



Gangnam-gu Carbon Mileage System

Background

Currently, Korea is ranked tenth in energy consumption, ninth in greenhouse gas emission, and its growth rate of greenhouse gas emission is the highest among OECD members. Korea is expected to be included in Annex I by 2013, when the second commitment period of the Kyoto protocol of 2005 ends. Therefore, it is necessary to reduce and manage the greenhouse gas emission according to the international standards.

For responding to climate change and establishing a basis for the country's low carbon green growth, it is necessary to convert the energy saving and management strategies into the online energy management system, which all residents (houses, corporations, school, and public institutions) can participate in. The online energy management system can provoke the voluntary participation from the residents as well as the facility improvement of the high energy consumption companies through analyzing their energy usage. In addition, the system helps everyday energy saving by giving monetary rewards to residents who reduce carbon dioxide emission by saving electricity, city gas, water and other resources.

Gangnam-gu in Seoul cannot execute the effective energy saving policy without efficient energy management policies about buildings and houses, where large buildings consist of 76.4%, houses, including large-scale apartment complexes, of 19.8%, and public institutions of 3.2%. ■

Objectives

- To take active part in the government policy and national efforts to fight against global warming
- To lead corporations or public sectors in their conversion to low emission facilities
- To raise awareness and interest for climate change to spread energy efficient habits
- To pursue easy, daily energy saving habits ■

Progress

In May, 2007, the carbon mileage system was established first in Korea. It practiced energy saving through inputting energy usages into the carbon mileage system manually, which were collected from corporations, houses, schools, and public institutions. It also gave rewards to participants based on the saved amounts.

Problem: impossible to obtain data validity due to registration process and manual input method of the energy usage

Solution: In October 2008, the system was automated through cooperation with KEPCO, Daehan City Gas, and the Office of Waterworks in Seoul as energy suppliers. Therefore, data validity was obtained and the framework was established for expanding the carbon mileage system throughout the country.

Since April 2008, the automatic system enables registered members to check the amount of energy usage and the greenhouse gas emission rate without any manual inputs. Also, the system is improved to provoke the everyday practice of saving energy by showing current carbon mileage online. ■

Promotion to spread the Carbon mileage system

Since May 2008, student education classes have been conducted for expanding the carbon mileage participation.

- Operate education classes targeted to about 80,000 students in 75 schools in Gangnam-gu for three months.
- Educate students ways and activities for practicing energy saving and instruct to carry them out at home.
- Give students an assignment on joining carbon mileage system.

Execute the policy to set the priority for supporting educational costs for each school, based on the number of student's memberships in carbon mileage system.

- Promote and educate residents for active participation.
 - Provide educating classes for carbon mileage system at various meetings held in the community centers.
 - Promotions by heads of *Tong* and *Ban*, subdivisions of city districts
 - Distribute 300,000 leaflets to residences, corporations, schools, and public institutions; provoke active participations
- Citizen practice groups promote the energy saving.
 - Gangnam-gu citizen practice group of 550 members promote active participations to corporations and houses. ■

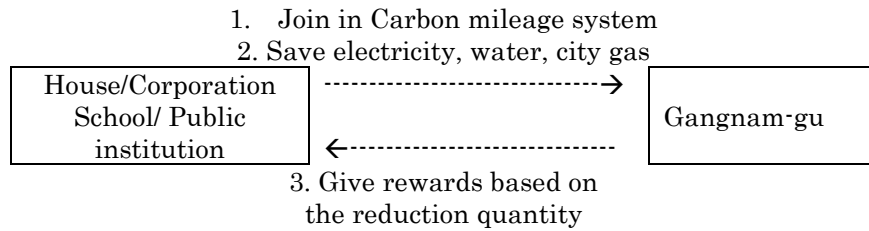
Carbon mileage homepage



[Note] The main phrase saying “Decrease carbon dioxide emission, and increase your benefits.”

[Source] <http://energy.gangnam.go.kr>

^ The Flow of Carbon Mileage Works



Statistic Results

(Second half of 2008)

Table 1. the number of Greenhouse gas members (As of Dec. 2008)
(Unit: person)

Total	House	Corporation	School	Public institution
87,928	85,591	2,240	59	38

Table 2 Greenhouse gas emission variation
(The second half of 2008 – in comparison with the second half of 2007)

Division	Total	House	Group (corporation , school, public institution)
Reducing Members	46,654	45,322	1,332
Reduced Quantity(ton)	-11,937	-6,420	-5,517

Table 3. Reducing quantities of Greenhouse gas emission based on the type of energy (Unit: kg)

Division	Total	Electricity	City gas	Water
Total	- 11,936,844	- 4,799,572	- 308,536	- 6,828,736
House members	- 6,419,811	- 3,297,789	- 229,883	- 2,892,139
Corporation members	- 5,175,285	- 1,310,448	- 72,218	- 3,792,619
School members	- 175,650	- 139,780	- 6,638	- 29,232
Public institution members	- 166,098	- 51,555	203	- 114,746

Table 4. A pure variation of Greenhouse gas emission

Division	Total	House	Group (corporation , school, public institution)
members	87,928	85,591	2,337
Quantity(ton)	- 2,686	- 916	- 1,770

Table 5. Reducing quantity of Greenhouse gas emission and reward payments based on the type of members (Unit: ton, U.S.\$)

Division	Reducing Quantity	Social Cost Reduction	Reward Payments
Total	11,937	8,160,000	340,100 (45,342 household)
House	6,420	4,370,000	320,000 (45,322 household)
Corporation	5,175	3,560,000	14,100 (10 corporations)
School Public Institution	342	230,000	6,000 (10 institutions)

Table 6. the number of Carbon mileage members in 2009 (as of May 2009) (Unit: person)

Total	House	Corporation	School	Public institution
126,620	122,760	3,394	69	37

Accomplishment

- To Realize the country's systematic energy management policy
 - The existing energy management policy, centered on the campaign, has turned into the one promoting for active participations from citizens. It provides opportunities for citizens from residence, school, corporation, public institution, etc. to participate in energy saving campaigns, by joining in on-line carbon mileage system. Particularly, high energy consumption corporations have been led to improve facilities through energy consumption analysis, and they contribute themselves to establish the framework for low carbon green growth.
 - Because on-line carbon mileage system can manage saved energy in off-line more effectively, the central government manages locally saved energy while local governments take up the middle management role. If spreading throughout the country, there can be a synergy effect.

- To secure greenhouse gas emission rights
 - Sell reducing quantities of greenhouse gas through projects for reducing greenhouse gas emission, especially P-KCER project, in preparation for the 2013 Annex I classification. Secure the rights for greenhouse gas emission as a major project of the country who responds to the world's climate change.
 - ※ **P-KCER (Program-Korea Certified Emission Reduction)**
Measure, register, and manage reducing quantities of greenhouse gas, generated by citizen's voluntary efforts, and establish the participatory type of greenhouse gas registration program. (Generated quantities are called as P-KCER)

- To strengthen national competitiveness by obtaining a patent on Carbon mileage system for the first time in Korea.
 - Carbon mileage system is "remote-monitoring system for reducing greenhouse gas." A patent on this system was granted on March 18, 2009 for the first time in Korea, after making up for weak points with efforts and studies of public officials. It has strengthened national competitiveness related to execution of efficient energy saving policies, including effective management of reducing greenhouse gas and practicing energy saving.

- To accomplish the reduction on greenhouse gas emission by operating carbon mileage system.
 - During the second half of 2008, the operation of carbon mileage system saved social costs of 6.8 million dollars by reducing 11,937 tons of energy (greenhouse gas emission).
 - 2009 Membership goal: 170,000 households

- To expand the system throughout the country
 - The carbon mileage system was reported to the President, Ministers, Governors of provinces, and citizen representatives of various cities, etc. at the local policy briefing session regarding green growth held in Gyeongnam Province Government office in May 2009. It paved the way to spread the system throughout the country as a model for Green Korea Creative Administration and contributed to low carbon green growth. ■

The article has been provided by the Gangnam-gu(District) Government of Korea (www.gangnam.go.kr).

OECD/KOREA Policy Centre releases Issues Brief to provide you with timely and relevant information on public governance.

Public Governance Programme, OECD/KOREA Policy Centre

87 Hoegiro Dongdaemun, Seoul 130-868, Republic of Korea

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD/KOREA Policy Centre or of the Organisation for Economic Co-operation and Development.