



**POLYCOM**

Škofja Loka d.o.o.

# Environmental report 2009

This report is intended for Nature protection.

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Man is the fruit of nature, but he resists nature, because it doesn't seem it would accept him. It should be attributed to other force, which also exists in nature and pushes us towards sacrifice and revolt.  
(Miguel Serrano)

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## I. Presentation of the company

### 1.1. Basic information

<b>Company</b>	Polycom Škofja Loka d.o.o.
<b>Address</b>	Poljane nad Škofjo Loko 76
<b>Telephone</b>	00386 45 070 600
<b>Fax</b>	00386 45 070 631
<b>Web site</b>	<a href="http://www.polycom.si">www.polycom.si</a>
<b>E-mail</b>	<a href="mailto:info@polycom.si">info@polycom.si</a>
<b>Number of employees</b>	103
<b>Revenues 2006</b>	9,6 MIO EUR
<b>Year of establishment</b>	1985
<b>Director</b>	Iztok Stanonik
<b>Field</b>	Processing of thermoplastics
<b>Products</b>	Plastic mass products for the automotive industry, compressor parts, electricity and electronics, household appliances, hand tools

Nature always acts in the given circumstances, which are available and if possible the most beautiful and the best things.  
(Aristoteles)

Nature is often hidden, sometimes overcome, seldom extinguished.  
(Francis Bacon)

## 1.2. Introduction

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Polycom Škofja Loka d.o.o.'s beginnings date back to the year 1985. Years of hard work have strengthened our position in the field of thermoplastics injection moulding. Our growth has been marked by numerous turning points that were encouraged by Man.

We are a successful company operating in the field of thermoplastics processing and tool-making. Our strategic policy aims at expanding our services to an international level while developing new tools along with the most demanding technical products.

By investing in knowledge, development and new technologies, we are embarking on the road that leads to the place where only the best are. In this way we achieve continuous growth that enables us and new generations to develop and have a safe journey to the future.

We are aware of the importance of quality, and we have therefore adjusted our operations' system to the ISO/TS 16949 and ISO 9001/2000 quality standards. Due to our constant care for the environment, we have introduced the ISO 14001 environmental protection standard and applied the "clean production" methodology. We have also introduced the system for guaranteeing healthy and safe working conditions according to the BSI/OHSAS 18001 standard. All branches of our operations are constantly under development on the basis of the "20 keys" method.

Our continuous striving for development in the automotive and automotive supplier industries is proven by our membership in the "Automotive Cluster of Slovenia".

The experience we have gained during our time of operations helps the environment, ourselves and our customers.



### 1.3. Products and services

Our production programme is divided in the field of thermoplastics injection moulding and the field of development and production of injection tools.

**The thermoplastics injection production programme includes:**

- ◆ Plastic parts for household appliances: housings, buttons, assembly plates;
- ◆ Plastic components for the automotive industry: window closing parts, exacting parts for hand brakes, gas and clutch, plastic parts for windshield washing mechanisms, etc.;
- ◆ Plastic products for precise measuring devices: electrical components, connector housings;
- ◆ Plastic housings for electric hand tools (hand drilling machines, grinding machines);
- ◆ Plastic parts for electric thermostatic and switch technique (thermostat housings, buttons for switches);
- ◆ Plastic parts for compressors;
- ◆ Plastic packaging.

**The tool-making programme includes:**

- ◆ Development of tools, from construction to prototype and transfer to production;
- ◆ Services in processing centres.

### 1.4. Company operations

Our scope of operations has been increasing since 1996, and the largest increase was marked in 2000, 2005 and 2006. The same applies to employing new workers; since 1999, the number of employees has increased for five times. Net sales revenues are intended for investing in expansion and renovating the production process.

Chart 1: Net sales revenues according to years (in EUR 000)

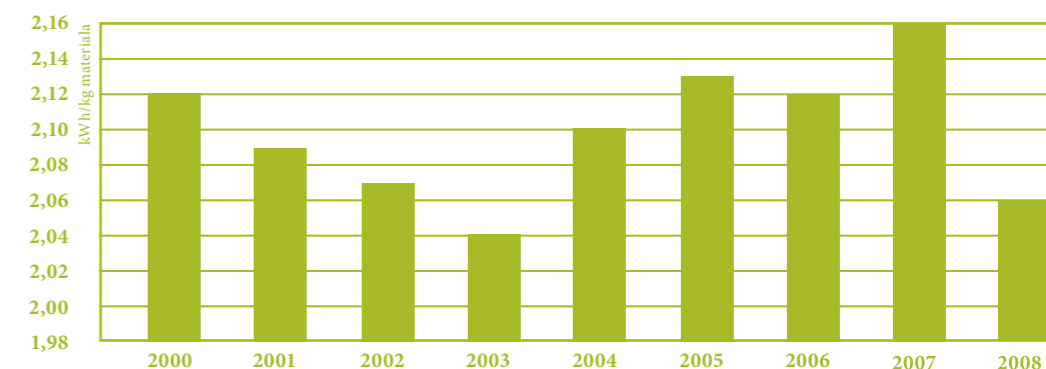


Chart 2: Increase in number of employees from 2000 to 2007

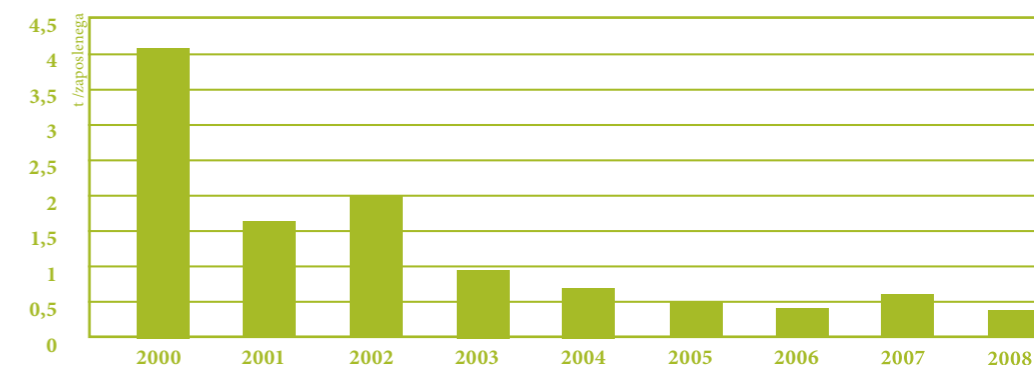
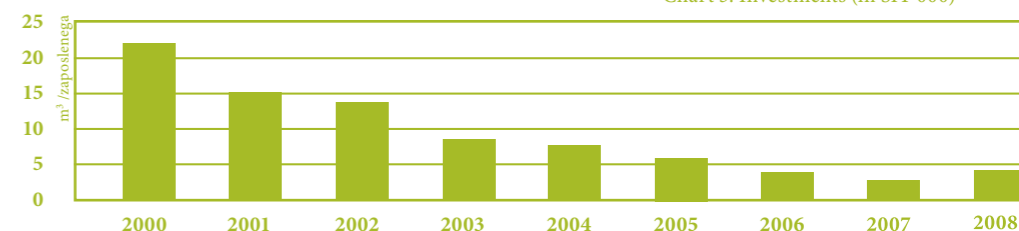


Chart 3: Investments (in SIT 000)



In nature there are no rewards or punishments; there are consequences.

*(Hrace Annesley)*



## II. Polycom and the environment

### 2.1. Environmental policy 2009/2010

Our aim is the satisfaction of clients, partners and the employed. To achieve this aim we constantly develop and improve our products and services, approaches, structure, knowledge and the inclusion of the employed.

- The fulfilment of the client's satisfaction

To fulfil demands, needs, wishes and expectations and to fulfil the satisfaction we offer to our clients (applies to external and internal buyers) innovative and economical solutions.

- The responsibility of the management

The management is bound to the development and execution of the quality system, and to the constant improvement and its efficiency and to the efficient management with aims.

- Inclusion of the employed

Qualification and motivation of our employed enables the success of the company. Important priorities are the development of human sources, security and health on the position of employment.

- The process orientation and the system approach

The team work enables a system approach with the help of which the set objective is achieved, the economical efficiency is improved and the marketing position is expanded.

With the identification, understanding and management of interactive processes as a system, we contribute to efficiency and success of the organization when achieving the set objectives.

- Constant improvements

Constant improvements are the responsibility of the employed on all fields of activity, which means a constant optimization of costs, services and technology. Our operation activities are being improved by methods such as. 20 keys, KVP, Kaizen and others.



- Making decisions on the basis of facts

Our decisions are based on the analysis of data and information.

- Collaboration and social responsibility

With buyers, suppliers and state institutions and other interested clients with the open dialogue the mutual trust is built. With the aim of improvement and quality demands, deriving from the early phase of the product and process development.

The social responsibility signifies the social and cultural responsibility in our local environment. The requirements in the legislation are taken into consideration.

- Compliance with requirements of the quality standard (ISO 9000 and ISO/TS 16949)

We guarantee the strategy of the full quality management within the meaning of zero mistakes achieved, the punctuality of deliveries and the efficient response to the

client's demands. With methods, tools and experience the methodology PEVD is established (plan- execute- verify- decide).

- Compliance with requirements of the standard environment protection (ISO 14001)

We make effort to maintain intact all the environmental elements that is why in our production process the environment friendly technologies and materials are used.

- Compliance with requirements of health and safety at work standards (BSI OHSAS 18001)

The basis of the quality life and work is health. In our company this is taken care of by assuring a safe work environment, responsible management, recognition and elimination of risks, taking into consideration legislation and other obligations.



Photo of the injecting plant

## 2.2. Integrated material flow control

### Thermoplastics injecting:

Thermoplastics injecting bases on temperature reformation of substance.

Our up-to-date production equipment enables complete automation of the production process. This means rational use of materials and energy. The material flow through the production is continuous, and the residual material of the regenerator is returned to the process in relation to the original.

**Tool-making:**  
The development, design and construction of our tools and products demands knowledge and experience, adheres to legal demands, and respects the wishes of our customers.

Our technological equipment guarantees precision, quality, speed, low energy and material use, and a safe and healthy working environment.

Figure 1: Material balance of injecting process

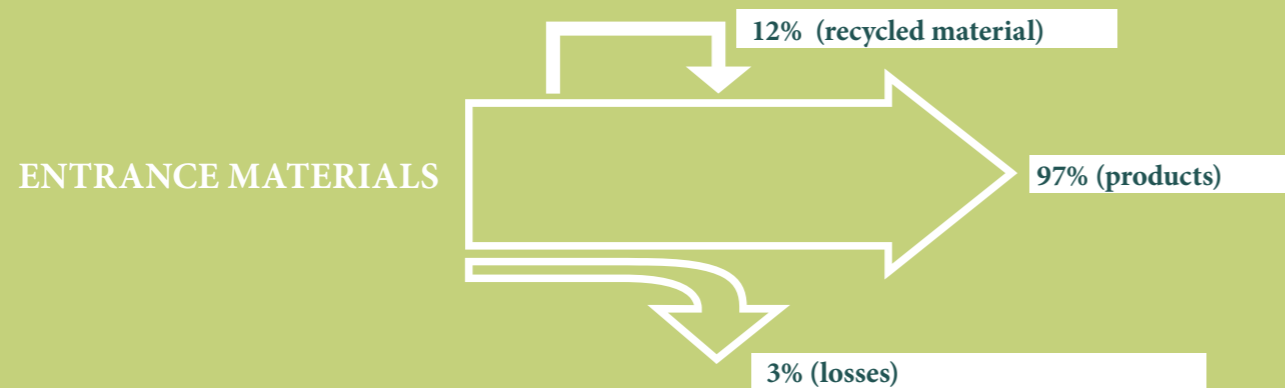


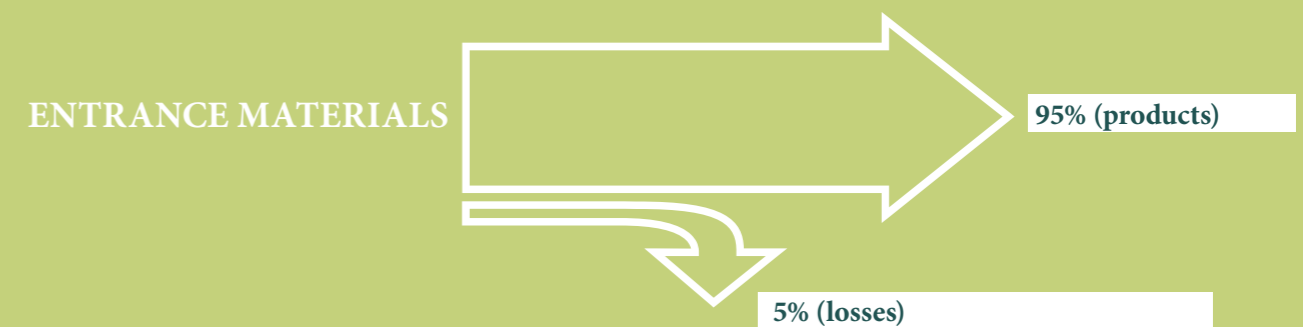
Photo of the tool-making plant

### Tool-making:

The development, design and construction of our tools and products demands knowledge and experience, adheres to legal demands, and respects the wishes of our customers.

Our technological equipment guarantees precision, quality, speed, low energy and material use, and a safe and healthy working environment.

Figure 2: Material balance of tool-making process



## 2.3. Water (balancing its use)

### Industrial wastewater:

Industrial wastewater is used for cooling the tools during the production process. A closed cooling system with constant water circulation is used. There are approximately 50 litres of water added to the system on a monthly basis, compensating for the losses induced by spillage and evaporation.

### Communal water:

The remaining water is used for sanitary utilisation. The amount of water used per employee is decreasing from year to year, a fact that we can attribute to the redevelopment of the water supply network and the awareness of the employees.

## 2.4. Energy sources

We are a heavy user of electrical energy; therefore, we constantly strive to reduce its use. It is for this reason that we have implemented the necessary measures and prepared a plan for the reduction of electrical power use in the machinery starting process.

By redeveloping the compressed air network, we have reduced the use of energy due to losses on installation by 5%.

We have managed to retain a part of the heat energy that emerges in the form of losses in the thermal reformation production process and use it for heating the space.

## 2.5. Evaluation of production costs of waste and emissions

There is 90-97% of material used for products, the remaining material has to be taken care of, otherwise, it presents a great burden for the environment. The polymer industry is a very clean industry; however, the emission of substances and energy into the environment is becoming an economic problem, since the waste material becomes a double cost. We have introduced eco-controls that include analyses and IT, planning, material and energy flow control, and recycling.

Input	Costs compared to sales (%)	Output	Costs compared to sales (%)
Material	39,73	Products	
Auxiliary material	1,25	Waste	0,08
Energy	2,37	Waste water	0,0010
Water	0,0010	Emissions	/
Fuels	0,08		

We have replaced the old machines with new ones, and despite high amortisation costs, our production costs are still lower by 20%, mostly due to reparations, input energy and labour.

We have established that the newest machines use up to three times less energy.

## 2.6. Waste management

### Information about the inducer

Thermoplastics are linear and chain growth polymers that soften and melt at increased temperature. The reformation of the thermoplastic granulate in the mould is implemented with the help of increased temperature and pressure.

We can regenerate the processing waste; therefore, the largest amount of waste is produced in the tools exchange process. It is necessary to clean the chamber and all channels where the melted mass of the intermediary product was. We name this process re-injecting and we implement it with a cleaning mass or granulate, with which a new product will be injected.

The maximum weight of the product that is injected on the machines amounts to 500g or lower; we can thus assume that there are only small quantities of waste in re-injecting.

The last year's of the processed granulate amounts to approximately 1.218 tonnes, namely 46% PA, 16% PP and 15% POM.

In accordance with Annex 1, Regulations on Waste Management, the waste is divided as follows:

- ◆ Classification number of waste: **12 01 05;**
- ◆ Name of waste: **plastic particulates.**

## 2.7. Waste and emissions prevention measures

### Waste

Our company has introduced the separate collection of paper, polyethylene packaging, metal waste, communal waste and hazardous waste. Such waste is submitted to the authorised collectors or processors.

The majority of the waste that is made during injecting is recycled during the production process, with the remaining part intended for lower quality products.

### Noise

The company is located in a business and residential neighbourhood; therefore, keeping below the prescribed levels of noise is quite difficult. Besides introducing organisational measures, we have also made additional alterations to the building in 2000. Last measurements of noise were done on July, 2007, with finding, that source isn't surpassing boundary values. Future measurements are planned for year in 2010.

### Water

The average monthly use of water in the company is approximately 43 cubic metres, and this water is supplied by the Poljane water supply network; 90% of the water is not used for production activity. Wastewater that emerges in the area of the company is communal water.

Due to the nature of the production, there is no industrial water. The production part uses water for the thermal conditioning of tools. A closed cooling system with constant circulation of water is used. Water is added in the event of loss and evaporation.

Rainwater that is collected from the roof and parking spaces then flows onto the meadow surface on the southern side of the building.

### Airborne emissions

Flue gas from the boiler room is the sole source of airborne emissions. The boiler room was redeveloped in 2001. The implemented measurements of airborne emissions for small boiling devices remain within the regulated limits.

### Information about the tool-making process

The tool from two halves constitutes an engraving opening. We form a metal surface from the metal block with the help of processing centres (dip, wire erosion, buffing, etc.), in order to get the form of the product. The waste includes lathe turnings from different metal structures, most of which are precious metals, copper, brass and aluminium. Lathe turnings represent secondary material.

In accordance with Annex 1, Regulations on Waste Management, the waste is divided as follows:

- ◆ Classification number of waste: **12.01.01, 12.01.03;**
- ◆ Name of waste: **fillings and lathe turnings from iron, fillings and lathe turnings from coloured metal.**

### Amount of waste

The estimated amount of communal waste deposited annually is 23 tonnes. The estimated annual amount of waste that is left during thermoplastics injecting is around 1.500 kg. There are 27.140 kg of collected secondary materials.

## 2.8. Description of organisational measures for consideration of regulations on waste management

The most important organisational measure that was introduced in order to respect the regulations on waste management is separate collection. There are ecological points at several places within the company, and they are equipped with marked collectors and instructions for depositing. The logistics unit takes care of waste manipulation to the applicable deposit places, and it also takes care of the submission of waste to authorised collectors and waste processors.

The second organisational measure in the field of waste collecting and separation is attributed to the formation of working groups according to the mini-companies principle. Each individual group is responsible for the regulation of its own working area. Besides complying with the regulations, the employees themselves actively cooperate in the formation of a healthy and safe working environment by assembling propositions for the improvement of the situation.

We have established that employee awareness of the importance of the environment is the main principle that contributes to respecting the organisational measures. Therefore, awareness building and employee training are permanent parts of our operations.

## 2.9. Environmental monitoring/eco-indicators

INDICATORS	CRITERIA	2000	2001	2002	2003	2004	2005	2006	2007	2008
Use of el. energy	Use of kWh per kg processed material	2,12	2,09	2,07	2,04	2,06	2,13	2,12	2,16	2,06
Waste production	Tonnes per employee number	4,0	1,7	1,9	0,9	0,74	0,466	0,477	0,634	0,478
Waste production	kg waste / kg processed material						0,032	0,042	0,03	0,04
Water	Cubic metres per employee per month	22	15	14	8	7,1	6,4	4,7	4,5	4,5

Chart 4: Use of electrical energy per kg of processed material

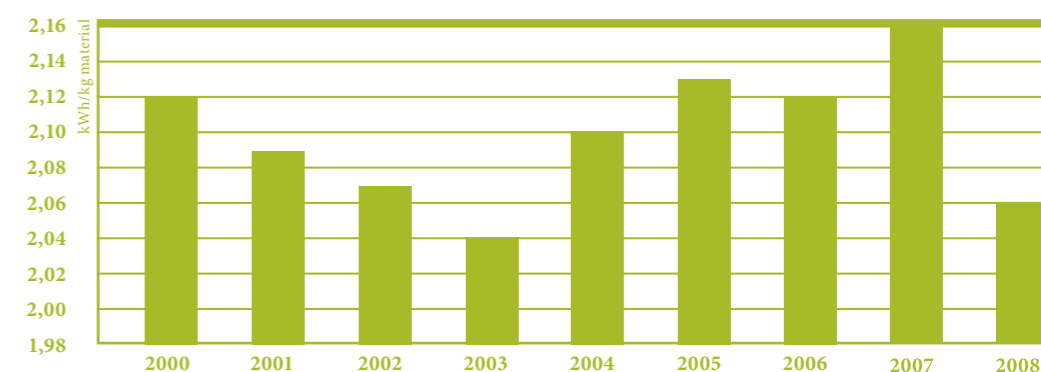


Chart 5: Quantity of emerged waste regarding employee number

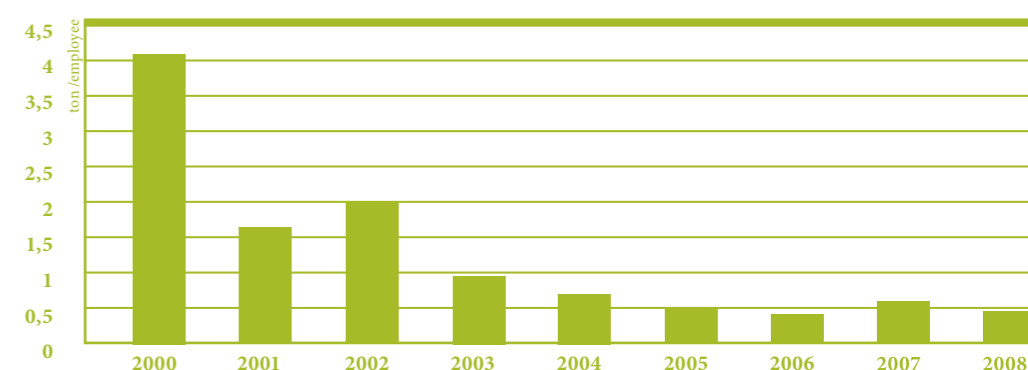
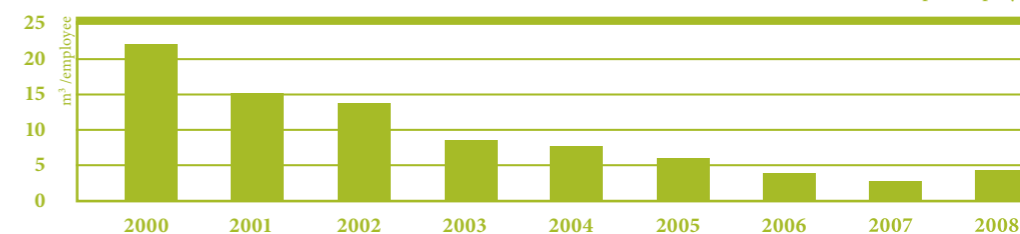


Chart 6: Use of water per employee



### III. Environmental protection projects

#### 3.1. Realised/planned measures, realised/planned savings and investment return time

All the environmental programmes that have been implemented since 2000 are presented in the table. This year, the company has adopted the ISO 14001 standard. This system ensures system planning and realisation of measures, the effects of which result in improvement of working conditions, good relations with other residents in the area, and energy and material savings.

Period	Project description / effect	Investment in EUR	Savings in EUR/year	Return of funds (months, years)
2000	Reduction of noise in the area (sealing of open places)	2.900	/	/
2000	Separate collection of waste	4.580	2.100	28 months
2000	Flue gases (redevelopment of the boiler room)	5.000	2.500	24 months
2001	Changing of machines (use of energy and material)	225.000	2,800 (saving energy)	30 months
01/02	Fire safety	6.600	security	
2002	Reduction of compressed air use (saving energy)	8.300	5.000	14 months
2003	Cleaning and preparation of water	5.000	9.100	6 months
2004	Reduction of el. energy use per kg of processed material	Organisational measure	5.000	/
2004	Implementation of a junction in the cleaning device	3.300	/	/
2005	Reduction of el. energy use per kg of processed material	Organisational measure	4.100	/
2006	Reduction of el. energy and material use per kg of processed material	Organisational measure	2.500	/
2007	Reduction of el. energy and material use per kg of processed material	Organisational measure	4.100	/
2008	Reduction of el. energy and material use per kg of processed material	Organisational measure	6.000	/

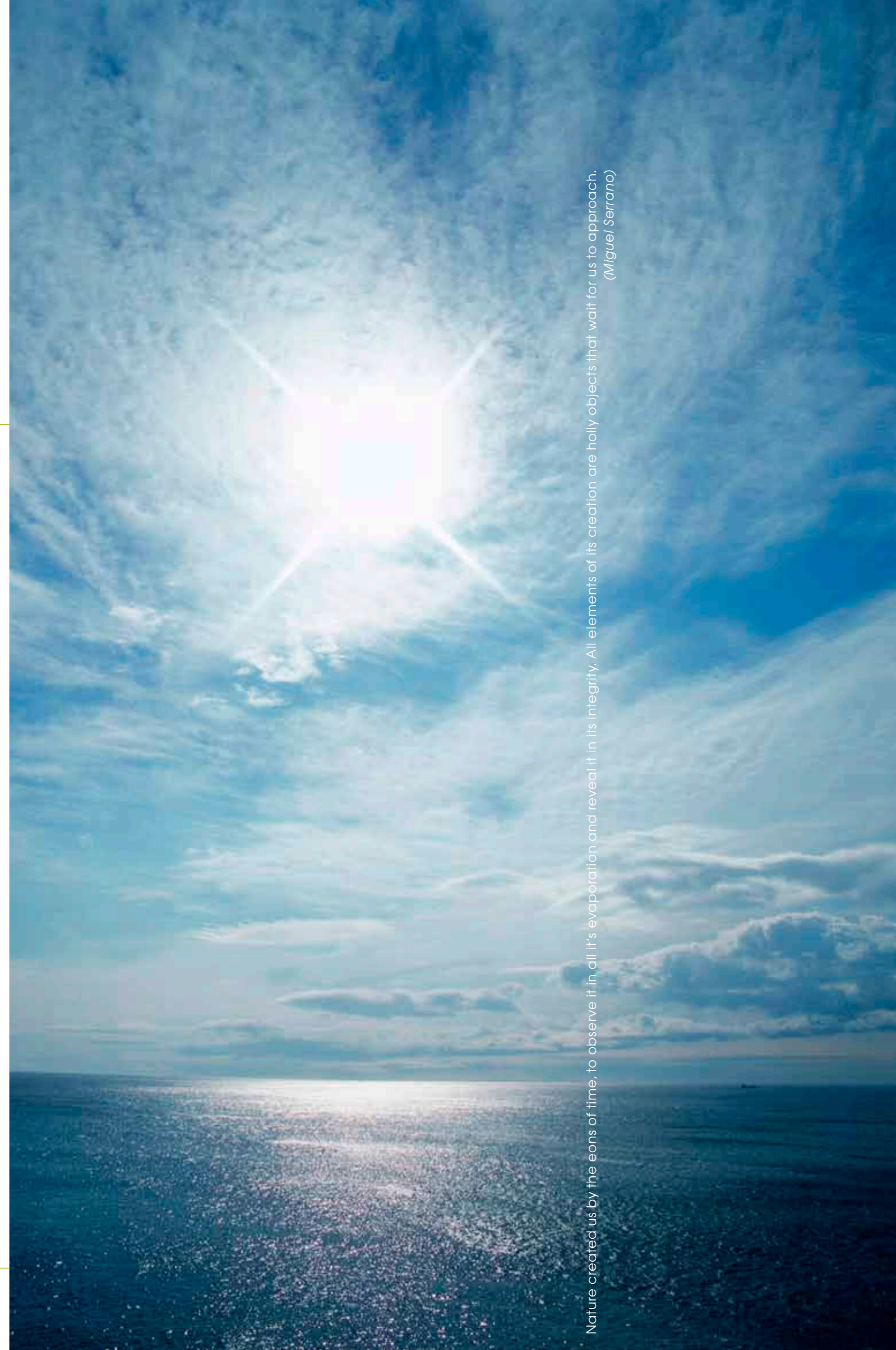
The oldest mystical record is nature, which teaches you to read the most original alphabet. There are collected and written down all the beneficent powers of effect that the victim transforms to life.  
(Tatjana Malec)

### 3.2 Goals for 2009/2010

As in the year 2007, we will devote most of our attention in the coming year to decreasing the costs of electrical energy use, which indirectly represents our small contribution to reducing air pollution.

We are planning organisational measures in the area of higher product quality, and we estimate that by improving quality we can save energy in the amount of EUR 10,000. Materials are mostly returned into the process and therefore cause no losses.

Period	Project description/effect	Investment in EUR	Savings in EUR/year	Return of funds
2009	Reduction of el. energy and material use per kg of processed material	Organisational measure	10.000	/



Nature created us by the eons of time, to observe it in all its evaporation and reveal it in its integrity. All elements of its creation are holly objects that wait for us to approach. (Miguel Serrano)

Do not go where the path may lead, go instead where there is no path and leave a trail.  
Only those who will risk going too far can possibly find out how far one can go.  
*(Ralph Waldo Emerson and T. S. Eliot)*



Environmental report  
**Mateja Karničar Šenk**

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