

**SHARP** understands that we must all take responsibility for our impact on the planet/**This is Why** our future is a greener future.



# **/This is Why** we run our product development, manufacturing and business operations in the most environmentally conscious way possible.

So much of the technology we all rely on today, was the stuff of writers' and scientists' imaginations a decade ago. Our progress is astounding. And with this progress comes responsibility.

For every step forward we must consider our footprint. Individuals and large corporations alike, from the smallest local action to far-reaching global initiatives, we all have a duty to reduce our impact on the environment.



# /This is Why we're changing the way we think as well as the way we work.

Since the 1990s we have been examining the lifecycle of our products, from conception to disposal, looking for new ways of reducing our environmental impact. Looking ahead to our 100-year anniversary in 2012, our dual business vision\* is to:

1. Contribute to the world through an environmental and health-conscious business, focusing on energy-saving and energy-creating products;
2. Contribute to a ubiquitous society with one-of-a-kind LCDs.\*\*

Our aim is to become what we have defined as an Eco-Positive Company: a company that works with all stakeholders to create solutions that positively outweigh any negative environmental impact caused by its operations.

To achieve this we have created our Eco Positive Strategy, which encompasses:

### 1) Eco-Positive Technologies

Generating new business through one-of-a-kind environmental technologies

### 2) Eco-Positive Products

Expanding contributions to protecting the environment through products and services

### 3) Eco-Positive Operations

Reducing environmental impacts in product engineering and manufacturing

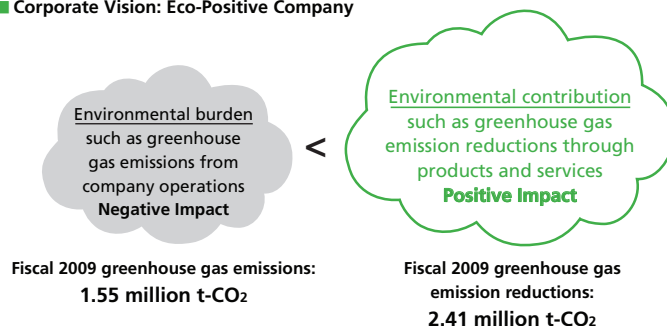
### 4) Eco-Positive Relationships

Enhancing corporate value through involvement with the community



**DID YOU KNOW?**  
In 2009, the use of Sharp energy-creating and energy-saving products contributed to emission reductions of 2.41 million tones of CO<sup>2</sup> – almost 1.6 times the CO<sup>2</sup> emissions from Sharp's business activities.

#### ■ Corporate Vision: Eco-Positive Company



\* For full details and explanation of this Sharp vision, its meaning and explanation of the above equation please refer to [www.sharp-world.com](http://www.sharp-world.com)

\*\* A "ubiquitous society" refers to how the whole of society will be connected through the rapid development of IT infrastructure and networks will always be accessible to users.

# **/This is Why** our Environmentally Advanced Factories are a key initiative of our Eco Positive Strategy.



We are incredibly proud of our Environmentally Advanced Factories and Green Front Sakai, our impressive, new, state-of-the-art manufacturing complex, leads the way in terms of ecology and efficiency. It is the first facility in the world to use 10th generation glass substrates to produce a new generation of energy-saving LCD panels and highly efficient, energy-creating solar cell panels.

Green Front Sakai raises the bar for environmentally responsible manufacturing by:

- Being one of the most environmentally advanced, and largest, business complexes in the world
- Bringing together cutting edge technology companies so they can function as one virtual company with coproduction and coexistence – the key to achieving environmentally-friendly operation
- Pioneering an inter-building transport system that increases production efficiency and reduces the CO<sup>2</sup> emissions from the transportation of goods
- Reducing CO<sup>2</sup> emissions by using over 100,000 Sharp LED lights – a decrease of approximately 17,000 tonnes compared to conventional lighting
- Using blocks made from recycled LCD panels that absorb rain and keep surface temperature cool, for the pathways around the offices.



## **DID YOU KNOW?**

Our pioneering Green Front Sakai manufacturing complex adopts a vertical integration model providing room for suppliers, supporting the entire production process and reducing CO<sup>2</sup> emissions due to a reduction in the transportation of goods.

# /This is Why we innovate to help the environment.

We use our technology and expertise to find new ways of reducing the environmental impact of our products. By developing unique environmental technologies, we are working towards raising the environmental performance of our products, while at the same time lowering the environmental impact of our production facilities.

## Recycling

Recycling is a key part of our focus to help the planet. We minimise waste going into landfill and re-use materials in our products whenever possible. For example, we have developed a new closed-loop recycling process with Kansai Recycling Systems, which allows us to repeatedly reuse recovered plastics from our consumer electronics products.

## Reducing resources in products

We work hard to find solutions that enable us to use fewer materials in our products. This is most evident in the production of our TVs. Fortunately, the desire for slimmer, lighter and flatter sets means that, already, material use has never been lower.

We recently developed a new durable, recyclable material, which will be used in many of our AQUOS LCD TVs. This revolutionary material is resistant to moisture and humidity, shows very few

signs of deterioration even after long-term use and can be reused several times in closed loop recycling.


## Packaging

Innovative packaging solutions can greatly reduce our carbon footprint. In 2006 we unified our packaging in Japan to lower our impact on the environment. Also by adopting a monochrome logo, we now require fewer resources for printing.

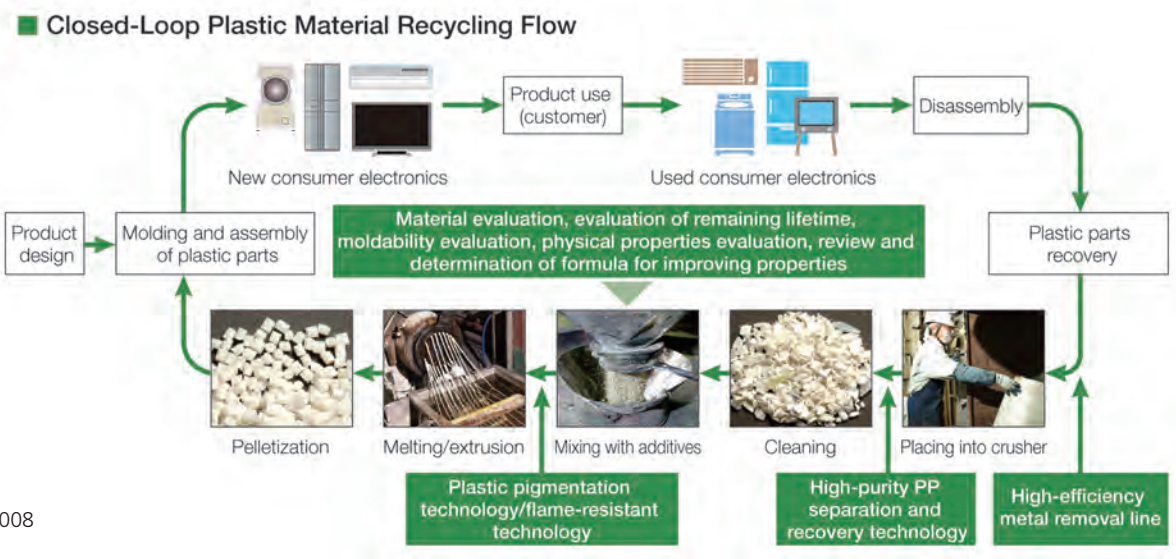
Finally, in our Green Front Sakai factory, we are reducing the packaging of parts with an innovative transportation system that makes use of localised business partners.

## Reducing impact on natural resources

In less than one hour, the sun delivers enough energy to the Earth's surface to power the activities of the entire planet for one year. Harnessing and converting this power into electricity is an obvious solution to reducing our dependence on more limited natural resources, such as fossil fuels. At Sharp we have been developing solar cells for more than half a century, with one out of four cells produced worldwide coming from our company.\*



**DID YOU KNOW?**  
Sharp began mass production of solar cells in 1963 and is one of the world leaders in manufacturing and sales.



\* As per 2008

# /This is Why our environmental commitment is a global effort.

Sharp UK shares the company's worldwide aim of reducing the environmental impact from our local business activities, to improve our performance and contribute towards Sharp Corporation's 2012 vision of becoming an Eco-Positive Company.\*\*

## Compliance with legislation

Sharp UK complies fully with the relevant EU/UK environmental and safety regulations for all the products we bring to the UK market. These include:

- Restriction of Hazardous Substances (RoHS)
- Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH)
- Energy related Products (ErP)
- Waste Electrical and Electronic Equipment (WEEE)

We are also a member of the Recycling Electrical Producers Industry Consortium (REPIC Ltd), the UK's largest WEEE compliance solution.

## ISO 14001

Back in 2002 Sharp UK achieved ISO14001 registration, which ensures a continued improvement of our environmental performance. By operating to this stringent environmental standard, we have made substantial reductions in our local energy consumptions, use of plain paper and CO2 emissions. In 2010 we exceeded our targets through staff training and the implementation of new energy saving ideas.

## Consumables recycling scheme

Sharp UK has partnered with eReco Ltd, an IT and electrical equipment recycling specialist, to set up a new recycling scheme for Sharp consumables. The scheme provides our customers with an environmentally responsible solution for the disposal of their waste toner cartridges, that aims to achieve zero waste going to landfill.

## Waste

Since August 2010 Sharp UK has also partnered with two new waste management companies that recycle and recover, as appropriate, all the waste generated by our offices. The result is zero waste to landfill.

## Runner up in The Sustainable Facilities Management Awards, 2010


*"The Sustainable FM Awards is a nationwide search for the most inspiring and practical developments in Sustainable Facilities Management. The challenge is for organisations concerned with sustainability and development to gain the recognition they deserve in contributing to the saving of our planet." \**

Further evidence of our commitment to the protection of the environment and our achievements so far were demonstrated by participating and coming second in this national competition, organised by Abbey Publishing & Exhibitions (UK) Ltd.

## Green Office

Sharp Corporation assessed the practices of Sharp UK and awarded us the Green Office status. This recognises our environmental efforts as real action against climate change and confirms that we have made substantial improvements in our environmental performance. These include:

- Maximising our efforts to protect the environment by increasing sales of energy saving products
- Implementing measures to reduce energy consumption
- Being contracted to a green electricity supply
- Using solar energy to reduce reliance on fossil fuel based electricity supply
- Improving our environmental communications internally and externally
- Promoting corporate social responsibility through local activities
- Identifying projects and setting targets to further improve our environmental aims in combating climate change
- Continuing our commitment to address the environmental issues that we can influence
- Setting a target to achieve zero waste to landfill



**DID YOU KNOW?**  
Sharp has been manufacturing solar panels in the UK since 2004 in its state of the art plant located in Wrexham, Wales. Today the site has an annual production capacity of 250MW for mono and polycrystalline photovoltaic solar cells.

\* [www.abbeypublishing.co.uk/sfmawards.html](http://www.abbeypublishing.co.uk/sfmawards.html)

# /This is Why our products are environmentally advanced.

Sharp designs and creates products that help you and the environment. In addition to reducing our environmental impact, every new product we design is now either Energy Creating, Energy Saving or Health Conscious.

## Energy Creating

50 years ago, Sharp began pioneering solar technology. Today there are approximately 100,000 Sharp solar products providing green electricity in countries across the world.

## Energy Saving

Sharp manufactures a wide range of energy saving products for domestic use. Our LED based lighting products consume extremely small amounts of energy and last longer than an ordinary incandescent lamp.


Our LED LCD TVs are continually becoming lighter, thinner and more energy efficient, with our Aquos LED backlight TV range using up to 40% less energy than traditional LCD CCFL backlight technology, whilst also being mercury free.

Sharp UK is registered with the Energy Saving Trust and a number of our recent TV models have been awarded the prestigious Energy Saving Recommended logo. We were also the first consumer electronics manufacturer to apply for and be awarded the EU Ecolabel logo issued by the European Commission.

We have recently launched a new range of environmentally friendly calculators that feature 100% post-consumer recycled plastic cases and solar panels. In addition, the calculators are free from lead and mercury, which further reduces their impact on the environment.

## Health Conscious

Sharp also produces a range of energy-efficient fridges, air conditioners and air purifiers, which feature Plasmacluster Ion technology. This recreates the natural process that purifies air in the Earth's atmosphere to provide the most effective removal of airborne dust, pollen, germs and odours.

 **DID YOU KNOW?** Over the past eight years we have reduced the power consumption of a 32 inch LCD TV (81 centimetres diagonal) by more than 50%.



# **/This is Why** our office products help you protect the environment.

## **Energy**

Sharp's latest multi-function printers/copiers (MFP) come with a range of energy saving features to reduce greenhouse gas emissions and save money. Between printing jobs they switch to Low Power mode, which reduces the temperature of the fuser. When idle, they switch to Auto Power Shut Off mode, only using power to receive a fax, when necessary.

The MX range of the Sharp copiers/printers is equipped with an Energy Save button, which manually forces the machine into a deep sleep mode. In addition, Sharp's high-speed MFPs deliver energy savings through External Heat Fusing Technology: an external system that heats thin steel fusing rollers and consumes less energy than conventional heating methods.

## **Consumables**

Sharp has made advances in toner technology, which include making our cartridges smaller and lighter, and using less packaging. This in turn reduces waste and makes our toner easier to transport.

Significant savings can also be had by printing internal documents in Draft mode or Toner Save mode, which increases yield and lowers running costs.

## **Paper**

We have designed our copiers/printers to help save paper and in turn, the environment. For example, our N-Up printing feature lets you print or copy up to 4 pages on to a single side of paper and an automatic double-sided printing function helps to cut your paper consumption by half.

Other paper-saving features include the ability to produce a test set of documents before a long print or copy run, automatic media selection and the use of PINs at the MFP. Using a PIN to initiate print runs, ensures that printed pages don't go astray and then have to be reprinted, whilst unretrieved print jobs are deleted from the server 24 hours after being sent to print.



### **DID YOU KNOW?**

The Ever Sharp pencil, invented by our founder Tokuji Hayakawa, was the product behind our name – Sharp. Since it also turned an everyday disposable item into something reusable, saving precious wood along the way, it could also be considered our first environmentally responsible product.

# /This is Why we are proud of our environmental awards and accreditations.

## EU Eco-label

Recognised all over Europe, this logo certifies environmentally friendly design and energy-saving features across a wide range of products.

<http://ec.europa.eu/environment/ecolabel/>



## Energy Saving Recommended (ESTR)

The ESTR scheme is run by the Energy Saving Trust. It aims to endorse the best performing products in terms of energy efficiency. Sharp integrated digital televisions displaying the distinctive blue logo are the most efficient in the category, achieving less than or equal to 1W power consumption in standby mode, less than or equal to 150W when switched on, while having an EEI (Energy Efficiency Index) of less than or equal to 0.40.

[www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)



## Energy Star

The Energy Star is awarded to computers, monitors, printers, fax machines and copiers that demonstrate outstanding energy efficiency. We are proud that nearly all our latest MFPs and copiers meet the stringent requirements for imaging equipment. For a full list of certified products, please visit [www.eu-energystar.org](http://www.eu-energystar.org)



## Blue Angel

The Blue Angel recognises products that are environmentally friendly across a number of criteria. In terms of MFPs, these criteria include reduced energy consumption, low chemical emissions, low noise levels and an environmentally friendly product design. For a full list of certified products, please visit [www.blauer-engel.de](http://www.blauer-engel.de)



## Nordic Ecolabel

Nordic Ecolabel is the leading environmental seal in Nordic countries. Like the Blue Angel accreditation, it considers the emissions, energy use, noise and other key environmental qualities of a product during its full life cycle. For a full list of certified products, please visit [www.svanen.nu](http://www.svanen.nu)



## ISO 14001 Certification

ISO 14001 assesses a business's effective environmental management. Sharp now has 37 plants and 31 offices around the world certified to the ISO 14001 environmental standard.



### DID YOU KNOW?

Sharp was the first consumer electronics manufacturer to be awarded the EU eco-label for its LCD televisions.

# **/This is Why** our commitment to the environment is ongoing.

At Sharp, we strive to apply our advanced technology and knowledge to create products of the highest standard in terms of design, function and environmental responsibility.

## **Expanding global initiatives worldwide**

The environmental issues we face today are global in scale. Around the world, Sharp is united in its commitment to the environment. We aim to be a company whose positive impact on the environment greatly outweighs any negative impact resulting from our business.

We are focussing on two key parameters:

- Expanding the production of energy creating products
- Improving the energy efficiency of our products

Sharp has been researching and developing solar panels since the late 1950s and today we are amongst the leaders in manufacturing and sales. The production capacity at our factory in Wrexham will soon double to 500MW per year.

We have pledged to lead the way when it comes to product energy efficiency and have made substantial improvements in reducing the energy consumption of our Audio Visual and Information Systems equipment. This is reflected in research carried out by the German NGO BUND (Friends of the Earth Germany), which placed Sharp as number 1 for energy efficiency for LED TVs in their size and categories.\*

## **Our Commitment to the Environment**

Sharp is committed to being an environmentally advanced company. This means balancing protection of the environment with business development and growth.



## **We aim to conserve the environment by:**

- Complying with all relevant legal requirements
- Working efficiently to preserve natural resources
- Controlling the use of chemicals
- Continuing to recycle

## **We will develop environmentally conscious products by:**

- Engaging in the minimisation of resources
- Reducing the size and weight of our products
- Increasing the use of recycled materials
- Developing long lasting, energy saving and energy creating products



### **DID YOU KNOW?**

We employ 8,000 researchers – 12.5% of all Sharp employees – based at numerous Sharp research facilities all over the world, and invest 6.5% of all net sales into research and development.

### *Notes*

The information contained in this brochure is a brief summary of Sharp environmental activities and successes achieved to date. To find out more about Sharp environmental activities please go to: **[www.sharp-world.com](http://www.sharp-world.com)**

The terms Eco-Positive and Green are Sharp internal terms based on internal definitions and criteria, which are explained by accessing the URL link mentioned above.

**SHARP**  
/ This is Why