

Low CO₂ Kawasaki Brand

'13

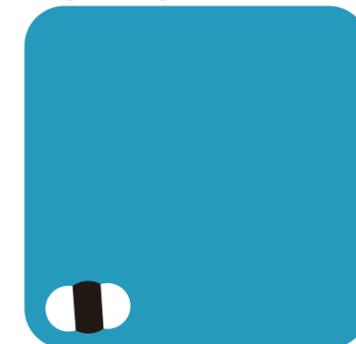
Evaluating CO₂ reductions in products, technologies and services through the whole life cycle

Low CO₂ Kawasaki Brand

'13

<http://www.k-co2brand.com/>

LOW CARBON



Low CO₂ Kawasaki Brand'13

Kawasaki City

What is Low CO₂ Kawasaki Brand?

Aim

- Evaluate products, technologies and services originating from Kawasaki that contribute to CO₂ reduction throughout the entire life cycle and prevent global warming through the wide dissemination of this information.
- Raise overall environmental awareness and factory skills by promulgating the concept of the CO₂ reduction effect over the entire life cycle.
- Contribute to a global reduction in greenhouse gases through the Low CO₂ Kawasaki Brand.

Features

- Evaluation of contributions made towards the prevention of global warming through the whole life cycle



- Voluntary computation of CO₂ reduction in in-house products, etc.
- Conduct computation seminars to spread the concept and skills as well
- Targeted at products, technologies and services
 - Final products, materials, parts, research and development activities, processing technologies
 - Also targeted at major corporations, small and medium enterprises and organizations regardless of their scale
 - Targeted at various services as well

Categories

- Product and technology category** Products and technologies manufactured or developed (established) in Kawasaki City that contribute to a reduction in CO₂ emissions through the whole life cycle
- Service category** Services provided or planned (established) in Kawasaki City that contribute to a reduction in CO₂ emissions through the whole life cycle

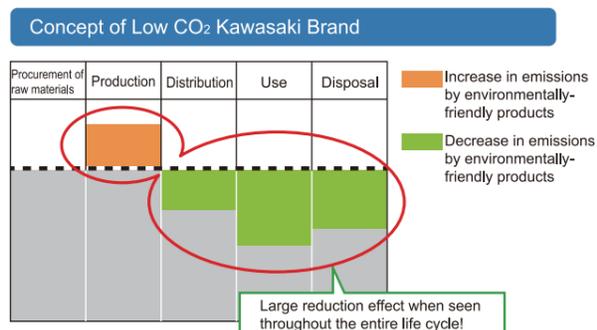
Certification Standards

- Improvement in environmental efficiency through the whole life cycle
- Originality and innovative spirit
- Promotion of overall initiatives by the citizenry and society
- International contributions

※ Besides the certification standards, the level of contribution towards the environmental policies of the city will also be assessed in general to select particularly excellent products, technologies and services for the grand prize.

Upon certification as a Low CO₂ Kawasaki Brand, you will get to enjoy the following benefits.

- Announcement of certification and participation in the Kawasaki International Environmental Technology Exhibition
- Participation in eco-product exhibitions etc. to disseminate information nationwide
- Use of the Low CO₂ Kawasaki Brand logo
- Free publicity through the PR activities and website of Kawasaki City
- Capital financing benefits for environmental countermeasures *Subject to terms and conditions.
- Proposal and reporting system for business activities that counter global warming *Brand certification results can be stated in proposals and reports submitted by businesses.



Low CO₂ Kawasaki Brand '13 Grand Prize

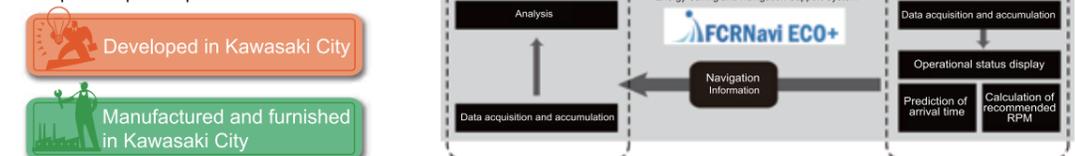
Product & Technology Category

EXA CORPORATION FCRNavi ECO+

Ship Energy Saving and Navigation Support System

Overview and features of product, technology

- A system to support optimal operation by monitoring the ship's navigation information in real time and analyzing the data to present a recommended main engine rpm etc.
- Using ship-to-land communications, a variety of information can be accessed and analyzed at any time not only on the ship but on land as well, allowing instructions and messages to be conveyed to the target ship
- According to preliminary calculations, a reduction in fuel expenses of more than a hundred million yen over 5 years can be expected per ship.



- Developed in Kawasaki City
- Manufactured and furnished in Kawasaki City

Life cycle CO₂ reduction effect



- About 5% reduction in CO₂ emissions compared to the case without this system
- Reduction in the amount of fuel used by displaying the recommended operating information



Low CO₂ Kawasaki Brand '13 Certified Products, Technologies and Services

Decrease No change Increase

Developed in Kawasaki City

Manufactured, supplied in Kawasaki City

Asahi Kasei Chemicals Corporation Purging Compound for molding machines ASACLEAN™

Product & Technology Category

Overview and features of product, technology

- Highly efficient purging and cleaning material developed for plastic molding machines by Asahi Kasei Chemicals Co., Ltd., a leading manufacturer of general, specialty, and engineering plastics
- Drastically reduces the time it takes to do color and material changes and reduces the loss of molding materials. And also removes contamination within the screw and barrel. Thus reducing the reject rate of finished products and increasing net operation rate

CO₂ reduction effect over life cycle

- Reduction of about 50% in CO₂ emissions compared to cleaning a molding machine with the next resin to be molded



JFE Engineering Corporation Rapid charger for electric vehicle RAPIDAS

Product & Technology Category

Overview and features of product, technology

- 49% cut in power receiving at the peak power due to the power assist from the built-in lithium-ion battery in the rapid charger
- To support as an emergency power supply during a power outage or disaster
- Achieve high power output with low power input in the industry
- Reduction in initial construction costs (facility renovation cost can be reduced for low power receiving)

CO₂ reduction effect over life cycle

- Reduction in CO₂ emissions at all stages of the life cycle compared to a conventional rapid charger with no electricity storage function (reduction effect of approximately 60 cedar trees per year)



JFE Steel Corporation East Japan Works (Keihin District) Advanced HF-ERW pipe, Mighty Seam®

Product & Technology Category

Overview and features of product, technology

- Quality improvement in the performance of welded seam
- Enables the use of HF-ERW pipes in oil and gas line pipes under harsh environment such as those in cold districts where seamless steel pipes were generally used in the past
- Reduction in CO₂ emission compared to seamless pipes which is manufactured in hot condition
- Reduction in weight and shortening of the on-site circumferential welding time

CO₂ reduction effect over life cycle

- Reduction in CO₂ emissions over the life cycle (e.g. approximately 20% reduction at the production stage compared to seamless steel pipes)



Toshiba Corporation Komukai Complex Solid-State MP Radar

Product & Technology Category

Overview and features of product, technology

- Weather Radar that can observe the inside of a cumulonimbus cloud that is the cause of sudden downpours and gusts accurately
- One-fifth the size of previous models, it uses a commercial power source and meets needs such as easy transport and installation
- Reduction in the power consumed by using a Solid-State transmitter, etc.

CO₂ reduction effect over life cycle

- Approximately 65% reduction in CO₂ emissions compared to the company's previous models



Toshiba Corporation Komukai Complex EY-5000 Ticket Issuing Machine

Product & Technology Category

Overview and features of product, technology

- Enable efficient ticket handling operation by installing three functions into one product
 - Ticket inspecting
 - Fare adjusting
 - Ticket issuing
- Reducing total material and energy consumption by integrating former three models into one

CO₂ reduction effect over life cycle

- As compared with former three models with same functions, about 60% of CO₂ emissions are reduced in a life cycle.



Nippon Yakin Kogyo Co., Ltd. Nas Tec Co., Ltd. (sales distributor) Nas filler

Product & Technology Category

Overview and features of product, technology

- Effective use of by-products generated by the manufacturing process (iron and steel slag) and development as a substitute for limestone powder used in the asphalt composite for road pavement
- Reduction in the energy required for transport from a remote limestone mine in addition to the effective use of by-products as raw materials

CO₂ reduction effect over life cycle

- Reduction in CO₂ emissions over the life cycle (e.g. approximately 70% reduction at the procurement and production stages compared to limestone powder)



Pioneer Corporation Dedicated car navigation system for EVs (Electric Vehicles) AVIC-MRZ007-EV

Product & Technology Category

Overview and features of product, technology

- A dedicated car navigation system for EVs that is equipped with comprehensive audio visual functions in addition to an advanced sense of operation, Eco-status functions that support a fun eco-drive and capabilities to match the running characteristics of an EV to support an ever-expanding EV society
- Using Pioneer's unique "Eco-Route Search" technology that has won numerous awards, a special route algorithm for EVs that proposes a route that consumes the least power before driving has been newly developed to help reduce CO₂ emissions

CO₂ reduction effect over life cycle

- Reduction of approximately 10% in CO₂ emissions compared to driving an EV that is fitted with the company's car navigation system for gasoline vehicles



Fujitsu General Limited Air conditioner equipped with a new air flow control function "nocria" X-Series

Product & Technology Category

Overview and features of product, technology

- First household air conditioner in the world that seeks to conserve electricity and provide a high level of comfort through a control function that uses two types of air flow
- Large reduction in the amount of energy consumed by suppressing the ascent of warm air to warm mainly the feet during the heating operation, and to evenly and naturally circulate the air in a room during the cooling operation based on the control of two types of air flow

CO₂ reduction effect over life cycle

- A maximum reduction of about 10% in CO₂ emissions compared to the company's old products (2009)



Room air conditioner "nocria" X-Series (AS-X28C/AS-X45C2/AS-X56C2/AS-X63C2/AS-X71C2)

Fuji Electric Co., Ltd. FP100i integrated 100 kW phosphorus acid fuel cell for commercial use

Product & Technology Category

Overview and features of product, technology

- Japan's first mass-produced fuel cell for industrial use
- Compared to traditional, fuel cells, the fuel cell is more compact and lightweight using parts with a longer lifespan while reducing CO₂ emissions
- Low emission gases and noise besides low CO₂

CO₂ reduction effect over life cycle

- A reduction of about 30% in CO₂ emissions compared to the company's old products (detachable type)



Fujiks Co., Ltd "Environmentally-friendly drainage pipe cleaning service" for apartment buildings (condominiums)

Service Category

Overview and features of product, technology

- Environmentally-friendly, high-pressure cleaning service for drainage pipes in condominiums
- Large reduction in the amount of fuel and water used by suitably controlling the energy required to create high-pressure water
- First initiative in the industry to use a system that feeds back the amount of CO₂ reduced to the customer

CO₂ reduction effect over life cycle

- Reduction in CO₂ emissions over the life cycle (e.g. approximately 30% reduction at the service provision stage compared to the company's old (high-pressure cleaning) services)



Environmentally-friendly drainage pipe cleaning service

Low CO₂ Kawasaki Brand Certified Products, Technologies and Services

'12



Fuji Electric Co., Ltd.

Turbine generator / geothermal turbine with the largest capacity as single cylinder



Product & Technology Category



Grand Prize

Overview and features of product, technology

- Turbine to convert geothermal heat used in geothermal power generation into rotating energy and generator to convert rotating energy into electricity
- By utilizing geothermal turbines and generators with the world's largest capacity of 140 MW, the amount of raw materials used and the energy consumed during the manufacturing and distribution etc. can be reduced compared to manufacturing several units of geothermal turbines and generators of smaller capacities (50 MW)
- Improved performance with the world's largest capacity
- Global contributions (e.g. delivery and operations overseas, etc)



CO₂ reduction effect over life cycle

- 36% reduction in CO₂ emissions compared to manufacturing multiple 50 MW turbines/turbine generators



JFE Steel Corporation East Japan Works (Keihin District)

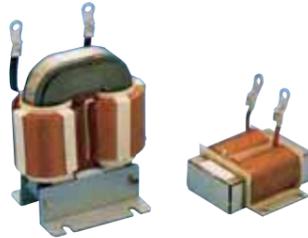
Improvement in the efficiency of solar power generation equipment using JFE "Super Core"®



Product & Technology Category

Overview and features of product, technology

- Iron core material for high efficiency and high frequency reactors
- Reduction in the loss when converting the direct current to alternating current in solar power generation equipment by reducing the size and improving the efficiency (iron loss reduction) of the high frequency reactor for power conditioners used in solar power generation
- Used in power supply parts for hybrid vehicles as well



Improved efficiency in solar power generation equipment

CO₂ reduction effect over life cycle

- 36% reduction in CO₂ emissions in a reactor core material compared to a general dust core with the same capacity



Shoei Co., Ltd.

Shoei Bathing Eco System (SBES) Series Hyper Pico Generator "DENTA"



Product & Technology Category

Overview and features of product, technology

- Auxiliary component for an integrated filtration system which aims to conserve energy through circulated filtration
- It incorporates Micro-hydroelectric power generation in a closed-loop circulation system
- Reduces the amount of CO₂ generated by adding power generators to the water circulation systems such as those used in large buildings, swimming pools and public bathhouses. The resulting electricity produced is used as auxiliary power for the circulation pumps



Energy conservation by generating electricity within the system

CO₂ reduction effect over life cycle

- 7% reduction in CO₂ emissions compared to similar systems where this product is not incorporated



Takasago, Ltd.

Regenerative system power source (charging and discharging functional evaluation equipment)



Product & Technology Category

Overview and features of product, technology

- Takasago's power-regeneration technology contributes to reduce the CO₂ emission. Generally, the powers in the tested devices are consumed as heats, but the technology provides the method of reusing the almost powers, not to transduce the heats



Large reduction due to the system power source regeneration function

CO₂ reduction effect over life cycle

- 40% reduction in CO₂ emissions compared to our previous products



Nihon Genryo Co., Ltd. Interceptor



Product & Technology Category

Overview and features of product, technology

- Used in the filtration pool and filtration equipment of water purification plants as a high quality filtration material, manufactured based on strict in-house standards that far exceed the standards set by the Japan Water Works Association (JWWA A-103)
- Has the effect of reducing the amount of water used during cleaning and extending the duration of use due to its ability to capture twice the amount of suspended matter compared to a normal filtration material because of a backwash effect that is about 5% higher



CO₂ reduction resulting from a reduction in the amount of water used during cleaning and an extension in the usage period of the filtration material

CO₂ reduction effect over life cycle

- 25% reduction in CO₂ emissions compared to the company's old products



Pioneer Corporation AV amplifier SC-LX85



Product & Technology Category

Overview and features of product, technology

- An AV multi-channel amplifier that is planned and developed as a result of the company's attempts to create a product that is high not only in sound quality, image quality and functions but in environmental performance as well
- Equipped with a direct energy HD amplifier that realizes a high power efficiency. Environmentally-friendly while having the largest power in its class (9-channel synchronous drive consuming a total of 810 W)
- Large reduction in the power consumption
- Suppresses heat generation to realize a more compact heat sink



Reduction due to the decrease in size and weight, Reduction due to an improvement in power efficiency

CO₂ reduction effect over life cycle

- 47% reduction in CO₂ emissions compared to the company's old products



Fujitsu Limited

Entry disk array ETERNUS DX60 S2, DX80 S2, DX90 S2



Product & Technology Category

Overview and features of product, technology

- An entry disk array that seeks the ultimate in performance using the latest technologies
- The capacity of the product (DX80 S2) whose LCA is computed this time is 108,000 GB
- World's highest performance in its class according to the SPC Benchmark™ (DX80 S2, based on company survey as of Jan 4, 2012)
- Supports eco-mode using MAID technology to reduce the power consumption during use



Reduction due to the multi-step control of the fan, use of a high efficiency power source and energy conservation using MAID technology

CO₂ reduction effect over life cycle

- 46% reduction in CO₂ emissions per GB of storage capacity compared to the company's old products



EXA Corporation

E@CS DaaS (desktop cloud service)



Service Category

Overview and features of service

- High performance desktop environment for the manufacturing industry
- Succeeded in the unprecedented integration of a high performance work station (thin client) and creation of a performance that can withstand actual operations
- Based on this, thin client machines and low specification PCs can be used in place of high performance work stations that are used in the manufacturing industry. A reduction in the power consumption, installation space and amount of heat generated by the devices themselves is thus possible



Reduction in procurement materials due to a switch from desktop PCs, Increase in the air-conditioning energy in data centers



Tonen General Sekiyu K.K. JX Nippon Oil & Energy Corporation

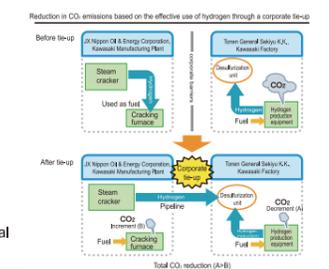
Reduction in CO₂ emissions through the effective use of hydrogen between the companies



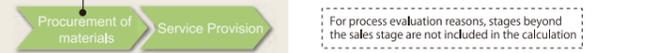
Service Category

Overview and features of service

- CO₂ emissions reduction through the effective use of hydrogen in two factories of the companies, located in Ukishima area of Kawasaki City
- JX Kawasaki Plant was spending hydrogen, by-product of its steam-cracker, as fuel for furnace in the plant, while Tonen General Kawasaki Refinery, adjacent to the JX plant, was producing hydrogen for its desulfurization. Reduction based on the effective use of hydrogen between two factories



Total CO₂ reduction (A+B). For process evaluation reasons, stages beyond the sales stage are not included in the calculation



NEC Corporation Rapid charger for EV(electric vehicle)·PHV(Plug-in Hybrid Vehicle) (NQVC500M3/NQVC440M3) and the cloud service



Service Category

Overview and features of service

- Provision of an EV·PHV cloud service together with a rapid charger
- Reduction in CO₂ emissions during operations by allowing operations to be controlled remotely through the cloud service, thereby eliminating the need to travel in the car to a charger to monitor the usage status
- Provision of services for EV·PHV users (authentication·billing, charging station map, and e-mail notification at the end of charging), services for installers (remote monitoring and maintenance, energy management, charging data management)



Improved efficiency due to the installation of a rapid charger for EVs that is equipped with communication functions



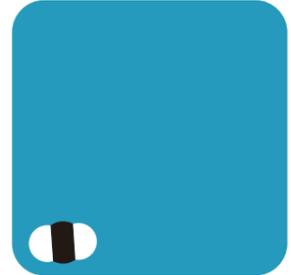


Low CO₂ Kawasaki Brand

'09 - '11

'09 - '11 * The manufactured products selected by Low CO₂ Kawasaki Pilot Brand from 2009 to 2011 will be treated as Low CO₂ Kawasaki Brand.

LOW CARBON



Low CO₂ Kawasaki Brand

Product & Technology Category 2010

[Company Name] TOSHIBA Corporation
[Product/Technology Name] 145kV Gas Insulated Switchgear G3A-b

■ CO₂ reduction effect over life cycle

- 24% reduction of CO₂ emissions compared to older models
- Improvement of environmental efficiency at all life cycle stages, with a particularly great efficiency during production, disposal/recycle, and usage



Product & Technology Category 2010

[Company Name] JFE Engineering Corporation
[Product/Technology Name] Air-conditioning system using geothermal pipe piles

■ CO₂ reduction effect over life cycle

- 29% reduction of CO₂ emission compared to a standard air-source heat pump
- Slight increase of CO₂ emissions during procurement. Substantial reduction of CO₂ emissions during use



Product & Technology Category 2010

[Company Name] JFE Steel Corporation
[Product/Technology Name] Recycling Technology of Used Plastics in Blast Furnace

■ CO₂ reduction effect over life cycle

- Reduction of CO₂ emissions through efficient use of waste materials as a substitute for coking coal
- Estimated CO₂ reduction in one year (2009) is 32,000 tons



Product & Technology Category 2010

[Company Name] FUJITSU NETWORK SOLUTIONS LTD.
[Product/Technology Name] FacilityCUBE

■ CO₂ reduction effect over life cycle

- 26% reduction of CO₂ compared to a new server room using large-sized air conditioners (calculated through M series)
- Increase in environmental efficiency during procurement and use. Particularly great effect during use



Service Category 2010

[Company Name] KAWASAKI STEAM NET Co., Ltd.
[Product/Technology Name] Steam Supply Business from the High Efficiency Power Plant

■ CO₂ reduction effect over life cycle

- Expected effect of 45% reduction of CO₂ emissions compared to other means of steam supply (such as boilers) owned by private users



Civic Activity Category 2010

[Company Name] Energy Saving Group
[Product/Technology Name] Eco-Life Challenge on Summer Vacation

■ CO₂ reduction effect over life cycle

- The basic units of CO₂ reduction of the respective eco-lives are checked and calculated uniquely utilizing the total results regarding the change in behavior of the participants. Reduction of CO₂ emissions through the implementation of continuous energy conservation activities at each participant's home



Genuinely Kawasaki Raised 2009

[Company Name] TOKYO TECHNOLOGICAL LABO CO., Ltd.
[Product/Technology Name] Energy-saving Heater: Mantle Heating

■ CO₂ reduction effect over life cycle

- About 50% reduction of life cycle CO₂ compared to the commonly used metallic heaters



Kawasaki Creation 2009

[Company Name] JFE Engineering Corporation
[Product/Technology Name] Thermal Energy Storage for Air conditioning Systems「CHS」

■ CO₂ reduction effect over life cycle

- 8% reduction of life cycle CO₂ compared to air conditioning systems using ice thermal storage



Genuinely Kawasaki Raised 2009

[Company Name] JFE Steel Corporation
[Product/Technology Name] Low CO₂ Sintered Making Process (Super SINTER™)

■ CO₂ reduction effect over life cycle

- About 5% reduction of life cycle CO₂ per ton of sintered ores compared to the sintering process line that was in operation until the year of implementation of this technology.



Product & Technology Category 2011

[Company Name] UPCON Corporation
[Product/Technology Name] UPCON construction method to lift sunken concrete floor slabs

■ CO₂ reduction effect over life cycle

- 49% reduction of CO₂ emission compared to the conventional concrete replacement method of construction



Product & Technology Category 2011

[Company Name] JFE Steel Corporation East Japan Works Keihin
[Product/Technology Name] Low CO₂ Ironmaking Technology by the new shaft furnace

■ CO₂ reduction effect over life cycle

- 70% reduction of CO₂ emissions compared to baseline (conventional blast furnace process)



Product & Technology Category 2011

[Company Name] SHOWA DENKO K.K.
[Product/Technology Name] Produce ammonia by recycling waste plastic, ECOANN®

■ CO₂ reduction effect over life cycle

- 51% reduction of CO₂ emissions compared to conventional ammonia production techniques



Product & Technology Category 2011

[Company Name] FUJITSU LIMITED
[Product/Technology Name] Desktop PC ESPRIMO D570/B, Display VL-178SRL

■ CO₂ reduction effect over life cycle

- 28% reduction of CO₂ emissions with personal sensor operating, and 23% reduction of CO₂ emissions without personal sensor operating compared to baseline (previous models from the same company)



Product & Technology Category 2011

[Company Name] YAMAKATSU ELECTRONICS INDUSTRY CO.,LTD
[Product/Technology Name] Straight tube type of LED lamp 「YAMA LIGHT」

■ CO₂ reduction effect over life cycle

- 16% reduction of CO₂ emissions compared to baseline (major LED lamps)



Product & Technology Category 2010

[Company Name] TOSHIBA CORPORATION Corporate Research and Development Center
[Product/Technology Name] Full HD LCD TV 「REGZA」/LED backlight controlling technology

■ CO₂ reduction effect over life cycle

- 30% reduction of CO₂ emissions compared to the previous model of the same line by the same company (calculated with 55F1)
- Increase efficiency in all life cycle stages except for production and distribution. Particularly efficient during use.



Product & Technology Category 2010

[Company Name] TOKYO GAS Co., Ltd.
[Product/Technology Name] Solar cooling system

■ CO₂ reduction effect over life cycle

- 15% reduction of CO₂ emission compared to air conditioning systems not using solar power.
- Increased life cycle CO₂ in procurement, distribution, and disposal/recycling. Significant reduction of CO₂ emissions when in use.



Product & Technology Category 2010

[Company Name] Nihon Genryo Co., Ltd.
[Product/Technology Name] Saito Tank

■ CO₂ reduction effect over life cycle

- 9% reduction of CO₂ emissions when compared to water purification devices without a self-cleaning system. (Calculated with ST-2200)
- Increase in CO₂ during procurement, production and distribution. Substantial reduction of CO₂ emissions when in use.



Product & Technology Category 2010

[Company Name] FUJITSU LIMITED
[Product/Technology Name] SPARC Enterprise M Series

■ CO₂ reduction effect over life cycle

- 62% reduction of CO₂ emission when compared to the previous model from the same company (calculated with quad core M3000)
- Increase in environmental efficiency in production, distribution and use. Particularly during use where efficiency is over 99%



Genuinely Kawasaki Raised 2009

[Company Name] KONDO KOGEI Co., Ltd.
[Product/Technology Name] Energy-Saving Lighting Device

■ CO₂ reduction effect over life cycle

- 5% reduction of life cycle CO₂ compared to the leading LED lamp.
- CO₂ emissions especially reduced during use, operations and management, and procurement of materials.



Genuinely Kawasaki Raised 2009

[Company Name] Shoei Co.,Ltd.
[Product/Technology Name] Energy-Saving Proposal Package 「Shoei Bathing Eco System(SBES)」

■ CO₂ reduction effect over life cycle

- Approximately 65% reduction over complete life cycle compared to before installing the system.



Genuinely Kawasaki Raised 2009

[Company Name] DC Co., Ltd.
[Product/Technology Name] Blast-furnace slag cement

■ CO₂ reduction effect over life cycle

- 40% reduction of life cycle CO₂ when compared to Portland cement (the Japanese norm).



Genuinely Kawasaki Raised 2009

[Company Name] JFE Plastic Resource Corporation
[Product/Technology Name] Recycled Plastic Boards for Concrete Work 「NF Board (New Frontier & Friendly)」

■ CO₂ reduction effect over life cycle

- Since they can be used 5 times more than plywood, over the complete life cycle they have a total CO₂ reduction of 45%



Kawasaki Raised 2009

[Company Name] The Tokyo Electric Power Company, Incorporated
[Product/Technology Name] MACC (More Advanced Combined Cycle)

■ CO₂ reduction effect over life cycle

- 25% reduction of CO₂ emissions for total power delivered compared to main generator (by the same company; started operating in 1991) before the implementation of the technology.



Genuinely Kawasaki Raised 2009

[Company Name] FUJITSU LIMITED
[Product/Technology Name] Energy-Saving Type Blade Server System 「PRIMERGY BX 900 Series」

■ CO₂ reduction effect over life cycle

- 55% reduction of lifetime CO₂ emissions when compared to the functionality (performance) of the previous model from the same company developed 4 years previous. (3.4 times higher performance per unit, emission 1.5 times greater)



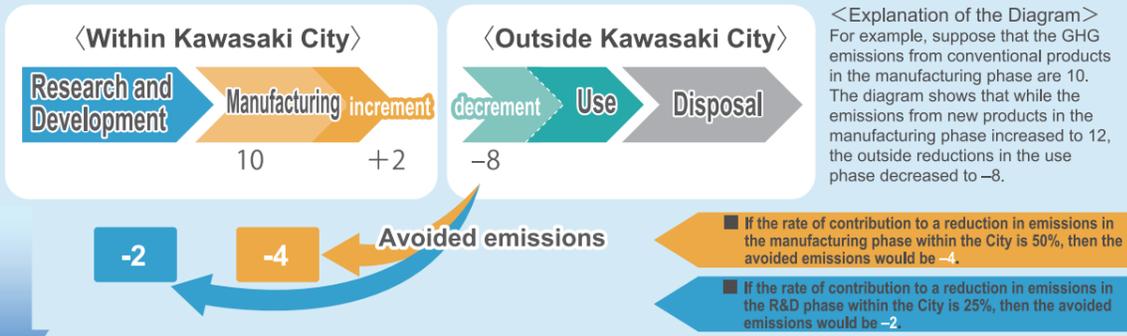
What is the Kawasaki Mechanism?

A strength and characteristic of Kawasaki City is its effort in promoting a reduction in greenhouse gas (GHG) emissions on a global basis by leveraging high quality environmental technologies. As one of its related initiatives, Kawasaki City has initiated the Kawasaki Mechanism Certification System to mark the contribution to GHG emission reductions outside the city (avoided emissions) made through the use of environmental technologies of enterprises within the City and to facilitate the appropriate evaluation of these enterprises in the market.

Phases of the Lifecycle of Products/Technologies



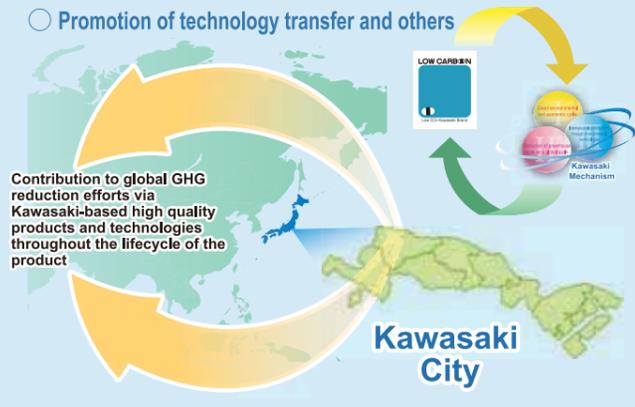
A Diagram of the Evaluation of avoided emissions



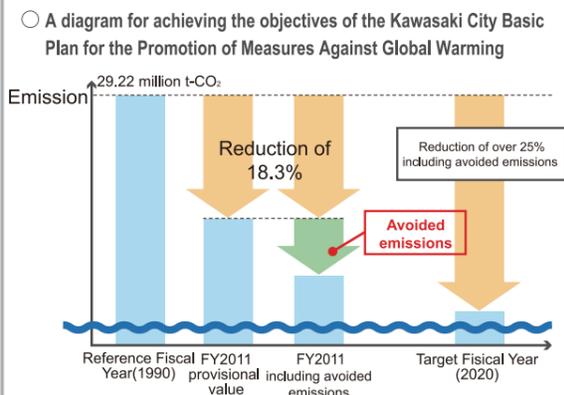
Benefits of the Kawasaki Mechanism certification for business operators

- Incorporation of avoided emissions into the system of Planning and Reporting of Anti-Global warming Measures in Business Activities based on the Ordinance***
 (*Kawasaki City Ordinance on the Promotion of Measures against Global Warming)
- Collaboration with Low CO₂ Kawasaki Brand Project**
 Part of its application is that it can be used of certification procedures of the Low CO₂ Kawasaki Brand Project. If a product satisfies the requirements, it can receive a Low CO₂ Kawasaki Brand certification.
- Use of the Logo**
 Certified business operators are allowed to use the logo of the Kawasaki Mechanism.

Further promotion of international contribution through the use of environmental technologies



Use it as a means to manage progress in the city's reduction targets



We will work towards incorporating the Mechanism into national systems, in order to achieve appropriate evaluation of Kawasaki-based high quality products and technologies on a national level.

Kawasaki Mechanism Certification System

System Target

Businesses in the city that contribute to a reduction in greenhouse gas emissions outside the city district (avoided emissions) over the entire life cycle of the product, technology, etc.

Target Companies

Companies that have an office within the city and more than one year of track record in service provision

Review and Certification Criteria

- Basic elements of avoided emissions
- Setting the type of contributions outside the district
- Additionality
- Uniqueness
- Innovativeness
- Perspective of reduction over the entire life cycle

- Computation methodology of the contribution volume outside the district
- Setting of the net reduction volume outside the Kawasaki City district based on life cycle evaluation
- Setting of the level of contribution (reduction contribution rate) by businesses in Kawasaki City
- Monitoring of the volume promulgated outside the Kawasaki City district

How to make use of the certification system

- Inclusion in the proposal and reporting system for business activities that counter global warming, based on City Ordinance regarding the promotion of measures against global warming

- Simultaneous recognition as the Low CO₂ Kawasaki Brand, etc.

Responsible Department: Environmental Protection Bureau, Global Environment & Sustainability Office

Tel: +81-44-200-3836

E-mail: 30titan@city.kawasaki.jp

Other related awards and certification systems

Smart Lifestyle Grand Prize

~Recognizing initiatives that contribute to a reduction in CO₂ emissions~

Award Targets

Development of "practices" and educational materials that lead to a reduction in CO₂ emissions and global warming countermeasures (e.g. "low carbon", "resource circulation", "harmony with nature", etc.), provision of information, PR initiatives such as educational activities in schools and companies

Target Groups

Individuals living, studying or working in the city or organizations based in the city (groups, NPOs, businesses, schools, universities, etc.)

Selection criteria

- Contribution towards CO₂ reduction
- Continuity in future
- Efforts and improvements leading to greater comfort and affluence
- Ripple effect on other citizens, businesses, etc.



Dissemination of information on the initiatives of award recipients etc.

A system to gather and commend excellent initiatives in environmentally-friendly lifestyle and business activities carried out by residents and businesses of the city. Information is disseminated and tie-ups and collaborative efforts are promoted through this system so as to further expand the activities throughout the region.

Responsible Department: Environmental Protection Bureau, Global Environment & Sustainability Office

Tel: +81-44-200-3871

E-mail: 30tisui@city.kawasaki.jp

Kawasaki Monodukuri Brand

~Supports great products and technologies by small and medium enterprises. Including environmentally-friendly products and technologies.~

A system to certify excellent industrial products and technologies of small and medium enterprises doing business in the city. Upon certification, these companies will get benefits such as support for participation in exhibitions, PR support in corporate and mass communication, PR support in collaboration with the country's largest website for technology information search "IPROS", use of the Kawasaki Product Manufacturing Brand logo mark, and so on.

Responsible Department: Economic and Labor Affairs Bureau, Industrial Promotion Department, Industrial Promotion Section

Tel: +81-44-200-2324

E-mail: 28kogyo@city.kawasaki.jp



Joint research in terms of environmental technologies conducted by collaboration with various stakeholders

These are research projects related to environmental technologies that are carried out jointly by Kawasaki City, companies, research institutes, NPOs, etc. Kawasaki City supports the research and development of such environmental technologies through the provision of research venues and the creation of opportunities for environmental technologies development and so on.

Responsible Department: Environmental Protection Bureau, Environment Research Institute (Urban Environment Section)

Tel: +81-44-276-8964

E-mail: 30sotosi@city.kawasaki.jp

Kawasaki environmental showcase and model businesses

Excellent ideas with great appeal to the general public that use city facilities with an expected energy conservation and creation effect using environmentally-friendly products and services will be implemented as businesses of Kawasaki City.

Responsible Department: Economic and Labor Affairs Bureau, International Economic Affairs Office

Tel: +81-44-200-2313

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