



Japan's Energy Policy and Ricoh Environmental Activity

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Ricoh Europe, B.V.

Ricoh Group

General Information

- 1. Solutions Provider** including manufacturing & marketing office equipment ,
founded in 1936.
- 2. Leading the sales of Digital Multi-functional Office Copier Sales in Europe,
US, Asia/Pacific, and Japan**
- 3. Consolidated in FY2005** as of 31 March, 2006
 - Net Sales: 1,915 Billion Yen (13.9 Billion EURO)
 - Net Income: 97 Billion Yen (704 Million EURO)
 - Number of Employees: 75,000
 - Number of group companies in
consolidated financial statements : 318



Main products of Ricoh



Printer



Gel jet Printer



Digital camera



FAX



Copier , MFD



Supply



Digital duplicator

Others



CD/DVD media



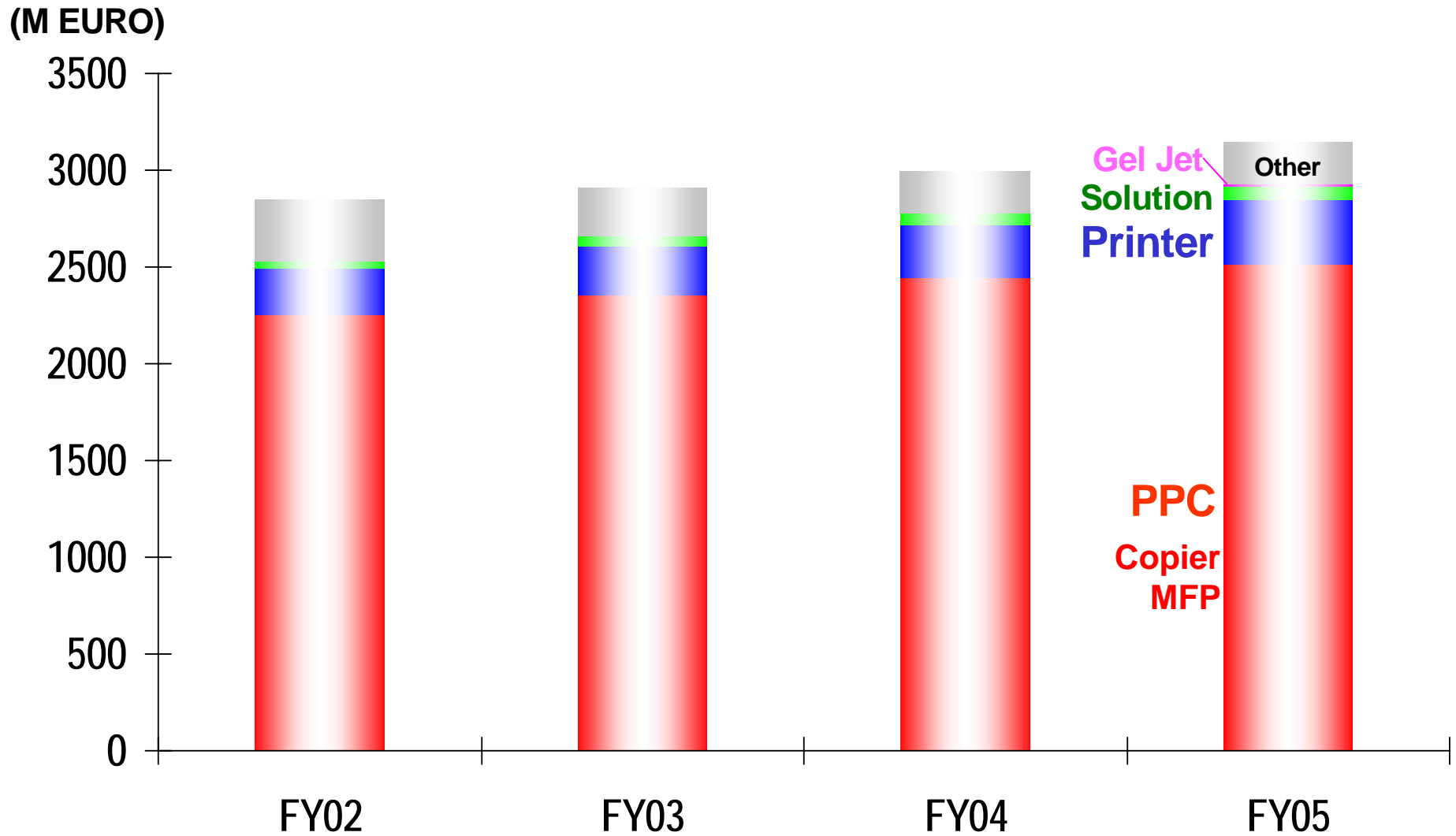
Semiconductor



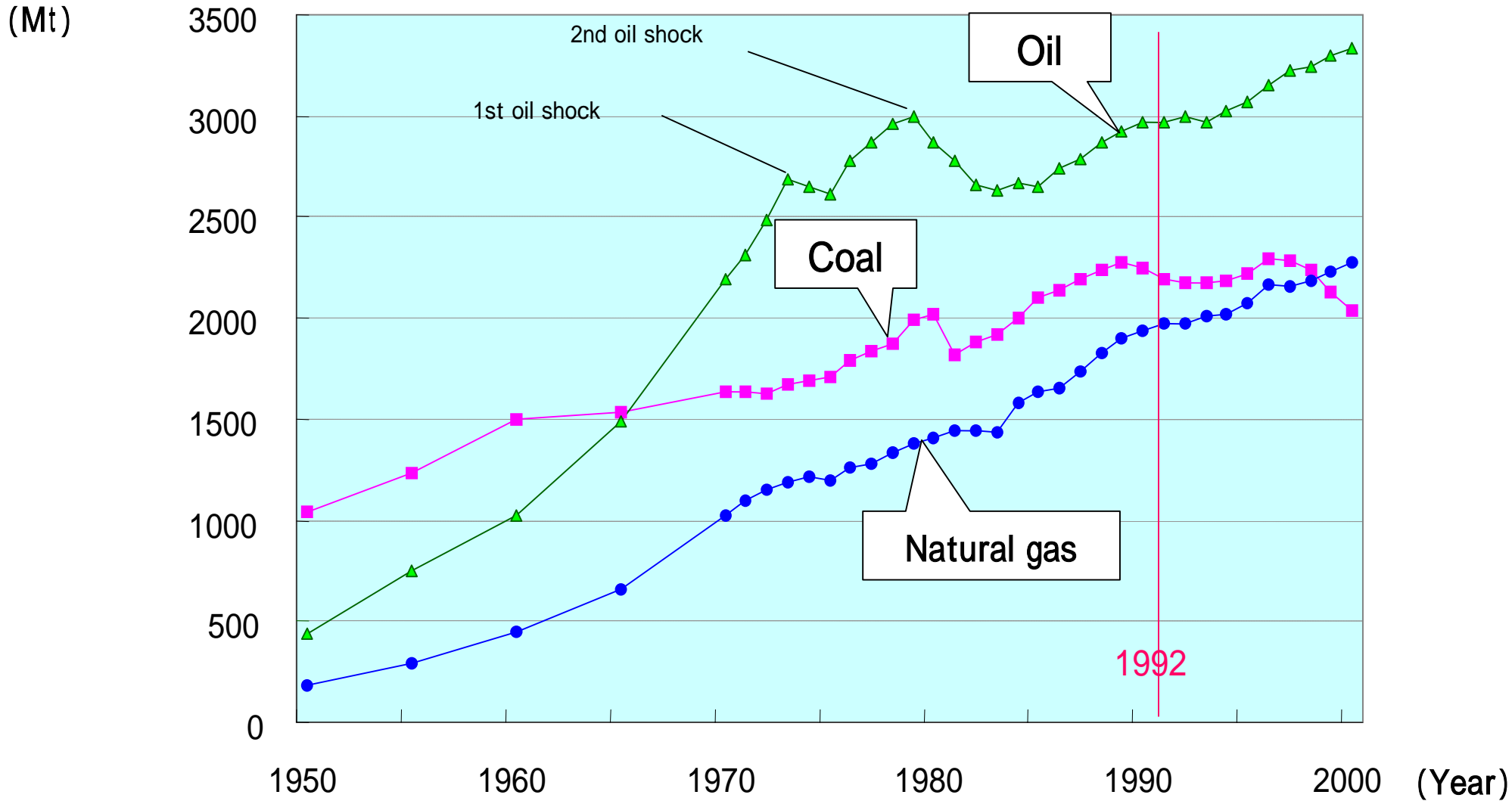
Thermal Paper

Solution
and so on,

Sales T/O Trend by Product Category in Europe



Amounts of Fossil Fuels Used in the world



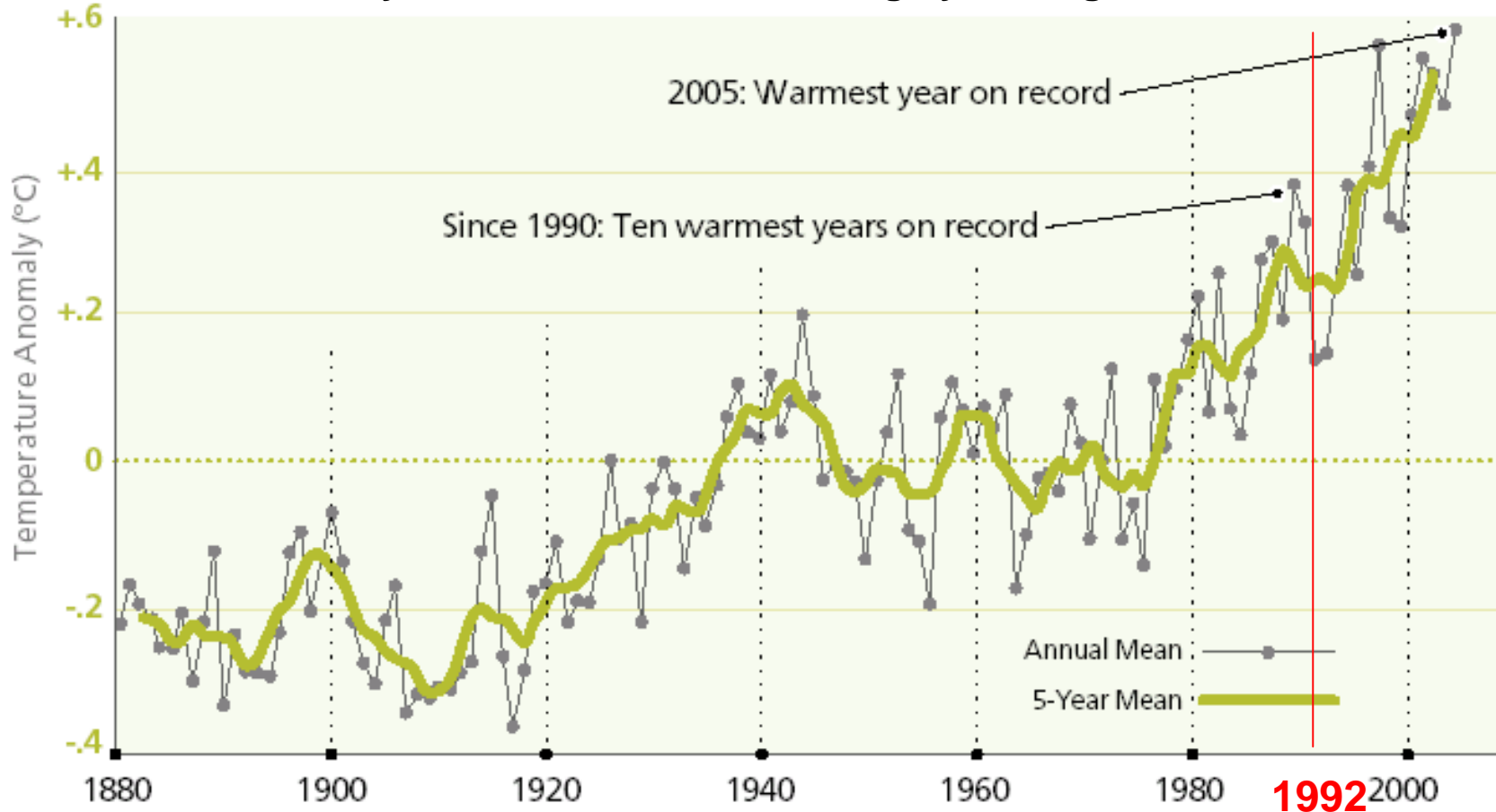
Petroleum-equivalent amount

Source: UN, BP Amoco, DOE, LBL, IEA, IGU

Estimated value for 2000

Average Global Temperature Trend (By NASA's Goddard Institute)

- 2005 was the warmest year on record since 1861.
- Eight of the last 10 years have been the top 10 warmest year records.
- In the last 100 years, it has been increasing by 0.8 degree C.



Global Temperature: Land-Ocean Index

Source: NASA's Goddard Institute

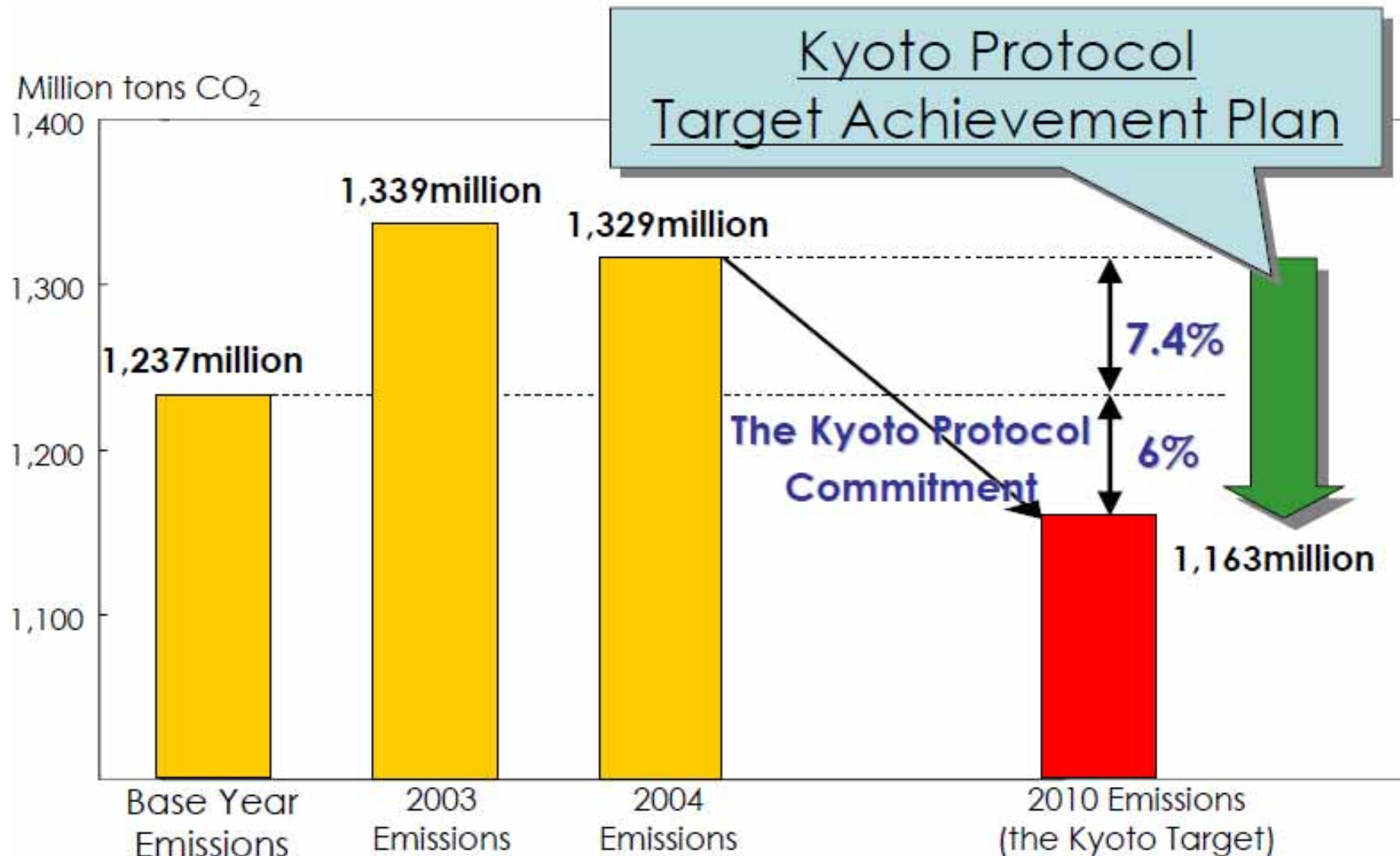
From 2006 CERES Report.

**“If auto makers
don’t reduce smog-
forming emissions,
greenhouse gases
and the need
for petroleum,
we won’t be in
business.”**

*Fujio Cho,
Toyota President in 2004*

From 2006 CERES Report.

Japan's GHG Emissions



Source: HP of Ministry of the Environment, Japan

Kyoto Protocol Target Achievement Plan

- **Target for each sector**

- 60 concrete measures

 - Action Plans of Industry

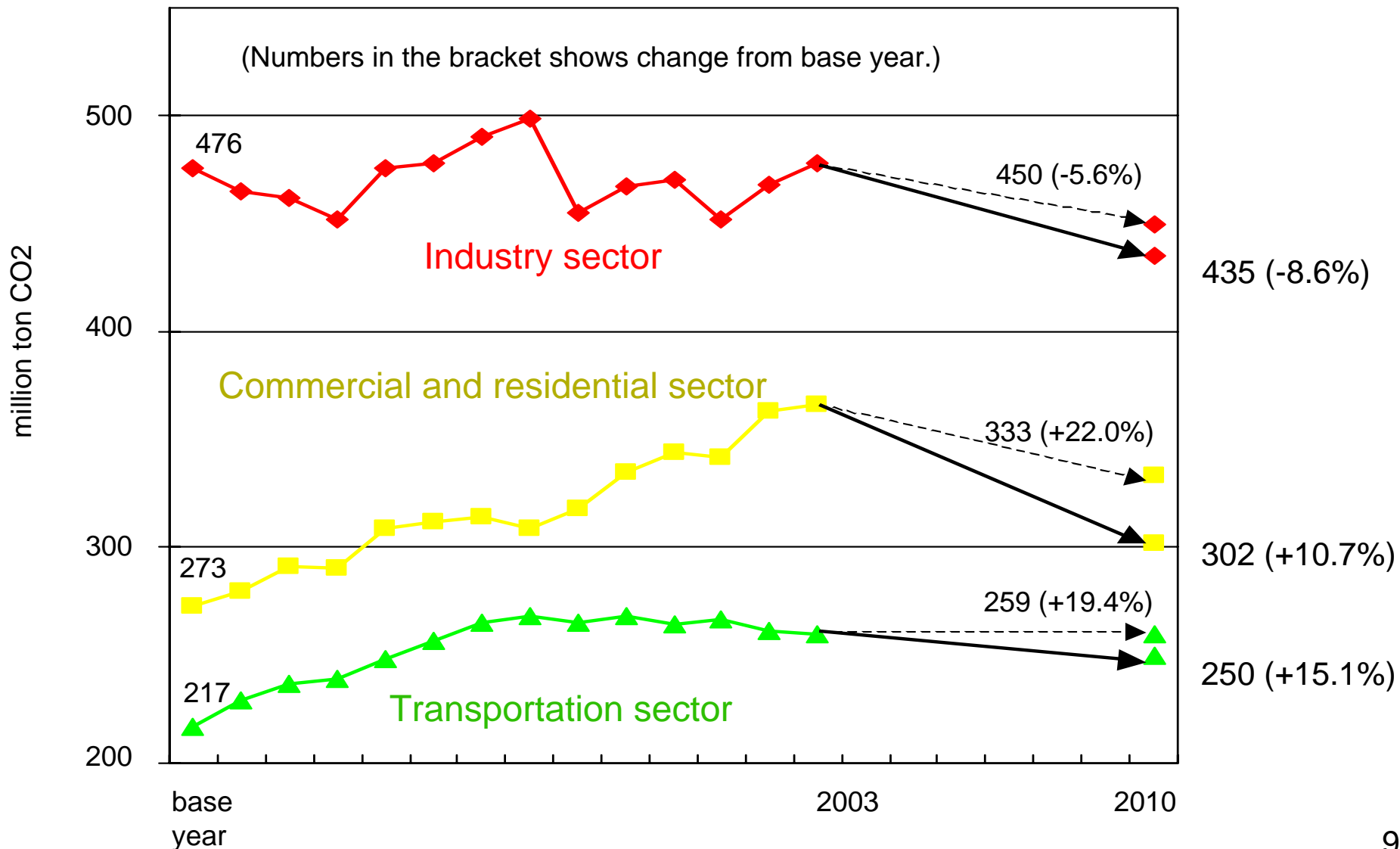
Top Runner Program

Renewable Energy (e.g. Bio-fuel)

Target for each sector

-----> Forecast updated
("Climate Change Program" in 2002)

————> New goals
("The Kyoto Target Achievement Plan" in 2005)



Outline of the Energy Conservation Law

1947 : Heat Management Regulation Enacted

1951 : Heat Management Law Enacted

1979 : Law Concerning The Rational Use of Energy Enacted

(1983,1993,1998, 2002 amended and reinforced)

<Basic Objective>

Enhancing energy efficiency in order to achieve 3E's harmonization.

- **Regulations regarding Factories**
- **Regulations regarding Buildings**
- **Energy efficiency standard for Appliances and Automobiles (Top runner program)**

What is “Top Runner Program”?

(1) Target Designated Products:

Target products are ones designated as machinery and equipment which are commercially used in large quantities in Japan, consume significant amount of energy on use and intensively require improvement of energy consumption efficiency .

(2) Target Standard Value:

As for the designated products, manufacturers and importers etc. are obliged to meet the target standard values concerning “energy consumption efficiency” of those products. Target standard values are set on the basis of the value of the most energy efficient products of the same category in the market.

(3) Classification of Target Standard Value:

Target standard values are set in classifications considering a variety of models with different sizes and functions etc. for each product.

What is “Top Runner Program”?

(4) Target Fiscal Year:

Target fiscal year by which the target standard value must be achieved is set up through taking into consideration of future technological development forecasts and the development period of products and so on, usually in the range of 4 to 8 years from the base fiscal year.

(5) Judgment Method of Achievement:

In the target fiscal year, achievement of the target is judged based on energy conservation figures as a weighted average of shipment by product for each product category per manufacturer and importer etc.

Top Runner Standards are different from the concept of MEPS.

(6) Measurement Method:

The measurement method primarily uses JIS (Japan Industrial Standards).

(7) Indications:

Responsibility is assigned to indicate the energy consumption efficiency of the device in catalogs, or the device itself, etc.

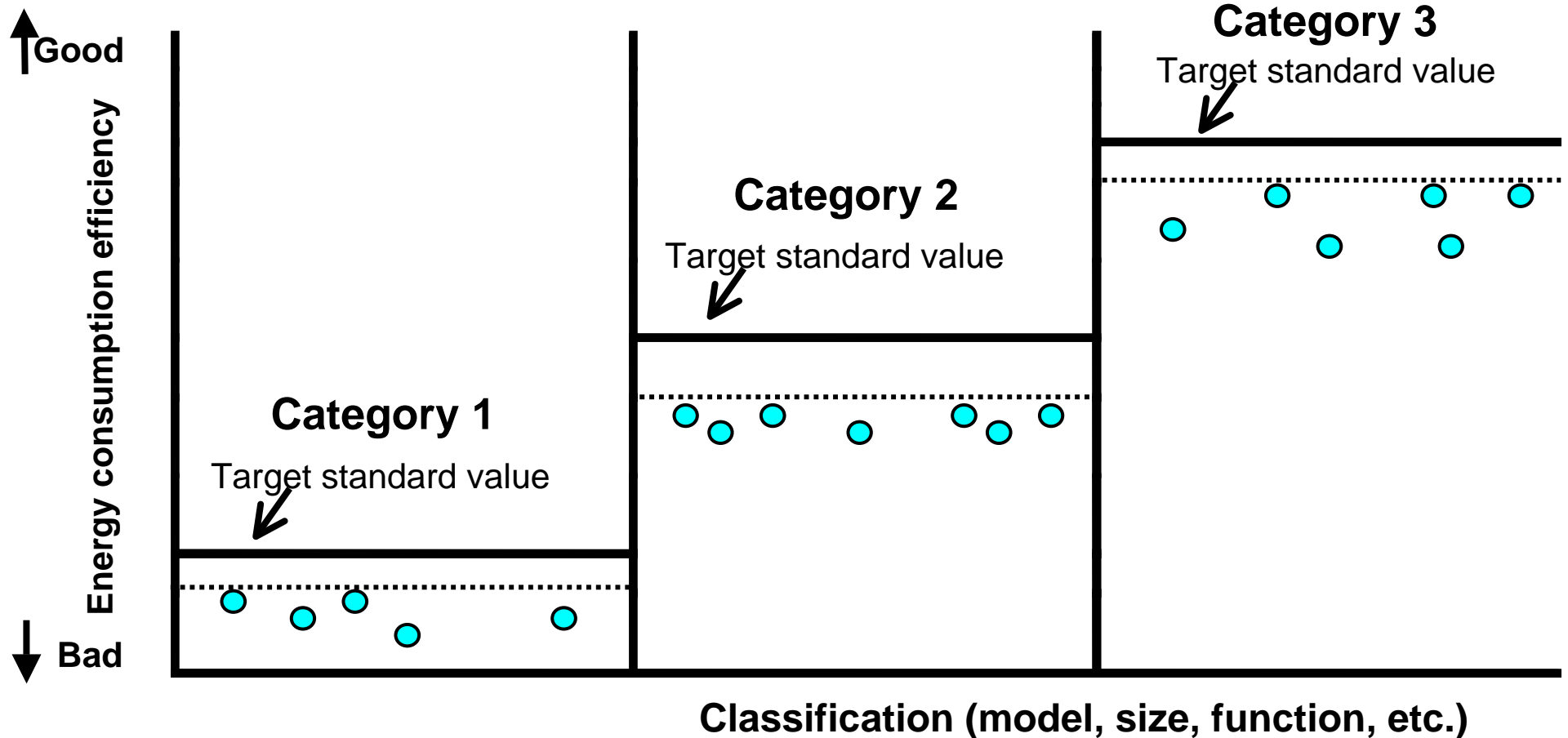
Expected Energy Conservation in Target Fiscal Year

Equipment	Target Fiscal Year	Expected energy conservation effects as of the fiscal year of the target
Gasoline passenger vehicles	FY2010	Approx. 23% compared to FY1995
Diesel passenger vehicles	FY2005	Approx. 15% compared to FY1995
LPG passenger vehicles	FY2010	Approx. 11.4% compared to FY2001
Gasoline freight vehicles	FY2010	Approx. 13% compared to FY1995
Diesel freight vehicles	FY2005	Approx. 7% compared to FY1995
Air conditioners	Frozen FY2007 Frozen FY2004 for blower/wall type items for cooling/heating under 4kW	Approx. 63% for coolers/heaters; approx. 14% for dedicated cooler compared to FY1997
Fluorescent lights	FY2005	Approx. 16.6% compared to FY1997
TV sets	FY2003	Approx. 16.4% compared to FY1997
VCRs	FY2003	Approx. 58.7% compared to FY1997
Copiers	FY2006	Approx. 30% compared to FY1997
Computers	FY2005	Approx. 83% compared to FY1997
Magnetic disk units	FY2005	Approx. 78% compared to FY1997
Electric refrigerators	FY2004	Approx. 30% compared to FY1998
Electric freezers	FY2004	
Space heaters	FY2006	Approx. 1.4% compared to FY2000 for gas space heaters; approx 3.8% for oil space heaters
Gas cooking appliances	FY2006	Approx. 13.9% compared to FY2000
Gas burning water heaters	FY2006	Approx. 4.1% compared to FY2000
Oil burning water heaters	FY2006	Approx. 3.5% compared to FY2000
Electric toilet seats	FY2006	Approx. 10% compared to FY2000
Vending machines	FY2005	Approx. 33.9% compared to FY2000
Transformers	FY2006: oil-filled transformers FY2007: mold transformers	Approx. 30.3% compared to FY1999

13 Products in the Voluntary Energy Saving Labeling Program

Source: The presentation of Mr.NOKA from The ECCJ

Classification and Target Standard Value in Top Runner Program



- Energy consumption efficiency for individual products

Concept of Top Runner Program

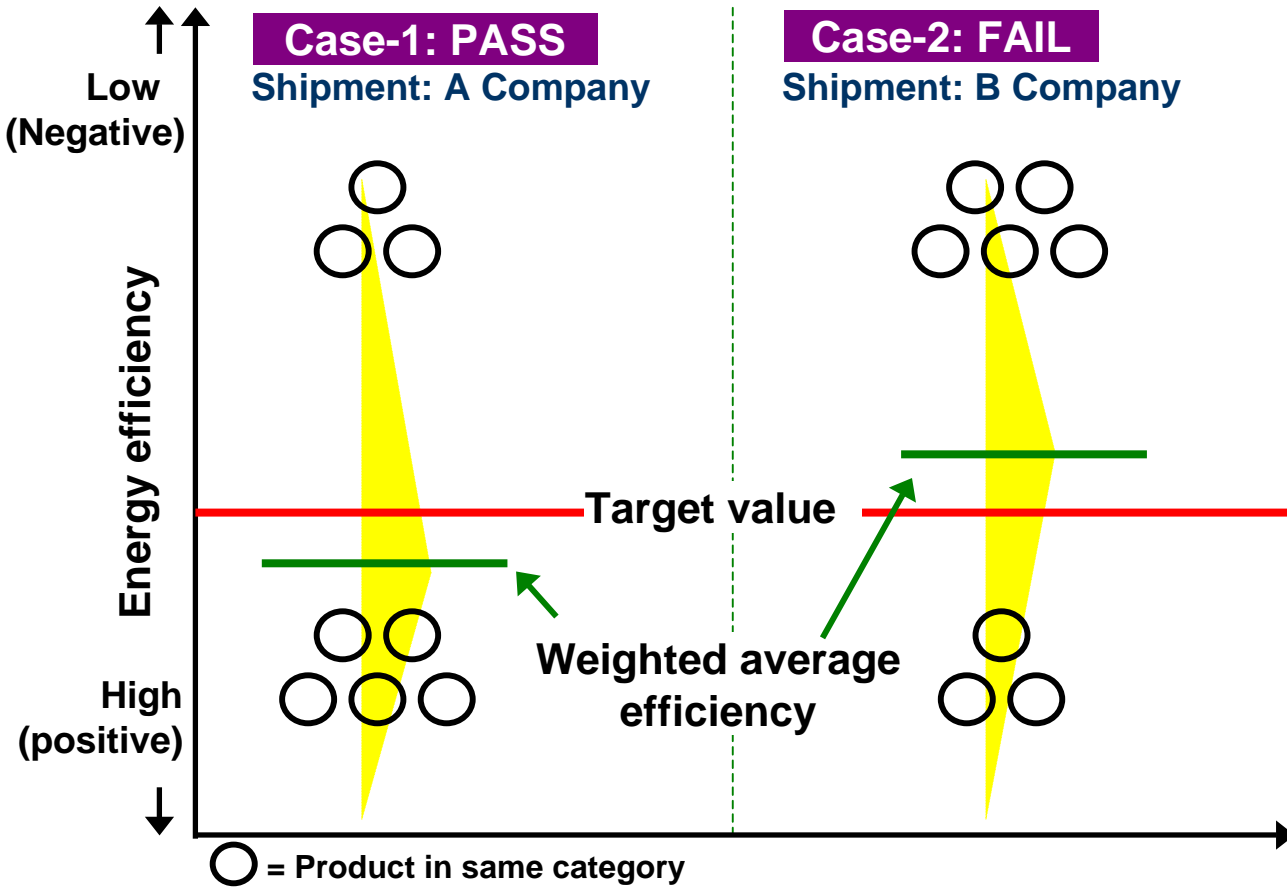
Top Runner Program Standards

Case-1: PASS

Shipment: A Company

Case-2: FAIL

Shipment: B Company



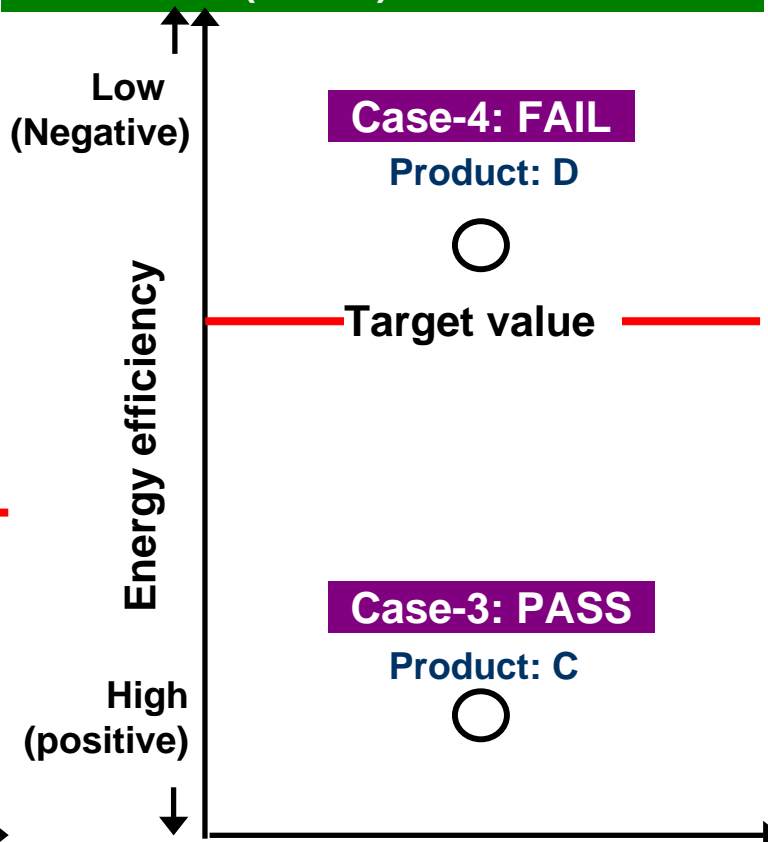
Minimum Energy Performance Standards (MEPS)

Case-4: FAIL

Product: D

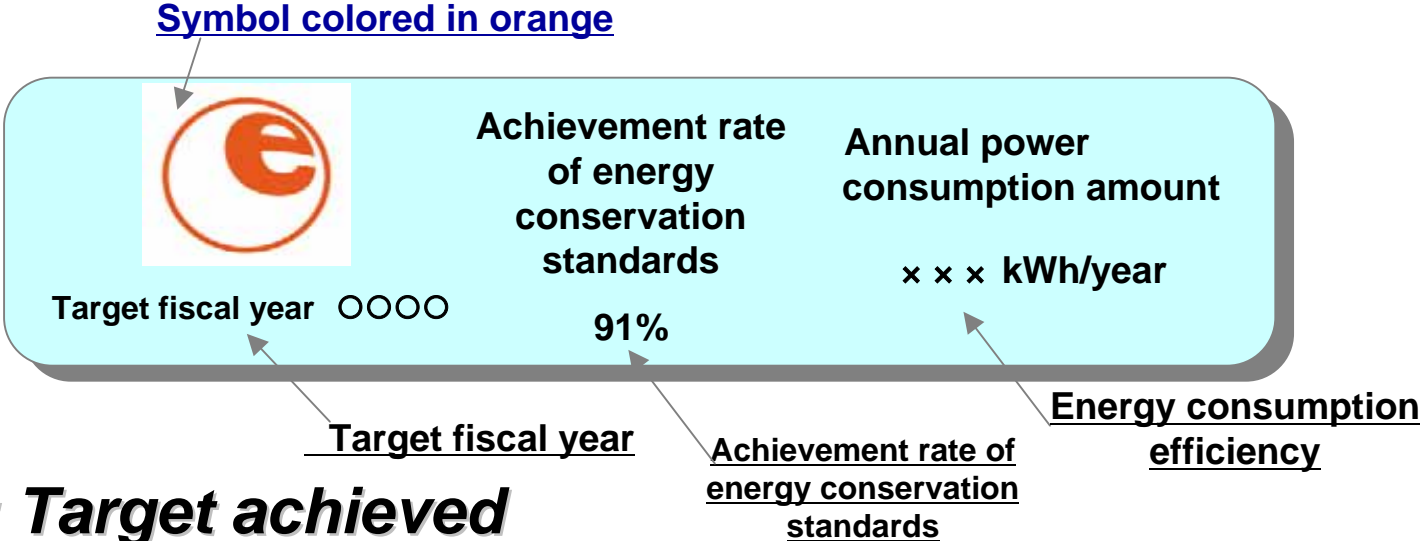
Case-3: PASS

Product: C

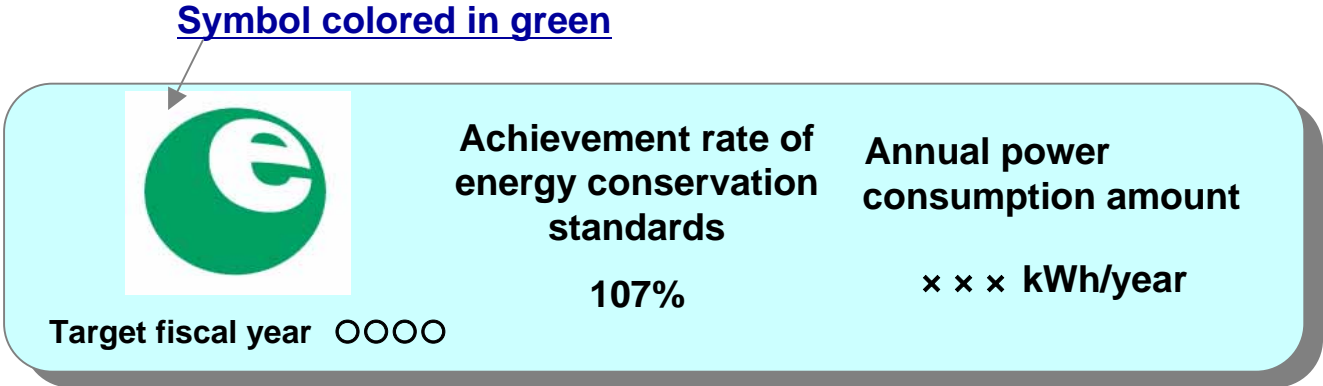


Voluntary Energy Saving Labeling Program

Case 1: Target still not achieved



Case 2 : Target achieved



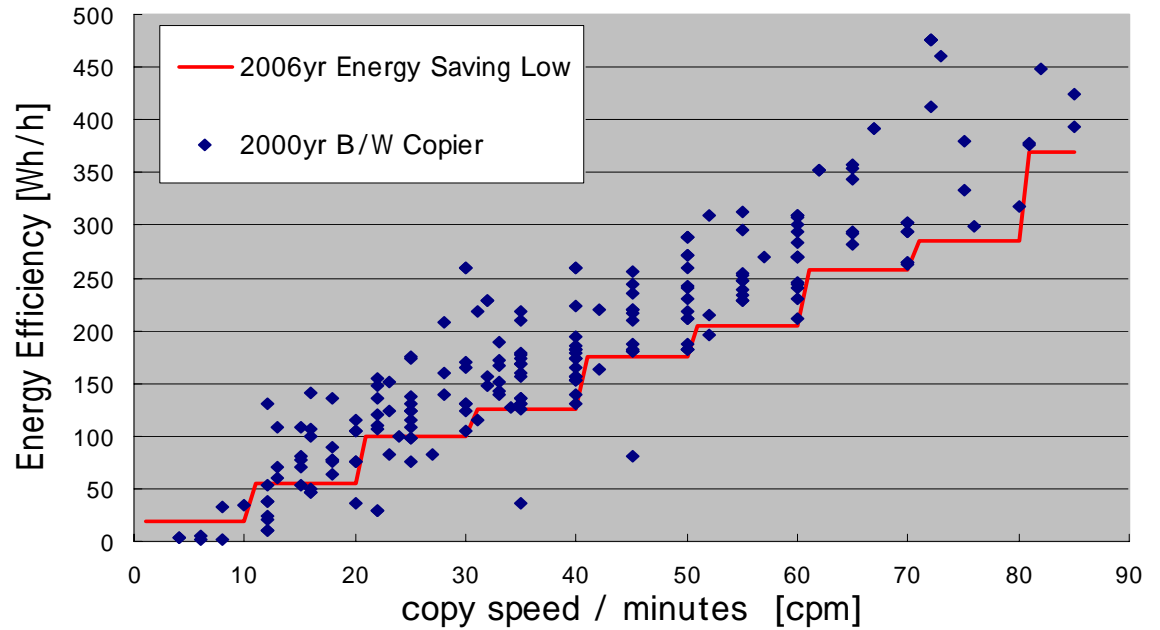
Source: The presentation of Mr.NOKA from The ECCJ

Effects of Top Runner Program (Black and white Copier)

Transition of Energy Efficiency
[Wh/h]

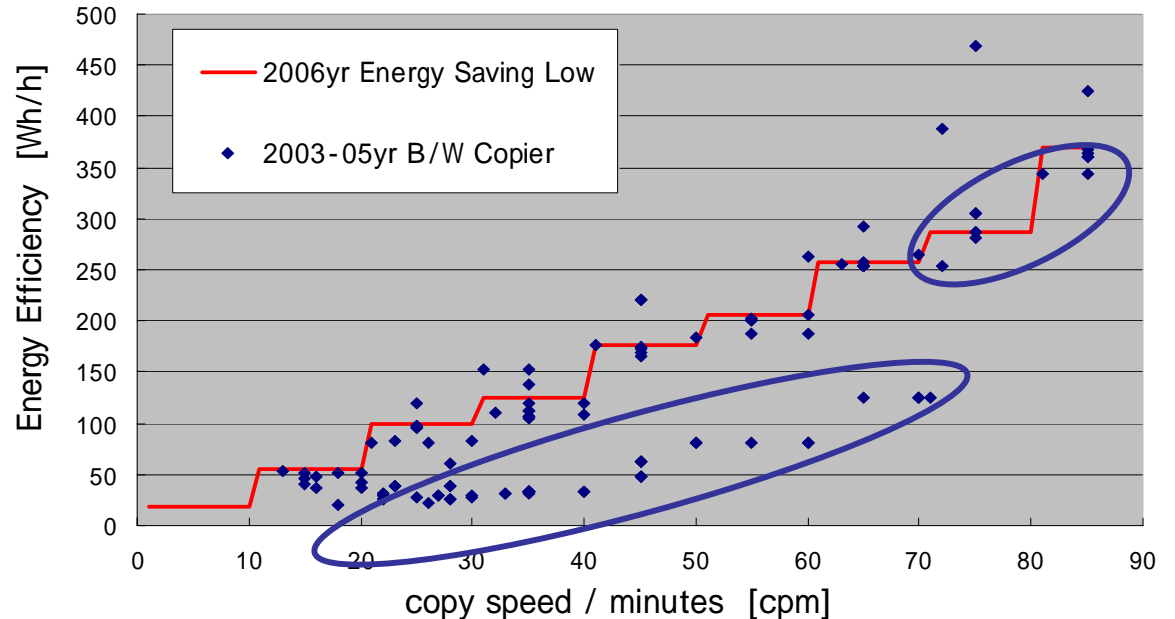
2000 year

Black and White Copier

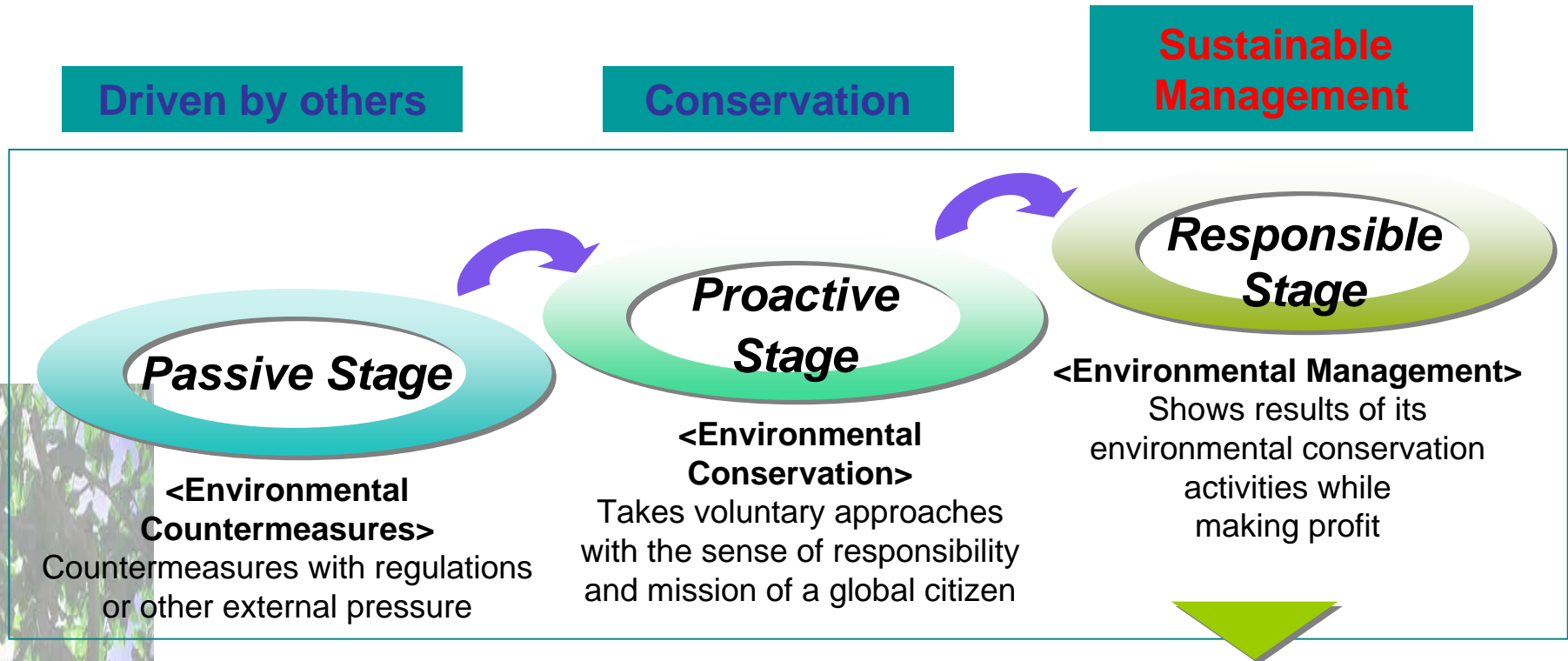


2003-2005 year

Black and White Copier



Steps toward Sustainable Environmental Management



Consider environmental conservation and economic benefits at the same time

Production Process Innovation: Push Cart Type

•Conventional



	Belt Conveyer	Push Cart	Savings
Electricity	90Kwh/day	1kwh/day	99%
Space	1160m2	380m2	67%
Initial Investment	J. Yen 20.00M	J. Yen 0.28M	99%
Maintenance Cost	J. Yen 2.24M	0	100%
CO2	7.7 ton/year	0.1 ton/year	99%

Production Process Innovation: On-demand Toner Filler

(78.3wh/pce)



<Conventional Toner Filling System>

(18.3wh/pce)

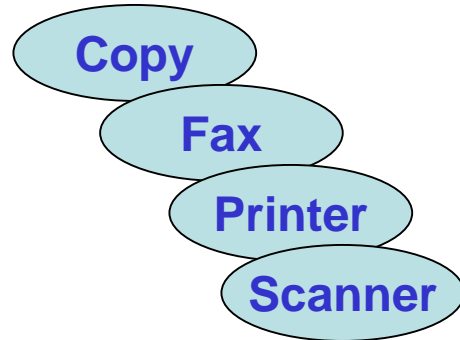


<On Demand Toner Filling System>

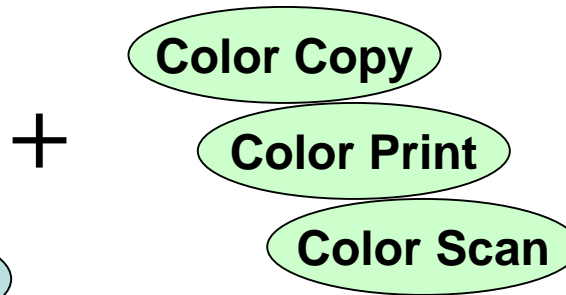
Compared with the past one, a new one becomes;
1/40 for installing space, 1/4 for energy & CO2

The MFP has “More Functions with less Money/Environmental Impact”.

Black & White



Full Color



Digital Features



4 + 3 + 4 = 1

1. Saving Resources

1. **Input material** is much less in 1 rather than 7.
2. Paper usage is reduced because of Duplex and Group printing.

2. Saving Energy to manufacture & to operate

3. Saving office space

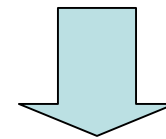
4. Saving product initial cost: 1 < 7 separate units

5. Improve productivity & efficiency

1. Copy/Distribute → Distribute and print when needed

6. Convenient

1. Check Fax message like an e-mail



Into ONE !



Sustainable Business Model

Quick Start-Up (QSU) Technology Innovation

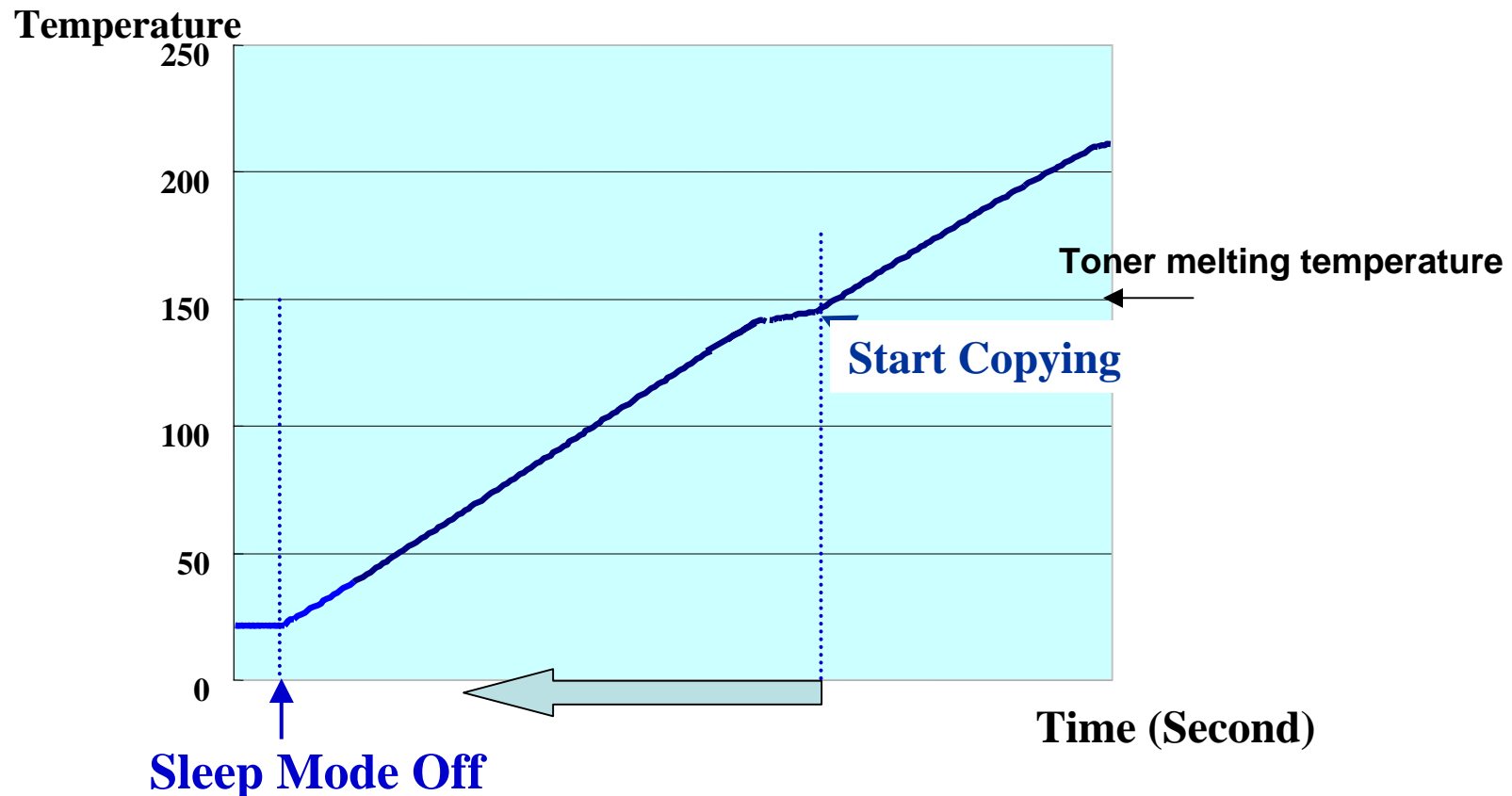
Improve
User
Convenience

+

Much More
Energy
Conservation

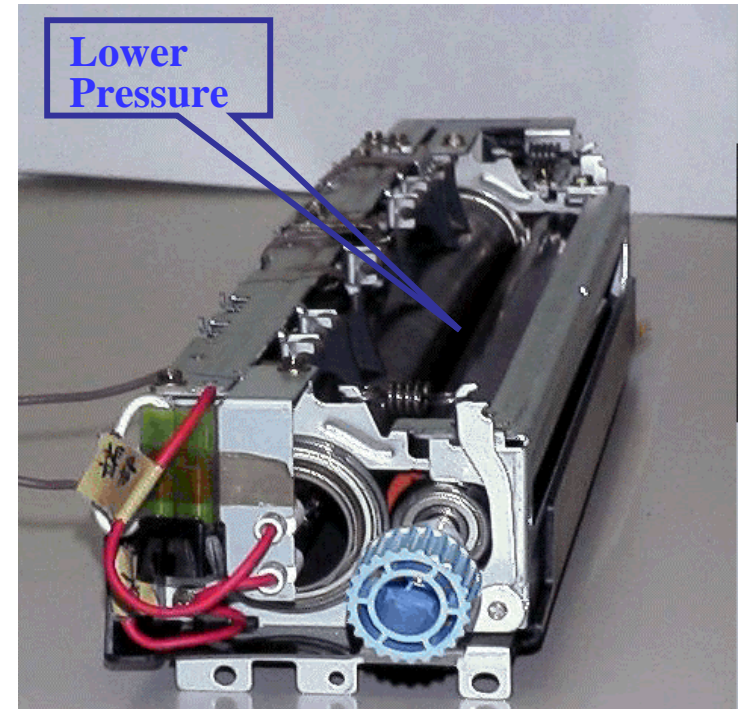
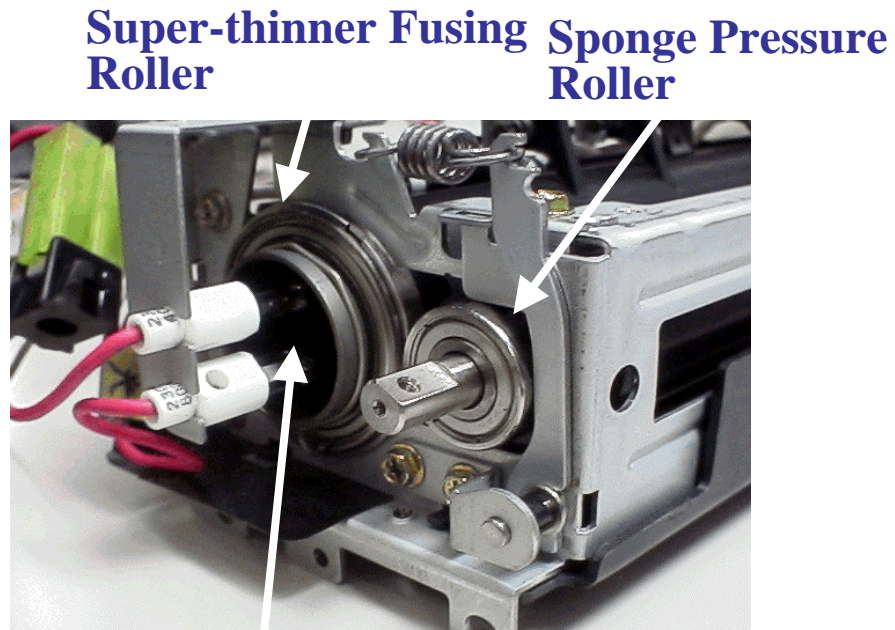
=

10-second
recovery!



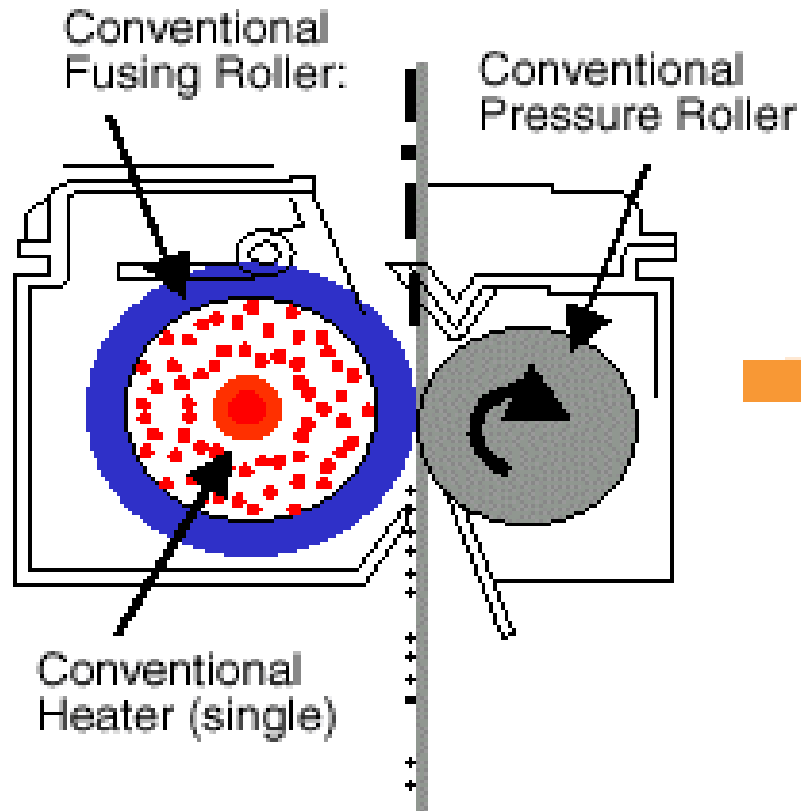
Energy Saving Fusing Unit

- Major Technology Adopted
 - Twin Heater
 - Ultra Thin Shell Fusing Roller
 - Sponge Pressure Roller
 - Low Temperature Toner

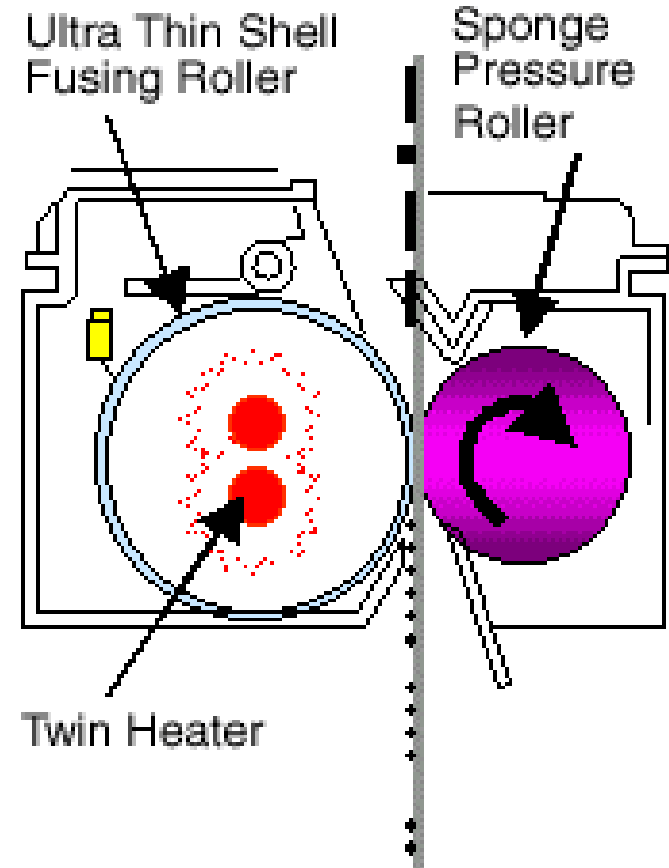


QSU Fusing Unit

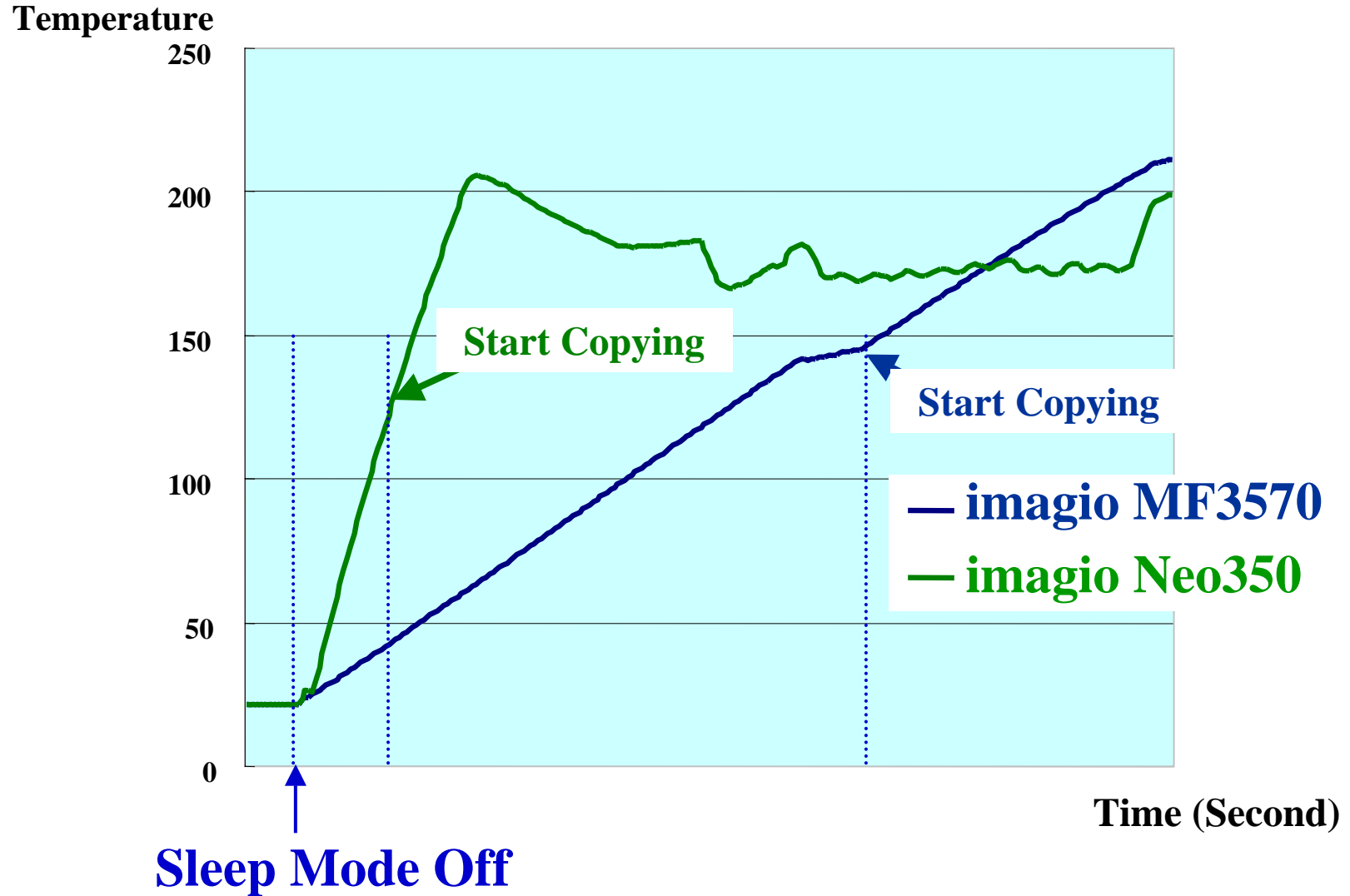
Conventional Fusing Unit



QSU Fusing Unit

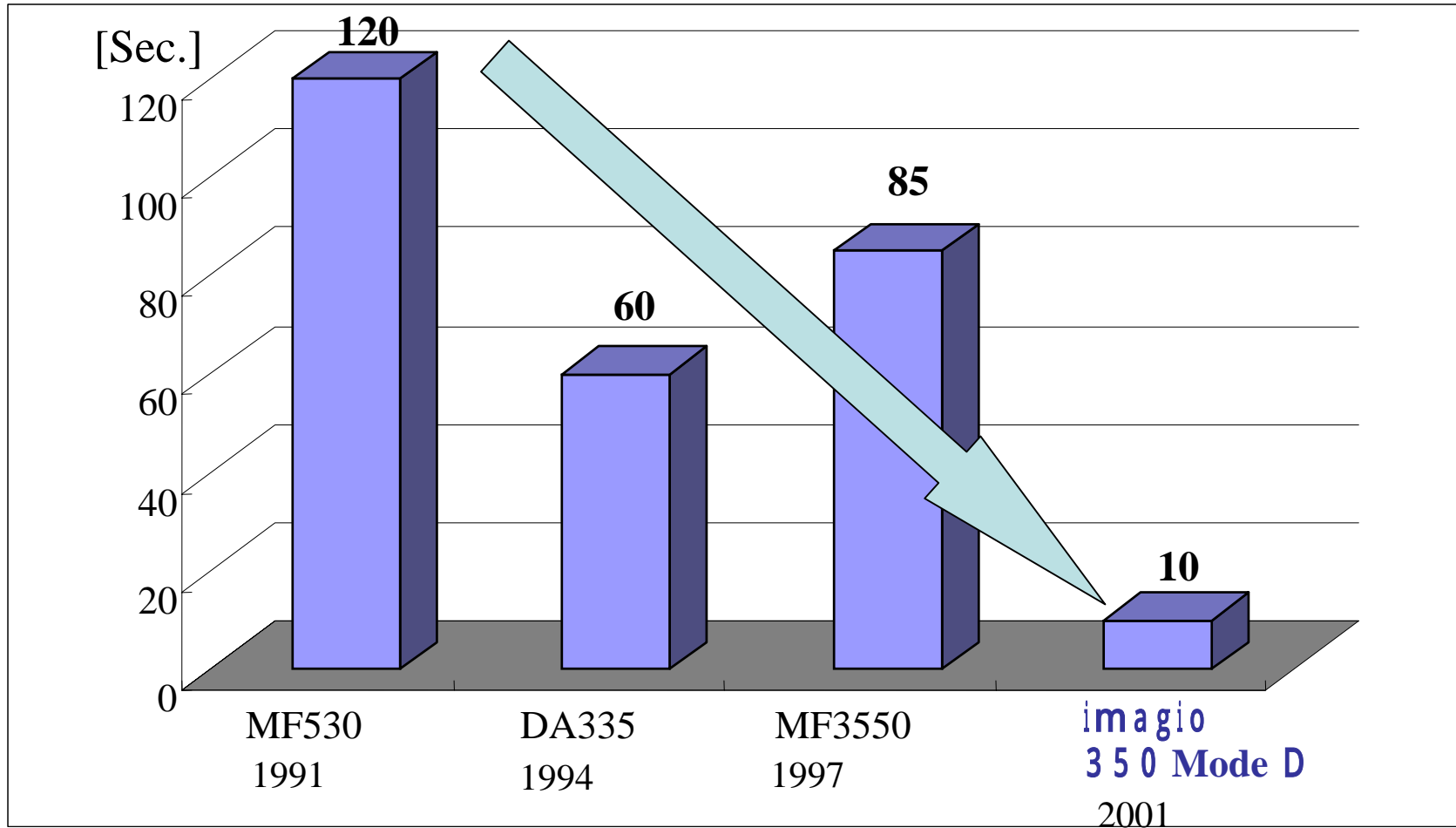


Fusing Temperature



Recovery Time From Sleep Mode

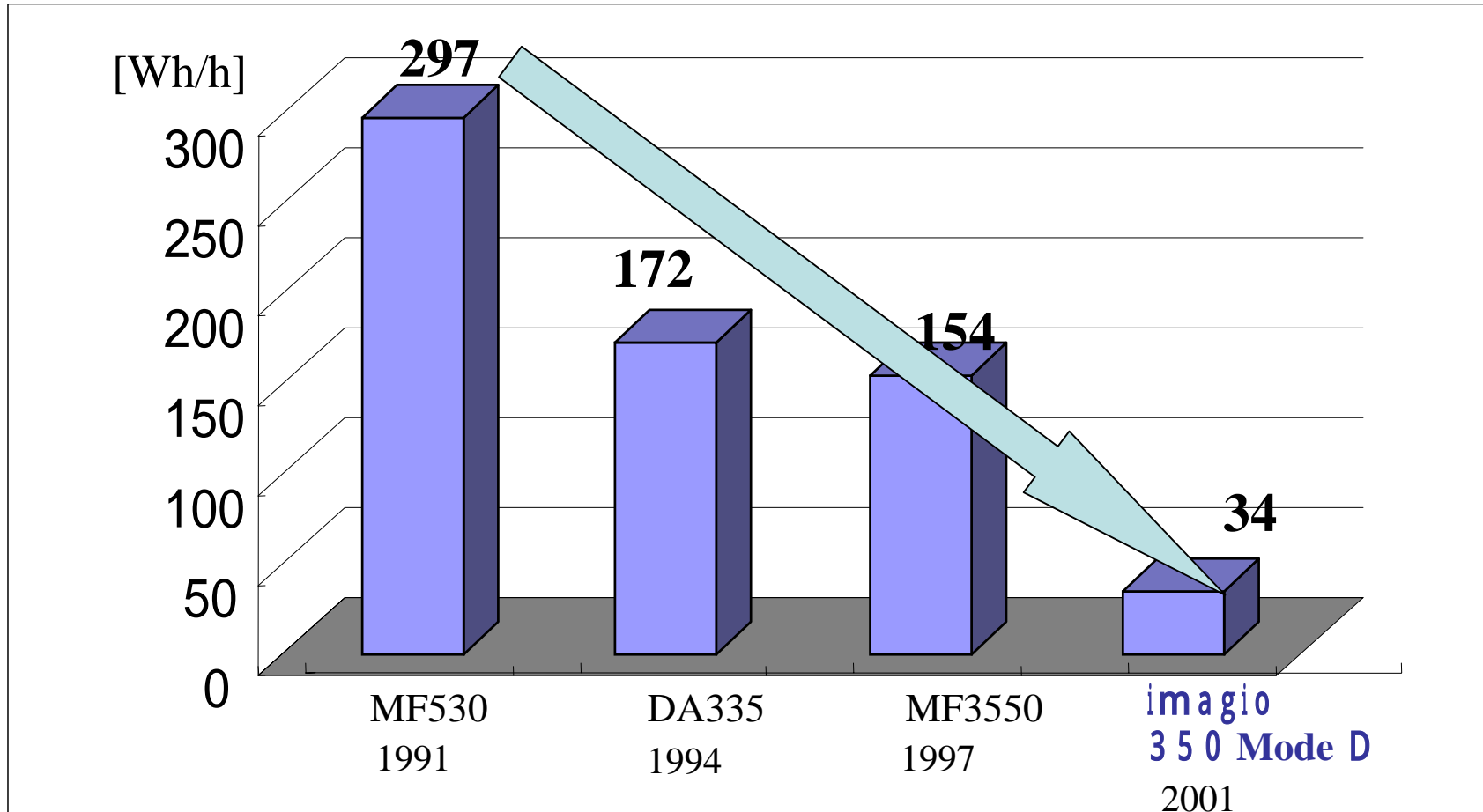
- Recovery Time From Sleep Mode



Large Reduction: 1/12 of Conventional Model (MF530)

Power Consumption

- Average Energy consumption



Large Reduction: 1/8 of Conventional Model (MF530)

A topics of Green Sales

RBS (Ricoh Business Systems) Seattle has got a large deal from Dept. of Ecology of WA State, USA because of environmental advantages.

RBS was one of three out of 17 venders applied.

Among those three, RBS offer was \$5,000/month more than the other two. However, because of Ricoh group comprehensive environmental management, RBS won the competition.

**155 units/
1.2 million copies/month !**

INSIDER

A VIEW FROM INSIDE RICOH BUSINESS SYSTEMS

IN THIS ISSUE
"Two Guys" Campaign 2
@Remote 3
"Color Bits" 4
Ricoh University 5
Hurricane Relief Effort 6
Fall 2005

Ability to Think "Green" Helps Win Clients

Ricoh's dedication to the environment echoes loudly throughout the company and remains top of mind in the development of each product and solution. This unwavering commitment has not only enabled Ricoh to help reduce global climate warming emissions, toxic waste and air and water pollution, but is now helping to separate the company from the competition and to land impressive new clients.

A best in class example is how the Washington State Department of Ecology recently awarded Ricoh Business Systems (RBS), Seattle a multi-million dollar contract. This impressive contract win involves one million dollars in hardware (155 machines) and 1.2 million copies per month. How was Ricoh Business Systems Seattle able to beat out the tough competition? The answer is by selling a partnership, not just hardware. The Seattle account team, led by Jeff Meiling, account executive, focused on Ricoh's environmental programs and was able to give the Washington State Department of Ecology exactly what it wanted—the total package, and what the competition failed to deliver. RBS Seattle was able to look at the big picture and see a solid relationship forged in corporate social responsibility, instead of merely a business transaction.

The process began when the principle environmental management agency of the Washington State Department of Ecology invited 17 vendors to participate in an RFP for an office equipment provider in early 2005. RBS Seattle was among the three finalists chosen to go to the next level. RBS Seattle knew it was critical they differentiate themselves because they were actually at a slight disadvantage than the other two finalists. The latter was due to RBS Seattle's final proposal being \$5,000 higher per month than the competitive bid and that one of the competitors already had a foothold with an existing state contract.

The Seattle team never talked about products or price during their presentation. Talk about being

different. Instead, they focused on the "green factor" and developed a presentation based on Ricoh's environmental programs, using environmental sales tools such as video clips that demonstrated Ricoh's demanufacturing and recycling efforts, as well as illustrating its cradle-to-grave philosophy.

When the team was close to landing the contract, they met another challenge. The Department of Ecology wanted a vendor that would recycle all equipment consumables; however, Ricoh's current cartridge return program was limited to select products. Toner bottles, for example, were not included in the return program. The team decided to research alternatives, found a waste disposal company in Washington that would recycle products and, as a result, customized a recycling solution for the customer.

Understanding the importance of sustaining the environment was the common denominator between RBS Seattle and the Department of Ecology and was ultimately what helped put Ricoh on top. RBS Seattle was smart and flexible enough to showcase Ricoh's environmental edge and was therefore able to edge out the competition and close the deal! ▲



RICOH

Think Green

RICOH

Thanks for your attention.