

Address	No. 579, Yuan-Shan Road, Chung-Ho District, New Taipei City, Taiwan		
Lot area	78963m ²	Total floor area	129828m ²
Establishment day	1962/10	Employees	1975persons
ISO14001certification date	1997/5	ISO14001renewed	2010/5
Major Products	Air-conditioner, television, refrigerator, washing machine and others		
Environmental CommunicationFY2010 Information disclosure	1items	visitors on factory tour	132persons
Contact	chen.richiung@tw.panasonic.com		TEL: 886-2-22271094



Message from Compliance Administrator

Panasonic Taiwan, ever since founded, focuses on coexistence with the local community and performs production. The factory is surrounded by Shihmen Dam and Fetsui reservoir providing high quality and abundant water resources. At the initial stage, the company makes radio, record player, and amplifiers. Currently, the company has businesses in electrical appliances, system manufacturing, component parts and machinery equipments. As an enterprise of 21st Century, the company is obligated to treat the environment friendly and co-exist with the earth. Panasonic activates Love Earth Campaign globally in order to promote environment protection, enthusiastically constructs green structures, and cleans the production environment, thus mitigating the impacts to the environment, seeking environment risk evaluation and promoting measures of environment protection to achieve cooperation in environment revolution. The company believes that environment protection is the social responsibility of a corporation.



Compliance Administrators

Nakatani Akihiro

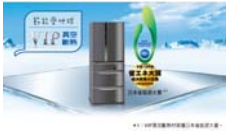
1. Constructs environment management system according to ISO 14001.
2. Complies with all relevant environmental regulations to continuously perform environment improvements.
3. Total participation of the environment protection to prevent pollution and continue improvements.

Main activities in FY2010

Target	Result
Environment Design	Products are designed based on the environment-friendly concept, and manufactured with recyclable and non-poisonous designs utilizing few materials, low power, easily-dismantled components, and reduced wastes. Hazardous material amount complies with the EU regulations. Examples of the products are super power-saving refrigerator with an efficiency exceeding 70%, and high resolution thin PDP TV. Amount of components used is greatly reduced. Tumble-dry washing machine adopts inverting direct-drive motor, saving electrical power by 45% and water by 50%.
Green production and manufacturing	Green process, effective and efficient factory flow management, and introduction of Nex Cell production model reduce energy consumption. 647 kWh can be saved annually by constructing reasonable factory and office spaces, introducing inverting air compressors, controlling air conditioning regulation, adopting energy-saving bulbs, installation of power meter in every department, and enabling visualization of energy consumption. This cuts annual energy expense by 1.68 million dollars per annum. If wastes of each department are properly processed, the recyclable rate can reach 96.7%.
Enhancement of social responsibility	By cooperating with the government, the General Manager leads the Love Earth Campaign. Panasonic plants trees, cleans the beach, organize environment exhibitions, and sponsors flowers expos, orphanage as well as old folks' home in Taiwan. The company also offers environment courses in Guangfu and Tzuchiang primary schools in Chungho of New Taipei City and participates in blood donations.

Products of Environmentally-conscious information

【Smart energy-saving refrigerator NR-F555T】



- Vacuum Insulation Panel
- First-grade energy efficiency
- New environment-friendly refrigerant (R600a)
- Memory→Analysis→Prediction→Auto power-saving mode
- Illumination sensing→switch sensing→environment sensing Temperature sensing→operation adjustment for predicting proper usagereg time
- LED illumination on two sides of the fridge compartments. Power-saving and durable.

【Tumble-dry washing machine NA-V158TW】



- Tumble-dry machines rotates a cylinder to tumble and clean clothes with little water required, thus reducing water consumption by 50%.
- Saving power by more than 45%.
- Only 34 deciBels are generated when the tumble-dry washing machine is in operation.
- The inverting direct-drive motor adopts suspension device that absorbs shock, and shock sensor to effectively suppress shock and running noise.

【178-degree wide-angle TV (TH-L42E3W)】



- New energy-saving and healthy design to automatically sense the environment lightings and reduce unnecessary power consumption while maintaining the clarity of the display.
- Auto shutdown if signals are not detected. If no signal is detected for more than 30 minutes, warning messages will be prompted and the TV is shut down to reduce unnecessary power consumption.
- 178-degree wide-angle
- DLNA Home Networking

【One-to-many inverting air conditioning】



- Temperature sensing: automatically detects number of people,their positions and temperatures; automatically adjusts air ventilation such that it is the most comfortable and power-saving.
- Light sensing: the environment is adjusted to the optimal temperature according to the strength of the exterior lighting.
- Body temperature sensing and light sensing devices of ECO NAVI; double-sensing to save electrical power by 32% more.

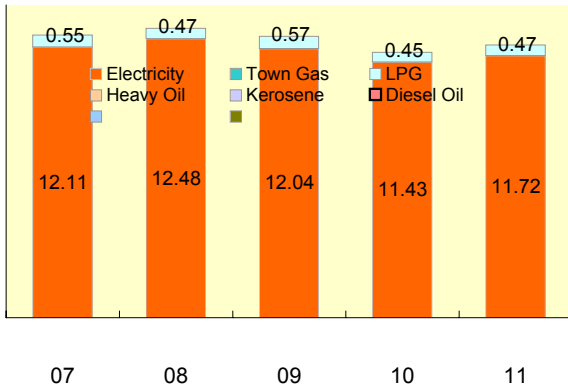
-> link to a product information web-site.

Environmental performance data

Year displayed in graph ex) 2011: April 1, 2010 - March 31, 2011

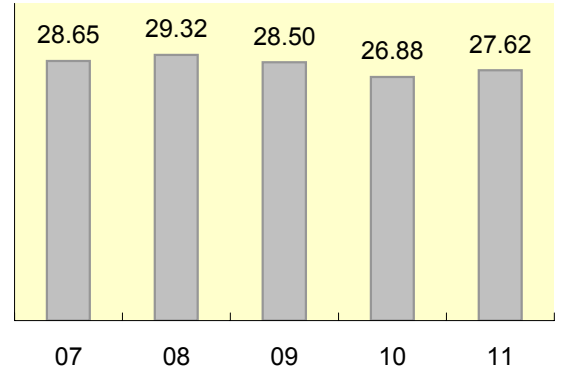
Energy

Unit: 1000kl



CO2 Emission

Unit: 1000t-CO2



Natural Energy

FY2011

0.00 1000kW/h

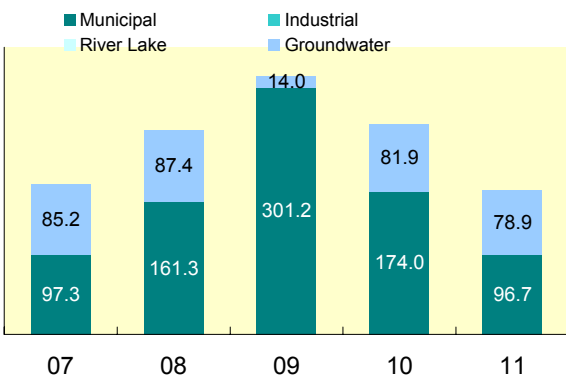
co2 emission

Calculation standards

- Every kWh of electricity used emits 0.581 tons of CO₂
- Every kilogram of LPG emits 3 kilogram of CO₂

Water

Unit: 1000m³



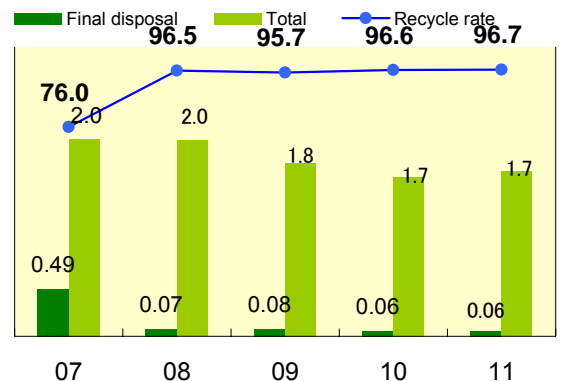
Circulated water

Rain-water FY2011

0.00 m³ 0.00 m³

Waste

Unit: 1000t, %

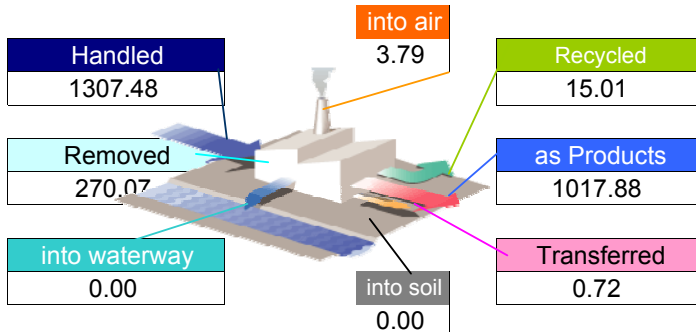


Chemical substances

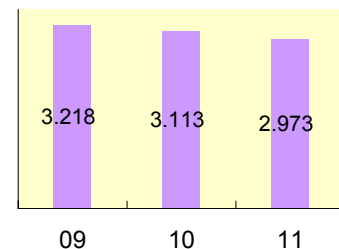
Unit: t

Material balance of controlled substances

FY2011



Key target reduction substances



About The Panasonic Group's Chemical Substances Management in Factory

http://panasonic.net/eco/factory/chemical_substance/

About the above data

- Tap-water consumption: 49th term/48th term is 77.3 thousand tons; detection and repair of tap-water pipe loss to reduce loss.

Compliance FY2011

<Air pollutant measurement results>

	Unit	Facility name	Legal limit	Voluntary limit	Average measur	Maximum measured	Measuring frequency
SOx	ppm	P010	100.00	90.00	<0.92	<0.92	1 year
		P012	100.00	90.00	1.50	1.50	1 year
NOx	ppm	P010	150.00	135.00	5.60	5.60	1 year
		P012	150.00	135.00	3.20	3.20	1 year
Particulate	g/Nm ³	P010	0.50	0.45	0.01	0.01	1 year
		P012	0.50	0.45	0.01	0.01	1 year

<Water pollutant measurement results>

	Unit	Facility name	Legal limit	Voluntary limit	Average measur	Maximum measured	Measuring frequency
COD	mg/l	water evacuation	120.00	108.00	38.45	39.90	3 months
BOD	mg/l	water evacuation	50.00	45.00	10.47	15.80	3 months
Nitrogen	mg/l						
Phosphorus	mg/l						

<Noise and vibration>

	Unit	Measurement Area		Legal limit	Voluntary limit	Average measur	Maximum measured	Measuring frequency
Noise	dB	DT	Transformer	77.00	70.00	56.00	58.00	3 months
		NT	Transformer	55.00	55.00	50.00	51.00	3 months
Vibration	dB	DT	Actual installed machine	80.00	75.00	52.00	54.00	3 months
		NT	Actual installed machine	75.00	70.00	48.00	50.00	3 months

*Legal limit: The strictest value out of those specified by laws, ordinances or agreements.

*N/A(not applicable):The meaning when the facility is exempted from the regulation.

About excess of legal limit value

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Improvement of direction by government, or point outs by neighbor

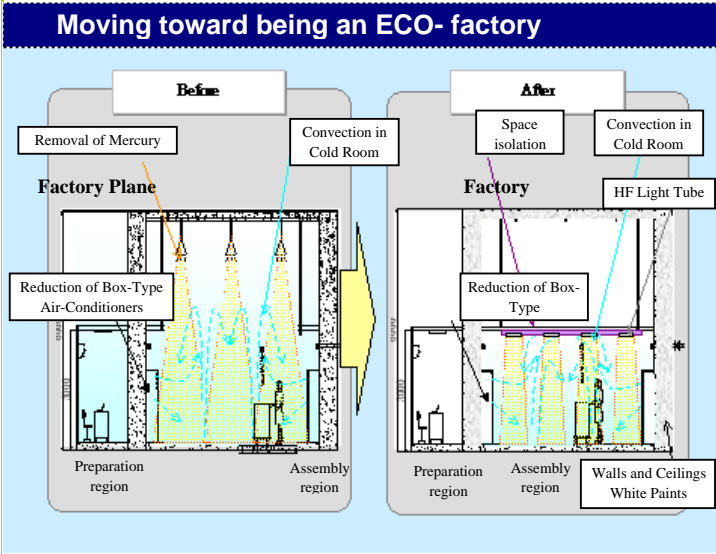
Occurrence situation	Countermeasure

Environmental Policy

Panasonic Taiwan will adhere to our Environmental Charter and the declaration of our corporate leader as basis of action, and devote our entire staff body to take proactive participation. We aim to achieve our environmental goals through the execution of various management projects under the theme of 2010 Green Plan. Meanwhile, we strive to reduce impacts to the environment through our processes of activities, manufacturing, and services. It is our Company's promise to abide by the following guidelines:

1. Implement system of environment management in accordance with ISO14001 requirements, brining together corporate operationsand environmental protection.
2. Construct system of environmental management; identify goals and specific subject of environmental management for ongoing monitoring.
3. Abide by environmental legislations and other pertinent rules, as well as internally constituted performance standards.
4. All staff body should work in collective efforts to promote energy and resource conservation, recycling, prevention of air, water, soil and underwater pollution, as well as the management of discarded materials and toxic chemical substance, in order to realize our promise of continuous improvement and prevention of pollution.
5. Practice promotion of green-merchandising (IPP, WEEE) , green-procurement (RoHS) , clean production, in order to reduce impact on the environment.
6. Promote geographical and social contribution to improve corporate image; further develop relations with external organizations.
7. Make public our environmental guidelines. Ensure that the guidelines are well communicated to all persons working for or on behalf of the organization.

Aiming to reduction of environmental impact



Air-Conditioner

Convection in Cold Room-space limitations

Commercial box type → Split and frequency conversion

Box type from 10→7 = $\Delta 3$
 Split Type from 0→3
 Reduction of electrical power consumption = $\Delta 40,862\text{kw/h}$
 CO2 reduction = $\Delta 24.4 \text{ ton/year}$

- Exchange of Split Air-Conditioner in the relevant offices
- Production area and volume minimization (NEXT CELL)
- Removal of unused air-conditioners

Lighting

Change to energy saving lamp tube

T8 → e-Hf

Light effect of the lamp tube 67 lm/w → 104 lm/w (Light effect of the lamp tube $\Delta 52.7\%$)

Mercury lamp from 28→0 lamp = $\Delta 28$ lamps
 Lamp tube from 792→466 tubes = $\Delta 346$ tubes
 Electrical power consumption is cut by $\Delta 57,025\text{kw/h}$
 CO2 reduction = $\Delta 33.1 \text{ ton/year}$

- Removal of the mercury lamps (40W) reduces most of the electrical power consumption
- Removal of unused lighting (40W) reduces most of the electrical power consumption

**Results: electrical power consumption is cut by 97,887KW/h
 CO₂ reduced by 57.5 tons/year**

Environmental Communication



Guidance on the environment containing factory-generated poisonous chemical substances

The poisonous chemical substances management section and the poison response team of the environment protection bureau of Taipei county visit to guide storage and onsite process of Toluene diiso-cyanate and perform onsite process confirmation, experience exchange and provision of the information.

Emergency preparedness and response

About our concept and training plan

Toluene diiso-cyanate (poisonous chemical substance) leaks from the pipes in the TDI storage area of the refrigerator factory due to improper operations, thus external help is required.

Case of a training

