sweden with the best ecological entrepreneurship.

Electrolux Australia sponsors the annual Australian Youth Parliament of the Environment (AYPE), bringing pupils together at the parliament house in Canberra to discuss environmental issues.

Partnerships, marketing and media

As electricity consumption constitutes a large part of the environmental impact of our appliances, an important task is to encourage households to replace their appliances with new high efficiency ones. Successful cooperation with both government and electricity suppliers has been established on many markets.

In Sweden, a pilot project together with the publicly owned utility company Vattenfall, to promote the most energy efficient refrigerators, freezers and washing machines, resulted in increased turnover in Electrolux Home stores. A campaign supported by Electrolux and other white goods manufacturers,

energy authorities and suppliers, – Elätarna (the Electricity Eaters) – to encourage early replacement of white goods, resulted in increased sales of efficient products (energy class A and B) from 10-15% of the market to 50-60%.

In the UK, Electrolux dishwashers and washing machines can be seen in the BBC television series “Dreamhouse”. The appliances communicate with the electric meter to get the cheapest possible electricity.

Similar collaboration also takes place in North America. Power companies in for example, Connecticut, Massachusetts, New York and Vermont have joined together to offer promotions to stimulate the purchase of energy efficient washing machines, like the Frigidaire Gallery Tumble Action Washer.

Internet

High environmental performance is a strong marketing tool as it also involves cost savings for the customer. During the year an Eco Save Guide was developed, to help customers calculate the life time cost of a household appliance. This will be introduced during the year on the Internet or at retailers. The popular Electrolux homepage, which soon will be available in ten different languages, is also a powerful tool for environmental communication. Visitors to www.electrolux.com can download environmental reports, get basic

information about our environmental work and visit a green product gallery. Parts of the internal educational database Eco Know How are also accessible on the Internet. Naturally, specific questions can be mailed to Environmental Affairs by e-mail. This environmental report is also available on the Internet.

Legislators, Business organizations

The Electrolux Group is a respected discussion partner by legislators in many countries and for example the European Union. Together with branch organizations we actively participate in for example the discussions concerning producer responsibility. In the USA, Frigidaire Home Products participates in the Major Appliance Resource Management Alliance (MARMA) through the Association of Home Appliances Manufacturers.

During the last one and a half years, Electrolux participated in a consortium together with Deutsche Bank, Gerling, ICI, Monsanto, Unilever and Volvo. The theme of the consortium was Sustainable Strategies for Value Creation. The group of companies gathered to develop a better understanding of how to further capitalize on their environmental efforts.

Electrolux is a member of the Swedish Association of Environmental Managers (Näringslivets Miljöchefer) and has been elected to join the steering committee.

An important discussion concerns the

standards for environmental reporting. Electrolux participates, along with organizations such as WBCSD (World Business Council for Sustainable Development), and ACCA (Association of Chartered Certified Accountants, UK), in the Global Reporting Initiative, launched by CERES (Coalition of Environmentally Responsible Economies) and aimed at producing a standard for environmental and sustainability reporting.

External verification of Corporate Environmental Reports is one issue up for discussion. As no accepted global standard yet exists, we have chosen not to use external verification for this report. Some sections, especially those financially related, could, however, be subject to future external verification. There is also a shorter section about environmental work included in the Annual Report.

During the year, Electrolux received a number of very encouraging recognitions of the success of our environmental work. Last year's Environmental Report was rated the best in the manufacturing industry, by Swedish business magazine *Affärsvärlden* and the Institute for Business Economics (Företagsekonomiska Institutet) in Sweden. Per Grunewald, Electrolux Environmental Affairs was voted the best Environmental Manager in Sweden by the same magazine. We are also proud to announce that the Electrolux share has been chosen by several international environmental investment funds.



In Italy, Electrolux supports various information packages from WWF, for example teaching children about sustainability.



The Institute of Packaging in the UK awarded Electrolux Cookers the Silver Award 1998 for the packaging of wide range combined gas/electricity cookers.

In order to encourage consumers to consider the lifetime cost (retail price and electricity cost) of household appliances, Electrolux has developed the Eco Save Guide. It provides a clear and easy way to calculate the total costs of appliances, break even years and potential savings from choosing efficient products. It was developed to be used at retailers.



Household Appliances

Household appliances is Electrolux's largest business area, representing almost three fourths of total sales. The business area is divided into product lines:

White goods

cold: refrigerators, freezers

wet: dishwashers, washing machines, dryers

hot: cookers, ovens, hobs, cooker hoods and microwave ovens

Floor-care products: vacuum cleaners

Leisure appliances: hotel minibars, refrigerators for trailers and mobile homes

Components

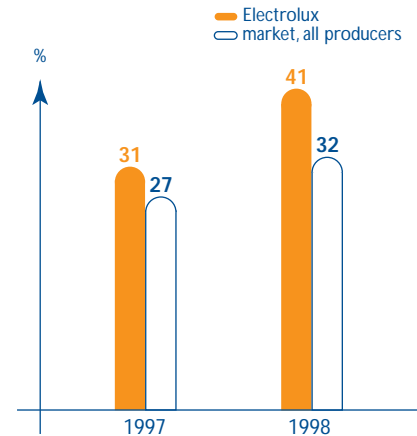
goods have been or will be introduced in both Europe and North America. Electrolux offers products that meet and exceed these demands.

As environmental impact most often goes hand in hand with the household economy, the trend is clear towards increased market demand for more efficient appliances. This is shown by our own environmental performance indicators, as well as by market statistics in general. In 1995, the European Union introduced a system for energy labeling of refrigerators and freezers, ranking efficiency from A to G. Washing machines and tumble dryers were included in the system the year after. Dishwashers will be included in the system starting in 1999.

Implementation of European directives is not a quick process; only

Electrolux meets increased demand

Share of freezers sold in Europe in energy classes A and B



Demand is increasing for resource efficient appliances in the European market. For example, 27% of all freezers sold in Europe in 1997 belonged to energy class A or B. In 1998 the volume had increased to 32%. During the same period the share of Electrolux freezers was even higher.

Electrolux

FRIGIDAIRE

EUREKA
VACUUM CLEANERS

ZANUSSI

AEG



Frigidaire Home Products in North America has expanded its offering of refrigerators with the unique PureSource Ice and Water filter. The built-in filter system reduces impurities in ice and water served through the door of side by side refrigerators. It also removes undesirable tastes and odors from the water. The PureSource filter has been praised by leading consumer magazines.

The greatest environmental impact from household appliances occurs during use. Less than 20% is attributable to manufacturing, transport etc. Most crucial environmental issues are energy and water consumption, but materials, chemicals and noise are also of interest.

Another important issue is recyclability, highlighted by current discussion about producer responsibility. Electrolux is well prepared with a recyclability rate of around 80% for our refrigerators, and higher for vacuum cleaners.

Important environmental issues may vary between different products, but energy consumption is central all over. Minimum energy standards for white

about 40% of all refrigerators were actually labeled in 1995. In 1997 this figure had increased to 70% and in 1998 to 80%. Market statistics from eight European countries show that the most energy efficient freezers, energy classes A and B, increased their share of the market from 26% to 32% between 1997 and 1998. Corresponding figures for Electrolux were 31% and 41%.

Refrigerators and freezers

Energy consumption is a key environmental issue in this product group.

Legislation and market demand work simultaneously to promote more energy efficient products, which is

clearly shown in the market statistics available. The European Union has set limits for the energy consumption of refrigerators and freezers which will come into effect in the fall of 1999.

In the United States more stringent federal energy efficiency standards will take effect in July 2001. In the European market, we are ready to meet the new demands, and as shown above have steadily increased our share in the top efficiency segments. Although refrigerators and freezers still represent the largest part of many households, electricity bills (heating not included), we offer a wide selection of appliances whose consumption equals that of a 15W light bulb. The AEG Santo Super 1872 is the



It's Not Either Or – It's Oz



The Oz refrigerator from Electrolux Zanussi, featuring innovative design and energy efficiency, was developed cooperatively by Roberto Pezzetta at the Zanussi Industrial Design Center and Luciano Pesavento, general manager, Susegana, both in Italy.

When it comes to design, many people think of Italy. And if it's a matter of household appliances, thoughts are likely to drift towards Electrolux Zanussi. Already known for innovative style, the Zanussi Industrial Design Center challenged all conventional wisdom with their 'family' of the refrigerator Oz, the oven Theo and the washing machine Zoe; three appliances the like of which no one had seen before. Now the Oz refrigerator is on the market offering originality, fashion and – yes – functionality. A gross capacity of 230 liters isn't bad for a fridge that would fit nicely as a piece of furniture. But more interestingly, what environmental performance had to be sacrificed?

Surprisingly enough, None! says Roberto Pezzetta, chief designer: "I felt like an ant at the feet of the Himalayas. I thought about this constantly. What is the task, the responsibility, the contribution a designer can make within such a macroscopic context?"

Pezzetta faced the challenge together with his friend and colleague, Luciano Pesavento, who took responsibility for production technology.

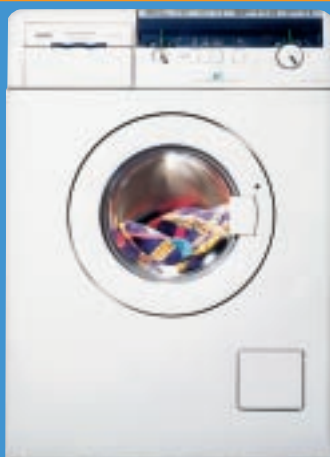
"We faced the problem of environmental impact with the attitude of, if not solving every problem, at least creating some solutions that could make this new object a turning point in the white goods world, a way of giving an answer not to functionality, but to desire and expectation."

And the result? Well, naturally, Oz won't hurt the ozone layer, using only natural isobutane R600A for refrigeration and cyclopentane as insulation material, but maybe more surprisingly it made the top league of energy efficiency and proudly wears a class A label. Furthermore, the low noise level of 38 dB(A) makes it welcome in every room.

It's quite evident that they succeeded.

Says Pesavento: "The project has been accepted by the market in an extremely positive way. Someone said that Oz is an example that could be mentioned in a manual of how product design, communication and brand building can be integrated."

Jetsystem washing machines from Zanussi use a unique spray wash technology that adjusts the water intake to suit the size and fabric type of the laundry. This gives ultimate washing performance at a minimum cost, because of savings in water, electricity and detergents. Jetsystem leads its field with class A ratings for both washing performance and energy consumption.



Doing the dishes by hand? The Zanussi Aquasave dishwashers reduce water consumption to a maximum of 24 liters per wash. That's less than a sink.

most energy efficient built-in refrigerator in the world, compared to others with the same volume, consuming 0.24kWh per day, equal to a 10W light bulb.

In the United States, the decision was made during the year to make substantial investments in the development of the "Next Generation" of refrigerators, which will be produced at factories in Anderson, South Carolina and Greenville, Michigan. With around 30% reduction in energy consumption, these appliances will well meet and exceed the new federal energy efficiency standards that take effect in July, 2001. They will also be designed to meet the mandatory phase-out of HCFC coming into effect in 2003.

Within the European Union, as well as in North America, CFCs (so called hard freons) are prohibited as refrigerants and insulation gas. HCFCs (soft freons) are prohibited as refrigerants in the EU. Electrolux was the first company to offer a complete range of models with no ozone depletion potential (ODP) in 1993. Today, our entire range of European household refrigerators and freezers is CFC- as well as HCFC-free.

Substantial investments have been made in new production technology and product development at our recently acquired facilities on new markets. We now offer a growing range of ODP-free refrigerators and freezers in Brazil and China.

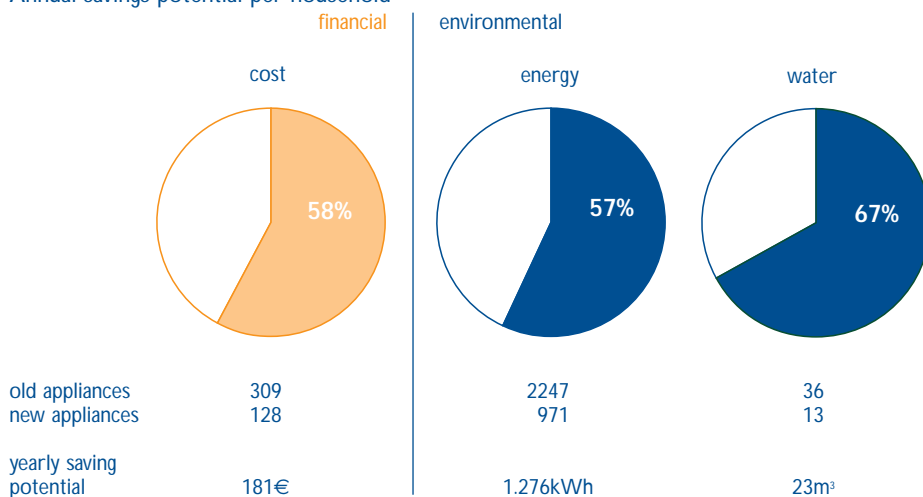
recyclability and detergent use are important environmental issues in this area.

During the year we introduced the first drying cabinet without PVC on the market, the EDD210, manufactured and marketed by AB Höörs Plåt. The EDD210 is also energy efficient and more silent than the quietest tumble dryer (57dB(A)), which makes it suitable for household use.

After leading the way in water and energy efficiency on the demanding European market for a long time,

especially under the AEG brand, global cooperation has permitted us to make innovations also in North America. Sales of the horizontal axis Gallery Tumble Action Washer from Frigidaire Home Products have grown impressively during the year, in a market where verticle axis machines normally dominate. The horizontal axis technology has permitted decreases in water and energy consumption, making it a leading environmental product; something which is also used in marketing. It has been rated No. 1 by a leading consumer

Savings potential of new appliances

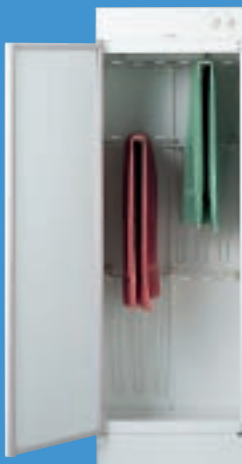


Dishwashers, washing machines and dryers

Water and energy consumption, noise,

The calculations are based on the average occurrence of full-size refrigerators and freezers along with dishwashers and washing machines in one household in the UK, with local cost of electricity and water. Ten year old appliances are compared to new, more efficient ones. For all households in London this means yearly savings of Euro (€) 334 million. This Savings Potential Tool will be made available during early summer 1999 via the Internet.

The Electrolux drying cabinet EDD210 from AB Höörs Plåt is entirely PVC-free, the first one on the market. Use of air recirculation technology and thermostat controlled temperature provides maximum energy efficiency. With a noise level of no more than 57 dB(A), it is a discrete family member in both houses and apartments.



The AEG built-in ovens from Rothenburg carry the LGA seal from Landesgewerbeanstalt Bayern. The Logo certifies that the ovens have undergone testing for possible emissions of formaldehyde from the isolation material and other substances used during production.



The Electrolux Oxygen vac helps to maintain a healthy indoor climate. It uses the reusable Gore Cleanstream® filters, developed exclusively for Electrolux. The Gore Cleanstream® filters are the only reusable filters to surpass the stringent HEPA H-12 Standard. The Oxygen is equipped with an ergonomic, back saving handle which has been praised by the National Back Pain Association in the UK.



magazine two years in a row, and it has, alongside the Frigidaire Precision Wash dishwasher, qualified for the Canadian Federal Department of the Environment's EcoLogo seal.

Both the washing machine and the dishwasher are designated as ENERGY STAR products by the US Department of Energy.

Cookers, ovens, hobs, cooker hoods and microwave ovens

Energy efficiency is central to this group of appliances, and similar energy regulations as for refrigerators and washing machines are expected from the EU in the year 2000 for ovens and cookers. We offer products that are leaders in energy efficiency and in many cases, also innovators in design and functionality. Preparations are made for future energy labeling.

The built-in oven Voss IEL 650-1 Futura produced in Fredericia, Denmark, has been designated "Best in Test" by the Danish National Consumer Agency. Its outstanding heat and air distribution, fast heat-up time and low noise level combined with high energy efficiency makes it the overall winner among seven competitors.

Another increasingly important environmental issue is recyclability. Some of our ovens have a recyclability of 80%.

In early 1998 it became apparent that the most often used insulation material in ovens emitted potentially dangerous substances during the initial

"burning off". This made it necessary to reorganize production and change the insulation material. This process is described in an article reprinted with permission from *Tomorrow* on page 4.

Floor-care products

Filtration is a central environmental issue for vacuum cleaners. At the National Asthma Conference in the UK in 1998, Electrolux presented the only reusable filter on the market to exceed the stringent HEPA H-12 standards (High Efficiency Particulate Air). These Gore Cleanstream® filters, made exclusively for Electrolux are used in the Electrolux Oxygen vacuum cleaner. In the North American market our company Eureka has been leading the way with the Enviro Vac, equipped with HEPA 99.97% level filtration in a sealed system. Also in Europe, the exhaust air from some of our models is actually cleaner than the ambient air.

We were also the first on the market to offer portable vacuum cleaners using cadmium free, rechargeable batteries.

Leisure appliances

Electrolux is the world leader in absorption refrigerators used as hotel minibars. Energy efficiency is crucial as the total number of appliances is normally high. This is also a strong marketing argument which is appreciated by large professional customers. Advanced electronic controls and vacuum panel insulation have reduced energy consumption in our

bar refrigerators by almost 40%. For a hotel with 100 rooms, this represents annual savings of about SEK 30,000.

Similar technology is also being introduced in refrigerators for trailers and mobile homes.

The increasing shortage of clean water makes the unique Electrolux water purifier interesting. The in-house developed membrane process leads to exceptionally fine water quality, good water management but low energy consumption.

Professional Appliances

The Professional appliances business area represents about one tenth of total sales. The business is divided into product lines:

Refrigeration equipment

Laundry equipment (during the year, the European operation in Senkingwerk, Germany, making large tunnel washer installations, was divested)

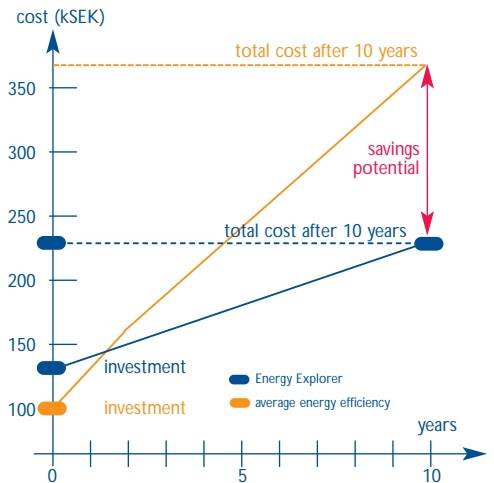
Food-service equipment

Cleaning equipment (during the year, Electrolux Euroclean operations were divested)

and more common, as are "Functional Sales", meaning the sale of the "function" of an appliance, rather than the appliance in itself, keeping responsibility with the manufacturer during the entire life cycle of the product. Another important environmental issue is, of course, the work environment, in terms of both noise and ergonomics. Customer demand for more convenient appliances is a strong driving force for our product development.

An important strength for Electrolux operations in this business area is our global organization which makes it possible to offer whole solutions for e.g. a hotel chain or a hospital, by providing all appliances from laundry equipment to an entire kitchen. Our environmental commitment and focus on efficiency is integrated into all parts of such offers.

Investment and cost of use



Investment and cost of electricity for a supermarket with an average set of refrigeration appliances; wall cabinets, freezer, gondola, etc. The higher cost of investment for the Energy Explorer range is recouped in about two years.

Electrolux
Wascator

ZANUSSI
PROFESSIONAL

Kelvinator



The Energy Explorer range of professional refrigeration appliances consumes less than half the energy needed by conventional appliances of average energy efficiency.



Professional appliances are usually used extensively, for at least eight hours per day and often up to 20 years. As a result, the lifetime operating costs often easily exceed the initial purchase price and efficiency represents substantial savings. It is natural for professional customers to rationally calculate an appliance's total life cycle cost, which is why high environmental performance is of paramount interest in this business area. The link between environmental impact and the user's economy is both strong and apparent.

Recyclability of used appliances is another important issue. Producer take-back schemes are becoming more

To an increasing degree, certain professional customers demand not only efficiency and a good working environment, but proof of consistent environmental concern. An objective and useful way of accommodating these demands is Environmental Product Declarations. The use of these is constantly increasing within this business area.

Refrigeration equipment

The phase-out of CFCs was completed in 1995. In Europe, the major part of all HCFC's were removed in 1996 and the phase-out completed in 1998. All new technology and production is entirely ODP-free.

Energy efficiency is a key issue for Refrigeration equipment since the total life cycle cost often is double, or even triple the initial investment. Electrolux concentrates on reduced energy consumption, both in product development and marketing, and has earned awards for most energy-efficient refrigeration units. In 1997, the Energy Explorer concept was launched to identify the top range of energy-efficient appliances. Since it started, the Energy Explorer range has increased from 5% in 1997 to 14% in 1998, in the product categories where the Explorer concept is offered and is expected to increase further over the next year.



A Computer in the Kitchen

for Safety and Efficiency

The Electrolux product line Food-service equipment (FSE), a part of Professional appliances, is the world leader in solutions for professional kitchens in for example restaurants, hospitals and hotels. Based in Conegliano, Italy, FSE is present all over the world and offers complete solutions for professional food treatment, from storing to cooking and dishwashing. The equipment from Electrolux has a strong reputation for quality, efficiency, user-friendliness and environmental concern.

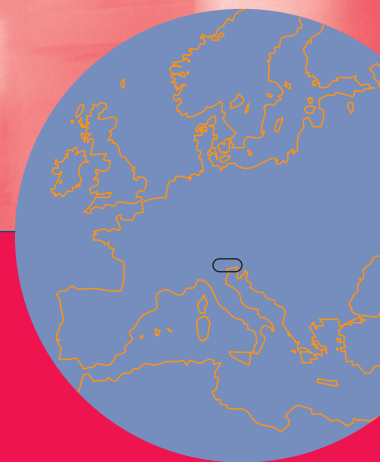
Handling large amounts of food for many people puts great demand on safety routines, monitoring and the work environment. Wrong temperature in the fridge, a problem in the washing process, bad control of cooking or poor ventilation can affect resource efficiency, jeopardize the quality and even endanger people's health. To avoid this requires both competence and technology.

The HACCP – Hazard Analysis and Critical Control Point – procedure is a way of assessing the inherent risks attributable to a product or a process and to determine the necessary steps to control the identified risks. HACCP was originally developed by NASA in the early 1960's, but has since then been acknowledged internationally. The European Union published guidelines for the HACCP process in 1993 and since 1998 the process has been mandatory for all professional kitchens in the EU.

Although there are several applications available to use in the monitoring process, most of these can only work with one appliance and require significant manual operations. Recently, Electrolux installed the new Electrolux Integrated HACCP system for the first time. This consists of Electrolux appliances equipped with an interface that allows data-transfer between the appliances and the connected software. A network connects all the catering appliances of one or more kitchens to the software on a central PC. Up to 128 different appliances can be monitored simultaneously. The system monitors, controls and logs all safety-related parameters including temperature.

According to Stanislas Verdonckt, central marketing support manager, one of the major benefits of the Integrated HACCP system is that it offers increased safety as well as creates a better working environment by lifting the burden of constant control from the shoulders of the chefs.

Says Verdonckt, "Essentially the system takes care of itself. Those working in the kitchen can operate like before, relying on the Integrated HACCP system. It's business as usual, allowing kitchen personnel to concentrate on what's really important – preparing good, healthy meals."



Stanislas Verdonckt is central marketing support manager at Electrolux based in Conegliano, Italy. He says the Electrolux Integrated HACCP system provides safety and efficiency while letting business in the kitchen proceed as usual.





The new Master System for apartment buildings not only permits tenants to reserve the washing facilities from their own apartments, over the Internet, but it also helps reduce costs and save the environment. The Master System can help with correct dosing and laundry weights and also keeps track of what programs are used, when and by whom. In this way the costs can be differentiated between the users to reflect individual consumption; something that not only is fair, but deters unnecessary over consumption.



The Clarus Control system, a microprocessor-based programmable control system for laundry equipment, makes it possible to optimize the use of both electricity and water consumption. With automatic weighing of the laundry, it is also possible to control the dosage of detergents to the optimal level. The personal Smart Memory Card can be used to store laundry programs tailored to particular users.

During the year, a partnership that was started in the Netherlands with a world leading company in food retailing, was rolled out. Electrolux provides all refrigeration equipment which after approximately five years is refurbished and used in another store.

This strategic cooperation, represents a minor part of total product line turnover, but is estimated to grow during 1999.

Following customer demand, the Environmental Product Declarations offered by refrigeration equipment have been further developed during the year and now contain material specifications.

Laundry equipment

Key environmental issues are energy, water and detergent consumption, as well as recycling. In addition to washing machines and ironers with reduced environmental impact, Electrolux also offers the unique Aqua Clean, a complement to traditional dry-cleaning, using only biodegradable detergents. Electrolux Wascator continued to develop the unique Dry Wash technology, using liquid carbon dioxide, CO₂, instead of traditional dry-cleaning agents, during the year.

Over the past decade, annual laundry costs for apartment buildings with shared laundry facilities, have decreased by more than 50%. Now Electrolux is introducing new digital innovations to reduce the costs further, while increasing quality and convenience. Two examples are the Master System and the Clarus Control System.

Demand for Environmental Product Declarations has so far been concentrated mainly in the Swedish market and met on an individual basis, but the aim is to offer a standardized system during next year. Work is also underway to implement the Green Range Environmental Performance Indicator to measure the profitability of environmentally high performing products.

Product development is aimed at reduced energy consumption, and all appliances are compatible with the main existing energy management systems on the market, i.e. systems used to monitor energy consumption and signal deviations (see for example the article on page 21). A software application has been developed to calculate the life cycle cost of a rack type dishwasher, to meet the increasing demand and show the connection between environmental performance and economy.

Recyclability of professional kitchens often reaches 75-85%. We have established systems for the take-back of worn out products in many countries; an experience which increases our preparedness for the extended producer responsibility schemes that are currently being discussed.

One issue encouraged by increasing customer demand is food waste management. This demand has been addressed during product development. One example is a fryer with a drain valve connected to a separate container for easy disposal of used grease.

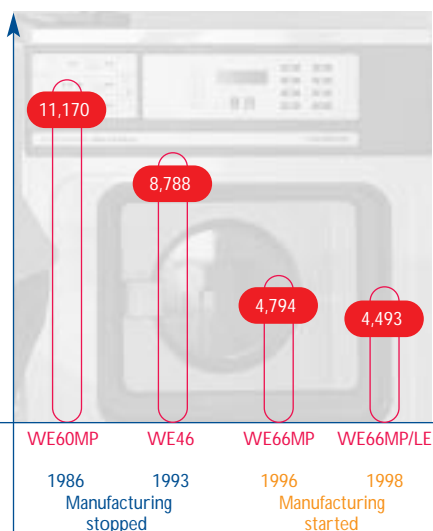
To encourage ecological thinking and energy efficient installations, Electrolux Food-service equipment in Sweden has established the annual Eco Kitchen Prize, which recognises professional kitchens that show good ecological management.

Food-service equipment

Energy consumption is a key environmental issue, and energy efficiency an appreciated feature by customers.

Annual laundry cost

SEK



Annual laundry costs for an apartment building of 20 households, each with ten kilos of laundry per week, using older or new resource-efficient laundry equipment. The figures are based on Swedish water and electricity prices.

Husqvarna

Husqvarna

Successful Partnership for Husqvarna



The Electrolux Group is the largest manufacturer of chainsaws in the world, and leader in many other appliances for outdoor use, such as lawnmowers, trimmers and brushcutters. Many of these products need fuel and lubricants – gasoline and oil that can be smelly and harmful to the environment. To meet the growing demand from customers and regulators for cleaner equipment, Husqvarna has developed a series of successful partnerships. While improving the technology to become more resource efficient, Husqvarna also works actively with subcontractors to offer complete solutions with reduced environmental impact.

Says Dagb Larsson, product manager: "As early as the 1980's, we started to work with the Swedish petroleum company Aspen. We actually considered going into the petroleum business ourselves, but found that a better way was to find a partner. Today, we market a rather unique brand of gasoline, the Aspen 2T and 4T, in our stores. It is virtually void of all benzene, aromates and olefins. You can buy this only from us, and even as the price is higher than for conventional, smellier fuels, demand is high due to the greatly improved work environment for the user."

Another successful partnership is with the German company Uniq, which has developed a biodegradable lubricant for trimmer gears. Likewise, the Finnish company Raisio offers – through Husqvarna – a vegetable chain oil.

A particularly successful arrangement is in place with Statoil. Every year, Husqvarna and Statoil sell almost 2,000m³ of an oil with reduced particle emissions for two stroke engines, which offers customers less smoke, less smell and a more pleasant and healthy work or gardening environment. According to Larsson this way of doing business has been a success in all markets.

Says Larsson: "Why are we doing this? It's good business. At Husqvarna we always try to be ahead of regulators and market demand. It is clear that people are demanding equipment that is cleaner, quieter, and that does not smell as much. And regulations will only become stricter. With Aspen for example we have found a way of using our respective competitive advantages to meet this demand, and in a way our competitors envy."

Husqvarna, headquartered in Sweden, has developed a series of successful partnerships, working actively with subcontractors to offer complete solutions with reduced environmental impact. Dagb Larsson, product manager, claims this way of using competitive advantages is a great way of meeting the demand for cleaner products.

Outdoor Products

Outdoor products is the second largest business area representing about one sixth of total Group sales.

Our largest brand names are Husqvarna, Partner, Flymo, Poulan and Weed Eater.

Examples of products in this business area are: trimmers, chainsaws, leaf blowers, hedge cutters and lawnmowers. They are equipped with internal combustion engines, powered electrically, solar powered or manually driven.

Environmental impact occurs mainly during the use of outdoor products and consists of emissions from combustion engines, energy consumption and noise. Recyclability is another issue of increasing importance. Demand for better ergonomics as well as for lighter products, lower emissions, less noise and overall less environmental impact is increasing both among professional users and weekend gardeners. Governmental authorities are also demanding cleaner products, both as legislators and customers.

One way of meeting these demands is to offer alternative products, such as lawnmowers powered electrically, instead of by combustion engines. This naturally eliminates exhaust emissions, grease, etc., and considerably reduces the noise level. Our English manufacturer Flymo offers a wide range of electric lawnmowers,

trimmers and garden vacs, and during the year, launched the world's lightest hovermower, the Flymo Micro Lite.

The Solar Mower from Husqvarna is still unique. The Solar Mower is a robotic mower powered by sunlight and capable of covering a lawn of up to 1,200m². This pride of Husqvarna was recently displayed at the National Design Museum in New York as part of the exhibition "Under the Sun".

Since the introduction of the Solar Mower, Husqvarna has developed the robotic technology further and during the year presented a new generation of Solar Mowers and the new Auto Mower. The Auto Mower is powered electrically via a rechargeable battery and a recharging unit which makes it independent of weather conditions. Both the Solar and the Auto mower cut little, but often.


 **Husqvarna**

Flymo

Poulan®
WEED EATER®

The range of electric hovermowers from Flymo in the UK is appreciated by gardeners demanding silent clean air cushion mowers. Flymo Micro Lite, the most recent addition to the Flymo family is, at 4.5 kg, the world's lightest hovermower.





The E-tech developed by Husqvarna, combines new, efficient engine technology with a new type of catalytic converter. Outdoor products equipped with E-tech exceed existing emission limits by a good margin.

The robot Auto Mower from Husqvarna takes care of the lawn all by itself, helped by a powerful microprocessor. Powered electrically, it finds its own way back to the power station to be recharged before returning to its duties. The Auto Mower, recently selected by the King of Sweden, is based on the same concept and technology as the Husqvarna Solar Mower, powered by sunlight.



The short cuttings disappear into the lawn where they decompose, returning nutrients to the soil. A special boost for the premiere of the Auto Mower was the choice of HRH Carl XVI Gustaf of Sweden to let it take care of the lawn at the residential castle Drottningholm outside Stockholm.

For products still using combustion engines, E-tech has meant considerable improvement in environmental performance. The E-tech was developed by Husqvarna and combines more efficient engine technology with a new type of catalytic converter. All Husqvarna's hand-held garden products with two stroke engines are today equipped with E-tech. Husqvarna has also developed a lightweight catalytic converter for small

engines, which is part of some lighter E-tech products, e.g. brushcutters. The reduced weight results in lower exhaust temperature. As a result, the Husqvarna brushcutter is the only one in certain markets which can match local or national fire legislation limits on maximum exhaust temperature.

Both federal and state governments in the USA, and the European Union, have introduced, or plan to introduce strict limits on exhaust emissions from small two-stroke engines used in garden and forestry equipment. The California Air Resources Board (CARB) standard went into effect in 1995 and remains the strictest in the world. It was followed by American federal Environmental

Protection Agency (EPA) standards in 1998. Corresponding European restrictions are expected at the beginning of the next century. Outdoor products equipped with E-tech exceed these standards by a good margin.

Demand for detailed Environmental Product Declarations is increasing, especially from public sector customers. Electrolux operations in the outdoor product business area have developed systems for these declarations and plan to offer them on a regular basis starting in 1999.

Environmental labeling also helps customers make environmentally conscious choices in some areas. The professional Husqvarna Rider 1200 was the first rider mower to earn the Nordic Swan.

Strict Protocols for Environmental Assessment

The Electrolux Group has grown dramatically through acquisitions. Over the past years, operations have been taken over or started in new markets in China, India, Brazil and Central and Eastern Europe. Both technology and regulations have often been on another level than in North America and Western Europe. Previous operations have sometimes been lacking in environmental control and standard. Moreover, environmental legislation is under constant change globally and has in many countries resulted in – or is moving towards – strict and joint liability.

It is paramount to carefully assess potential

a standard Group procedure is followed. The objective of the Phase I study is to obtain a general understanding of areas of potential environmental concern, and identify the need for further investigation in the form of a subsequent Phase II ESA. This in turn is a more thorough and quantitative assessment procedure and includes sampling and testing. A Phase II ESA should confirm contamination, evaluate the extent, suggest suitable remediation techniques and estimate the magnitude of remediation costs.



"All potential environmental hazards, liabilities and investment needs are carefully assessed before an acquisition," says Arne Pontenius, project manager.
"Standard protocols are essential to maintain high assessment quality and to minimize the risks for the Group and the environment."

environmental hazards, liabilities and investment needs before an acquisition. Since environmental legislation and practice is extensive and complex, and the Group is global and diverse, a standardized approach is needed. A Due Diligence process according to a strict protocol has been developed to fulfill this need.

The process is divided into different levels of minimum assessment activities required for different situations. A desktop study, meaning an evaluation of the facility from photos, maps, etc. and phone interviews with people who are responsible on site, is required for any transaction. This is carried out by Electrolux personnel. Should the desktop study so suggest, the next step is to proceed to a Phase I study.

The Phase I Environmental Site Assessment (ESA) includes a site visit together with external, objective specialists. In certain countries, for example the US, standard protocols are required by state or federal law for this phase in which case they are used. In other cases,

Different levels of assessment are conducted depending on the results from the previous level. However, in the case of taking over production sites or in situations where hazardous chemicals are or have been stored, all levels of assessment are mandatory. In addition to the Phase I and II ESA, there are also Phase III and IV assessments. These provide detailed information for negotiations with the authorities and the design of remedial actions.

Says Arne Pontenius, project manager: "Our standardized protocols for this are absolutely essential to maintain high quality assessments. By investing time and effort at an early stage of the acquisition process we clear the table for future operations and ascertain that all responsibilities are assumed in a just way. We make sure that all skeletons are out of the closet before we make an acquisition. This is the method we have chosen to minimize the risks for the Group and the environment."

Results

In earlier Environmental Reports we reported on the production related Site measurements. This is the first year that results related to products and strategic development are included in this section. The aim is to further extend this section in line with the implementation on a Group level of all Environmental Performance Indicators.

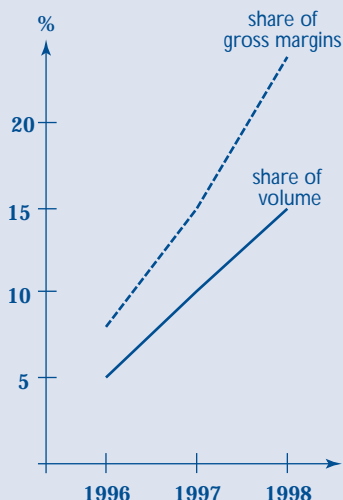
In June 1997, Electrolux started a major restructuring program, running over a two-year period. This involved,

among other things, the planned closing of 25 production facilities and 50 warehouses. A large part of this restructuring has been accomplished. It is important to keep in mind the changing structure of the Group when comparing the production related measurements. Differences in reported measurements can partly be explained by both the individual performances of the production facilities and of the current Group structure.

Most of the facilities that were taken out of operations were located in Western Europe and at the same time facilities were bought in India and Eastern Europe. These new Group facilities do not have the environmental standard of the ones that were taken out of operation. However, the standard will increase over a few years, as has been the case with our Hungarian and Brazilian production facilities.

Products

Green Range



Leading products show good margins

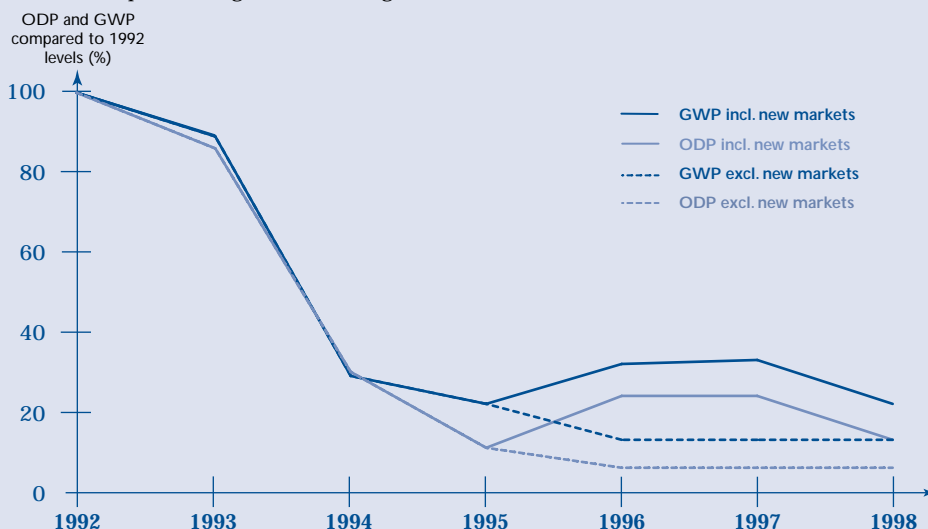
Green Range is one of the Environmental Performance Indicators, EPIs. The graph describes the results for White goods Europe during three consecutive years. Products within this sector, with the highest environmental performance, accounted for 16% of total sales and 24% of gross margins during 1998.

Fleet average

The average energy efficiency of Electrolux sales of freezers in eight European countries improved dramatically between 1997 and 1998. In 1997, the average energy consumption equalled a good energy class D freezer, while in 1998 it had improved to a good energy class C freezer. That means that the total fleet of freezers sold in 1998 was about 15% more energy efficient than in 1997, with substantial energy savings as well as related savings in CO₂ emissions.

Phase out of substances with ozone depletion and global warming potential

Total Group including and excluding new markets.



Phase out of substances with ozone depletion and global warming potential

The graph shows the relative change in the combined ozone-depleting and global warming potential of all refrigerants and insulating gases used in Electrolux's products between 1992 and 1998. The comparison is based on the amounts used in products, adjusted by the specific ozone-depleting potential (ODP) and global warming potential (GWP) of each substance, as estimated by UNEP (United Nations Environment Program).

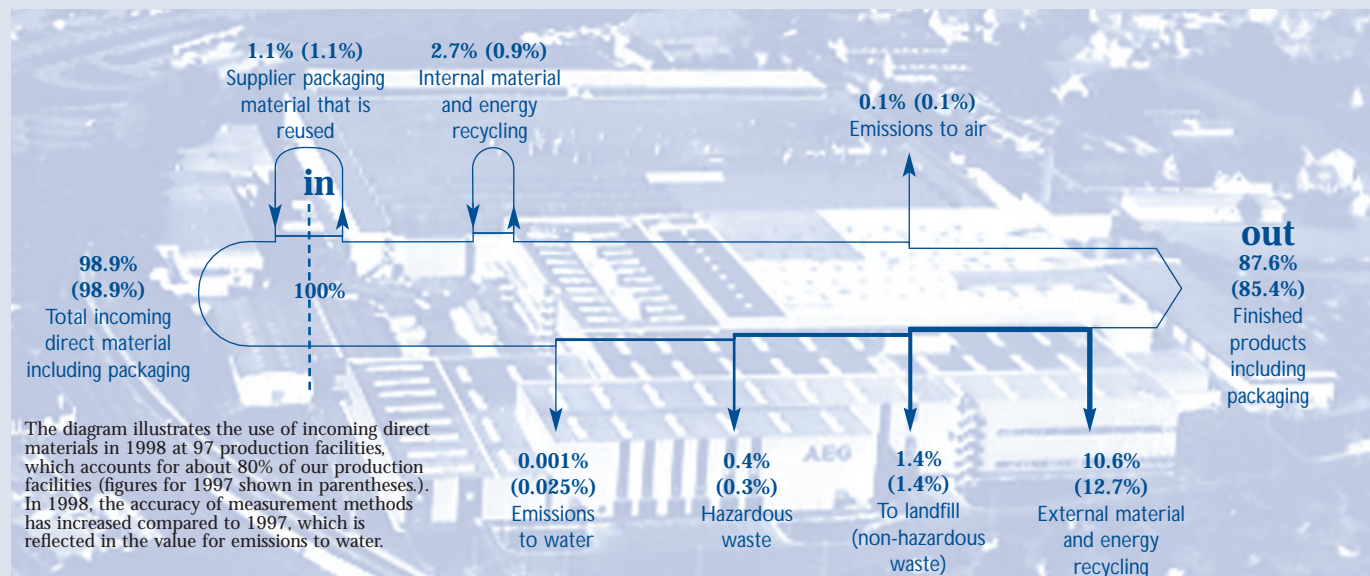
The acquisitions of facilities in China, India and Brazil during 1995 to 1998 added CFC-based ranges of refrigerators and freezers into the Group.

Investments and product development made are targeting the elimination of ozone-depleting substances. The new product ranges in China using only ozone-safe chemicals is

one important reason for the down-turn in the ODP and GWP curves during 1998. The potential impact is also reduced by introduction of CFC-free products in Brazil 1997, as well as the use of HCFC141b as a temporary replacement for CFC 11 for existing model ranges. These improvements represent a reduction of ODP substances in the emerging markets of 60%. For China alone the ODP reduction is 97%. The phase-out efforts will continue during 1999.

Production

Direct materials efficiency for the entire group in 1998



Direct materials balance 1998, metric tonnes

		Total materials balance 1996, 1997, 1998 (tonnes)									
		Input		Output							
Country/Region	No. of facilities	Direct material	Finished products	Internal restflow		External restflow		Hazardous waste	Emissions to		
				Recycled	Incinerated	Recycled	Incinerated		Landfill	air	water
Austria	1	36,158	26,306	0	0	9,432	0	23	397	0	0
Denmark	2	8,344	6,332	51	0	1,847	87	21	57	0	0
Finland	3	6,533	6,126	11	1	207	73	110	17	0	0
France	5	48,633	45,356	25	0	1,829	189	1,070	177	12	0
Germany	5	71,922	52,010	0	0	18,949	2	382	577	3	0
Great Britain	3	47,916	43,354	377	0	3,358	0	1,015	161	28	0
Hungary	3	67,862	61,619	3,500	0	4,213	8	1,707	224	91	0
Italy	17	644,938	554,411	50,496	0	75,565	477	8,699	5,636	150	0
Luxembourg	1	3,813	3,700	7	0	100	0	12	1	0	0
Norway	2	6,736	5,456	0	0	1,123	10	139	6	3	0
Romania	1	12,559	9,593	11	2	1,578	0	1,336	0	53	0
Slovenia	1	160	152	0	0	5	0	4	0	0	0
Spain	3	120,319	101,060	0	0	18,089	0	1,146	9	16	0
Sweden	18	141,082	111,112	3,717	0	12,978	13,705	1,842	1,406	40	0
Switzerland	2	7,662	6,146	25	0	1,298	110	0	101	7	0
Europe, total	67	1,224,638	1,032,731	58,219	3	150,570	14,660	17,507	8,768	402	0
North America	20	1,117,046	1,015,472	8,816	0	84,795	193	15,738	139	699	9
South America	2	89,270	82,796	534	0	5,344	30	483	349	268	1
Asia	7	43,273	37,381	0	1	5,677	1	80	0	131	3
Other	1	1,917	1,829	7	0	62	0	24	1	1	0
Total 1998	97	2,476,145	2,170,209	67,576	4	246,448	14,885	33,832	9,258	1,500	13
Total 1997	143	2,556,520	2,183,491	23,733	1,305	307,830	17,602	36,088	8,804	2,071	634
Total 1996	144	2,361,560	2,073,920	64,941	1,282	231,232	15,651	25,981	11,443	3,270	63

Per Business Area

Household	64	2,080,910	1,828,182	64,750	3	206,671	14,582	22,226	8,264	972	13
Professional	19	73,064	62,466	42	1	8,418	97	1,913	136	33	0
Outdoor	14	322,172	279,561	2,785	0	31,359	206	9,693	857	496	0

Emissions to air do not include CO₂ emissions. Values <0.49 are set to 0. Reported data covers about 85% of total site area. In cases where exact data is missing, estimates are used. Divestment in 1998 of Ballingslöv AB resulted in reduction of internally incinerated material. Some corrections have been made for 1996–97. The materials balance is calculated as: Direct material = Finished products + External restflow + Emissions to air and water.

ISO 14001 Implementation status 1998

Business area	Production facilities	Certified end 98	Planned 99	%98	%99	%area 98	%area 99
Household	73	23	50	32	68	46	88
Professional	36	10	14	28	39	52	63
Outdoor	14	2	11	14	79	10	85
Total	123	35	75	28	61	42	88

%98 and %99: percentage of units certified. %area 98 and %area 99: percentage of workshop area certified.

In 1998, 16 production facilities were certified according to ISO14001. This brought the total up to 35 units by the end of 1998. During 1998 six certified facilities were divested and one was taken out of operation. During the last three years 42 units have implemented an environmental management system certified according to ISO14001. All of them are located in Europe. This equals about 2/3 of the European workshop area. The work to implement an environmental management system has also begun in North and South America. 40 units plan to be certified during 1999, which brings the total to 75 units. This equals 88% of the total area and 61% of the units, mainly due to the structure of the Professional appliances sector with a large number of sites of a comparably small area.

The table below shows the status in terms of coating processes. The surface coating, including pretreatment, has presented and still presents, an important improvement area in appliance manufacturing.

Coating processes and use of solvents and oils

Country/Region	No. of facilities	No. of facilities with			Use of solvents and oils, metric tonnes		
					Chlorine-based organic solvents	Volatile organic compounds	Oils
		Pre-treatment	Solvent painting	Enameling			
Austria	1	1	0	0	0	0	200
Denmark	2	2	0	1	0	0	3
Finland	3	1	1	0	1	0	4
France	5	5	4	1	90	10	42
Germany	5	5	1	1	14	0	89
Great Britain	3	2	1	1	0	1	522
Hungary	3	3	2	0	11	16	24
Italy	17	11	3	1	0	45	1,123
Luxembourg	1	0	0	0	0	0	0
Norway	2	2	1	1	0	4	9
Romania	1	1	1	1	11	1	2
Slovenia	1	0	0	0	0	0	0
Spain	3	3	3	2	0	65	1,706
Sweden	18	13	4	1	9	14	181
Switzerland	2	1	0	1	3	2	6
Europe, total	67	50	21	11	138	159	3,911
North America	20	16	5	1	1	79	2,761
South America	2	2	1	0	8	0	20
Asia	7	5	1	0	26	1	129
Other	1	0	0	0	0	0	6
Total 1998	97	73	28	12	173	239	6,828
Total 1997	145	80	41	14	200	737	4,687
Total 1996	144	79	48	16	190	2,065	4,959

Per Business Area

Household	64	50	22	12	159	178	4,609
Professional	19	13	4	0	14	11	35
Outdoor	14	10	2	0	0	51	2,183

Use of processes (pre-treatment and coating) and indirect materials (solvents and oils). A facility may perform several critical processes. Figures for one major facility Curitiba, Brazil, are not included. Divestment in 1998 of Ballingslöv AB partly explained the reduction in use of volatile organic compound (used in solvent based painting operations).

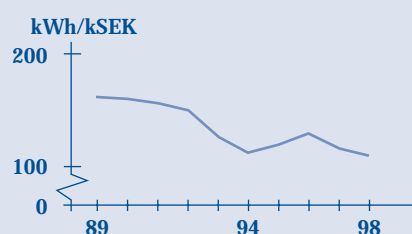
Key environmental figures

Business area	Energy consumption		Energy cost as % of added value	CO ₂ /added value kg/kSEK	Water/added value m ³ /kSEK
	per added value kWh/kSEK	per heated area kWh/m ²			
Household	117	722	3.3	34	0.71
Professional	66	323	2.2	20	0.11
Outdoor	80	442	2.5	28	0.44

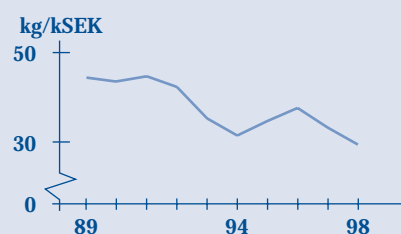
The key environmental figures are based on standardized reports from 138 production facilities, warehouses and offices with more than 1,000 square meters of heated area.

- (1) Energy consumption per added value. The amount of energy required adding SEK 1,000 value to a product. Measured in kilowatt-hours per SEK 1,000.
- (2) Energy consumption per square meter of heated surface area. Measured as kilowatt-hours per square meter.
- (3) Energy cost per added value. The share of energy cost measured as a percentage.
- (4) Carbon dioxide emissions per added value. The amount of carbon dioxide emitted in generating the energy we consume. Different types of energy as well as different countries' carbon dioxide equivalents for electricity are taken into account. It is measured as kilograms per SEK 1,000.
- (5) Water consumption per added value. The use of treated water in cubic meters per SEK 1,000.

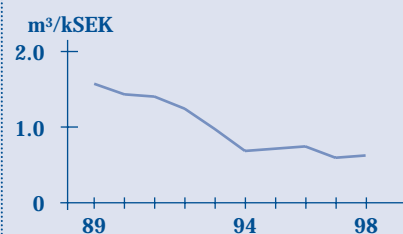
Energy consumption per added value



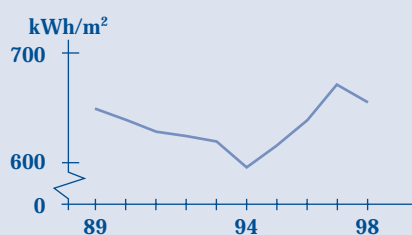
CO₂ per added value



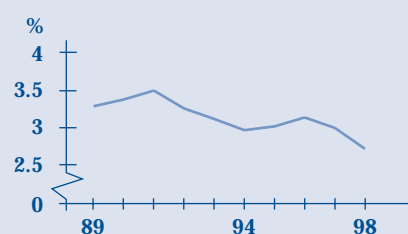
Water per added value



Energy consumption per heated area



Energy costs % of added value



Production related measurements

The 1998 report for energy consumption, water consumption and carbon dioxide emissions includes about 91% of our total building area. The five key figures that we follow up on group level since 1988 are shown in the graphs and the above table.

In 1995, reporting was extended to cover other production related environmental impacts. This additional reporting now includes about 85% of our total building area (results shown on previous pages).

At the Group level, the reported data is aggregated into a number of key figures that show the total environmental impact of production. Other data that reflects local conditions is not followed up at the Group level. Much of this data is operations-specific.

Because much of the environmental impact depends on production volume, some of our

measurements are calculated in relation to added value – defined as the difference between total manufacturing costs and direct material costs. The added value measurement takes into account changes in production structure, and thus makes it possible to compare year to year. At the same time it introduces the problem of inflation and exchange rates changes, which our data is not compensated for. Energy data for heating are compensated for fluctuations in the temperature, for example a mild winter.

The decrease in key environmental figures experienced in 1998 (except water consumption per added value) is partly due to actual reductions in energy consumption.

Yet another reason is an increased utilization rate at the factories, which is reflected in that a larger number of product units are produced using the same production area.

Strategic Development

Position statements

Certain environmental issues with a relation to Electrolux's operations are addressed in Position Statements approved by Group Management. Three new positions were developed during the year to guide all related company activities. (These are summaries.)

Electrolux Group Position on Climate Change

AB Electrolux commits itself to certain actions in order to mitigate its contribution to Climate Change, namely to:

- minimize energy consumption in the production and transportation of products,
- minimize the use and direct emissions of greenhouse gases,
- use ISO 14001 to identify other significant environmental aspects affecting climate changes, and to develop appropriate improvement plans,
- produce products that meet or exceed standards on energy consumption and air emission,
- support the development of new product standards (see above),
- support the development of global programs for greenhouse gas emission reductions that harness market forces to fund the most cost-effective solutions.

Electrolux Group Position on Ozone Depleting Substances – ODS

Ozone depleting substances, relevant for Electrolux applications, are CFCs and HCFCs. These substances are used as refrigerants and as insulation gases in fine cell insulation foams in refrigerators and freezers.

- Reducing the emissions of ODS is a priority for Electrolux.

AB Electrolux commits itself to certain actions in regard to the use of ozone depleting substances, namely to support:

- the development and commercialization of competitive alternative substances,
- amending national legislation implementing the Montreal Protocol and revising the related European Council Regulation (3093/94) to accelerate phaseout where practicable,
- developing regulations and infrastructure on compulsory recovery of ODS from products being serviced or scrapped.

Electrolux Group Position on Hydrocarbon Refrigerants (HC)

Hydrocarbon refrigerants are alternatives to HFCs and HCFCs (and CFCs) with performance and global warming benefits. In contrast to the

mentioned refrigerants, HC gases are flammable. Electrolux has developed safety criteria for the design of products using HC refrigerants. These safety criteria are reflected in some European standards. Electrolux has taken the position that:

- we support the use of HC refrigerants in Household and Professional refrigeration applications as they show environmental advantages over other alternatives known to date,
- recycling and reuse of old HC refrigerants is not needed.

However, safety considerations exclude certain applications of HC such as:

- when the HC refrigerant is directly distributed from a cooling unit located in a remote machine room, refrigerant charge is normally several kilograms
- in applications with integrated cooling units (plug-in), and charged with more than 150 g of flammable refrigerant,
- in markets where local regulations or product liability practices restrict the use of flammable refrigerants,
- the use of HC refrigerants for servicing or converting old products not designed for these refrigerants,
- in markets where the local network does not possess the necessary skills for safe servicing.

Corporate Minimum Environmental Requirements

What?	How?	Status – end of 1998
Environmental Management Systems	ISO 14001	35 out of approximately 123 production facilities certified (equals 42% of the production facility area)
Knowledge and skills	determine educational needs, roll out education	different environmental education programs have taken place regionally in all business sectors, some sectors plan for sector specific, common education
Experience sharing	ENVA Network, functional networking, external input	tool available via the intranet, processes for functional networking and external input in place
Performance measurements	implement Group measurements, identify and develop own measurements	Site measurements implemented in all sectors, Green Range and Fleet Average implemented in one sector
Network of coordinators	responsibility of business sectors	Sector Environmental Responsible appointed in five sectors Network of coordinators formed in 1995 undergoing restructuring
External communication	Environmental and Annual Report, media and stakeholder relations	in place

Glossary

Absorption cooling system:

A heat-driven cooling system with no movable parts. Used mainly for refrigerators and freezers in places lacking electricity or demanding very low noise levels. See compressor-cooling system.

Added value:

The term added value used in this report is defined as the difference between total manufacturing costs and direct material costs. However, in the Annual Report, added value represents the contribution made by a company's production, i.e. the increase in value arising from manufacturing, handling, etc. within the company. It is defined as sales revenues less the costs of purchased goods and services.

CFC (Chlorofluorocarbon):

So-called "hard" freons. See freons.

Compressor-cooling system:

A mechanical cooling system with a compressor, condenser, vaporizer and circulating refrigerant. The cold generation occurs in the vaporizer, where the refrigerant is brought to boiling point. Most domestic and refrigerators and freezers for professional users, have compressor-cooling systems. See absorption cooling system.

Environmental management system:

That part of an organization's general management system which includes organizational structure, responsibilities, planning activities, method development, work practices, processes and resources for developing, implementing, evaluating and maintaining the organization's environmental policies. An environmental management system makes it possible to formulate clear goals for environmental work, systematic follow-up of results and documentation of practices and activities.

Freons:

Name of a group of halogenated hydrocarbons where one or several of the molecules hydrogen atoms have been replaced by fluorine atoms or chlorine atoms. The name comes from the Freon trademark registered by DuPont in the 1930s. Freons or CFCs were previously used largely as refrigerants and as blowing agents in insulating foam. Since they contribute to both the depletion of the ozone layer

and to the temperature raising greenhouse effect, it is now forbidden to use them in many countries. CFC11 and CFC12, sometimes called R11 and R12, are two common CFC gases that were previously used in refrigerators.

Global Warming Potential (GWP):

Measure of the greenhouse effect of gases if they were released into the atmosphere. Indicated by the CO₂ equivalent by comparing the actual gas with the greenhouse effect of carbon dioxide, which is GWP 1. For example, the GWP of CFC11 is GWP 3,500.

Greenhouse effect:

The warming effect the atmosphere exercises on the earth's surface by letting through the sun's radiation but absorbing infrared radiation from the earth's surface. The so-called greenhouse gases, especially CO₂, water vapor, CFCs and methane, keep the temperature of the earth's surface at a global average of 15°C. Without them, the average would be below 0°C. Through human activities, especially the release of CO₂, the amount of greenhouse gases in the atmosphere is increasing. It is feared that the increase causes the temperature of the earth's surface to rise, which can lead to an unstable climate, increased precipitation and higher sea levels.

HCFC (Hydrochlorofluorocarbon):

"Soft" freons. An alternative to CFCs, with approximately one tenth of their ozone-depleting properties and greenhouse effect. See freons.

Insulation gas:

A gas, also serving as a blowing agent, which is added to plastic (usually polyurethane) to form the heat-insulating foam that is used in refrigerators and freezers, etc. The insulation gas itself has good heat-insulating properties.

ISO 14000:

A series of international standards for environmental work. ISO 14001 for environmental management systems was published in 1996.

Life cycle assessment:

Method for determine the environmental impact of a product or system during its entire life cycle – from extraction of raw materials, through manufacturing, logistics and use to recycling and waste generation.

Life cycle cost:

In the consumers' perspective, life cycle cost is the total cost of purchasing, use, and discarding of products.

Ozone depleting potential (ODP):

Indicates a substance's potential to destroy the ozone layer, measured in comparison with CFC11, which has a ozone-depletion potential of 1.

Producer responsibility:

When responsibility for product take-back and recycling is put on those who bring goods to market (producers, importers).

Product line:

An organizational unit within the Electrolux Group. Usually, all activities relating to a certain product category are organized into a product line – for example, Floor-care products or Food-service equipment.

Refrigerant:

A substance in a cooling system that transports or removes heat by transforming into gas or liquid during pressure changes. Since the 1930s, CFCs have mainly been used as cooling agents, but recently their use has been greatly limited due to their ozone-depleting properties. Natural cooling agents such as ammonia, propane and butane are used instead.

Resource efficiency:

Attribute of a product or process that consumes few resources in relation to the useful result achieved, creating the most value for the customer using the least material resources.

Sustainable development:

A term coined by the UN's World Commission on Environment and Development 1987. Combines economic growth and greater prosperity for people across the world with high environmental quality. Meeting the needs of the present without compromising the ability of future generations to meet their needs.

White goods:

A comprehensive term for major home appliances. White goods are divided into cold products (refrigerators, freezers), hot products (cookers, ovens, hobs), and wet products (washing machines, dishwashers, dryers).

Contact us!

Electrolux Group Environmental Affairs welcomes questions and comments on this report. We want to encourage discussion with environmentally concerned groups and individuals.

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