

Reviewing the Japanese Emission Trading Scheme: Lessons and Problems

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I Kyoto Protocol Target Achievement Plan and the Keidanren Voluntary Action Plan

1 Current Situation of Japanese Climate Change Countermeasures

- GHG emitted in 2007: 9.0% increase over 1990 level
- Household Sector: increased, however, still low level from the global viewpoint
- Kyoto Protocol Target Achievement Plan was reformed by Cabinet Decision of March 2008---It focuses on the Keidanren Voluntary Action Plan for the Environment

2 Current situation of the Keidanren Voluntary Action Plan

- CO2 emission in 2006 was reduced by 1.5% from 1990 level----however, this number assumes that the purchase of a large amount of CDM is regarded as the reduction of GHG
-----The stoppage of Nuclear Reactors due to the Chuetsu-Oki Earthquake resulted in more shortage of CDM
- In 2007, 11 industries raised their targets.

3 Limitation of the Keidanren Voluntary Action Plan

- 1) The target lacks consistency with the Kyoto protocol
- 2) It lacks cost-effectiveness
⇒ It is not a system for a drastic reduction.
- 3) It allows free-riding. This system does not reward those who make efforts.

II Japan's Voluntary Emissions Trading Scheme(JVETS)—1 Contents

- MOE started JVETS in 2005.
- MOE subsidizes installations reducing CO2 emissions, makes companies commit to a certain volume reduction of GHG emission, and admits the trade of emission allowances.
By these actions MOE supports companies that actively try to reduce CO2 emissions and realizes the reduction of GHG in a highly reliable and cost-effective way.

(1) Types of participants ▪

① Participants who set targets (Type A)

Companies that get subsidies for installations reducing CO2 emissions and commit to a certain volume reduction of GHG emission (amount of subsidies: 1/3 of total cost)(1st phase-31, 2nd phase-58, 3rd phase-55)

② Participants who set targets (Type B,C)

Companies that commit to emission reduction without subsidies (3rd phase-6)

③ Trading participants

(2) Schedule of JVETS

- 1st year: installation renovation period
- 2nd year: implementation of reduction countermeasures period
- 3rd year: adjustment period

(3) Setting emission targets of participants

- Boundary of emission volume measurement: For each establishment (e.g. factory)
- Basis year emission volume: average volume of actual emission volume in the past 3 years
- Target volume: 【basis year emission volume】—【expected emission reduction volume】
- Target gas: Only CO₂

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(4) Verification and Surrender

- Measurement of emission volume: Third party verification by verifying organization
- Tradable allowances: JPA; jCER, jERU (jERU could only be traded in the third phase)
- In case companies failed to surrender: Companies return the received subsidies and the administration make their names public

(5) Results and present situation

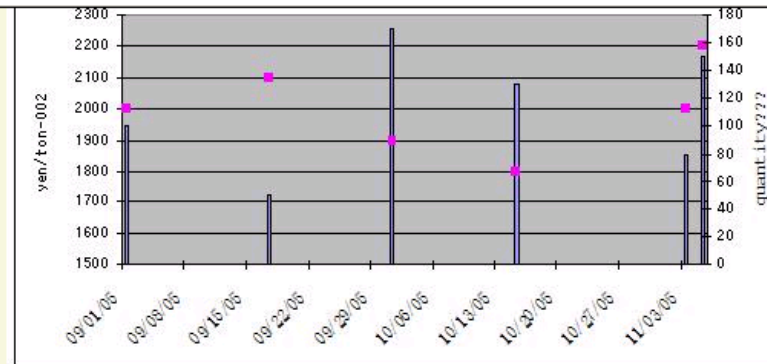
- Since 2005 a total number of 288 companies have participated.
 - Participants in the third phase (FY2007) reduced CO₂ by 340,000t-CO₂ in FY2008 equivalent to 23% of the emission volume of the basis year. The number highly exceeded expected reduction volume equivalent to 8.2% of the emission volume of the basis year. In the third phase there were 23 transactions totaling 34,227t-CO₂.
 - Now JVETS is treated as one type of the Experimental Nationally Integrated Market for ET.
 - Now only establishments that are not included in the Voluntary Action Plan, mainly, small and medium-sized enterprises are dealt with in JVETS.
- After October 2008 participants of JVETS should set a target of CO₂ emission in the Experimental Scheme, and then the target should be reduced by the expected reduction due to a subsidy, when they had gotten the subsidy.

3 Evaluation of JVETS

○ Significance of JVETS

- It has a Registration system.
- Pre-allocation type of ETS
- First Cap & Trade scheme in Japan
First Trading Scheme of valuable emission allowances
- Monitoring and verifying guidelines are set in accordance with ISO.
- "Emission volume management system" is established.
- Mediation system of Website supporting emission trading (GHG-trade.com) is established.

GHG-trade.com image



注文リスト

排出権種類	売買の別	売り数量	価格	買い数量	注文日時
jCER	買い		30	450	2006/03/22 01:22
jCER	買い		200	2,000	2006/03/23 15:20
jCER	買い		1,000	20	2006/03/22 09:40
jCER	売り	5	1,000		2006/03/22 09:44
jCER	売り	66	4,576		2006/03/23 00:05
jCER	買い		5,678	4,674	2006/03/23 00:08
jCER	売り	927	8,888		2006/03/23 00:14
jCER	買い		10,000	10	2006/03/22 13:49
jCER	買い		10,000	50	2006/03/22 09:43
jCER	買い		10,000	10	2006/03/22 14:05

+ 新規注文

III Introduction of an Experimental Nationally-Integrated Market for Emission Trading

- In 2008 the Japanese Government introduced an Experimental Nationally-Integrated Market for Emission Trading.
- 521 companies applied for Experimental ETS(1.1)).

1 Contents

- 1) **Experimental** ETS
- 2) Domestic Credits (i. e. Domestic CDM)
- 3) Kyoto **Mechanism** Credits

2 Participants in this Scheme

- 1) Participants who set targets
 - ① pre-allocation(only absolute target can be used):
90% is commitment reserve
 - ② post-account settlement (energy-intensity target can be used): only the surplus can be traded
- 2) Participants who do not set targets (i.e. Trading Participants)

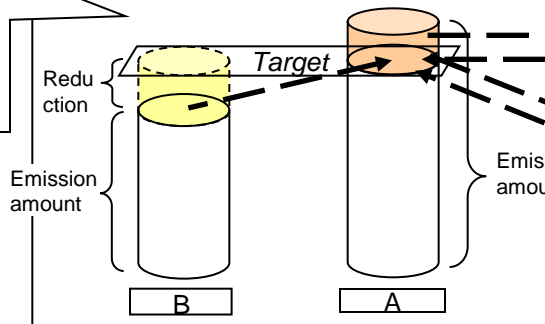
Experimental Introduction of an Integrated Domestic Market for Emissions Trading

Integrated Domestic Market

Experimental emissions trading scheme

Participating corporations set their own emission reduction targets (absolute- or intensity-based) and make efforts to achieve. The following allowances and allowances can be used to achieve the targets.

Target is set consistently with VAPs. Government examines each target's validity.



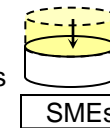
Domestic credits

Joint reduction projects by large corporations and small- and medium-scale enterprises (SMEs)

Joint projects

Financial, Tech. Resources

Domestic credits



Emission reductions

SMEs

Kyoto Mechanisms credits

[GHG reduction from projects abroad]

JVETS is incorporated into this scheme as one of participating options.

Achievement of targets is to be reflected in the "voluntary action plan" and contribute to achieving the 6% reduction target.

Key points

- This scheme prepares various options for **substantial emissions reduction** by various entities including large corporations and SMEs in every sector.
- In the **integrated domestic market**, various allowances and credits are available for target achievement.
- Follow-up is scheduled at the beginning of 2009 and in the fall 2009.

“Experimental Introduction of an Integrated Domestic Market for ET” Result of a Recruitment

(Jul. 6 2009)

(Ref. 1) Number of Participants with Targets in Each Sector

Industrial Sector	Number of Applicants	Number of Participants
Electricity	9	9
Oil Refinery	9	9
Gas	4	4
Steel	2	74
Chemical	41	41
Paper	10	10
Cement	9	9
Electric Appliances	21	21
Automobile Manufacturing	1	58
Non-ferrous Metal	7	7
Rubber	21	21
Convenience Stores	5	5
Trading Companies	10	10
Banking	5	5
Nonlife Insurance	3	3

Industrial Sector	Number of Applicants	Number of Participants
Brewing	1	1
Medical Suppliers	2	2
Aviation	2	2
Freight Transportation	3	3
Industrial Waste Disposal	2	2
Other Industrial Sectors	47	47
Other Office Sectors	9	9
Other Transportation Sectors	11	11
MOE: Voluntary Emissions Trading Scheme (JVETS)	176	176
Total	392	521

(Ref. 2) Coverage of Emissions from Participating Applicants (Estimates)

About more than 70% of CO2 emissions from industry in FY2007.

3 Characteristics of this scheme(1)

- 1)It is based on the Voluntary Action Plan.-
- 2)Among those who set targets only those who buy and sell emissions should open accounts.
- 3)In order to prevent the “money game” (i.e. overspeculation), the Japanese government introduced several points in this scheme.

3 Characteristics of this scheme(2)

4)Prevention of “money game”

- post-account-settlement type of ETS.
- commitment reserve(90%) for pre-allocation type of ETS
- Banking and borrowing are permitted
- The government will consider the possibility of providing participants with price indicators.
- The government will consider and implement measures to prevent a sudden price rise caused by overspeculation.

4 Comments (1)

- It is a step towards the full-scale ETS, however, it has 4 defects.

1) The target is voluntary and sometimes not enough to meet the national target for the period between 2008 and 2012.

2) It will allow participation not only by individual firms and establishments but also by **a group of all major companies in a certain business sector**.---- Emission Trading will not be considered as a corporate management strategy.

4 Comments (2)

- 3) Low Possibility of Trading ---because of the low possibility of opening accounts
- 4) Low Possibility of Verifying the emission of facilities by the third-party verifiers

IV ETS of Tokyo Metropolitan City

In June 2008

Tokyo introduced the first mandatory total amount reduction of CO₂ and the first mandatory ETS in Japan.

1 Characteristics

- (1) The first mandatory total amount reduction of CO₂ and the first mandatory ETS in Japan
 - 1) total amount reduction
 - 2) mandatory scheme
 - 3) a kind of cap and trade scheme
- (2) The first city- type total amount reduction scheme in the world---including office buildings
- (3) Trading of reduced (i.e. surplus) amount below the target

2 Contents(1)

- (1) Coverage: Large CO2 emitters, such as buildings and factories---consumption of fuels and electricity is over 1,500 kiloliters per year
- (2) Phase: 5 years---1st phase:FY2010-2014
2nd phase:FY2015-2019
Monitoring and reporting: every year
- (3) Gas covered: CO2 originated from energy sources
- (4)Cap setting: The level of cap will be set based upon the following two criteria.
 - Criteria 1: TMG's Target of GHG emission reductions (25% reduction by 2020 from the emissions level of 2000)
 - Criteria 2: Reduction potentials of the emitters to implement CO2 reduction measures

2 Contents(2)

(5) Allowance allocation:

Baseline year emission \times 5(years)

\times Compliance factor (e.g. 0.9)

- mainly, Grandfathering / partly, Benchmarking

(6) Object of trade

- 1) Reduced (i.e. surplus) amount below the target
 - 2) Reduction credits produced by small and medium-sized enterprises from energy-saving measures
 - 3) Reduction credits produced by factories etc. out of Tokyo
 - 4) Green Energy Bond credits produced by renewable energy
- Kyoto mechanism credits cannot be used in trade for the timebeing. TMG is adopting wait and see approach.

2 Contents (3)

(7) Compliance assessment:

Compliance assessment will take place after the completion of each phase (i.e. after 5 years)

-1st phase:Mid-2015/ 2nd phase: Mid-2020

(8) Penalty for non-compliance

- TMG Commands the non-complying establishment to reduce their emission by the shortage amount multiplied by 1.3
- If this command is not complied,
the disclosure of the violation facts, and/or
fine under 500,000 yen, and/or
a type of surcharge collected according to the unfulfilled amount of emissions
is imposed.

2 Contents (4)

(9) Monitoring, Reporting, Verification:

Participants are required to report their verified emissions to TMG annually based on “TMG Monitoring/ Reporting Guideline” and “TMG Verification Guideline”.

(10) Registry: Any transactions of allowance are operated on an electric registry established by TMG.

(11) Banking and borrowing of allowances:

Banking is allowed./ Borrowing is not allowed.

3 Comments

- (1) How to estimate the trading only for the reduced (i.e. surplus) amount?
- (2) How to estimate the fact that Kyoto mechanism credits cannot be used in this scheme? ---This is so in order to have actual reduction in Tokyo or in Japan.
- (3) Introduction of ETS in a city, local government ▪ ▪ ▪ Harmonization with the national scheme

V Causes for concern regarding ETS and Policy- mix in Japan

1 Causes for concern regarding ETS in Japan

- 1)carbon-leakage, international competitiveness
- 2)controlled economy
- 3)unfair allocation
- 4)not a big incentive for technology innovation
- 5)continuous high price of ETA
- 6)high administrative cost

2 How to deal with the issues?

- 1) Continuing the free allocation for the specific
industrial sectors
Border adjustment
Sectorial approach
-----Decoupling of the Post-2012 issue and the
introduction of ETS in Japan

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5) Cost-containment methods

- banking
- borrowing
- price-cap
- utilization of external credits
- utilization of foreign allowances
- coordination by a market management organization

3 Policy-mix

- ETS
- Carbon Tax
 - especially for the transportation sector
- Renewable energy
 - feed-in-tariff for promoting renewable energy

VI Japanese version of ETS?

- 1 Trading only of reduced (surplus) amount
---Strong allergy against “money game”, overspeculation and continuous high price as in the case of crude oil in 2008
- 2 Allocation for indirect emitters approach
 (“Option2” of the report *)

* The Meeting to Research Domestic ETS in MOE, “Interim Report” (May, 2008)

Option1 Upper Stream Allocation

Option2 Down Stream Allocation--- Allocation for indirect emitters approach

Option3 Down Stream Allocation---Allocation for direct emitters approach

Option4 Down Stream Allocation--- Allocation for indirect emitters approach + Industry is only responsible for the intensity improvement

VII Statement by YUKIO HATOYAMA PM of Japan at the UN Summit on Climate Change on Sep.22 2009 (excerpt)

[Reduction targets]

Allow me to touch upon the issue of reduction targets for greenhouse gas emissions.

Based on the discussion in the Intergovernmental Panel on Climate Change (IPCC), I believe that the developed countries need to take the lead in emissions reduction efforts. It is my view that Japan should positively commit itself to setting a long-term reduction target. For its mid-term goal, Japan will aim to reduce its emissions by 25% by 2020, if compared to the 1990 level, consistent with what the science calls for in order to halt global warming.

This is a public pledge that we made in our election manifesto. I am resolved to exercise the political will required to deliver on this promise by mobilizing all available policy tools. **These will include the introduction of a domestic emission trading mechanism** and a feed-in tariff for renewable energy, as well as the consideration of a global warming tax.

However, Japan's efforts alone cannot halt climate change, even if it sets an ambitious reduction target. It is imperative to establish a fair and effective international framework in which all major economies participate.

The commitment of Japan to the world is premised on agreement on ambitious targets by all the major economies.

On the establishment of the domestic emission trading market, we will promote exchange of information on systems of other countries, and hold discussions on the issue, bearing in mind the impact on international competitiveness as well as possible future linkages among countries.

VIII Legal perspective for Japan's full-scale ETS in the future

1 Allocation of emission allowances

- Free allocation and/or auctioning for installations.
- Allocation of emission allowances is regarded as an administrative act.
- An allowance of emission is a tool for the compliance of the regulation.
- An allowance of emission is an intangible property when it is traded in a market.

2 Two approaches for domestic emission allowances

(1) The 1st approach

- Those who emit more than a specific volume of GHG are legally required to get an administrative permission.
- An emission allowance is a permitted volume as a condition of administrative permission.
- A trade of emission allowances is a transfer of the Permitted (divisible) status by the administration.

- The 1st approach fits the IPPC system in EU where air pollution substances and CO2 are regulated by an administrative permission.
- An emission allowance in Germany in particular, is a Berechtigung permitted by the administration and it belongs to Public Law /An emission allowance belongs to Private Law when it is transferred.

(2)The 2nd approach

- Those who emit more than a specific volume of GHG are legally required to hand in to the administration a certain volume of emission allowance at the end of the term.
- When emitters are in shortage of emission allowances at the end of the term compared to a certain volume fixed at the beginning of the term, they fail to meet the obligation.

- The 2nd approach fits the Japanese system where air pollution substances and CO₂ are regulated by a reporting system which is connected to the administrative modification order.