

# Japanese Voluntary Emissions Trading Scheme (JVETS) -Overview and Analysis-

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INECE - Confidence Through Compliance in Emissions Trading Markets

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Washington, D.C.**

# Outline

- ◆ Overview of Japan's Voluntary Emissions Trading Scheme (JVETS)
- ◆ Some points
  - ❖ Positive aspects
  - ❖ Concerns?
- ◆ Concluding remarks and suggestions

# **Current Status: Domestic Emissions Trading Scheme in Japan**

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# Japan's Voluntary Domestic Emissions Trading Scheme: JVETS (Launched in May 2005)

## OBJECTIVES:

- ◆ For the business making efforts in reducing their GHG emissions voluntarily, the MOEJ provides them with subsidies to introduce additional measures to reduce GHG emissions. → Incentives to take additional efforts by those businesses.
- ◆ To learn “real” emissions trading with verification and compliance assessment
- ◆ To provide incentives for additional CO<sub>2</sub> reductions

# Japan's Voluntary Domestic Emissions Trading Scheme: JVETS (Launched in May 2005)

## 3 **Methods** to achieve cost-effective and real emissions reduction

- ① **Subsidies** for companies/facilities for introducing the facilities and measures to reduce GHG emissions (cost-effectiveness of their plans will be the basis for selection)
- ② **Voluntary commitments** for a certain amount of GHG emissions reduction (in case of non-compliance, companies need to return the subsidies. → higher incentives for them to make serious commitment)
- ③ **Emissions Trading** (Flexible mechanism that enables its participants to deal with the risks, such as the increase in GHG emissions. Also, in case of over-achievement, they can sell the excesses to others.)

# Japan's Voluntary Domestic Emissions Trading Scheme: JVETS (Launched in May 2005)

## Procedure

1. Private companies are invited to commit their CO<sub>2</sub> emissions reduction for receiving subsidy from MOE during FY2005.
2. Base-year emissions of each company will need to be verified by MOEJ-accredited verification entities before October 2005.
3. MOE screens participants on the basis of “cost-efficiency” optimization. Allowances (EAs) will be allocated to each of participants.
4. Participants are required to demonstrate to have allowances covering their verified CO<sub>2</sub> emissions in FY2006. Participant can trade allowances (EAs) freely throughout FY2006.
5. **In case of non-compliance, the subsidy must be returned to MOEJ.**

# Japan's Voluntary Emissions Trading Scheme (JVETS)

Subsidies for new facilities and their installation leading to GHG emissions reduction

← Budget for FY2005: 3 Billion Yen

Participants shall retire allowances in the registry

Operational period (FY2006)

June 2007

Start (April 2006)

End (March 2007)

April 2005

Application for subsidy/ Screening

- Setting-up period for new facilities
- **Calculation and verification of base year GHG emissions**

- Emissions allowances will be allocated to each participant
- The participants can trade allowances throughout FY2006

**Calculation and verification of actual GHG emissions for FY2006**

Final trading period (about one week): Participants can trade allowances again if necessary

## Facilities to be subsidized

- New facilities to improve energy efficiency or to promote renewable energy leading to GHG emissions reduction (Total budget: 3 Billion Yen)

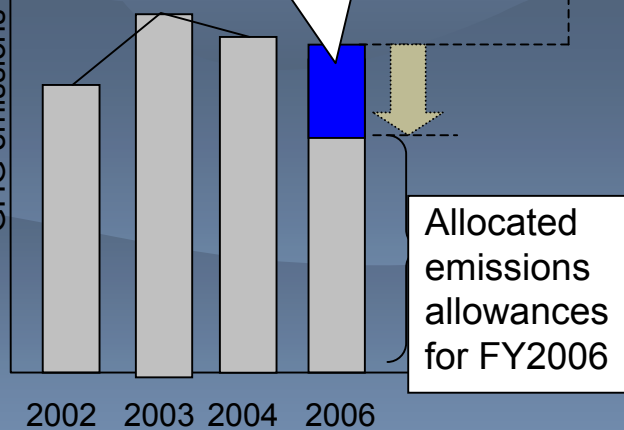
**Expected amount of emissions reduction in FY2006**

Base year emissions (average for the past 3 years)

## Required items for application

- Facilities and their installation costs
  - Expected amount of emissions reduction in FY2006
  - Base year emissions (overall average for the past 3 years)
- ※ Participation unit: Single site basis

GHG emissions



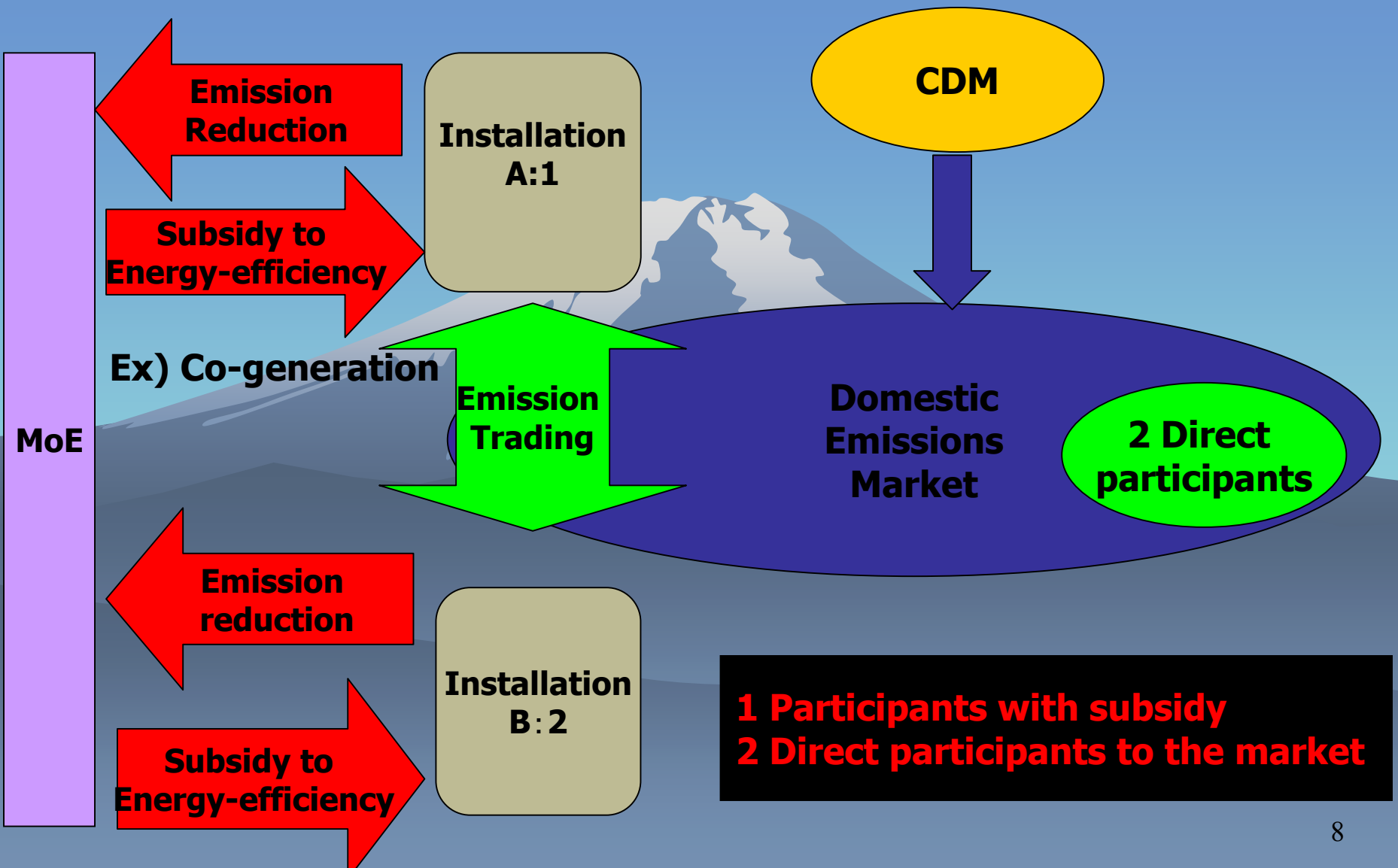
## <Key points>

- After the final trading period, if participants cannot retire allowances corresponding to the actual amount of their emissions, the subsidies paid to them should be returned.
- CERs and traded allowances can be used for the retirement in the registry.

Screening on the basis of "cost-efficiency" optimization

※ Subsidy rate: 1/3 of installation cost (max. 200 million Yen per site)

# Major Revisions for Kyoto: Establishment of Voluntary ETS



# JVETS: Some Facts

- ◆ 38 entities applied → 34 entities/groups are selected as participants.
- ◆ Total Amount of Subsidies: JPY 2.6 bn. (FY2005 budget is JPY 3bn.)
- ◆ Base-year emissions: Average between 2002-2004 → 1,311,241t-CO<sub>2</sub>/yr.
- ◆ Estimated total amount of CO<sub>2</sub> emissions reduction pledged (FY2006): 276,380t-CO<sub>2</sub> (=21% of the total emissions from 34 facilities)
- ◆ Estimated (Statutory useful life of facilities) total amount of CO<sub>2</sub> reduction: 3,750,311t-CO<sub>2</sub> (based on the pledges)
- ◆ Total Subsidies/Estimated (Statutory useful life of facilities) = JPY 692/t-CO<sub>2</sub> → low cost emissions reduction!
- ◆ Emissions allowances = Base-year emissions – Estimated/pledged reduction amount (FY2006)

# JVETS: Some Facts

- ◆ JVETS is just an option. Basically, Keidanren's voluntary achievement plan is the benchmark for the efforts in industry sector.
- ◆ Who can participate? → Private companies & entities that MOEJ regards appropriate
- ◆ Subsidized operations → facilities for reducing CO<sub>2</sub> emissions through energy-saving methods and alternative energy to oil. (*Domestic operation only!!*)
- ◆ Ceiling for subsidies → 1/3 of the total cost for the operation concerned.

# JVETS: Some Facts

## ◆ Forms of participation

### ❖ Participants with targets (pledged targets)

- ◆ Instead of pledging a certain amount of CO2 emissions reduction, receive subsidies for improving efficiency of the facilities and allowances. (34 group companies)

### ❖ Trading participants (To be selected in late 2005)

- ◆ The purpose for the participation is to trade EAs. Open accounts in the registries and operate trading. Not eligible for subsidies or allocation of the allowances.

# Points

- ◆ “Voluntary” → Only participation is voluntary.
- ◆ Basically, it is a “closed market” among 34 facilities. (→ Cap and trade scheme)
- ◆ “Gentleman’s agreement” → Participation is facility-based, not corporate/company based. (leakage + cheating?!)

# Positive points

- ◆ Its cost-effectiveness → JPY692 (=USD 5-6)/t-CO<sub>2</sub>
- ◆ Good basis for future Cap and trade scheme
- ◆ Despite the reluctance of METI and Keidanren, 34 facilities/companies decide to participate in JVETS with the pledged targets.

# Monitoring, Calculation and Verification

- ◆ **May 2005:** Participants calculate the base-year emissions (2002-4) and submit to the third party verification entity for verification. (~Nov. 2005)
- ◆ **April 2006:** MOEJ allocates emissions quotas based on the result of the verification.
- ◆ **April ~ June 2007:** Participants calculate the emissions during the FY2006 and submit the result to the verification entity for verification.

# Monitoring

- ◆ **Principles:** Adequacy, Completeness, Consistency, transparency, and exactness.
- ◆ **Monitoring system:**
  - ❖ Appointment of the person-in-charge for monitoring
  - ❖ Responsible for “calculation, submission, and storage” of emission data
  - ❖ Quality control of the data
  - ❖ Closely cooperate with verification entities
- ◆ **Targets:** Basically all activities conducted within the target facilities. (except LULUCF, accidents, etc.) → Fossil combustion (Direct) + emissions generated in the process of electricity generation by electric companies (Indirect)

# Monitoring

- ◆ **Monitoring methods:** Based on the principles, choose the best available methods....
- ◆ Monitoring **based on the records + based on on-site measurement**
- ◆ **Fuel use** → Receipt for purchasing/record for usage
- ◆ **Electricity/gas use** → 1) invoice from electric/gas companies; 2) on-site measurement using the meters for electricity and gas.
- ◆ Adequacy of the monitoring results will be verified by the verification entities.

# Verification

- ◆ Cost for verification will be paid by MOE.
- ◆ Twice: Base-year emissions + results (FY2006)
- ◆ *!! For the electricity generation by co-generation, separate verification methods will be applied!!*
- ◆ **Information submission:** company's environment white paper; company charts that shows the flow of monitoring and evaluation within the company; maintenance records; calculation formula; receipts and any kinds of documents....
- ◆ **Verification (Paper-based & site visit)**

# Optional

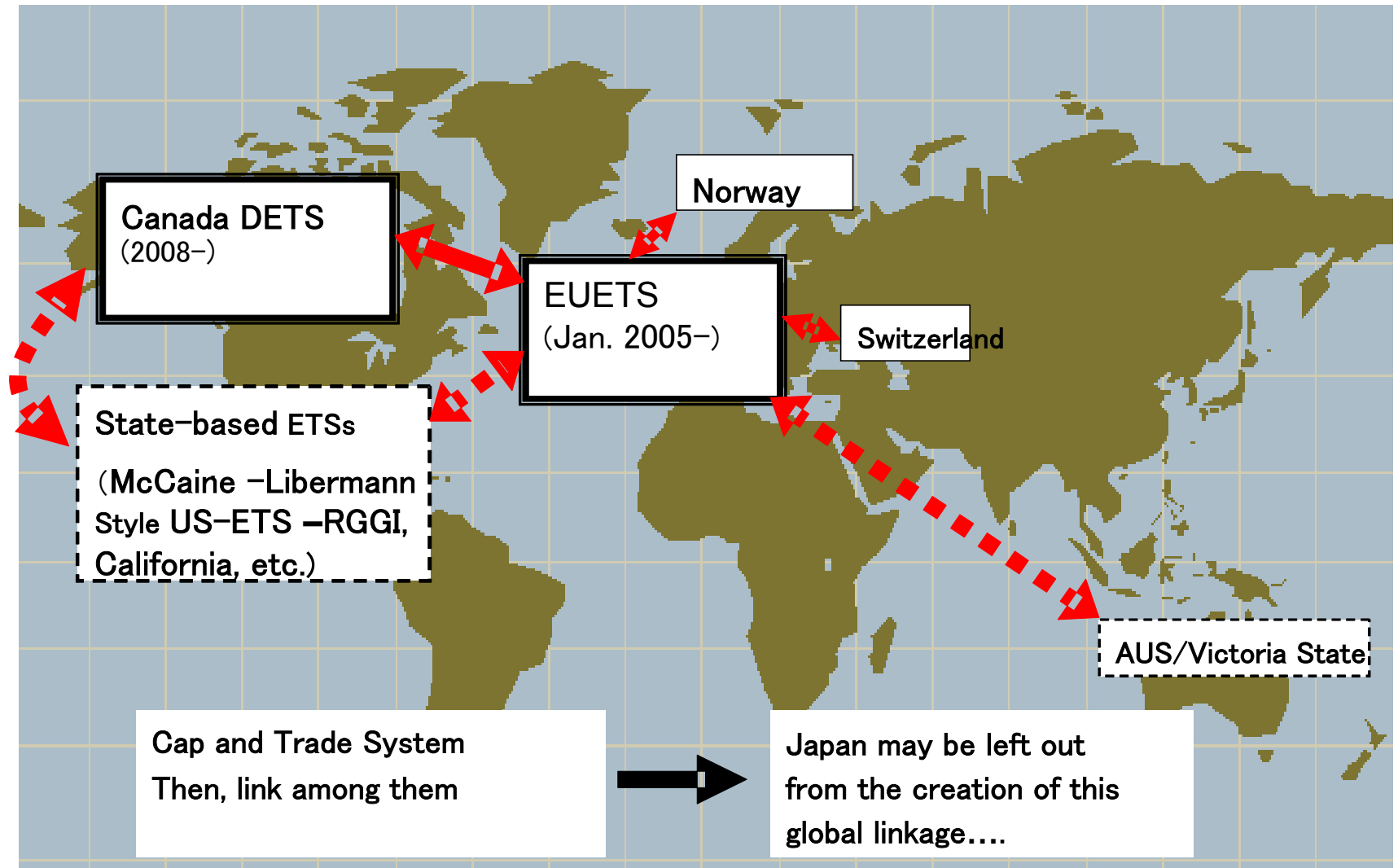
- Hope I have a chance to talk about this..... -



# Some concerns...

- ◆ Pilot phase? Until when?
- ◆ Does “voluntary” system really work? (i.e. CCX, UK-ETS) ( SOx trading scheme in Europe??)
- ◆ Scale: Too small? Limited participation (only 34 companies) → any prospects that more companies will participate?
- ◆ Lack of motivation for companies to join?
- ◆ Does anybody know where we go next with JVETS?
- ◆ No participation of major emitting industries (i.e. Electricity, steel, petro-chemical)
- ◆ Link-ability?

# Global Linkage among Domestic ETSs



# Some concerns...

- ◆ Against the Polluter-Pays-Principle?
- ◆ Example: Europe's Acid Rain –(SO<sub>x</sub> and NO<sub>x</sub>)  
→ “victims-pay” principle?

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# Some concerns...

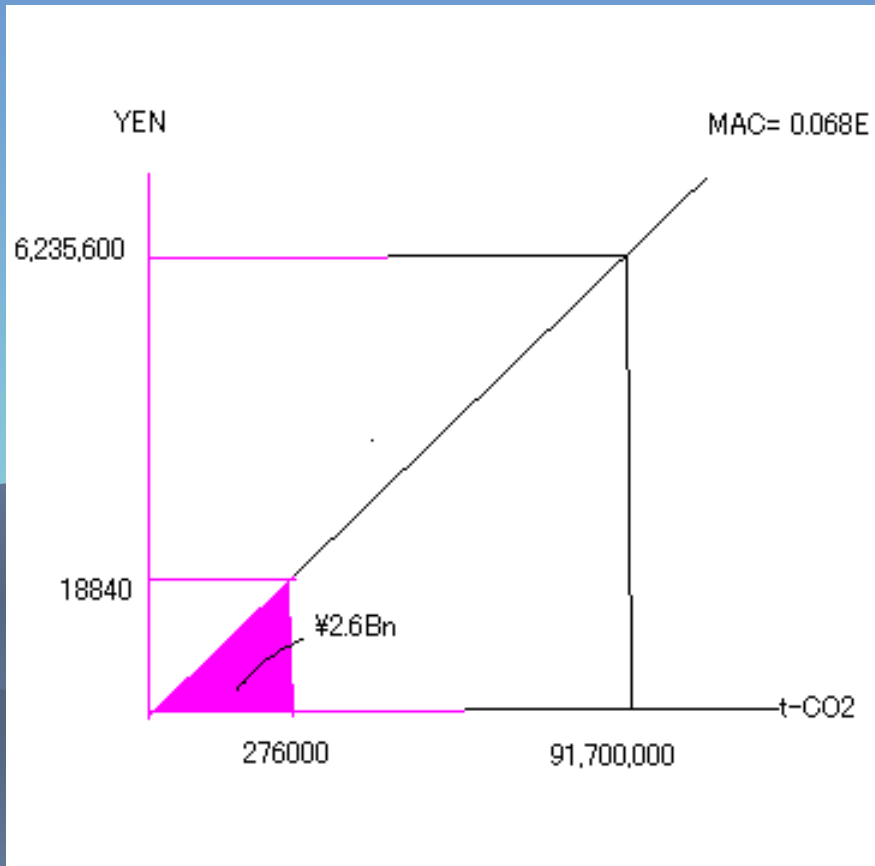
- ◆ JPY 692/t-CO<sub>2</sub> → Is this really cost-effective?  
Can we really trust this number? .....



# Some concerns...

- ◆ Suppose JVETS can help reduce 276,000 t-CO<sub>2</sub> every year from 2006 to 2012 (6 years)
  - Total CO<sub>2</sub> emissions reduction: 1,656,000 t-CO<sub>2</sub>
  - Cost will be  $\$2.6 \text{ bn.} / 1,656,000 \text{ t-CO}_2 = \$1,570 / \text{t-CO}_2$
- ◆ Still cost-effective?

# Cost-effective??



- ◆ This is only a simple policy cost analysis. (extreme case!!!)
- ◆  $E=8.6(\%) \times 12.4\text{Mt-CO}_2 = 91.7\text{Mt-CO}_2$
- ◆  $\text{MAC} = \sqrt{6.23\text{M} / \text{t-CO}_2}$
- ◆ Total Cost =  $E * \text{MAC} = \sqrt{571.8}$  Trillion (approx. 113% of Japan's GDP)
- If all of 8.6% (domestic measures) out of 12% reduction will be reduced through the measure using the JVETS, this will be the policy cost.
- Economically and political not feasible?

# Some concerns...

- ◆ Is this market really liquid?
  - ❖ Direct participants will not face any caps or target. They just act like a “broker”
  - ❖ Everything seems to be fixed.
- ◆ Accumulating experiences? Isn't it just another experiment?

# Concluding Remarks....

- ◆ (MOEJ) Mandatory emissions trading is NOT an option at this moment. In future, it might be discussed, taking into account-
  - ❖ Results of voluntary scheme
  - ❖ Trend in GHG emissions
  - ❖ International situation (link between EU and US?)
- ◆ JVETS could be a good basis for a future Cap and trade scheme.

# Concluding Remarks and Suggestions

However...

- ◆ *JVETS requires high policy costs.* → In terms of policy costs, JVETS is not an economically feasible measure if it is the only measure to be used to attain 8.6% domestic measures.
- ◆ Some other economic measures should be used! (i.e.) combination with carbon tax? Double-dividend?

# Suggestions and Implication for Future

- ◆ How about put uniform cap on every direct participants? (let's say, 1,000 t-CO<sub>2</sub>/ year?)
- ◆ Agreements between the government and companies and tax resumption → CCLA/CCL
- ◆ Use \2.6bn (\3 bn.) as subsidies for the sectors whose GHG emissions are estimated to increase
- ◆ Idea of Double Dividend (tax – subsidies)

# Thank You!

- ◆ For comments, [shimada@iges.or.jp](mailto:shimada@iges.or.jp)
- ◆ Working Paper on Emissions Trading
  - ❖ SHIMADA, Kunihiro & Tae Yong JUNG (2004), “Designing Japanese Emissions Trading System – Issues and Options,” *IGES-CP Working Paper 2004-001*  
(<http://www.iges.or.jp/en/cp/report4.html>)