



**imageRUNNER
ADVANCE**

Advanced Responsibility

Sustaining Our Environment

Agenda

- *Industry Trends*
- *Canon Corporate Environmental and Sustainability Initiatives*
- *imageRUNNER ADVANCE - Environmental Solutions*
 - Reducing CO2 Emissions
 - Maximizing Energy Efficiency
 - Resource Conservation
 - Pollution Prevention

Industry Trends

IDC Study: “The Green/Sustainable Movement and Printers And MFPs – Customer Attitudes and Purchasing Behavior” Angèle Boyd, June 2009

- **Key Findings:**

- **Customer desire to be “green” on the rise**

- *Customer interests are being driven by energy costs, growth in volumes, brand reputation, Gov’t regulations, etc.*
 - *Technology advances facilitate less printing; New workforce generation prefers not to print.*
 - *Customers are switching brands for “green” compliance.*

- **Trend towards an environment-conscious print/copy infrastructure is a leading initiative.**

- *Large companies (1000+ employees) are leading in this area.*
 - *Specific green hardcopy policies show that the focus is on paper/consumable reduction, scanning, and recycling.*



Corporate Environmental and Sustainability Initiatives

“Kyosei”

For harmony between people, products,
and nature.

- Canon aims to reduce environmental burdens in all stages of the product lifecycle including: Production, Usage, and Recycling activities.
- Canon’s Corporate Environmental Management System (ISO-14001) focuses on three fundamental strategies:
 - *Resource Conservation*
 - Environment-conscious product design; Recycling Programs; Bio-based plastics, etc.
 - *Energy Conservation*
 - Energy Star qualification; Energy-saving Technologies, etc.
 - *Elimination of Hazardous Substances*
 - First manufacturer to become fully compliant with EU’s RoHS Directive (RoHS restricts 6 substances- Canon restricts 24)

*Canon is among the world largest ISO-14001 certificate holders (700+ locations certified)

CANON AMERICAS ENVIRONMENTAL CHARTER CORPORATE PHILOSOPHY: *KYOSEI*

Achieve corporate growth and development while contributing to the prosperity of the world

and the happiness of humankind through the corporate philosophy of ***Kyosei***:
All people, regardless of race, religion or culture, harmoniously living and working together into the future.

ENVIRONMENTAL ASSURANCE PHILOSOPHY

Pursue maximization of resource efficiency and contribute to the creation of a society that practices sustainable development.

FUNDAMENTAL POLICIES FOR CANON AMERICAS ENVIRONMENTAL ASSURANCE

Canon Americas seeks to harmonize environmental, economic and social interests in all business activities, products and services; offer products with lower environmental burden through innovative improvements in resource efficiency; and eliminate anti-social activities that threaten the health and safety of humankind and the environment.



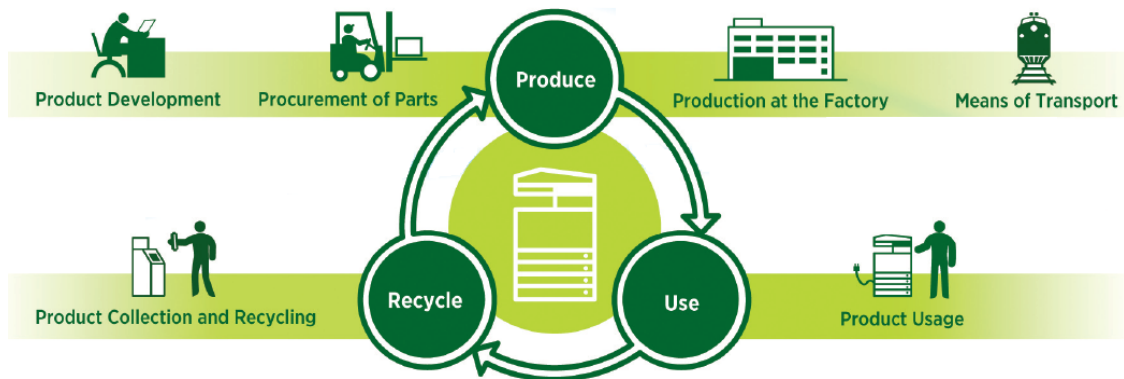
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Environmental Solutions

- Reducing CO2 Emissions
- Maximizing Energy Efficiency
 - Resource Conservation
 - Pollution Prevention

Reduction of CO2 Emissions



Life Cycle Assessment System

- imageRUNNER ADVANCE models are the first to implement Canon's **Life Cycle Assessment (LCA)** system.
 - Assesses and seeks to control carbon emissions at each lifecycle stage.
- Through this system, overall carbon emissions are reduced by **more than 30%**.
 - Equates to 1.33 tons per device (or carbon absorption of 95 trees) per year.



Maximizing Energy Efficiency

Canon has incorporated a range of energy-saving technologies into its products, which help save energy while improving performance.

- All models are **ENERGY STAR** Qualified
- Power consumption during Sleep Mode has been reduced:
 - **1W or less** for imageRUNNER ADVANCE C7000 and C5000 Series
 - **1.5W or less** for imageRUNNER ADVANCE C9000 PRO Series
- Energy Star TEC (Typical Energy Consumption) has been reduced by **up to 75%** as compared to predecessor models

imageRUNNER ADVANCE C5000 vs. Color imageRUNNER C5185

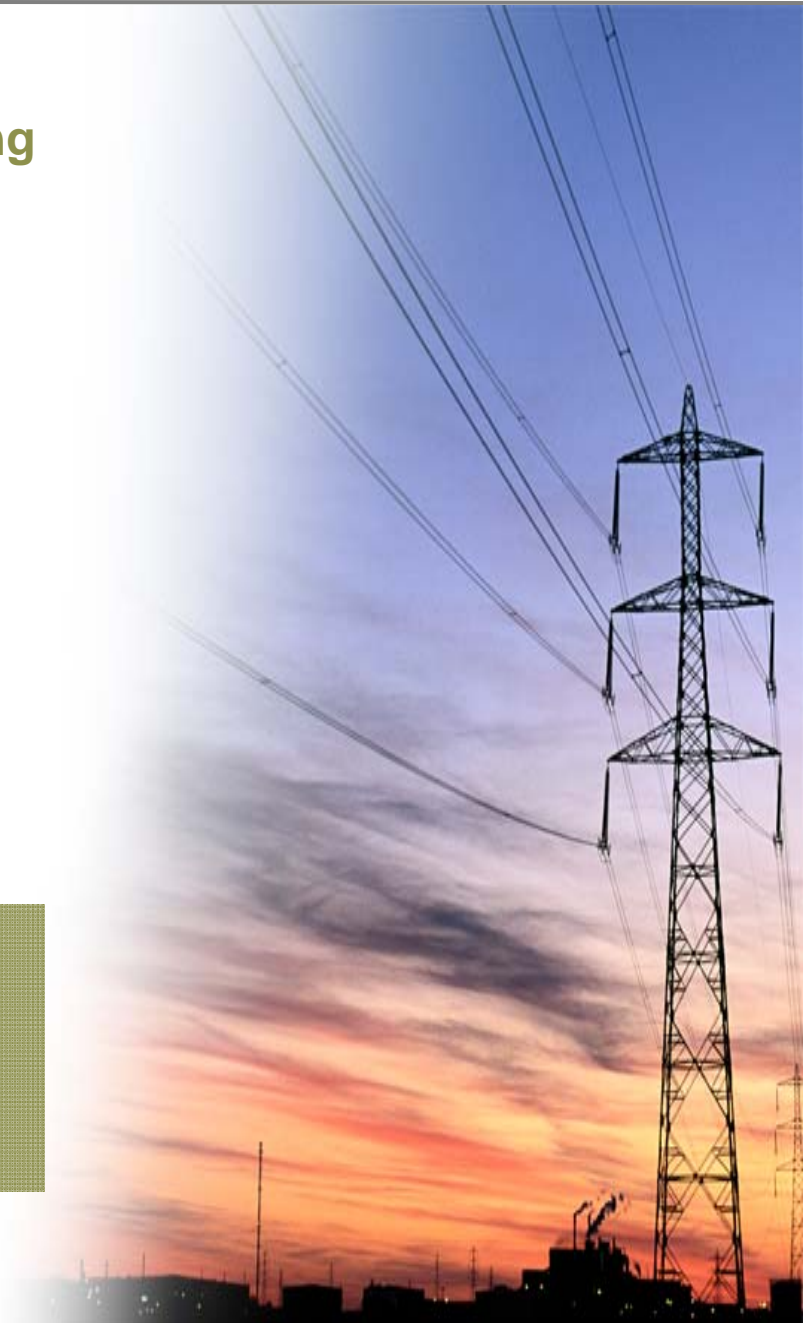
- 75% reduction in power consumption in 1 week TEC

imageRUNNER ADVANCE C5035 vs. Color imageRUNNER C3480

- 45% reduction in power consumption in 1 week TEC

imageRUNNER ADVANCE C9075 PRO vs. Color imageRUNNER C5185

- 33% reduction in power consumption in 1 week TEC



Maximizing Energy Efficiency (con't)

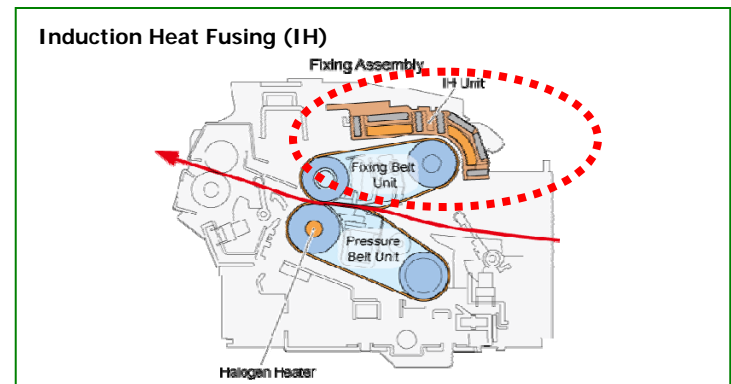
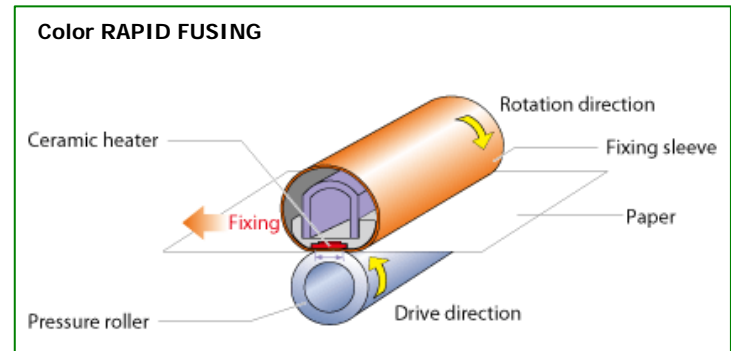
New and Improved Fusing Systems

- **Advanced Color RAPID Fusing**
 - For imageRUNNER ADVANCE C5000 Series
- **New Induction Heat (IH) Fusing**
 - For imageRUNNER ADVANCE C9000 Pro and C7000 Series
- Dramatically reduces power consumption and lengthy warm-up periods to increase productivity.

New “pQ Toner” (Pure Quality)

- Reduces fusing temperature **by up to 36 degrees*** Fahrenheit (20 degrees Celsius) compared to past models (leads to lower energy requirements).
- Wax-based toner disperses uniformly for superior image quality and high productivity.

*The temperature differences are 20 degrees Celsius for C9000/C7000 series as compared to C5185 Series, and 10 degrees Celsius for C5000 series as compared to C3480 series.



Maximizing Energy Efficiency (con't)

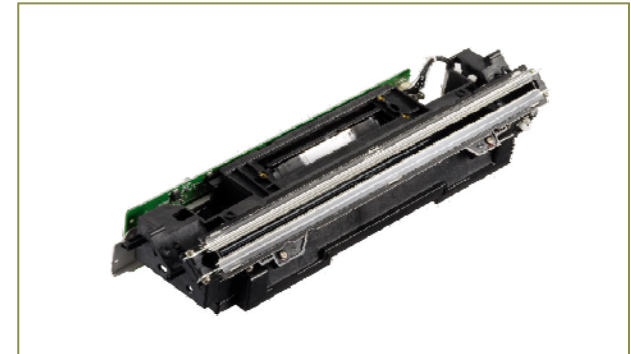
New Image Reader (Scanning) Technologies

White LED Array

- The imageRUNNER ADVANCE Color Image Readers use a new White LED array as a light source when scanning, instead of a Xenon tube.
 - This helps reduce energy consumption up to 75% (uses $\frac{1}{4}$ of the energy compared to traditional technology).

Canon Proprietary Image Sensor technology

- Color Image Reader uses a Canon Proprietary Image Sensor instead of a CCD.
 - Canon's undisputable digital camera technology has been incorporated for high speed color scanning within a compact size – without sacrificing image quality.
 - This technology saves 50% of the energy compared to CCD sensors.



LED (Light Emitting Diode) Advantages:

- Great energy efficiency (requires less energy)
- Generates less heat
- Longer life; Greater reliability



Resource Conservation

Canon focuses on improving resource efficiency and reducing our demand for raw materials its product design .

Compact and Lighter Design

- Canon aims to make its imageRUNNER ADVANCE products rank among the very ***smallest and lightest*** available in each product group
 - Enables transportation efficiency and helps ***reduce carbon dioxide emission by 20%*** per transporter vehicle.
- Simplified packaging through improved technologies and product strength



Resource Conservation (con't)

Higher-yielding Supplies and Consumables

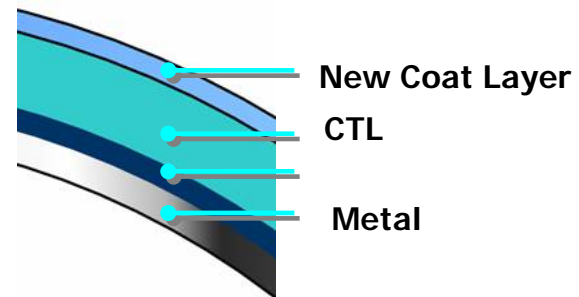
- New Toner Bottle design and packaging materials are 40% lighter, and offer higher yields.
- New E-Drum units offer a longer life than conventional drum units due to an additional layer on the surface of the drum (leads to fewer replacements and reduced downtime)



Color E-drum



B/W E-drum



Resource Conservation (con't)

Use Bio-based plastics and 100% Recycled Plastics

- **imageRUNNER ADVANCE devices incorporate bio-plastic on certain exterior parts.**
 - Bio-based plastics use an environment conscious material that incorporates plant-based and organic components.
 - First bio-based exterior plastic applicable for use in MFPs with world's highest level of flame resistance.
 - Reduces dependent on petroleum-based plastic.
- **Certain exterior parts use 100% Recycled Plastic materials.**
 - Canon employs various recycling processes to treat collected plastic resulting in a recycled plastic with the same level of impact strength and flame resistance as in new products.
 - Recycled plastic has the effect of reducing carbon dioxide emission by 94% compared with new plastic.



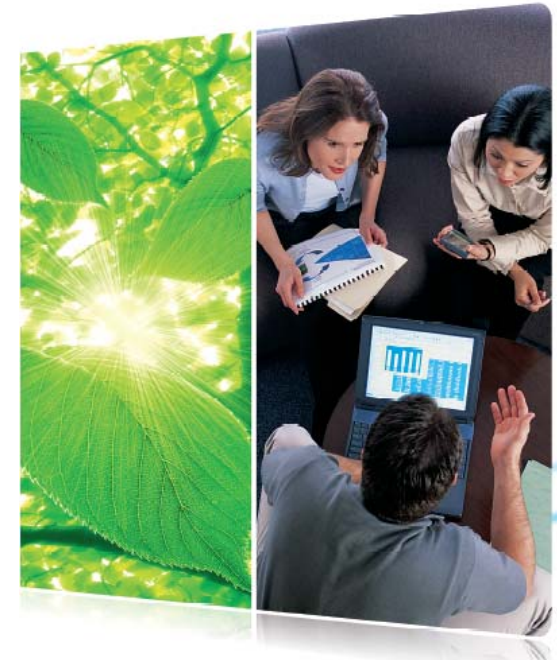
Resource Conservation (con't)

Environment-conscious Product Features

Canon devices incorporate features that help users get the most from their investment and maximize their workflow efficiency.

Features that Save Paper, Toner, and Energy

- Mailbox/Secure Print: Store frequently used documents and forms at the device; Minimize wasteful printing by enabling printing only after a PIN is entered at the device.
- Print Driver Default Settings: Enforce 2-sided Printing, 2up/4up, restrict banner pages, toner saving mode, etc.
- IR ADVANCE Essentials: Search retrieve, manage, review, manipulate, and execute wide-ranging “make-ready” operations on digital documents in a dynamic, interactive, operator-centric setting.



Pollution Prevention

Canon's effort towards the elimination of hazardous substances far exceeds the levels mandated by regulations.

Implementing, with Suppliers, Hazardous Substance Measures that Surpass Legal Requirements

- Canon actively strives to use raw materials that do not contain regulated substances, even on products and parts that are themselves not subject to these regulations.
- Examples of restricted items...
 - **Lead Reduction**
 - RoHS allows more than 1,000PPM of lead in parts made from steel, copper, and aluminium materials. (Up to 3,500PPM in steel materials, 40,000PPM in copper materials, 4,000PPM in aluminium materials)
 - Canon has minimized usage of steel, copper, and aluminium materials to 1,000PPM or less in mechanical parts (except for electric/electronic parts).
 - **Cadmium Reduction**
 - RoHS states that more than 100PPM of cadmium used in the contact of electric parts is allowable.
 - Canon has minimized the usage of cadmium to 100PPM or less in the contact of electric parts.





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END OF PRESENTATION
THANK YOU!!!