

# Institutional Framework to Foster People's Behavioral Change for LCS

Climate Experts, Ltd. & PEAR Carbon Offset Initiative, Ltd.

Naoki MATSUO

*n\_matsuo@climate-experts.info, n\_matsuo@pear-carbon-offset.org*

It is a challenge to change the behavior of consumers who have no obligation to do so. Two concrete and one imaginary proposals are presented below.

## **Carbon Management Practice Driven by Carbon-Offset**

PEAR Carbon Offset Initiative considers that the offsetting can serve as a “trigger” to change the behavior of people (while it also provides real reductions somewhere else).

The original concept of carbon offsetting provides opportunities to let them realize and recognize carbon footprints of various consumption modes (possibly calculated by LCA). This information can be disseminated at each consumption point with the collaboration of B-to-C companies.

In addition, PEAR considers the importance of “carbon management” practices and provides a Web-based “carbon account” for each individual as a platform to manage his/her carbon footprints as well as to offset them. New IT system enables the automatic recording of carbon footprints in the account at the time consumption occurs. Provision of simple advices on energy-saving is also an additional service.

## **Household-level ETS in Minami-Senrioka Civic Zone**

More than 1,200 households will live in a new civic zone “Minami-Senrioka” from March 2010. It incorporates not only the top-level hardware standards for buildings, *etc.*, but also many innovative but replicable measures to change the people's behavior for a low carbon society.

One is the accurate and real-time monitoring system with custom-made energy saving advice system. The major obstacle for people (to change their behaviors) is that they neither know how much CO<sub>2</sub> they emit from what kind of behaviors, nor know how to save energy effectively. Even if some incentive framework is introduced, it will not work properly without such information.

Minami-Senrioka is to introduce precise and real-time (every 5 minutes) household-wise CO<sub>2</sub> inventory information for major appliances together with other parameters such as temperature. Using such information, optimized interactive energy-saving advices are provided.

In addition, household-level ETS is to be introduced as the incentive framework. At this moment, auction-based cap-and-trade ETS is envisaged to be introduced. It is unrealistic to penalize non-compliant households for the time being. Instead, such households will be ruled out from incentives (in the form of local currency) that will be provided to compliant households.

## **Individual-level ETS as the Ultimate Form of ETS [Dual-economy System]**

In general, ETS cannot cover whole economy. This proposed ETS covers all CO<sub>2</sub> emissions from fossil fuel combustion. The key is to allocate CO<sub>2</sub> quota to each individual and regulate up-stream companies which import or produce fossil fuels. The companies shall surrender emission quota at the end of the period which is equivalent to the amount of fossil fuel they sold. Companies add the “carbon price (with the unit of kg CO<sub>2</sub>e)” for their commodities or services to the their usual market prices (*e.g.*, in \$), so that the consumers shall pay for the “CO<sub>2</sub> quota”.

The CO<sub>2</sub> quota can be realized as a currency and recognized similar to VAT which is levied for “additional value” at each consumption mode, so that CO<sub>2</sub> quota plays the role of “currency” which is deeply implanted into the whole economy.