Japan's Voluntary Emissions Trading Scheme (JVETS)

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Global Environment Bureau,
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What is Japan's Voluntary Emissions Trading Scheme (JVETS)?

Ministry of the Environment, Japan (MOEJ) has started JVETS to accumulate knowledge and experience about emissions trading in Japan and to support CO2 emissions reduction activities by Japanese business operators.

Scheme Overview

The scheme aims to support voluntary CO2 reduction activities by business operators and to ensure their target achievement in a cost-effective way using (1) a subsidy to facilities which contribute CO2 emissions reduction, (2) participants' commitments to reduce CO2 emissions below their base year emissions and (3) emissions trading.

Merits for scheme participants

- (1) Subsidy to facilities which contribute CO2 emissions reduction
- (2) Opportunity to take third-party verifications of their CO2 emissions
- (3) Sales revenues from their surplus emission allowances
- (4) Acquisition of know-how on domestic emissions trading
- (5) Acquisition of know-how on the established CO2 emissions calculation system
- (6) Reduction of energy costs for JVETS participants

JVETS in Kyoto Protocol Target Achievement Plan

Kyoto Protocol Target Achievement Plan (Cabinet Decision on March. 28, 2008)

(6-3) Domestic Emissions Trading System (p. 59)

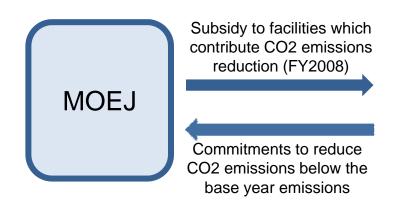
In order to accumulate knowledge and experience concerning certain and cost-efficient emissions reductions and trading, etc., the Government of Japan provides economic incentives for the corporations that make efforts to achieve reduction targets they have determined themselves, and has been implementing voluntary participation domestic emissions trading utilizing the trade of emissions quotas since FY2005. After the end of the first round in the summer of 2007, taking into account the results gained, the government will expand the system for the purpose of accumulating more useful knowledge and experience by increasing participants, diversifying participating methods, making verification process more effective, etc.

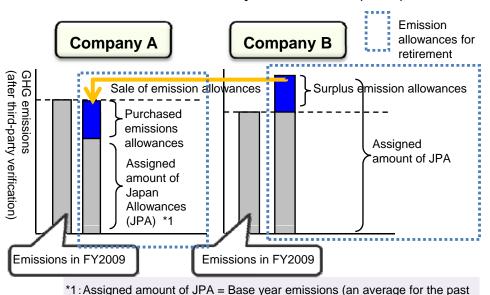
The domestic emissions trading system, with including a viewpoint of materializing Japan's intermediate global warming strategy, and sufficiently considering the considerable reduction effects expected by the evaluation and verification of FY 2007 because of "Expansion and Reinforcement of the Voluntary Action Plan," a central pillar of industrial sector policy, is an issue that must be comprehensively studied about the wide range of discussion points includes a comparison of the domestic emissions trading system with other methods and their effects, the impact on industrial activities and the national economy, international trends, etc.

JVETS overview

(1) Scheme outline

- Launched by MOEJ in 2005
- Supports voluntary CO2 reduction activities by business operators and ensures their target achievement in a cost-effective way using a subsidy to facilities which contributes CO2 emissions reduction, participants' commitment to reduce CO2 emissions below their base year emissions, and emissions trading
- Participants of JVETS are counted as participants of Japanese Experimental Emissions Trading Scheme.
- Candidates should be factories and offices which are NOT included in Voluntary Action Plan (VAP)



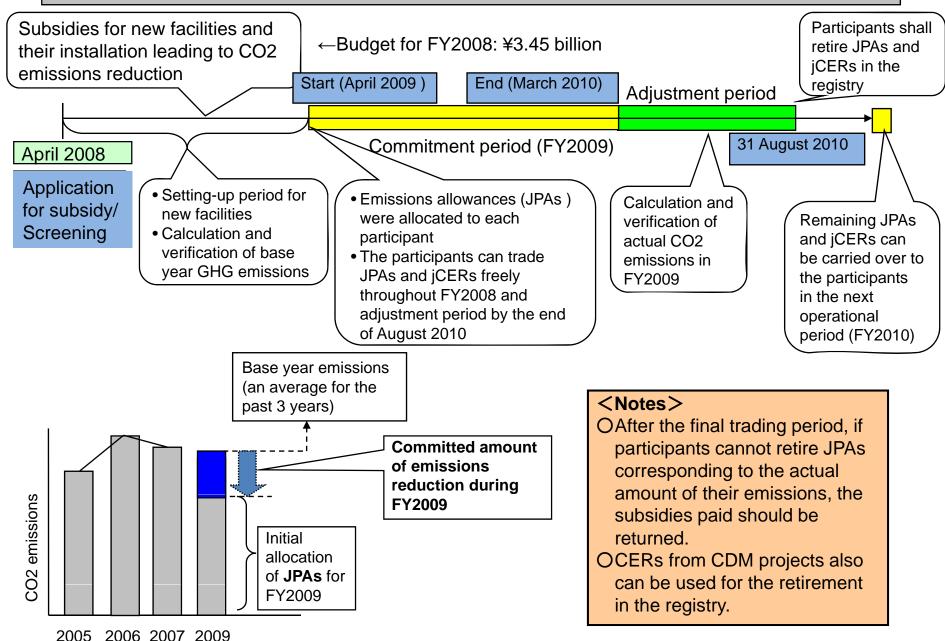


3 years)-Expected emissions reduction

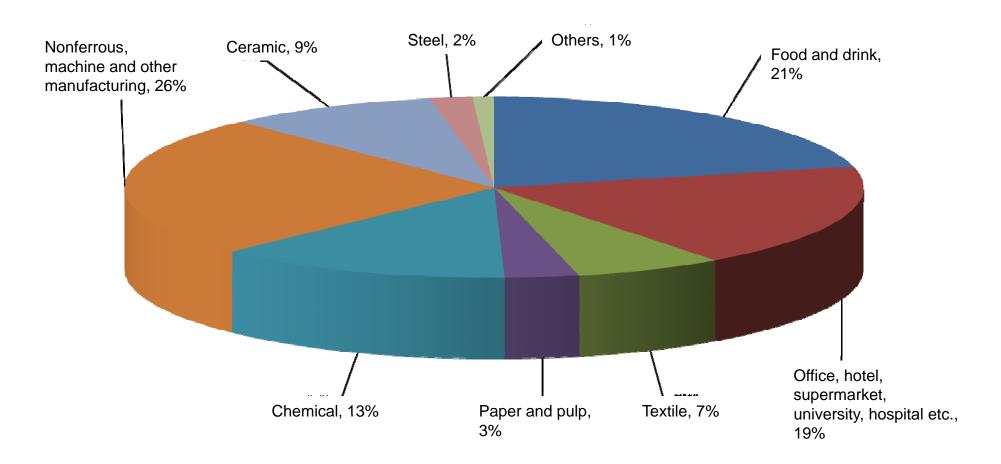
(2) Achievements

- Total participants: 232 companies
- Emissions reduction in FY2007 by 2nd phase (FY 2006) participants: 280,192t-CO2 (25% of the total emissions in the base year emissions) cf. their original emissions reduction plan: 19% of the total emissions in the base year emissions
- Total transactions in the 2nd phase: 51 transactions (54,643t-CO2 in total) with the average price of ¥1,250/t-CO2.
- Development of infrastructure for emissions trading: Emissions monitoring, reporting and verification guidelines, the registry for emissions trading, and the emissions management system

Japan's Voluntary Emissions Trading Scheme (JVETS) 4th phase



Industrial classification of JVETS participants (1st to 4th phases)



^{*}If one company registered its two branches, they were counted individually.

Main participant list in JVETS (1st to 4th phases)

1st phase (2005-2007)

Nippon Electric Glass Co., Ltd. Nissan Shatai Co., Ltd.

Mitsubishi Gas Chemical Co., Inc. Kitasenjyu branch, LUMINE Co., Ltd.

Asahi Fiber Glass Co., Ltd. The SEIYU Co, Ltd.

Teijin Techno Products Ltd. INAX Co.

Yamazaki Baking Co., Ltd. Panasonic Electric Works Gumma Co., Ltd. etc.

2nd phase (2006-2008)

Rengo Co., Ltd. INAX Co.

Tokai Senko K.K. Victor Company of Japan, Ltd.

TOTO Ltd.

Suntory Shokuhin Kogyo Ltd.

House Foods Co.

3rd phase (2007-2009)

Toyo Kohan Co., Ltd.

Teijin Fibers Ltd.

Daiwa House Industry Co., Ltd.

Mitsubishi Plastics Inc.

4th phase (2005-2007)

Takeda Pharmaceutical Co., Ltd.

TOYOBO Co., Ltd

Showa Denko K.K.

Sumitomo Light Metal Industries Ltd.

Hitachi Seisen Ltd.

Meiji Dairies Co. etc.

Sumitomo Rubber Industries Ltd.

Kikkoman Co.

Suntory Ltd.

Calpis Co., Ltd.

Nippon Milk Community Co., Ltd. etc.

Isuzu Motors Ltd.

Epson Imaging Devices Co.

New Otani Co., Ltd.

Family Mart Co., Ltd. etc.

Source: http://www.env.go.jp/earth/ondanka/det/koubo-result.html

Key features of JVETS

(1) First carbon pricing and emissions trading in Japan

- Transactions are available on request for 10am-6pm (JST) on business days
- Settlement is completed by emissions allowance transaction

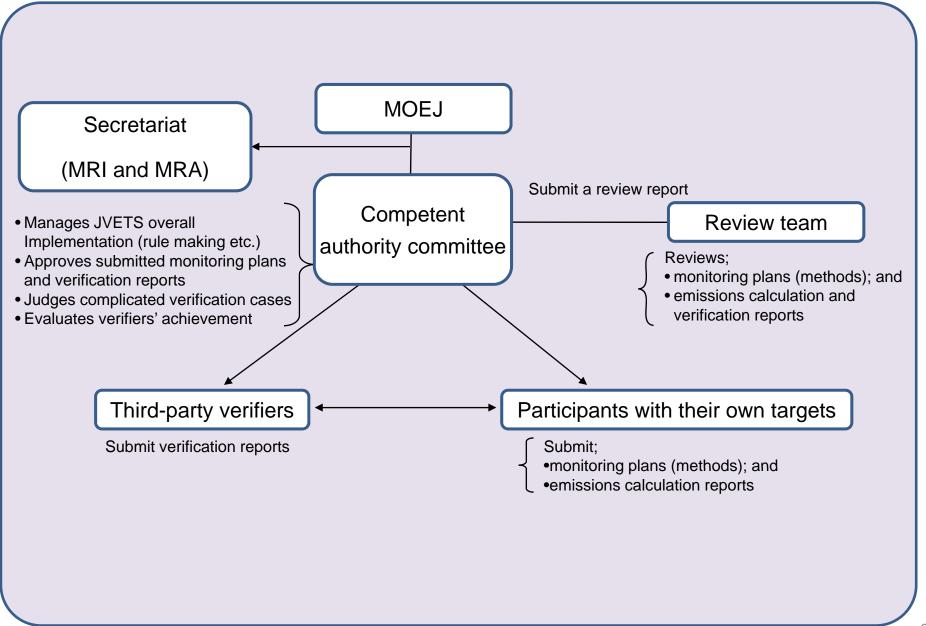
(2) Development of infrastructure for emissions trading

- IT system: the registry system, emissions management system, and trade matching system
- Guidelines: the monitoring and reporting guidelines, emissions verification guidelines
- Form of documents for a transaction contract
- Proposals for accounting treatment of emissions allowances in emissions trading

(3) Introduction of third-party emissions verification

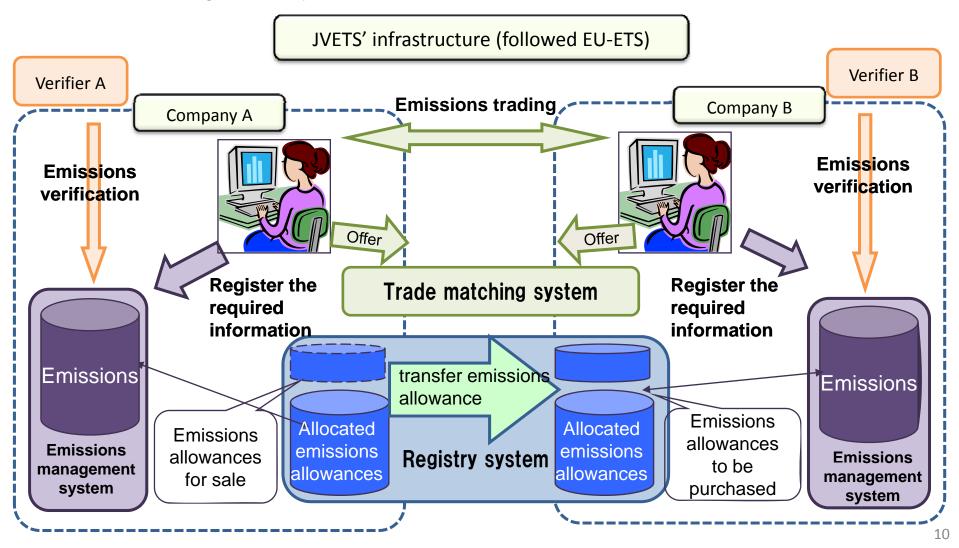
- Third-party verifiers conduct emissions verification for participants' base year emissions and their reduced emissions
- Third-party verification ensures credibility of emissions allowances as "merchandise"

JVETS 4th phase (FY2008) operation system



JVETS Operation Infrastructure

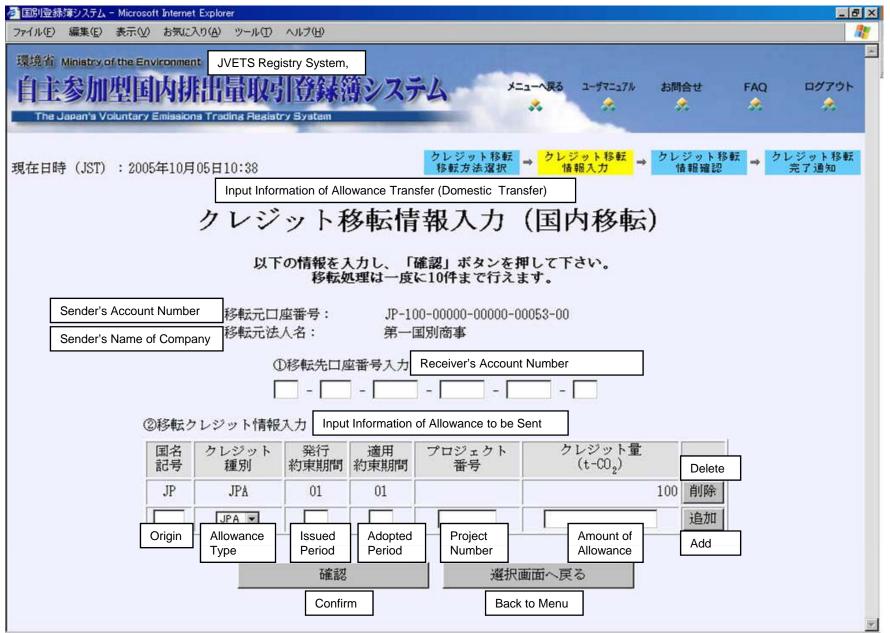
One of the big contributions of JVETS is that it has established basic infrastructure (the emission monitoring, reporting and verification guidelines, registry system, and emissions management system etc.) which is required for smooth operation.



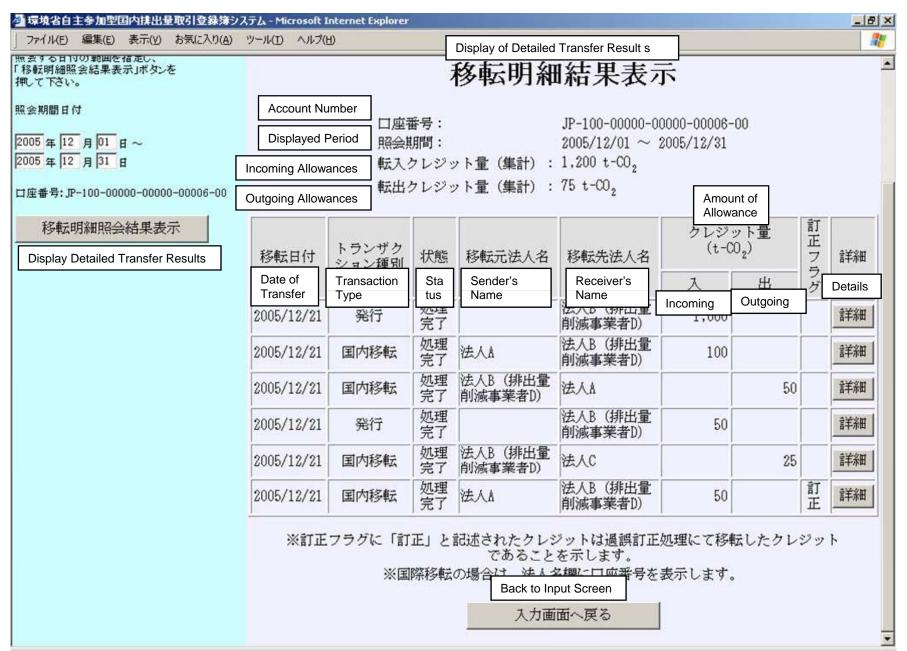
Three core systems of JVETS

System	System overview	Contribution
Registry system	 Manages the initial allocations (JPAs), emissions allowance transactions (trading) and retirement Manages all accepted allowances and credits in JVETS (JPAs and jCER) Emission allowance transaction time: 10am-6pm (JST) on business days 	 No double counting and the same security level of allowance retirement as the national registry in Kyoto Protocol Open access to the web-based registry system for all participants
Emissions management system	 Based on the emissions monitoring and reporting guidelines, all participants' emissions base years and their actual emissions amounts in their commitment periods are stored under the system. The data will be used for third-party verification. Adopts existed monitoring methods (mainly energy purchasing bill) EU-ETS verifiers voluntarily use similar management systems 	Integrated emissions calculation method Streamlined emissions calculation and verification processes Database of all stakeholder information
Trade matching system ("GHG-trade.com")	 Encourages emission allowance transactions among the participants Requires pre-contacts before sales of allowances Updates allowance prices and amounts for participants' transactions on the notice board. (After confirmation of the contract details, participants should pay to their clients' bank accounts and apply for allowance transactions in the registry system.) 	Opportunities for the participants to find their trading counterparts through the Internet

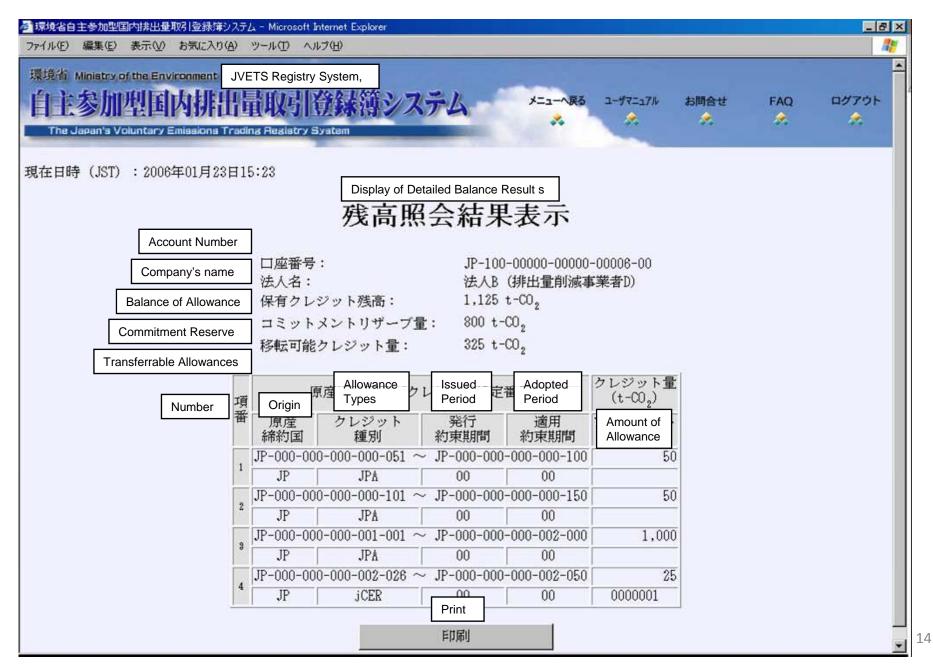
Registry System of JVETS: Image (1)



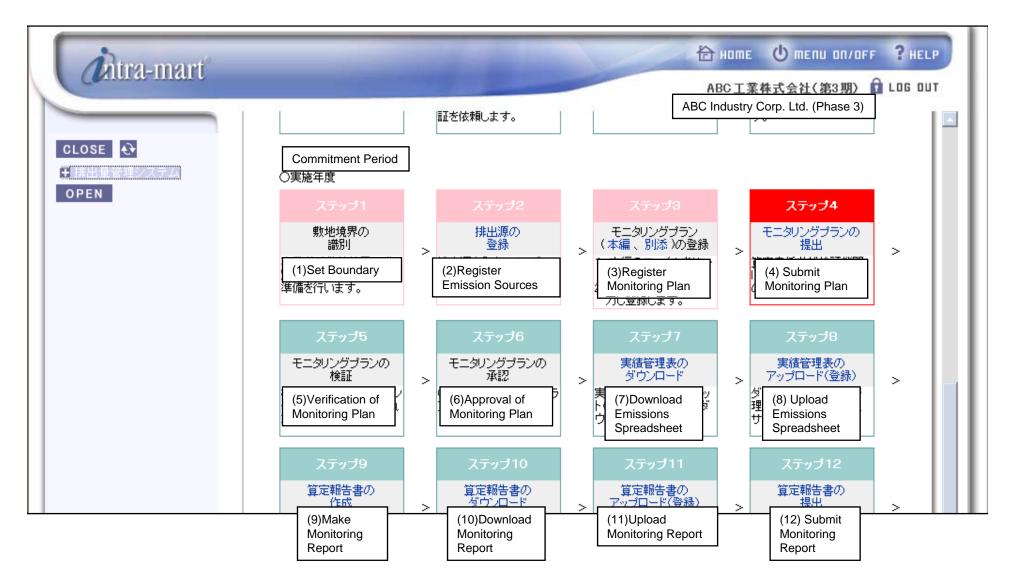
Registry System of JVETS: Image (2)



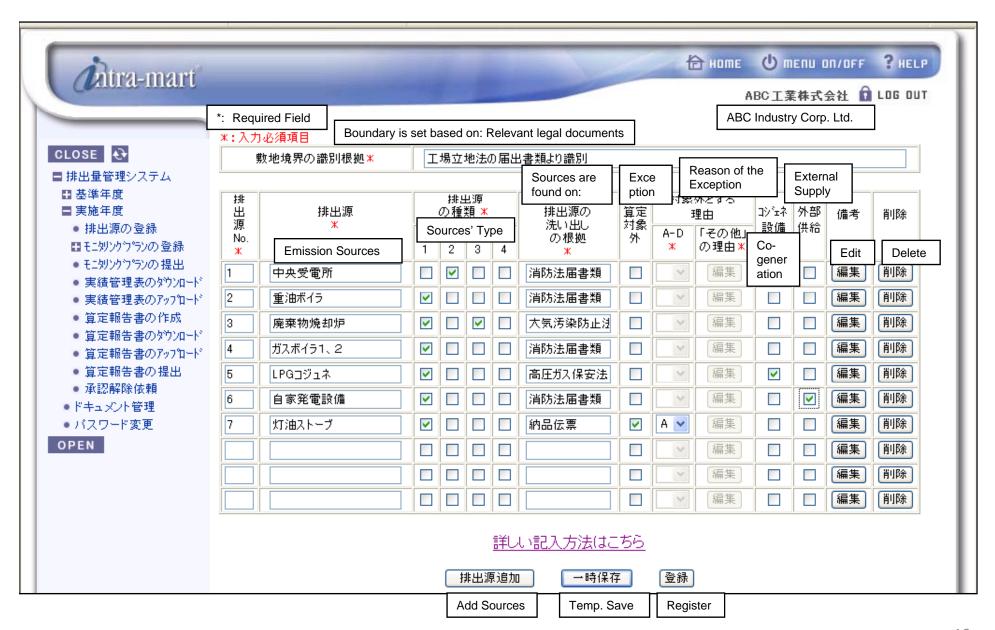
Registry System of JVETS: Image (3)



Emissions Management System of JVETS: Image (1)



Emissions Management System of JVETS: Image (2)



Key guidelines in JVETS

Monitoring and reporting guidelines

- Play as an equivalent to EU-ETS Monitoring and Reporting Guidelines
- Suggest appropriate CO2 emissions monitoring and reporting by the participants

Emission verification guidelines

 Encourage appropriate emissions verification for the third-party verifiers

- Ensure consistency
 with International
 standards such as ISO
 14064 series and ISO
 14065
- Secure high accuracy in emissions calculation and verification
- Achieve cost-effective verification which contributes to total cost cut of emissions reduction for the participants

JVETS third-party verifiers

4th phase (2008-2010)

Currently, 20 verifiers are on the list of JVETS third-party verifiers.

- 1. KPMG AZSA & Co.
- 2. SGS Japan Inc.
- 3. PricewaterhouseCoopers Arata Sustainability Certification Co., Ltd.
- 4. Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.
- 5. Ernst & Young ShinNihon Sustainability Institute Co., Ltd.
- 6. JACO CDM Ltd.
- 7. Japan Quality Assurance Org.
- 8. Japan Management Assn.
- 9. Japan Consulting Inst., JCI CDM center
- 10. Det Norske Veritas AS
- 11. TÜV SÜD Japan Ltd.
- 12. TÜV Rheinland Japan Ltd.
- 13. Nippon Kaiji Kentei Quality Assurance Ltd.
- 14. JIC Quality Assurance Ltd.
- 15. BSI Management Systems Japan K.K.
- 16. Bureau Veritas Japan Co., Ltd.
- 17. Lloyd's Register Quality Assurance Ltd.
- 18. Perry Johnson Registrars Clean Development Mechanism, Inc.
- 19. Japan Smart Energy Co., Ltd.
- 20. Environment & Quality Assurance International Certification Center

The Result of JVETS 1st phase (Started in FY2005)

- Participants with target...31 firms
- Participants for trading... 7 firms
- Total Base Year Emissions ...1,288,543t-CO2
- Achieved reduction exceeded committed reduction.
 - ...Achieved reduction was 377,056t-CO2 in FY2006. (29% reduction by Base Year Emissions)
 - →Committed reduction was 273,076t-CO2.(21% reduction by Base Year Emissions)
- All participants cleared their target, because they acquired sufficient allowances by trading.
- Number of total transactions...24
- Total amount of traded JPA...82,624t-CO2

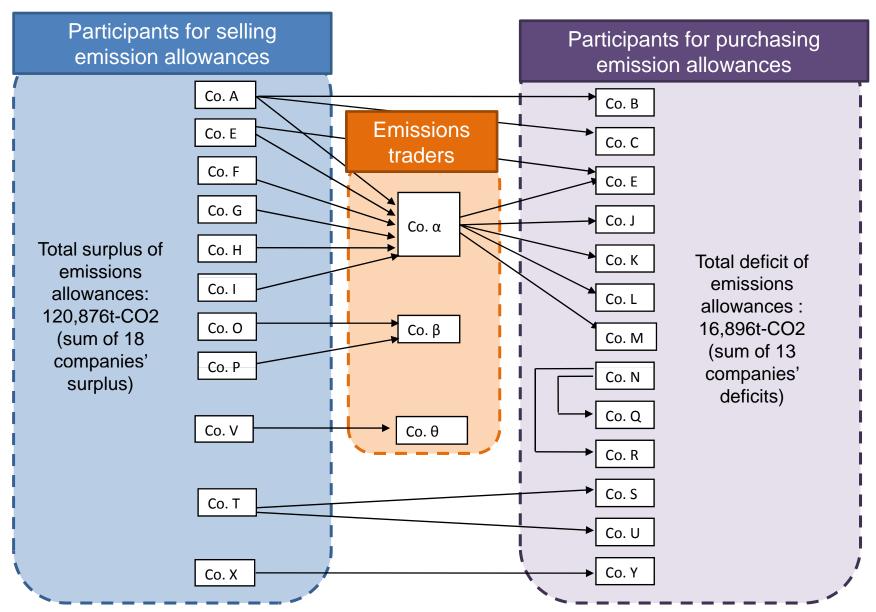
(Average JPA prices transacted in GHG-Trade.com: ¥1,212/t-CO2)

The Result of JVETS 2nd phase (Started in FY2006)

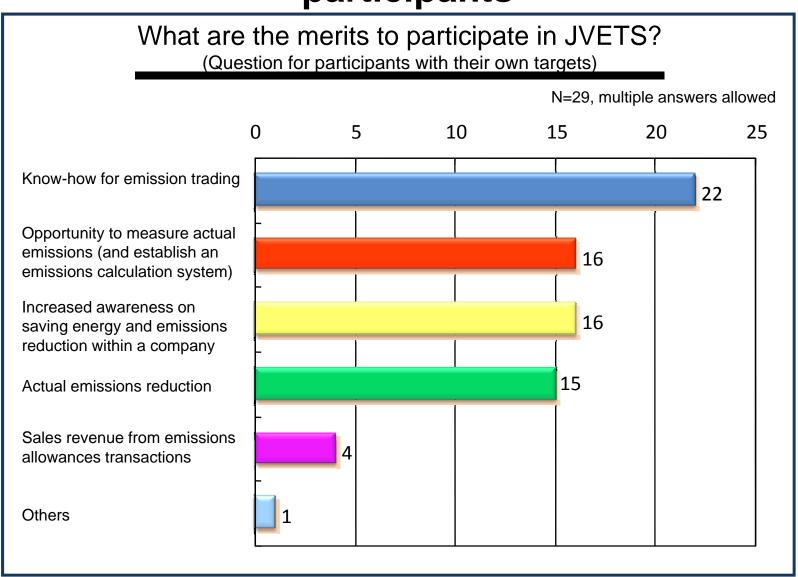
- Participants with target...61 firms
- Participants for trading...12 firms
- Total Base Year Emissions ...1,122,593t-CO2
- Achieved reduction exceeded committed reduction.
 - ...Achieved reduction was 280,192t-CO2 in FY2007. (25% reduction by Base Year Emissions)
 - →Committed reduction was 217,167t-CO2. (19% reduction by Base Year Emissions)
- All participants cleared their target, because they acquired sufficient allowances by trading.
- Number of total transactions...51
- Total amount of traded JPA...54,643t-CO2

(Average JPA prices through OTCs: about ¥1,250/t-CO2)

Flowchart of emissions transactions in the JVETS 1st phase



Results of questionnaire for the JVETS 1st phase participants



JVETS Evaluation Committee

After the completion of 1st phase (FY2005), the expert group conducted evaluation on JVETS.

The review report (Dec. 27, 2007) is available in the following website; http://www.env.go.jp/earth/ondanka/det/index.html. (accessible from MOEJ official website)

Member of JVETS evaluation committee

- •kazuhiro UEDA (Kyoto University)- Chairman
- Tadashi OTSUKA (Waseda University)
- Yoshihiro FUJII (Sophia University)
- Masaki MITA (Argus Media Limited)
- Hideki MURAI (Nihon University)
- Toru MOROTOMI (Kyoto University)

*Courtesy titles omitted

Three suggestions to improve JVETS based on the 1st phase results

(1) Improve target setting and verification methods

 Results of the 1st phase operation highlighted the current problems of emissions target setting and verification methods

(2) Expand the number of participants

- In the 1st phase, the total number of participants was just 38 which consists of 31 entities for their emission target achievement and 7 for trading emissions only
- To accelerate emissions trading in Japan, more participants are essential

(3) Improve transaction systems for smoother operation

 A certain amount of emissions transactions is required to make emissions allowance prices to work as price signals of CO2 emission

Key improvements in the 4th phase

(1) Participation of corporation branches

- Introduction of verification of total emissions from the participants' franchise stores (e.g. convenience stores, supermarkets etc.)
- Change of rules (for monitoring, reporting and calculating emissions etc.) to accept participation of franchise stores

(2) Expanded range of target participants

For example, offset providers were newly accepted as participants

For detailed information: http://www.et.chikyukankyo.com/

(JVETS official website)

Domestic emissions trading- decisions made by the Japanese Cabinet

Speech by Mr. Yasuo Fukuda, former PM In pursuit of "Japan as a Low-carbon Society" (June 9, 2008)

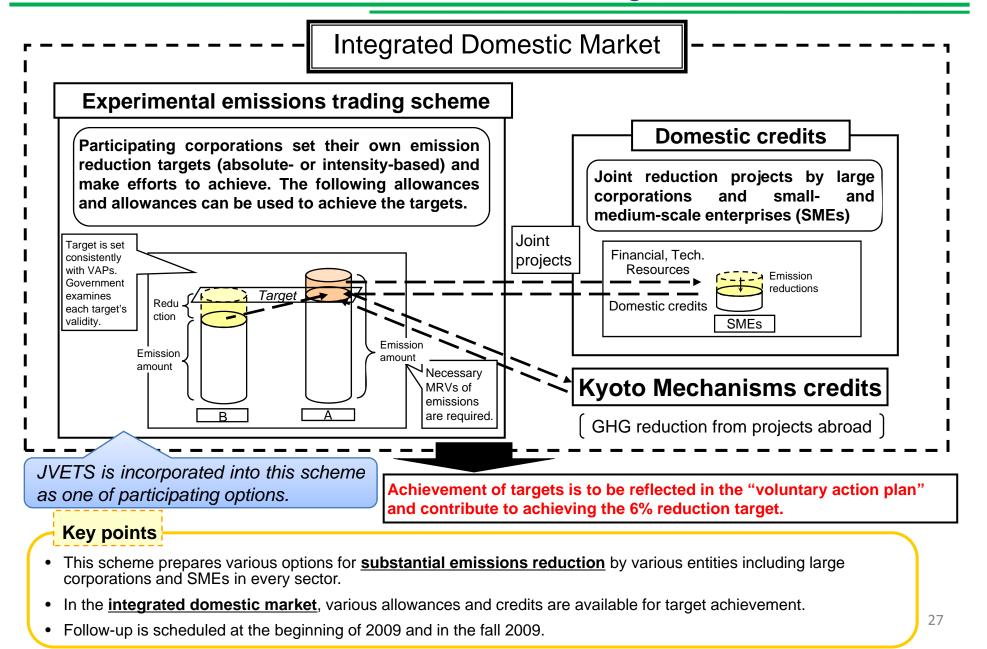
- OThere is a need to ensure active use of methods which encourage the development of technologies and the reduction of emissions by pricing CO2 transactions and making full use of market mechanisms.
- OJapan should not devote endless time and effort merely to find problems with the scheme. I believe we should rather shift to a more proactive approach, for example propose a more effective set of rules.
- OFrom autumn this year we will begin an experimental introduction of an integrated domestic market of emissions trading with the inclusion of as many sectors and companies as possible.
- Olt is essential to make effective rules that actually lead to reduction efforts and technological development, while at the same time develop a healthy market which is based on real demand and does not lend itself to money games.
- OI intend to use the experience thus gained, to clarify the conditions which need to be met, the issues of design that must be dealt with and other relevant matters in the event an emissions trading scheme is to be fully introduced. I will duly consider the type of system that is appropriate for Japanese industries, which are focused on technology and manufacturing.
- OWe will design a system that enhances Japanese qualities, and will exercise leadership in international rule-making.

Action Plan for Achieving a Low-carbon Society (Cabinet Decision on July 29, 2008)

- OThe government will design a concrete framework for the market, taking into account the consistency with the Kyoto Protocol Target Achievement Plan and with the Voluntary Action Plans ranked in the Target Achievement Plan, focusing on a scheme in which participating companies set their targets of emissions amount or emissions intensity and trade various types of emissions caps and allowances to achieve their target, making use of existing systems and systems under consideration, and bearing in mind that the framework should ensure the participation of as many sectors and companies as possible.
- OConsidering issues such as target setting, types of tradable emissions caps and allowances, and monitoring and verification methods, a study team from the relevant ministries will establish the design of the experimental introduction by this September, and commence the experimental introduction around this October.

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Experimental Introduction of an Integrated Domestic Market for Emissions Trading



Result of a Recruitment for "Experimental Introduction of an Integrated Domestic Market for emissions trading" (Feb. 10 2009)

- (1) Participants with Targets 455 (Applicants with Targets: 326)
- (2) Trading Participants <u>60</u>
- (3) Other Participants 13 (Participants of the Domestic Credits Scheme)

Total Number of Participants 528

In addition, 1,103 companies and organizations (including the participants) are going to join "Trial Emissions Trading Conference" (Public-private cooperative organization for outreach, identification of problems, and informational exchange on this scheme)

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

Industrial Sector	Number of Applicants	Number of Participants
Electricity	9	9
Oil Refinery	8	8
Gas	4	4
Steel	2	74
Chemical	41	41
Paper	12	12
Cement	11	11
Electric Appliances	16	16
Automobile Manufacturing	1	58

Industrial Sector	Number of Applicants	Number of Participants
Rubber	21	21
Trading Companies, Convenience Stores	14	14
Aviation, Construction, Transportation, Residence	6	6
Industrial Waste Disposal	2	2
Other Industrial Sectors	53	53
Other Office Sectors	13	13
MOE: Voluntary Emissions Trading Scheme (JVETS)	125	125
Total	326	455

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

About 70% of CO2 emissions from Industry in FY2007.