Empowered by Innovation NEC

NEC Ecological Display Solutions and Initiatives

# NEC GREEN VISION

## GREEN VISION IN ACTION

SHAPING OUR FUTURE

### ECO Innovation

MORE PRODUCTIVITY

### Lower Consumption

ECO CERTIFICATION

### World's First TCO Certified Projector

## Striving to Create a Sustainable Society

# GREEN > VISION

## CREATING A SUSTAINABLE SOCIETY

Disappearing Species, Depleted Resources, Harmful By-products, Waste, Global Warming, Pollution, Rising Energy Costs; Corporates, Government Bodies and Institutions need easy to adopt eco products and solutions and the means to quantify eco savings.

NEC aim “to be a leading global company leveraging the power of innovation to realise an information society friendly to people and the earth” and “minimise our environmental impact over the entire product life cycle”. The NEC Group 2010 Vision sets a goal of balancing the $CO_2$ Emissions of NEC products and services through $CO_2$ savings generated from green product design and environmentally-friendly NEC solutions, so that the Kyoto Protocol commitments are maintained by 2010.

Today, we are ideally placed to supply Green Products and Solutions that help protect the World’s future.

The World needs green innovation, NEC has a World Leading ECO Display Portfolio and a long established Corporate Commitment to Responsible Manufacturing. Our Green Vision is about developing green products on the basis of a commitment to Sustainability and Increased Productivity.

| ECO SUSTAINABILITY | ECO PRODUCTIVITY |
| --- | --- |
| Responsible Innovation and Production | Greater Efficiency Lower Consumption |

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# ECO SUSTAINABILITY

## RESPONSIBLE INNOVATION AND PRODUCTION

ECO
SUSTAINABILITY

NEC Display Solutions are strongly committed to environmental protection with sustainable production a key objective. We see recycling and energy conservation as the company's top priorities in trying to minimize the burden placed on the environment.

We are engaged in developing environmentally-friendly products, and always strive to help define and comply with the latest independent standards from agencies such as ISO (International Organization for Standardization), TCO (Swedish Trades Union), EPA Energy Star, as well as EU Commission Environmental Directives and local laws.

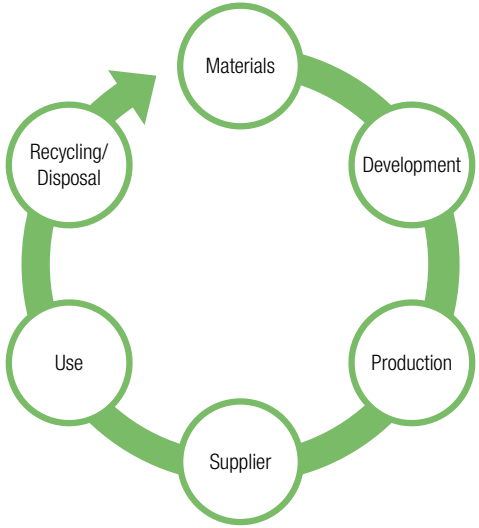
NEC Display Solutions is practically involved in the formulation, driving and implementation of EU environmental policies through membership of Digital Europe - the voice of the ICT industry to the EU Commission and the Japanese Business Council Europe.

We instituted an internal company program to ensure compliance to all the recent EU directives (WEEE, RoHS, REACH, EuP and Waste Packaging). We also work closely with partners and representatives to ensure legal compliance to any local environmental legislation.

On a global basis, NEC Display Solutions ensures that our manufacturing facilities are compliant to the stringent ISO14001 (Environmental Management) norm.

The World's first ever TCO Certified Projector

Minimising our Environmental Impact over the entire product lifecycle



ECO
SUSTAINABILITY

Under the NEC Group 2010 Vision, NEC is implementing environmental management targeting zero net $CO_2$ emissions by the end of 2010. In addition to cutting $CO_2$ emissions generated by production activities, NEC is also helping customers reduce emissions by supplying energy efficient products and IT solutions.

- Taking the lead in ECO IT Development
- Products that last longer and consume less
- Reducing $CO_2$ Emissions by ecological design
- Using ECO Friendly Materials and Reducing Packaging and Waste
- Compliance to Global Standards such as EPEAT, TCO, Energy Star
- ECO Manufacturing Processes to ISO14001
- Applied Corporate Values and Responsibilities

# ECO PRODUCTIVITY

## GREATER EFFICIENCY LOWER CONSUMPTION

### MultiSync Productivity and ECO Ergonomics: The Perfect Display Combination

NEC Display Solutions are renowned for Product Quality and Innovation. With the MultiSync® Brand an established market leader for providing trusted business critical display performance over the longest lifecycle.

Ideal for the most demanding applications such as Corporate, Finance, Government, Educational, Medical, Colour and Transport Markets MultiSync® Displays deliver the optimum image in the most challenging environments.

The longer lifecycle associated with the MultiSync® brand in itself means greater Eco savings, whilst Widescreen and Dual Screen Solutions mean greater productivity and an overall Lower Total Cost of Ownership.

ECO
PRODUCTIVITY

- Innovations that Increase Productivity, so a single product can be more environmental by generating greater output. Greater efficiency. MultiSync Dual Screen and Wide Displays
- Lower Total Cost of Ownership with Less Energy Usage and Longer Life-Cycle ECO MODE, Schedulers, Ambient Light Sensors. Lowest Stand-by Power Draw.
- NEC High Build Quality and Future Innovation. Means Longer Product Usage and Less Waste
- Easy to adopt ECO and identifiable rewards One Button ECO MODE, Carbon Meter

# REDUCING OUR CARBON FOOTPRINT

Increases in $CO_2$ omissions are considered the largest single contributor to climate change, it is estimated that 40% of the increase is related to what we do as individuals.

Energy is also expensive. It is costing individuals and corporations increasing amounts of money, both directly in the price of gasoline and electricity and indirectly in the form of rising prices for energy-dependent goods and services ranging from transport to food. And it’s expensive in terms of environmental impact, as the scientific evidence linking the “carbon footprint” of human activities - the amount of carbon dioxide humans worldwide pump into the atmosphere to generate power - to global warming and climate change has become persuasive.

Knowing your carbon footprint and finding ways to reduce it, helps you understand your impact on the environment - and more importantly, make a difference.

One of our Stated Corporate Visions is the aim to become carbon neutral. To this end, we have developed features to assist our users reduce their $CO_2$ emission in the use of our products. Users are given active control over a display’s carbon footprint. For instance, the EA and PA Series are equipped with an innovative Carbon Savings Meter.

The carbon savings through the Eco Mode function setting or a reduction of the brightness are indicated via the On Screen Display, as is the reduction of the $CO_2$ footprint in comparison with the average values listed in the manual.

To maximise valuable savings potential Displays are shipped in Eco Mode and the Eco Mode Notifier indicates the setting for the Eco Mode status whenever the monitor is turned on or whenever the input signal is changed.

Packing and shipping have also been minimised at NEC Display Solutions to reduce the $CO_2$ footprint. Smaller packaging can contribute to a reduction of $CO_2$ emissions of about 35%. NEC MultiSync® 90 series models are available without stand upon request; they are generally offered optionally with NEC Public Displays. In addition, NEC Public Displays are already shipped with an energy-saving preset of 500 $cd/m^2$.

# SAVE > ENERGY

AT THE TOUCH OF A BUTTON




Projector One Touch ECO Mode Button



- Carbon Meter for Administrating and Reporting $CO_2$ Reductions
- Reduce Operational Costs, Energy Usage and $CO_2$ Impact
- Simple One Touch Button encourages ECO Operation
- Balance Best Performance and Best Savings

Display One Touch
ECO Mode Button

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# ECO > DESKTOPS

- Power Requirements as low as 13W in operational ECO mode
- Our ECO Ergonomic Innovations lead the way for Socially Responsible Displays
- All of our Displays are manufactured in production lines conforming to the ISO14001 standard and we ensure that products are certified to EPEAT standard as well as the latest TCO, EnergyStar and other certfications

Ambient Light Sensor

MultiSync Performance and ECO Innovation

The perfect combination for better TCO

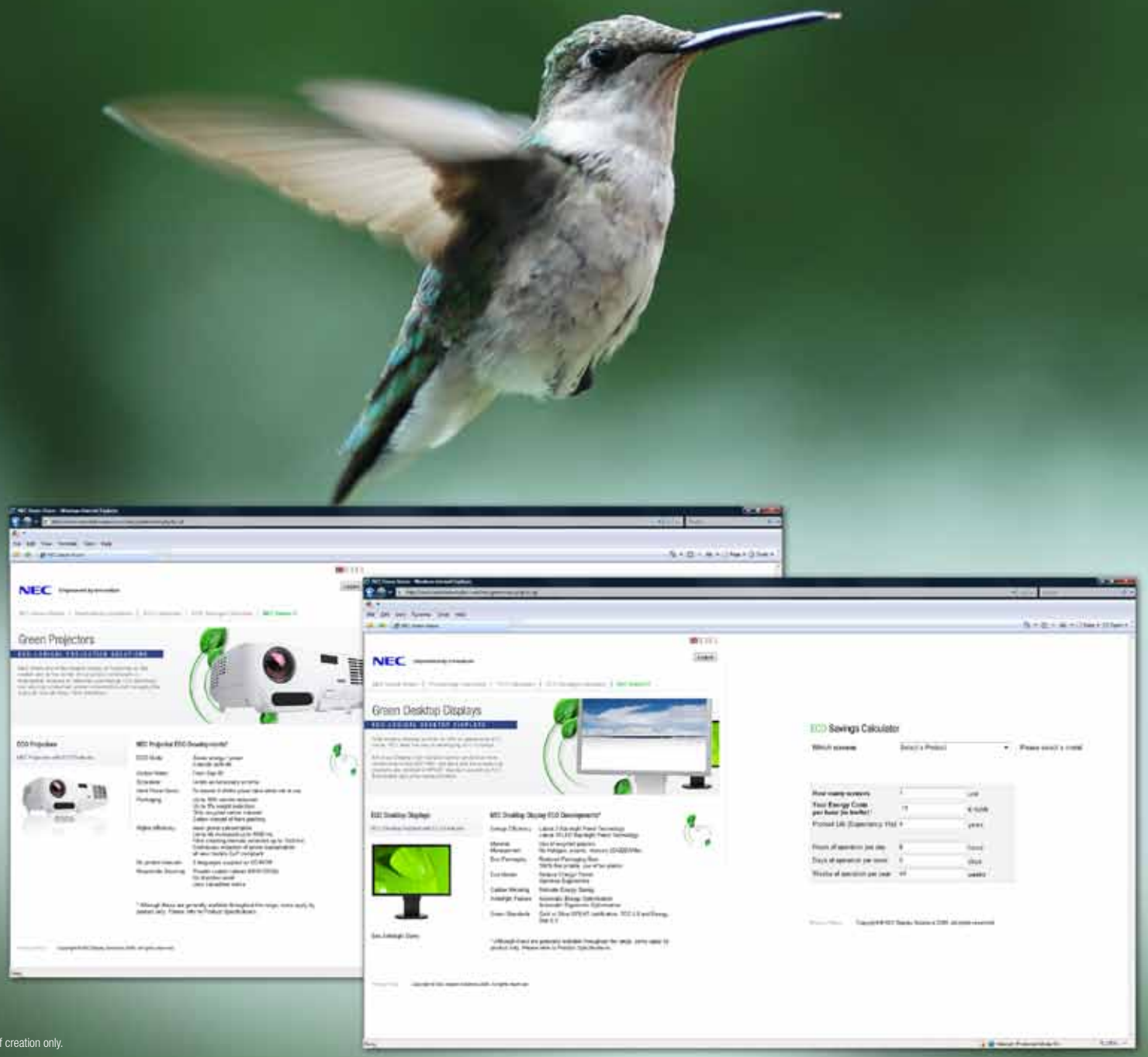
DESKTOP DISPLAY ECO DEVELOPMENTS*

Lower TCO, Lower Consumption, Extra Productivity with Dual and Wide Screen Options

| | | |
|---|---|---|
| • | Energy Efficiency: | Latest 2 Backlight Panel Technology |
| | | Latest W-LED Backlight Panel Technology |
| • | Material Management: | Use of recycled plastics |
| | | No Halogen, arsenic, mercury (EA222WMe) |
| • | Eco Packaging: | Reduced Packaging Size |
| | | 100% Recyclable; Use of bio plastics |
| • | Eco Modes: | Reduced Energy Requirements |
| | | Optimise Efficiency |
| • | Carbon Metering: | Motivate Energy Saving |
| • | Ambilight Feature: | Automatic Energy Optimisation |
| | | Automatic Ergonomic Optimisation |
| • | Green Standards: | Gold or Silver EPEAT certification, |
| | | TCO 5.0 and Energy Star 5.0 |

* Although these are generally available throughout the range, some apply by product only. Please refer to Product Specifications.

Lower Cost of
Ownership
Lower Cost to the
Environment




## COMPARE ECO SAVINGS:

**Visit the Green Vision Website**
**at nec-display-solutions.com**

Errors and Omissions Excepted. Competitor information current at the time of creation only.

# ECO > LARGE FORMAT

- Protecting the environment and saving energy is just as important with Large Format Displays, where size, impact and image brightness are demanded. Some of our latest features including Ambient Light Sensors, Schedulers and our NEC Carbon Savings Meter can help ensure less power is used and less $CO_2$ produced.

## LARGE FORMAT DISPLAYS ECO DEVELOPMENTS*

Lower TCO, Lower Consumption, Longer Life, ECO Innovation

| | |
|---|---|
| • Motivate Lower $CO_2$: | Shipping at 500cd/$m^2$ when 700cd/$m^2$ possible |
| | Reduced Energy Requirements |
| | Carbon Footprint Savings Meter |
| • ECO Features: | Ambient Light Sensor on P/X/Multeos Series reduces Brightness when it is not needed |
| | ECO Schedulers to reduce unnecessary on-time |
| • Less Materials: | Stand feet now shipping as extra option only |
| | Saving materials on items that are often not used |
| | Logistics weight reductions |

# ECO > PROJECTORS

- NEC offers one of the largest ranges of Projectors on the market. At the centre of our product philosophy is responsible sourcing of materials, limiting $CO_2$ emissions, via reducing component power consumption and managing stand-by and off times more effectively, providing better TCO with more bundled features and longer lasting products and consumables.

One Button
ECO Mode

## PROJECTOR ECO DEVELOPMENTS*

### Lower TCO, Lower Consumption, Bundled Software for More Productivity

| | |
|---|---|
| ECO Mode: | Reduces Energy Requirement |
| | Extends bulb-life |
| Carbon Meter: | Value, standard, short-throw and entry level installation models |
| Scheduler: | Limits unnecessary on time |
| Vacation Switch: | To ensure 0 Watts power take when not in use |
| Packaging: | Up to 30% volume reduction; Up to 3% weight reduction; |
| | Only recycled carton material; Carton instead of foam packing |
| Higher efficiency: | Lower power consumption |
| | Lamp life increased up to 5000 hrs |
| | Filter cleaning intervals extended up to 1500 hrs |
| | Continuous reduction of power consumption, |
| | all new models EuP compliant |
| Responsible Sourcing: | Powder coated cabinet (NP41/52/62); No dissolver used; |
| | Less hazardous waste |

* Although these are generally available throughout the range, some apply by product only. Please refer to Product Specifications.

# GREEN > VISION

## THE TOTAL GREEN CONCEPT

Protecting our natural resources and the environment is one of our top priorities. In line with the NEC “Environmental Management Vision 2010”, NEC ensures that anything that impacts on the environment is sustainably reduced.

This is all part of the NEC Display Solutions total green concept, ‘Green Vision’. Standards and voluntary initiatives underlie the core issues: recycle, re-use and reduce, and so contribute to establishing energy saving as a potential energy “source”, in addition to conventional sources, such as oil, gas, coal and nuclear energy. We are committed to assisting our clients in understanding and measuring their environmental impact and how NEC Display Solutions can contribute to sustainably increasing energy efficiency and thus improving their carbon footprint and their contribution to protecting the environment.

| ECO INNOVATION | ECO SAFETY | SAVE ENERGY | ECO PACKAGING |
|---|---|---|---|
| Carbon Meter<br>Eco Mode<br>Ambient Light Sensor | Avoiding hazardous substances, e.g. mercury. Use of environmentally friendly materials, e.g.. bio plastics or recycled metals and plastics. | Ensure that products use a little energy as possible, reduce energy consumption of our operations. | Reduced package size<br>100 % recyclable, new Packing Concepts such as Paper Fill. |

# Meeting the latest Industry Recognised Ecological Standards

## TCO

The Swedish TCO organisation is the forerunner throughout Europe in ECO Ergonomics. Unlike other Certification Bodies, TCO do not allow self certfication and provide a genuine independent verification of a products ECO Credentials.

With their advanced ergonomic functions and technologies, NEC monitors always meet the latest TCO (TCO 5.0) norms and are considered to be the ergonomic trendsetter on the market also recently winning iF Design Awards in our EA and PA ranges. NEC Desktop Displays were amongst the first to introduce ECO Mode options and a Carbon Meter.

NEC received the World's first TCO certification for Projectors with the NP215 and NP410. With a commitment to green innovation, the majority of our existing and new projectors meet TCO standards with further certifications planned for 2010

Certification covers ergonomics as well as environmental friendliness and as an independent third party label provides a trustworthy measure.

NP410 and NP215, the World's first ever TCO Certified Projectors

## EPEAT US STANDARD

EPEAT is an established and well respected 3 tier environmental protection seal, which compares desktop computers, notebooks and monitors based on 51 environmental criteria, such as power consumption and energy efficiency, product longevity, use of toxic substances, recycling, packaging and certification of corporate performance according to ISO 14001.

A large number of the new NEC desktop LCD displays have been awarded the EPEAT Gold certification and the majority of all displays have Silver accreditation. Gold accreditation, in addition to the 23 mandatory criteria also includes conformity with 14 optional requirements.

## Energy Star 5.0

Energy Star is an international standard for energy efficient consumer products. New Energy Star 5.0 specifications were introduced on October 2009. Many NEC Displays meet the amended standard.

## Taking Responsibility, Striving to Exceed Obligations

### REACH

REACH Regulation 2006/1907/EC of the European Parliament entered into force on 1st June 2007, covering tracing of chemicals used in manufacturing processes.

It involves Registration, Evaluation, Authorization & restriction of Chemicals with the aim to establish a framework to promote the protection of human health and the environment, as well as competitiveness of the EU chemical industry. Involving Increased transparency, Promotion of non-animal testing, Conformity with EU international obligations under the WTO. NEC fully comply with REACH by publishing reports on all products concerning their chemical content.

**The EU has put forward legislation for dealing with Waste of Electrical and Electronic Equipment (WEEE), the Restriction of the use of certain Hazardous Substances (RoHS) and the new directive on establishing a framework for the setting of ecodesign requirements for energy-using products (EuP).**

### RoHS Directive 2002/95/EC

This directive limits the use of hazardous substances in electric appliances and electronic devices (RoHS). Essentially, it covers six substances lead, mercury, cadmium, hexavelent chromium, polybrominated biphenyls and polybrominated diphenyl ethers. All products launched on the market since January 2006 fulfil the RoHS directive.

### WEEE (Waste Electric & Electronic Equipment)

This objective is to avoid, reduce and dispose of electronic waste in an environmentally sound manner. All products by NEC Display Solutions have fulfilled the WEEE directive since the beginning of 2005. In addition, our packaging conforms to the EU Directive 94/62/EG, which lays down the requirements for the composition, recyclability and usability of packaging and packaging waste. The EU Directive 91/157/EC on reducing environmental risks by improving the disposal and recycling of batteries has also been implemented in the company, in the areas of waste management and recycling.

### DIRECTIVE ON ENERGY USING PRODUCTS (EUP) 2005/32/3C

This directive aims to improve the environmental impact of products which operate using energy by specifying even more energy-efficient measures and more specific ecological design requirements. In addition to reducing power consumption, the directive is also geared towards the product's life cycle, from the development right through to the disposal phase. Thus when it comes to display products, the materials consumption, radiation and toxicity of materials used are taken into consideration and, accordingly, are implemented in the product development and production phases by NEC Display Solutions.

The first EuP regulation to come into force is the Regulation for standby and off mode, which is effective as of January 2010. The objective of this Regulation is to reduce the energy consumption of all household and office products. As a general rule, products must have an off mode (0W) and/or a standby mode (<1W).

### SCOPE OF THE EuP DIRECTIVE

Established a framework for all products using energy in the use phase of the life cycle: Eco-design requirements; Energy efficiency improvements; CE marking includes EuP compliance.

### EuP IMPLEMENTATION TIMETABLE

The First EuP Regulations were published on 17th December 2008 these concrete requirements were focused only on Standby and Off Modes to become mandatory in EU Countries by January 2010. Tighter standby and off modes are set for January 2013. Additional EuP regulations will be published over time.

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# NEC GREEN VISION

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