BANG & OLUFSEN

Down to the smallest detail...

A story about environmental awareness told through the development, production, use and disposal of Bang & Olufsen's products for hotels.

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Foreword

Bang & Olufsen develop products that have a timeless design and which are unique in terms of quality and use. We consider our corporate responsibilities to include designing products that are environmentally-friendly. We want our customers to trust us to have made informed choices on their behalf – choices that include the environment.

We have been working on environmental issues for years, but environmental issues and standards have changed over time. Traditionally, the issues focused on products and production, including the workplace environment and the wider environment. Today, environmental thinking is much more orientated towards life cycles and sustainability, and thus a product's relationship to the environment has become a crucial parameter.

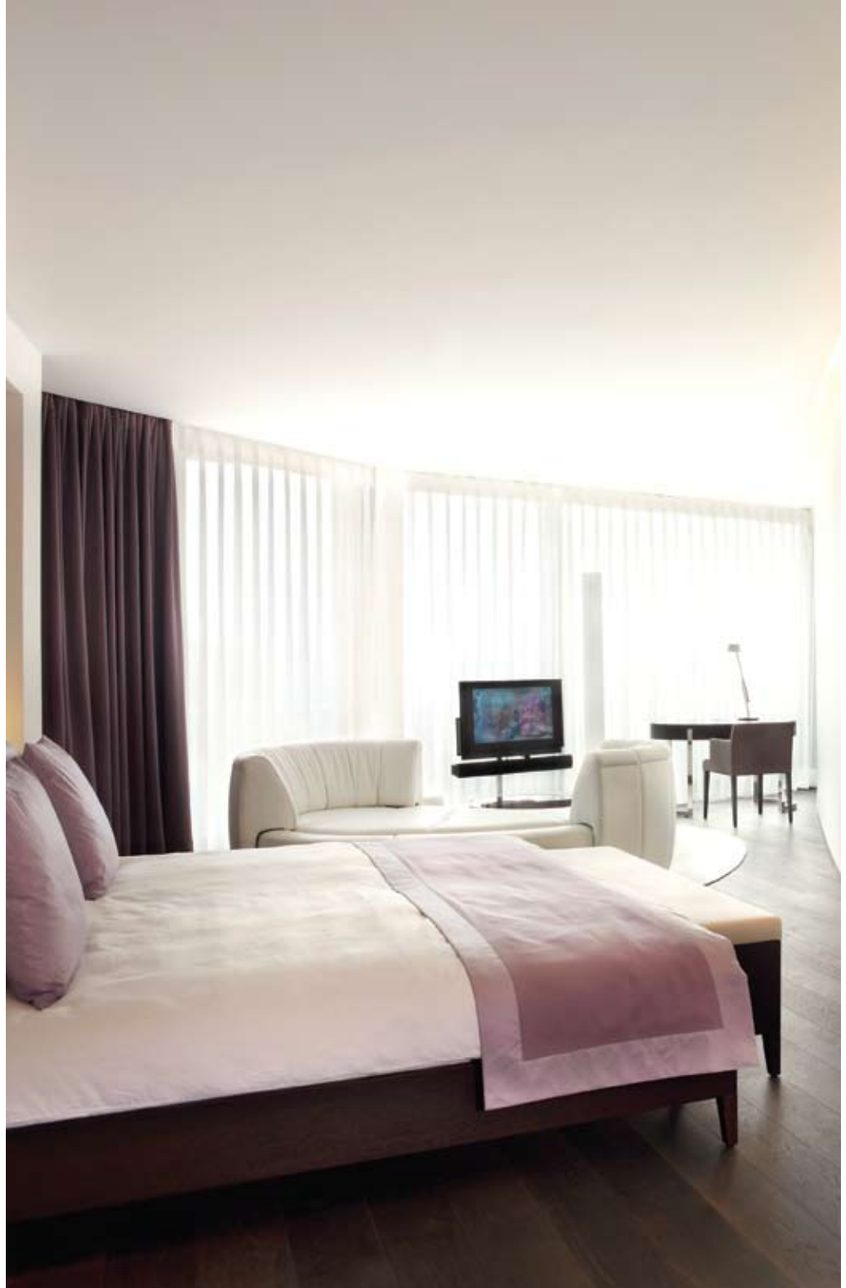
At Bang & Olufsen we want to be open when we talk about our environmental policy. So we publish an annual report that looks at the environment and the workplace environment, in relation to production and our factories. The name of the report is "Down To The Smallest Detail" and that's what you are reading right now.

"Down To The Smallest Detail" has previously reported on BeoCenter 1, BeoLab 1, BeoSound 3200, BeoCenter 2 and BeoCenter 6-26. It has also reported on Automotive, the business area which develops sound systems for the automobile industry.
This time around we're taking a close look at Enterprise, the business area responsible for the sale of Bang & Olufsen products and solutions to luxury hotels and major property projects around the world.

This year's "Down To The Smallest Detail", as well as previous year's reports, are available at www.bang-olufsen.com.

On behalf of the board of directors

Kalle Hvidt Nielsen
President & CEO
Bang & Olufsen a/s



Presentation of Enterprise

A partnership with Bang & Olufsen Enterprise provides much more than just hardware. It guarantees quality entertainment systems and solutions. We know how to combine brains and beauty, smart design and technology. Our products are pleasing the guests whether on or off.

High-end hospitality is also about 'ease of use'. And good product design is not just about the looks, it is about the performance behind the scenes - giving guests the best quality experience. That is why Bang & Olufsen has become the brand of choice for some of the biggest names in the hospitality industry.

We take our environmental responsibilities seriously in relation to the development, production and usage of audio and video systems for the hospitality industry. We consider carefully which materials and technologies should be used and assemble the different elements so that both the product environment and external environment are brought into the equation.

Some of the capabilities and technologies which are included in the sound systems for hotels feature our own patented ICEpower amplifier technology. This ensures precise and powerful musical reproduction combined with extreme high-energy efficiency – saving a lot of energy.

Bang & Olufsen Enterprise is a professional and highly competent business partner in creating integrated and tailor-made hospitality solutions. Televisions, music systems, loudspeakers, telephones, control for light and curtain – all controlled with one remote control that can be customized to the specific needs of the hotel.

No matter the scale of the project, we are capable of helping you with all the information that you and your team may need – whatever project we start out with you we will always have a high emphasis on environmental protection.

Flemming Nielsen
Managing Director
Bang & Olufsen Enterprise

Environmental policy

All human behavior influences the environment. This also applies to the production and use of our company´s products. Bang & Olufsen works continuously on minimizing the effects on the environment. Equal weight is given to finding a balance between the needs of the environment and the consideration given to our products´: practical qualities, economic value, aesthetic value and a long life span. In this way, Bang & Olufsen endeavors to be among the best in the business. We will openly discuss environmental issues related to the company and publish a yearly environmental report. We wish to be a part of sustainable global development and view our activities within a life cycle perspective. As a minimum Bang & Olufsen will comply with national and international environmental requirements.

Development
(idea, design & construction)
A product´s qualities regarding environmental impact are determined in the product generation process, and the necessary steps are taken to reduce this impact in subsequent phases of the product´s life cycle.

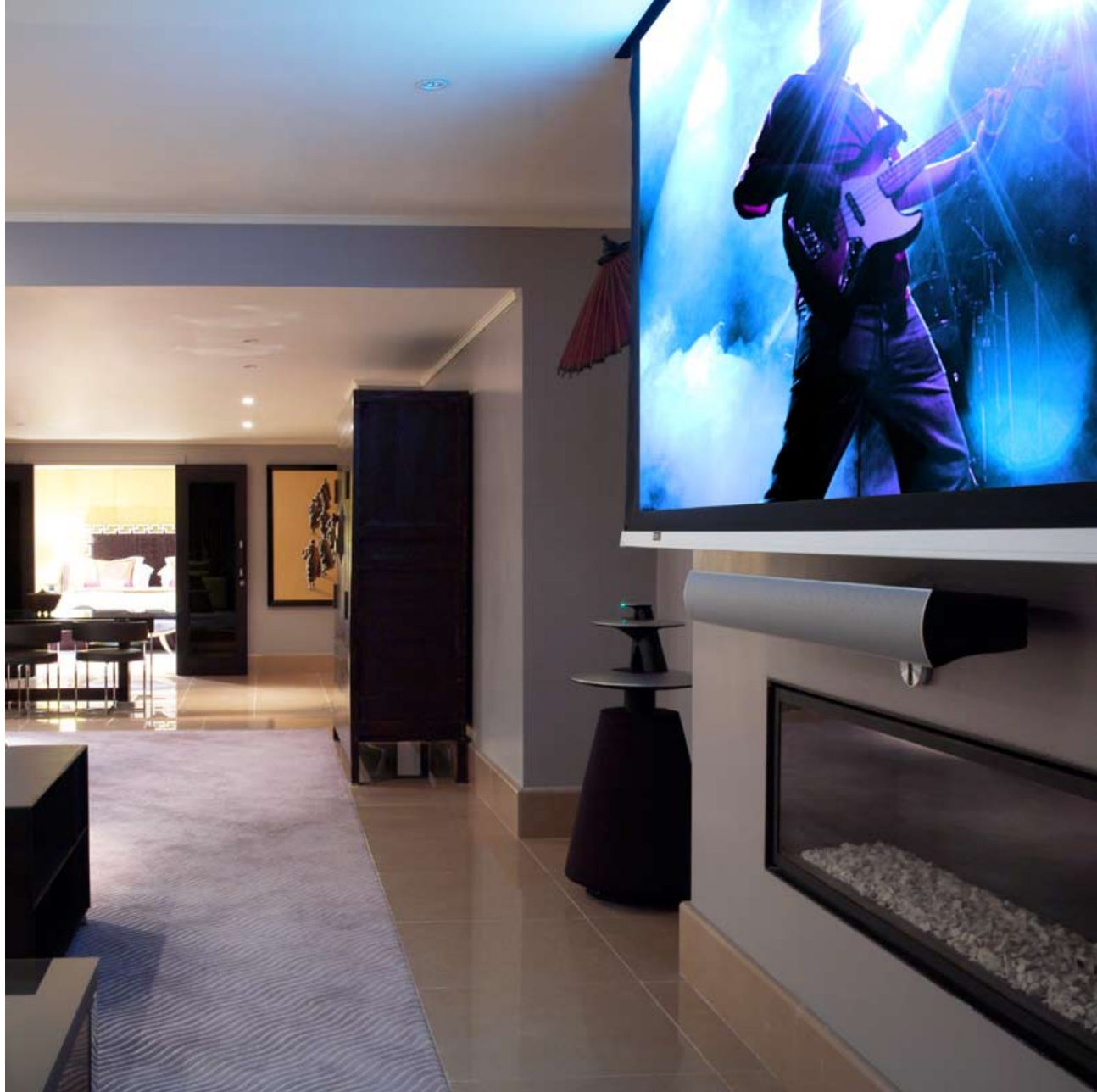
Raw materials
We will attempt to avoid selecting environmentally problematic materials.

Production
We will give cleaner technology a high priority when choosing methods of production and equipment. We place emphasis on consideration of the local environment, as well as on creating a safe and healthy work environment for our employees. We focus here on improving the physical as well as the mental work environment. We will ensure that the suppliers we choose have adopted environmentally appropriate attitudes and policies. We will carry on a continuing dialogue with suppliers regarding the creation of sound environmental conditions in that phase of the product´s life cycle that they are responsible for.

Transport
We will demand a great degree of efficiency of our carriers in their use of resources and application of technology in transport units.

Use
We will aim for problem-free product use in the customer´s environment, long product life and a low level of energy consumption during the product´s life span.

Disposal
We will endeavor to make product parts suitable for recycling. This entails making significant components easily identify able during disassembly, and thereby making it possible to choose the best method of disposal or recycling.



Environmental design standards control a product's environmental qualities

At Bang & Olufsen we include environmental thinking as early as possible in our product's life cycle. This is why we already have comprehensive environmental specifications laid down in the development phase. We call these environmental specifications environmental design standards.

Environmental design standards include statutory and regulatory specifications as well as more stringent company specifications, and company regulations that cover areas where there are as yet no statutory regulations.

Every Bang & Olufsen product has its own product specification folder, which follows the product throughout the whole of the development phase. Environmental design standards are also specified in the product folder. The product environmental impact manager is responsible for making sure all relevant environmental specifications are stipulated. The project manager must accept those specifications, sign-off that he or she has understood the specifications and that the product will meet the specifications. The product simply cannot progress to the next development stage unless it has met the relevant environmental design standards.

At the end of the development phase, project managers must verify that the specifications laid down in the product folder have been met – the product cannot be released for production otherwise.

The implementation of environmental design standards ensures that our products meet EU Directives and other international regulations and ensures that our products always meet national regulations in those markets where our products are sold. Bang & Olufsen always complies with the most stringent regulations. If one particular market tightens a particular regulation, say for chemical compounds, then Bang & Olufsen will make sure that product specification is met in every market where the product is sold.

The internal environmental design standards also ensure that our products have a low standby energy consumption and meet regulatory standards, such as specifications governing how much power a person holding a mobile phone may absorb – the Specific Absorption Rate(SAR), the Electro Magnetic Field (EMF), and the prohibition of a range of hazardous chemicals, such as brominated flame retardants.

Our internal environmental design standard for standby energy consumption has long been ahead of the EU Directive 2005/32/EC – "Ecodesign Requirements for energy-using products".

One of the new environmental design standards in 2008 prohibits the use of the metal tantalum in capacitors. The mining of tantalum in the Democratic Republic of the Congo has led to a series of ethical issues concerning human rights and threatened animal species in the mining industry.

The phasing-out of hazardous substances in products

At Bang & Olufsen we endeavour to design environmentally-friendly products. This means that we think about the entire life cycle of the product early on in the development phase. This is important because much of a product's eventual environmental impact is determined here.

Electronic products contain a series of materials that can have a negative impact on the environment if the product is not disposed of responsibly. Therefore, Bang & Olufsen has chosen to phase out a number of materials and replace them with less hazardous materials.

PVC is an example of a substance we have chosen to phase out. If PVC burns or if it is not disposed of properly, it may harm the environment. So some years ago we banned the use of PVC plastic in our products and only allowed it to be used in cables.

Phthalates are frequently used in PVC cables to soften the plastic. This does make cables flexible and malleable but there is some suspicion that phthalate exposure may be detrimental to health. So Bang & Olufsen has phased out the use of phthalates in all new non-standard cables since the beginning of 2007. And we are phasing out phthalates from all of our existing PowerLink cables. This task is expected to be complete by the end of 2008. Then we will begin to phase out phthalates in our MasterLink cables too.

Production and the environment

We are aware that our activities affect the outside environment and the workplace environment, so we are working to minimise these effects.

External environmental impact
The sheer amount of waste that we produce has a significant impact on the environment. We put great effort into waste management, sorting waste correctly for recycling. For example, any aluminium that has been scrapped in production is sold to an external aluminium recycling company. The same process applies to plastic. We also sort waste into paper, packaging, plastic film and chemicals. In total, 74% of our waste is recycled – only 2% is disposed of in landfills, while the rest is incinerated.

Workplace environment
Our employees' workplace environment is important to us. We maintain a safe and healthy workplace environment, with specific focus on improving the physical and psychological aspects of the workplace environment.

When an assembly line is set up, we make sure it is ergonomic and heavy lifting is avoided. All existing workplace and office areas undergo a workplace evaluation assessment (APV), at least once every three years. We assess not only the physical, ergonomic and chemical environment but also the employees' psychological workplace environment.

We focus strongly on minimising the use of hazardous substances so that operators are not exposed to chemicals that may be detrimental to their health. We endeavour to replace the most dangerous substances with substances that can perform the same function but which are less damaging to the environment generally and the workplace environment specifically.

The Danish Working Environment Authority carried out an unannounced audit of the Bang & Olufsen production factory. The audit resulted in the Bang & Olufsen factory being categorized as a Level One Company, the highest level possible in Denmark

Responsible Corporate Supply Chain

Bang & Olufsen has actively been working with Corporate Social Responsibility (CSR) in the supply chain for the last four years. The CSR supply chain guidelines have been described in the Bang & Olufsen Code of Conduct, which all suppliers must sign as a part of the co-operation agreement. The aim of the code is not to terminate business, but to help suppliers improve on social and environmental standards.

The procedures of the Bang & Olufsen CSR in the supply chain have been implemented in the overall quality system and are executed by the purchasing department.

The entire Bang & Olufsen supplier port folio is being risk evaluated once a year. As a result of the risk analysis the suppliers are divided into three risk groups and categorized as a low, medium or high risk supplier.

All suppliers must sign the Bang & Olufsen Code of Conduct. In addition to this suppliers categorized as medium and high risk must also fill out a self assessment survey. The self assessment may result in some corrective actions that the suppliers must implement.

Furthermore, Bang & Olufsen will perform a full audit at all suppliers categorized as high risk based on the Code of Conduct. The audit will be done together with a highly respected partner. If the audit reveals any violations from the Code of Conduct, a corrective action report will be made based on any possible findings in co-operation with the supplier.

Finally, a re-audit of the supplier will be conducted in order to ensure that the corrective actions have been imple-mented.

Bang & Olufsen has performed several full audits of different suppliers, and the conclusions of the re-audits show significant improvements at the suppliers in terms of human rights, labor and environment.

Energy consumption

In environmental terms, the amount of energy used by consumer electronics when they are operated has the greatest impact. Life cycle studies have show than over 80% of the total impact on the environment occurs when the product is in use, and, for this reason, we have focused for years on minimis-ing product energy consumption, and especially standby consumption. We have focused on standby because many people would say this is wasted energy.

Our efforts mean that, apart from a few exceptions, all of our products use 1 W or less on standby.

The technological shift from analogue to digital TV means that televisions in the future will have set-top boxes or digital receivers. Bang & Olufsen has chosen a solution that does not require an increase in standby power. The digital signal receiver module is an integrated part of the TV. When the TV is set to standby, the receiver module is switched off. Thus the TV's standby power consumption is not increased. Updating and background functions that traditionally run on standby are instead carried out when the TV is switched on. If a background/update function is not complete when the television is switched off, then the module receiver will stay on until the function/update is finished and then switch off automatically.

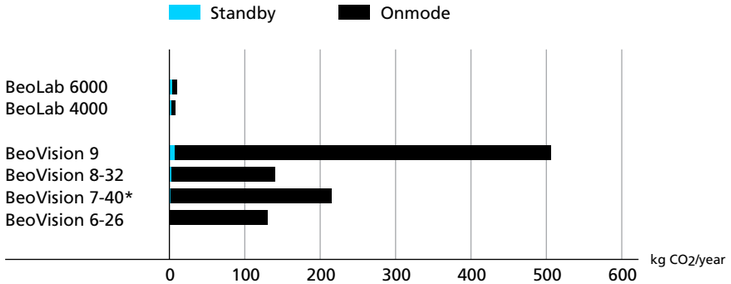
We also look at ways of reducing energy consumption when the TV is switched on.

We use energy-efficient Bang & Olufsen ICEpower amplifiers. An ICEpower amplifier uses only 10% of the energy used by a standard amplifier. This means that when BeoLab 4000 loudspeakers were updated with ICEpower technology in 2007, energy consumption was reduced by 25%.

Some of our TVs have several functions, such as the BeoCenter 6 which has a built-in radio. Energy consumption is reduced here, because only a single function is powered up as it is used. If for example, you are using the BeoCenter 6 radio, then only the radio circuitry is powered up and radio channel information is displayed on the information display, and not on the TV screen.

All of our audio and acoustic products have a Power Management function, which means that they will switch automatically to standby if they are have not been used for thirty minutes.

The annual energy consumption of products that are sold via Enterprise are expressed in terms of CO2 emissions . As the bar chart shows, the amount of energy used on standby is negligible compared to energy consumption of the unit when it is switched on. As a manufacturer we have to reduce the amount of energy consumed by our products as much as possible without compromising audio and visual quality. This factor is important when you consider that the unit is switched on say, from two to four hours, every day.



*= mounted with BeoLab 7-2

Sustainability

At Bang & Olufsen we develop high-quality products that have long lifetimes. Our designs are timeless and many households have perfectly-working Bang & Olufsen products that are 20-30 years old.

On average, a Bang & Olufsen product has a lifetime of 10-15 years without any loss of audio or video quality. Products are exhaustively tested before they are released for production, to ensure high-quality throughout their lifetime. They are tested to ensure they can withstand cold, heat, knocks, sunlight, dust, etc.

If in the unlikely event that a product develops a fault during its lifetime, it can of course be repaired.
We deliver product spare parts for up to twelve years after a product has ceased to be manufactured. We also have mechanical spare parts - for example front and back panels, in the event of a unit becoming scratched or damaged.

The high quality and long lifetime of our products are good for the environment.

Product Disposal

When handled correctly, electronic waste can become a valuable source of raw materials.

In many parts of the world disused electrical and electronic products have to be collected and recycled at an approved recycler. The products are taken apart and split up into their constituent materials – metal, PCBs, plastic, glass and screens. Often this work is done by hand. Alternatively, a shredder is used and the different metals and plastic parts are automatically sorted and recycled for the manufacture of new raw material. Copper and other metals from PCBs are also recycled. Material that cannot be recycled is sent for incineration where the heat energy can be utilised, or it is buried in a landfill.

Bang & Olufsen also thinks about disposal when designing new products. Among other measures, we mark up all plastic parts so that recyclers can identify the material. We carry out a disassembly test that shows how a product will be taken apart and disposed of, and how much of which materials go to make up the product and how much of the product can be recycled. Naturally, if a design improvement is identified during this process, we will use that in future products.

The disassembly tests show that over 65% of our televisions can be recycled. The EU Waste Electrical and Electronic Equipment (WEEE) Directive, requires that at least 65% of the material that constitutes an electronic consumer product must be recyclable – we meet the requirements of that directive.

BeoVision 9 contains some wood which cannot be recycled and this is why it is not as recyclable as the other televisions.