Environmental

Report 2012

Environmental Targets

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Environmentally-friendly Products

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A Member of the Community

Mt. Fuji Cleanup Campaign Cleanup activity outside the company's premises

CITIZEN ELECTRONICS CO., LTD.



Environmental Targets

Target achievement in FY2011 was generally good, although some of the targets were not achieved. We will continue to work toward achieving targets for FY2012 considering the FY2011 results. Please refer to the following contents.

• Environmental Targets and Achievements in FY2011, Environmental Targets for FY2012

	Targets in FY2011	Achievements in FY2011	Evaluation	Targets for FY2012
1	 Realization of manufacture of environmentally-friendly products & enhancement of our environmentally-friendly products 1) Implementation of R&D and Production Activities reducing the environmental burden (product miniaturization) Target: Plan achievement rate: 100 % <concrete steps=""> Miniaturization, Energy-saving of products (R&D) Improvement of yield rate, Reduction of material consumption, Establishment of integrated production line, etc. Review and improvement of Environmental Quality Activities Target: Achievement rate: 100 % <concrete steps=""> Enlightenment and education of Environmental Quality Activities Activities (that include delivery time shortening) based on the review and reinforcement of the system </concrete> </concrete>	Achievement rate: 95 % <main activities=""> • Design of environmentally-friendly products • Improvement of yield rate • Establishment of integrated production line • Reduction of material consumption Achievement rate: 94 % <main activities=""> • Strengthening of data management and enhancement of analysis data accuracy • Implementation of Environmental Quality Training in each division</main></main>	0	 Realization of manufacture of environmentally-friendly products & enhancement of our environmentally-friendly products 1) Implementation of R&D and Production Activities reducing the environmental burden (product miniaturization) Target: Achievement rate: 100 % Choosing of the themes related to sectoral activities in terms of effects on reducing the environmental burden 2) Operational improvement of Environmental Quality Activities Target: Achievement rate: 100 % Common themes in all divisions> Implementation of Environmental Quality Training Preparation of Environmental System of June Training for sectoral secretariats: in July Implementation of sectoral training: from August Implementation of division-specific activities>
2	Reduction in greenhouse emissions & promotion of energy conservation activities 1) Reduction in CO2 emissions Target: Reduction by 10 % compared with FY2010 <concrete steps=""> Planning and development of energy-saving measures by application of the "Case studies of energy- saving activities" or by support of the subcommittee 2) Starting preparations for CO2 reduction activities in Citizen Electronics Group <concrete steps=""> Starting of preparations for energy-saving activities implementation including subsidiaries and factories in China</concrete></concrete>	 Reduction rate: 4.0 % compared with FY2010 6,446 → 6,186 (tons of CO2) (Reduction of 260 tons of CO2) <main activities=""></main> Promotion of "Cool Biz" campaign Implementation of energy-saving actions for constant-temperature units Reduction in the quantity of printers and fluorescent lights, implementation of patrols in division, etc. Implementation of other energy-saving project activities 	۵	Reduction in greenhouse emissions & promotion of energy conservation activities Reduction in CO2 emissions Target: Reduction by 1 % compared with the CO2 emissions amount in FY2011 (calculated reduction effect) • Reduction by implementing various energy-saving activities (energy-saving subcommittee, each division) Choosing themes (limiting the objects): by the end of May Monitoring of operation: from June
3	Implementation of division-specific environmental activities and contribution to environmental protection Target: Achievement rate: 100 % • Choosing of the themes related to business targets (Policy management, 335 Project, etc.) in terms of effects on reducing the environmental burden • Feasible actions considering outside case examples	Achievement rate: 97 % on average <main activities=""> • Waste reduction • Product service life extension • Reduction in infrastructure running time • Public relations activities • Voluntary patrols • Reduction in the quantity of printers, etc.</main>	0	Implementation of division-specific environmental activities and contribution to environmental protection <common all="" divisions="" in="" themes=""> Target: Reduction of 30 % (calculated reduction effect) • Reducing the environmental burden by the use of printing management software Communication of operational rules: by the end of May Starting of operation: from June <choosing business="" of="" related="" targets<br="" the="" themes="" to="">(Policy management, 335 Project, etc.) in terms of effects on reducing the environmental burden> Target: Achievement rete: 100 %</choosing></common>

[Evaluation]

🐵: Achievement rate equal to 100 % or more \ominus: Achievement rate equal to more than 80 %, but less than 100 % 🛆: Achievement rate less than 80 %





Environmentally-friendly Products

We are striving to produce Environmentally-friendly Products with our multilateral approaches such as "Miniaturization," "Energy conservation" and "Extended service life."

Our typical products, which were manufactured as environmentally-friendly products in FY2011, are as follows.

•LED Devices



Power (W): 26.4

Luminous efficacy (lm/W): 123

Power (W): 26.8

Luminous efficacy (lm/W): 104



Energy Conservation

Power consumption has decreased by 0.8 %, and fuel (utility gas) consumption has also decreased by 14.5 % in FY2011.



• Fuel (utility gas) consumption (km3)



CO2 emissions (tons of CO2) <reference value>





Energy-saving project activities

In FY2011, our company worked to take the following actions to cope with the electricity shortage and rise in electricity costs.

- Organize a common scheme

 CITIZEN ELECTRONICS CO., LTD. (headquarters) and CITIZEN ELECTRONICS TIMEL CO., LTD. jointly take actions

 Install a generator

 Install a generator and cut 15% of the peak of the receiving power of FY2010 (used to operate compressors and vacuum pumps)

 Preset the temperatures of air conditioners at 28 °C in administrative
- divisions and implement a centralized system 4) Reduce illuminating lamps moderately
- 5) Limit when elevators can be used
- 6) Switch off vending machines
- 7) Ensure the secretariat is informed of the use of non-stationary facilities before running them
- 8) Others

<Target: 15% reduction in maximum demand power of the previous summer>



With the following alarm levels (4 phases), take actions according to each level

- Level 1: Turn off lights and printers
- Level 2: Stop air conditioners and chillers
- Level 3: Operate generator for servers
- Level 4: Stop manufacturing equipment sequentially



Maximum demand power of the previous year	Reduction target of the current FY (15 % reduction)	Actual achievement
2,849 kW	2,422 kW	2,270 kW (20 % reduction)

In FY 2011, we exceeded 15% reduction (target). In the next FY, we will reconsider issues and continue energy-saving activities.



Monitoring of Waste

Combustible waste

We maintained recycling activities and combustible waste reduction activities, and in the first half we achieved 2.49 ton reduction (10.6 % reduction) compared to the first half of the previous year. However, with the integration of manufacturing sites to headquarters in the second half, combustible waste increased by 2.95 ton (7%) compared to the previous year as a result.



Waste volume, amount of valuable resources, and their recycling rate

In FY2011, waste volume was decreased by 65 % and the amount of valuable resources was decreased by 40 % compared to that of FY2010. Their recycling rate was 94 %. We are going to continue to treat reduction of waste and improvement of the recycling rate as maintenance activities.



^{*} The percentages indicate the recycling rate of the total amount consisting of waste and valuable resources.

Note

- Recycling rate (%) =

[(amount of recycled resources + amount of valuable resources)/(waste volume + amount of valuable resources)] x 100 $\label{eq:constraint} \begin{array}{l} \mbox{-Valuable resources: Resources with profit reported having subtracted the transportation expense after selling the waste - Recycled resources: Resources obtained from waste that is recycled. $$< Ex.> Recycling rate in FY2011: [(164+8)/(174+8)] x 100 = 94 (%) \end{array}$



Monitoring of Chemical Substances

Released and transferred quantities of substances relevant to the PRTR Law

The following table shows the results of released and transferred quantities of substances in FY2011 that are relevant to the PRTR Law. None of them required reporting to the prefectural government.

(in kg)											
	Substance No.	Annual handling amount	Released products	The amount discharged into the environment							
Contained substance				Total amount	Amount transferred	Amount released into the air	Amount released into the water	Amount released into the soil			
Silver and its water-soluble compounds	82	6.15	3.09	3.06	3.06	0	0	0			
Xylene	80	4.95	0	4.95	0	4.95	0	0			
Dodecylbenzene Sulfonic Acid	30	2.1	0	2.1	0	2.10	0	0			
Ferric Chloride	71	1176	0	1176	0	0	0	0			
Antimony and its compounds	31	1.3	1.3	0	0	0	0	0			
Normal Hexane	392	409.29	0	409.29	241	168	0	0			
Ethylene Glycol Monomethyle Ether	58	0.01	0	0.01	0	0.01	0	0			
Ethylbenzene	53	0.01	0	0.01	0	0.01	0	0			
Toluene	300	0.01	0	0.01	0	0.01	0	0			
Manganese and its compounds	412	0.01	0	0.01	0	0.01	0	0			
1.2.4-trimethylbenzene	296	0.13	0.091	0.039	0.04	0	0	0			
1.3.5-trimethylbenzene	297	0.03	0.021	0.009	0.01	0	0	0			



A Member of the Community

Mt. Fuji Cleanup Campaign

Our company is located at the foot of Mt. Fuji. 49 people (including employees' family members) participated in the "Mt. Fuji Cleanup Campaign" and conducted cleanup activities near the 5th station of Mt. Fuji in FY2011.



•Cleanup activity outside the company's premises

Also, in June, a cleanup activity was conducted by 46 employees, who were chosen from the company's different sections. The cleanup activity included an area from the company's premises to the nearest train station and from the premises to the employees' parking area. 26 kg of waste was collected.



June 15, 2011