

Wanted: factory for mass manufacture

*Philips concern doesn't believe in a quick breakthrough*

A lamp that consumes half the electricity of a low-energy light bulb. Will it break through? Two great-grandsons of Anton Philips are firmly convinced that it will.

The investors Frans Otten and Warner Philips have a good sense of timing. In October these two great-grandsons of Anton Philips – the man who made the Philips concern what it is today - launched a new lamp onto the market. The lamp consumes 90% less electricity than the traditional light bulb and what's more it lasts for 30 years. The lamp also uses half the amount of energy consumed by low-energy light bulbs which were introduced onto the market in the 1980's by giant lighting manufacturers such as Philips, Siemens and GE.

Within a month of the launch during a visit to the Netherlands, Bill Clinton stood grinning in front of flashing cameras whilst holding the new lamp in his hands. These days, the former American President is dedicated to saving the environment. Now that politicians throughout the whole world view the traditional light bulb as a symbol of wasted energy that should be banned as soon as possible, the investor duo's chances of success can only increase.

In March, Australia was the first industrialized nation to announce a ban on light bulbs from the year 2009. Last week the European Union was a little more cautious. During the environmental summit, the European government leaders gave the European Commission instructions to introduce measures that will strongly reduce the use of traditional lamps for street and office lighting in 2008. Domestic household lighting will follow in 2009.

Despite numerous advertising campaigns, the low-energy light bulb has never really achieved a mass-breakthrough (see: Low-energy light bulb campaign). The lamp first needs to glow before it emits any proper light and what's more, the light it gives is rather cold. The fact that low-energy light bulbs have considerably improved over recent years seems to have gone unnoticed by many consumers. The biggest stumbling block is still the price. You can buy a light bulb for less than 1 euro, but a low-energy light bulb can cost you up to 7 euros. Very few consumers seem to have done their sums and worked out that low-energy light bulbs make a considerable difference in energy consumption as well as lasting for years, thus giving them a quick return on their investment.

The lamp that the investor duo have put their money into is the pear-shaped Pharox which was given its name by the company Lemnis Lighting. The lamp works on the basis of so-called LED technology (LED stands for *light emitting diode*). With this concept semiconductors are used, instead of the thin filament which consumed energy that was then transformed into unnecessary warmth - and not into lighting. A low-energy light bulb contains mercury and this counts as chemical waste. The LED lamp does not contain any mercury.

Philips does not believe in a quick breakthrough for the LED lamp. Just as the first low-energy light bulbs, the light it gives is too cold, isn't suitable for reading, and the technology needed for mass production doesn't yet exist. "During the first few years, the LED lamp will mainly be used for decorative purposes" believes Harry Verhaar, who works in the lighting division of Philips and is responsible for durable and sustainable products. He thinks that the lamp will only make a breakthrough for domestic household use after the year 2010. However Frans Otten and Warner Philips believe that this is the right moment for the breakthrough. Two years ago they encountered the otherwise unknown inventor John Rooymans who had developed LED technology suitable for use in the home. "At first we couldn't imagine that this man could invent something that the big light manufacturers didn't have just by experimenting in his garage", says Otten. "But he looked at things in a slightly different way and when we saw the lamp and gained more insight into the technology, we then realized that this could be something really big". They are still searching for a suitable factory where mass production can take place.

The LED lamp is expensive, much more expensive than the low-energy light bulb. At the present time, only energy company Oxxio sells the Pharox to its own customers, charging €107,80 for a box of 4 (€26,95 per lamp). At the end of this year, Princess – the company that up to now has been active in grill plates, coffee machines and deep frying pans will sell the pear-shaped Pharox lamps via supermarkets, DIY stores, and shops selling household goods and electronics. "The price certainly needs to come down so that eventually it is about the same as a low-energy light bulb, says Aad Ouborg, director of Princess (active in 75 countries and with a turnover of 60 million euros). "We are having talks with potential manufacturers in the Netherlands at first, but then we will move on fast throughout the rest of the world". He was not immediately impressed with the first version of the Pharox, mainly because the light was too cold and wasn't suitable for reading. The lamp also receives similar criticism on a number of websites. However Ouborg says that an improved version is in the pipeline, "I am testing it at home, and it is much better". Ouborg is busy with "well-known designers" the names of whom he is reluctant to mention. They are giving the lamp a shape whereby the LED technology has

been built-in. “If the LED is already in the lamp, then people will be more willing to pay a price of 200 euros for it.”

Philips first intends to invest a lot of money in the further development of the technology and in taking over companies who can strengthen their position in LED lighting. In the autumn Philips took over the Belgian manufacturer PLI, a company that had a great deal of experience in building LED technology into ceiling lights and other lights for living rooms. This week Philips added another company to their list of takeovers, Canadian manufacturer and LED specialist TIR Systems.

The investor duo hope they can persuade established manufacturers such as Philips to speed things up. “Of course we hope to be able to sell our patents to them. We are investors so we want to make money on them”. They are also looking outside the Netherlands. “We are having talks with interested parties in China” says Otten. “There they certainly realize what they can win by investing in saving energy. And the fact that we are great-grandsons of Anton Philips helps us to come into contact with them more easily”.

A ban on light bulbs in many countries would seem to offer manufacturers the biggest opportunity to sell more low-energy light bulbs and LED lamps. Other substantial government measures can also help. Verhaar: “You could also think about increasing V.A.T. on the traditional light bulb and lowering it for the low-energy light bulbs.

According to Verhaar the most radical trendsetting country is Cuba, where last year a ban came into force which is very strictly implemented. “There officials go into houses and literally screw the traditional light bulbs out and the low-energy light bulbs in. The government pays so nobody makes a problem of it. That would of course be fantastic” he laughs, “but in western countries that would probably be going too far”.

*The traditional pear-shaped light bulb has become outdated (photo: Hollandse Hoogte)*