



Regulations on Rechargeable Batteries Recycling in Japan

**Environmental and Economic Committees (EEC) of INSG
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1. Framework of Japan's Recycling Legislative System (1)

Basic Law for Establishing a Recycling-Based Society (basic framework law)

Put into force in January 2001

〔To ensure material recycling in society; to reduce consumption of natural resources; to reduce environmental burden〕

- Basic principles
- Obligations of the national and local governments, business and citizens
- Measures to be taken by the national government

<Proper waste management>

<Promotion of recycling>

Amended in December 2003

〔Establishment of a general scheme〕

Put into force in April 2001

Waste Management Law

1. Proper waste disposal
2. Regulations for setting up waste disposal facilities
3. Regulations on waste disposal business
4. Measures to control improper disposal
5. Development of facilities through participants of the public sector

Law for Promotion of Effective Utilization of Resources

1. Prevention and recycling of byproducts
2. Utilization of recycled resources and parts
3. Product designing and manufacturing with awareness of 3Rs
4. Product labeling for selected collection of waste
5. Self-collection and recycling of used products
6. Promotion of effective utilization of byproducts

〔Regulations in accordance with the characteristics of specific products〕

Containers and Packaging Recycling Law	Home Appliance Recycling Law	Food Recycling Law	Construction Material Recycling Law	End-of-Life Vehicle Recycling Law
Put into force in April 2000	Put into force in April 2001	Put into force in May 2001	Put into force in May 2002	Scheduled to be put into force in January 2005 (Partially put into force in January 2003)

Green Purchasing Law

〔The national government shall take the initiative in procurement of recycled products〕

Put into force in April 2001

Recycling of Rechargeable Batteries

(Compact Pb Batteries, Ni-Cd Batteries, Ni-MH Batteries, Li-ion Batteries)

and Devices using compact rechargeable batteries
is regulated by

“Law for Promotion of Effective Utilization of
Resources”

2. Framework of Law for Promotion of Effective Utilization of Resources

- Purpose

Comprehensively promoting reduction of waste, reuse of parts, and recycling of used products as raw materials

- Outline of Law

The law provides for measures to be taken by businesses, such as 3R-related measures in the production stage, 3R consideration in the product designing stage, labeling for selected collection, and development of a system for self-collection and recycling by manufacturers.

Responsibilities of parties concerned		
Businesses	Consumers	National and Local Government
<ul style="list-style-type: none"> -Ensuring rational use of raw materials with the aim of reducing used products and by products -Using recyclable resources and parts -Promoting the use of used products and byproducts as recyclable resources and parts 	<ul style="list-style-type: none"> -Using products for a longer time -Using products containing recycled resources -Cooperative for selected collection -Cooperating with measure taken by the national and local government as well as by businesses 	<ul style="list-style-type: none"> -Taking financial measures -Promoting the use of recyclable resources in procurement -Promoting science and technology development -Endeavoring to gain the understanding of the public

3. Specific Framework of Regulation for Rechargeable Battery Recycling in the Law for Promotion of Effective Utilization of Resources

- General Framework of Specified Regulations
- Specified Regulations for Rechargeable Batteries (Pb, Ni-Cd, Ni-MH, Li-ion)

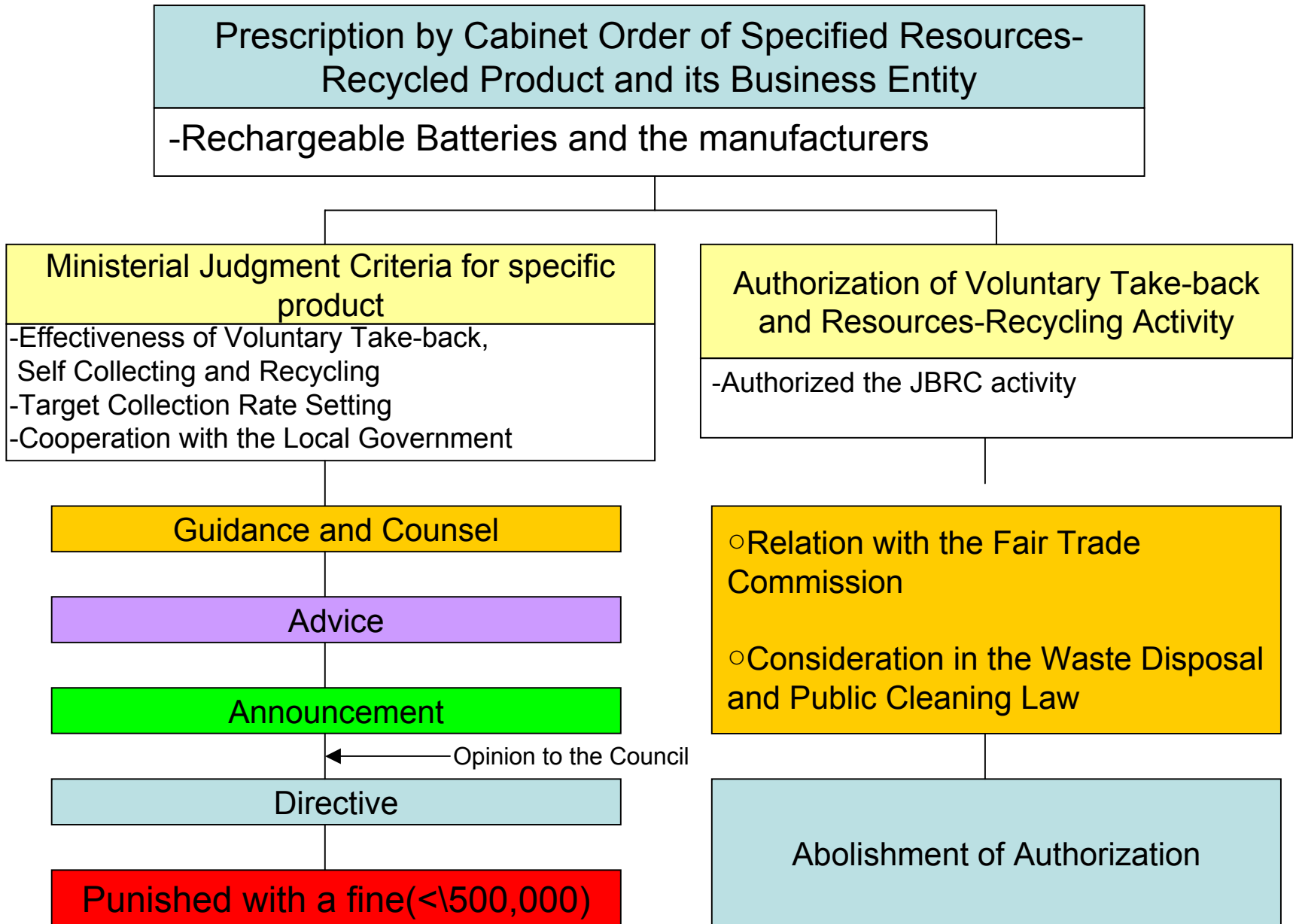
3.1 General Framework of Specified Regulations

The Law regulates 10 specific Industries and 69 product items to apply the 3Rs(reduce, reuse and recycle)

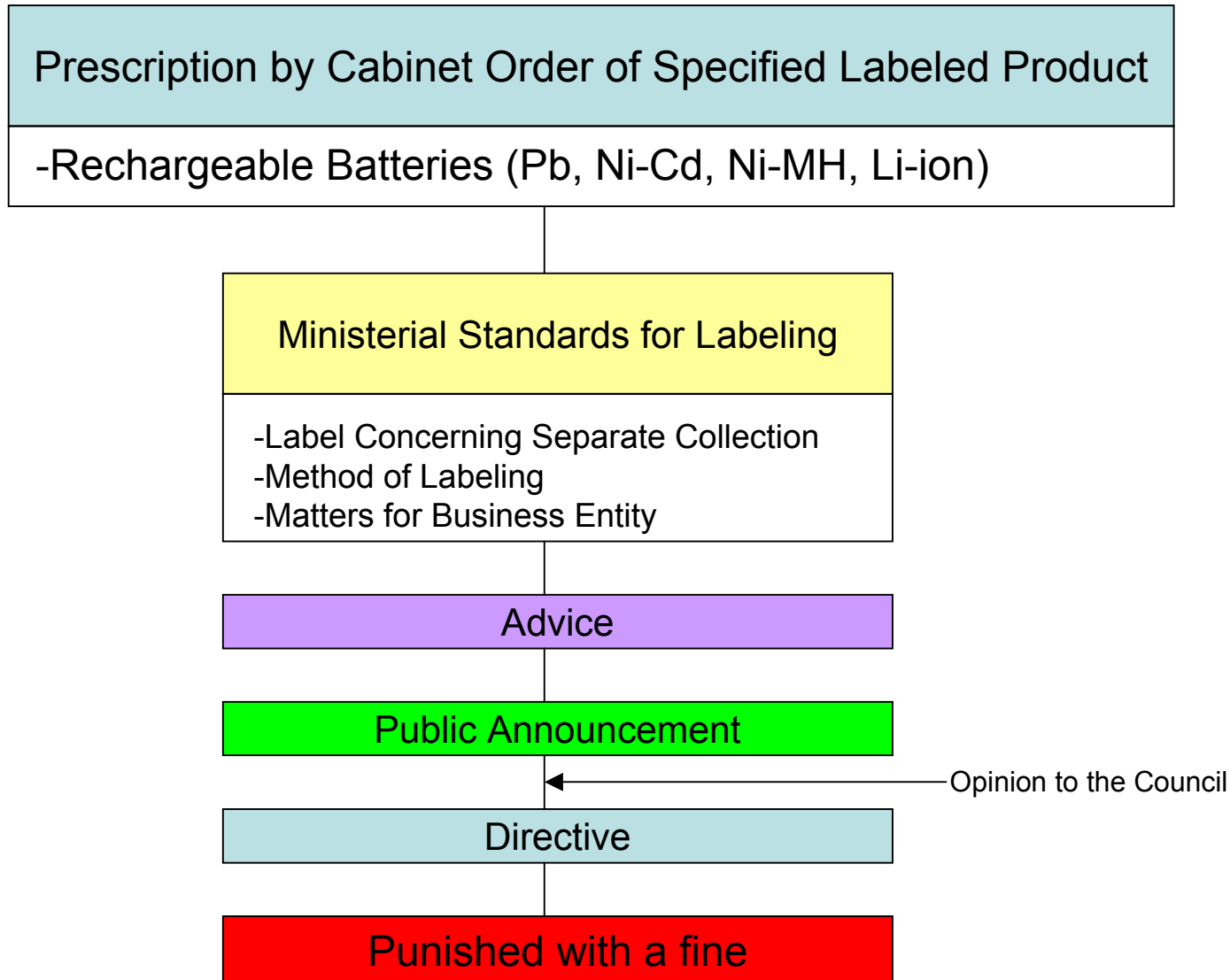
<p>1.Resources-saving Industries</p> <p>Required to reduce generation of byproducts by ensuring rational use of Raw materials and promoting use of by products as recyclable resources.</p> <p>-Pulp paper, -Automobile manufacturing, -Iron making, etc</p>	<p>5.Labeled products</p> <p>Required to be labeled to facilitate selected collection</p> <p>-Pet bottles, -Paper containers and packaging, -Plastic containers and packaging</p> <p>-Compact rechargeable batteries ,etc</p>
<p>2.Resources-reusing Industries</p> <p>Required to use recyclable resources and parts.</p> <p>-Paper manufacturing, -Construction, etc</p>	<p>6.Resources-recycled products</p> <p>Required to promote self-collection and recycling</p> <p>-Compact rechargeable batteries,</p> <p>-Personal computers</p> <p>*Devices in which compact rechargeable batteries (specified resources-recycled products) are used as parts. Required to promote self-collection and recycling of compact rechargeable batteries</p>
<p>3.Resources-saved products</p> <p>Required to ensure rational use of raw materials, prolong product life and reduce generation of used products</p> <p>-Automobiles, -Home appliances, -Personal computers, etc</p>	<p>7. Byproducts</p> <p>Required to promote the use of byproducts as recyclable resources</p> <p>-Coal ash generated by the electricity industry</p> <p>-Soil and sand, slabs of concrete and asphalt, and lumber generated by the construction industry</p>
<p>4.Reuse-promoted products</p> <p>Required to promote the use of recyclable resources and products (designing and manufacturing products that can be easily reused or recycled)</p> <p>-Automobiles, -Home appliances, -Personal computers, etc</p> <p>-Devices using compact rechargeable batteries,etc</p>	

3.2 Specified Regulations for Rechargeable Batteries

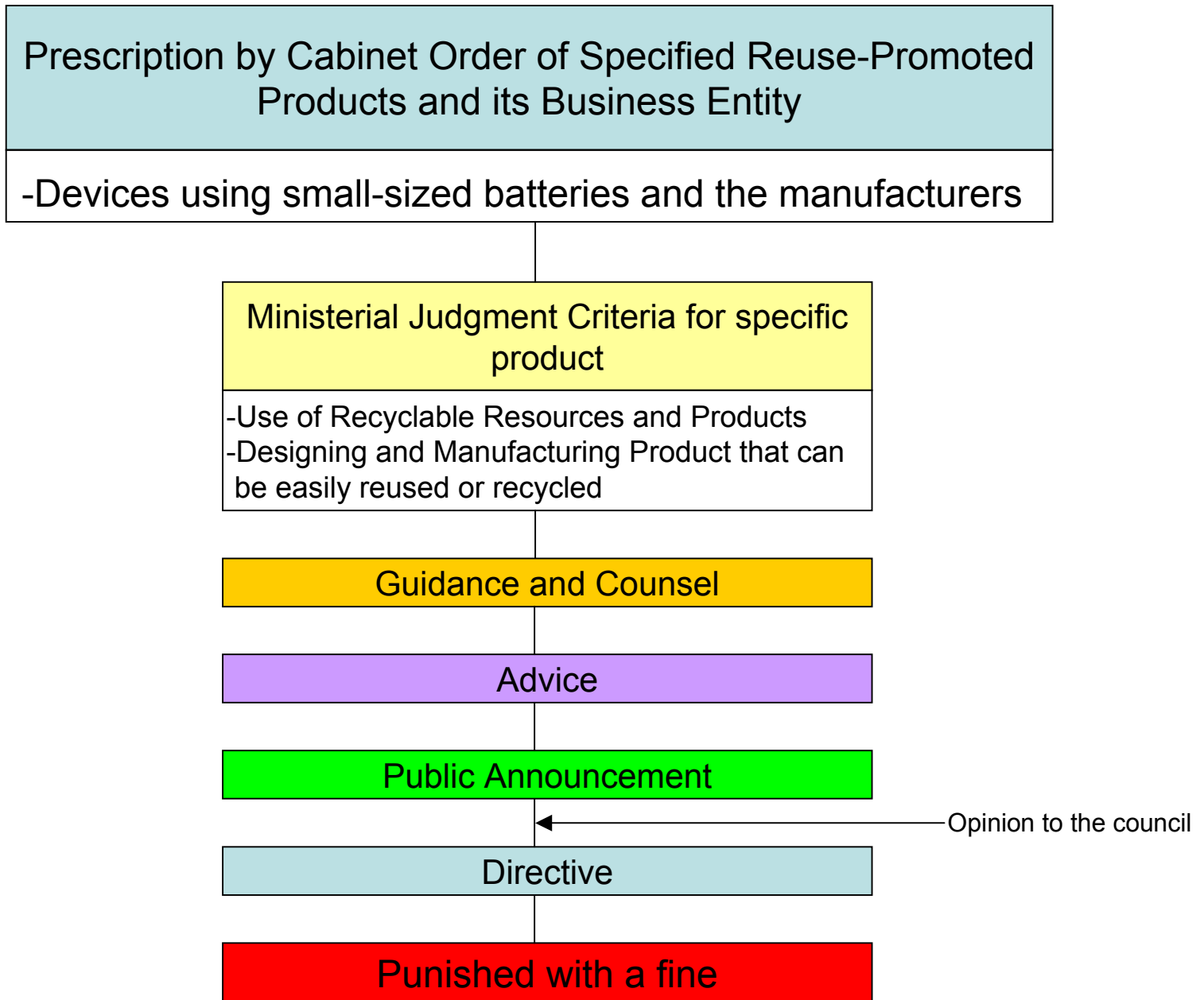
3.2.1 Resources-Recycled Product



3.2.2 Labeled Products



3.2.3 Reuse-Promoted Products



4. Present Situation of Compact Rechargeable Batteries Recycling stipulated by the Law for Promotion of Effective Utilization of Resources

4.1 Targets of Recycling Rates and Results

Upper:2004FY
(Lower):2003FY

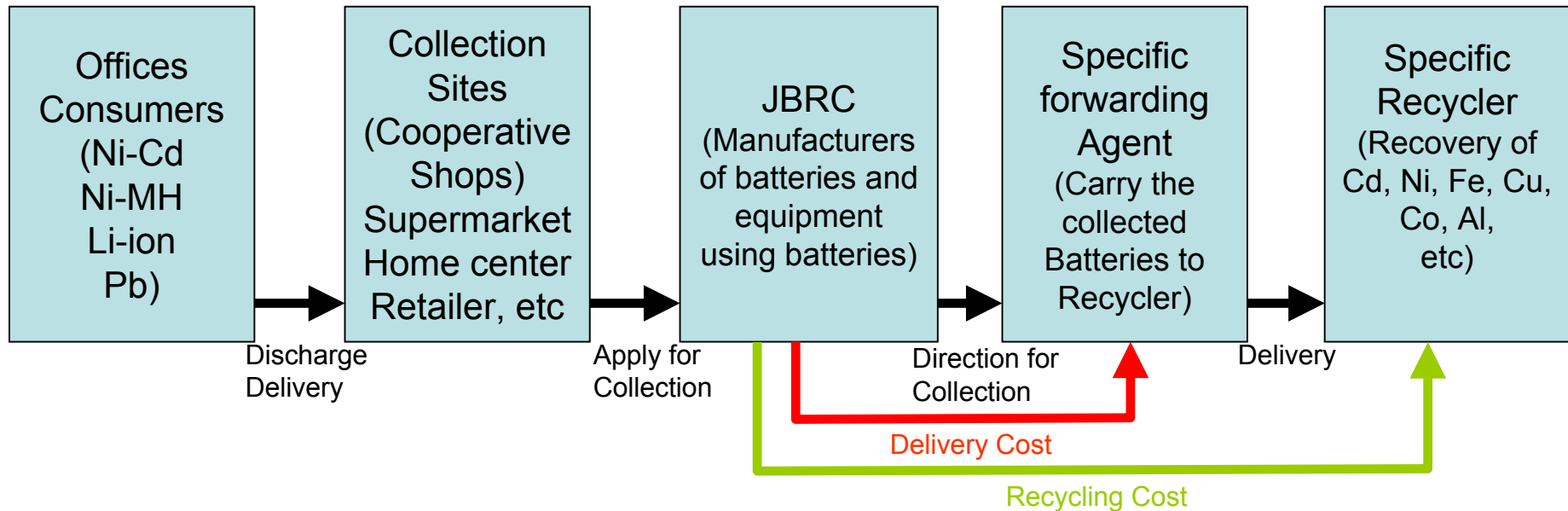
	Treated Quantity (t)	Recycled Quantity (t)	Recycling Rates(%)	Targeted* Recycling Rates(%)
Nickel-cadmium batteries	878 (799)	647 (587)	73.7 (73.5)	60
Nickel metal- hydride batteries	99 (85)	76 (66)	76.8 (77.6)	55
Lithium Secondary Batteries	216 (221)	119 (124)	55.1 (56.1)	30
Small-sized seal lead batteries	3,938 (3,962)	1,970 (1,981)	50.0 (50.0)	50
Total	5,159 (5,067)	2,831 (2,758)		

*This Targeted Recycling Rates was set in FY 2001 for FY2005

4.2 Collecting and Recycling System of Compact Rechargeable Batteries

-Based on the law, JBRC(Japan Battery Recycling Center) was established in 2004 and has been Authorized as the Business Entity of Specified Resources –Recycling Product by METI and MOE

〔Flow of Collecting and Recycling System of Compact Rechargeable Batteries〕

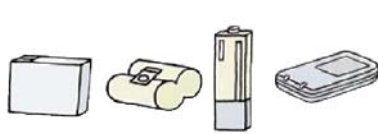


-JBRC has installed a total 8000 collection sites for consumers and 60 sites for Local Governments

-JBRC consists of manufactures of compact rechargeable batteries and manufacturers of equipment that uses such batteries, and carry out this system

4.3 Labeling System of Specific Labeled Products

-Based on the Law, the Ministers set up the standards for labeling to facilitate selected collection



Compact rechargeable batteries

(compact sealed lead batteries, sealed nickel-cadmium batteries, sealed nickel-metal-hydride batteries, lithium batteries)

- Extensive introduction of identification labeling shall be promoted to facilitate the selected collection of four types of small-sized secondary batteries.
- Publicity and educational measures shall be implemented continuously through various media.
- Publicity has been actively conducted including participation in various events such as eco products fairs and preparation of informative and educational brochures (such as guidance for recycling)



Recycling Box

Put compact rechargeable batteries into the “Recycling Box” located at cooperating shops. Please put used compact rechargeable batteries into the recycling box located at shops that are member of the Recharging Battery Recycling Club. You can search for these collection spots on the JBRC Website.(<http://www.jbrc.com>).

4.4 Regulation for Devices using Compact Rechargeable Batteries (Built-in Batteries)

- For efficient collection and recycling of small-sized secondary batteries, it is necessary for built-in batteries to be easily removed from the product.
Instruction shall be given to manufacturers to design ways of easy removal
- Results and achievements attained from implementation of 3R measures in the stage of designing and manufacturing shall be released to the public.
- The Law regulates 29 items^(*) to require the Manufacturers to make efforts to simplify the removal of batteries from the devices and indicates in the Devices and manuals that the Devices uses small-sized batteries by the Ministerial Judgment Criteria.
- Manufacturer of Devices using small-sized batteries shall develop products with less load of the battery to reduce the use of small-sized batteries.
- The measures taken in the design and the manufacturing. Stages shall be studied by Business Entity.

*Devices using compact rechargeable batteries

(electric power units, power tools, guiding lights, fire-alarm systems, security-alarm systems, electric-assisted bicycles, electric-powered wheelchairs, printers, mobile data collection devices, cordless phones, facsimile machine, telephone switchboards, communication devices for mobile phone, communication devices for MCA system, communication devices for simplified radio transmission, amateur radio equipment, video cameras, electric vacuum cleaners, electric shavers, electric toothbrushes, emergency lighting equipment, blood-pressure meters, infusion instruments, electric massaging equipment, electric therapy tool for home use, electric bubble generators, electric toys.)

5. Summary

- Governmental Legislative Regulation for recycling of Batteries has endorse the industrial voluntary action for Recycling
- The Manufacturers may be conscious of Extended Producer Responsibility (EPR) context in the world
- The Regulation has promoted the cooperative action of the stakeholders, such as consumers, retailers, manufacturers, recyclers and etc.

References

Handbook on Resources Recycling: Legislation and Trends in 3Rs

(<http://www.meti.go.jp/policy/recycle/main/english/pamphlets/index.html>)

Homepage of METI (Ministry of Economic, Trade and Industry)

(http://www.meti.go.jp/english/index_environment.html)

Homepage of Battery Association of Japan (BAJ)

(<http://www.baj.or.jp/e/index.html>)

Homepage of Japan Battery Recycling Center(JBRC)

(<http://www.jbrc.net/hp/contents./index.html>)