Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

IGES Institute for Global Environmental Strategies

Wuppertal Institute for Climate, Environment and Energy

Ministry of the Environment

Minutes

Fourth German-Japanese Workshop on Economic Instruments for Climate Protection

Berlin, November 27/28, 2008

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Content

Time	Content
Thursday, Nov 27, 14.30-16.00	**Session 1: Current Status of ET Discussion in Japan, Germany and the EU, and the U.S.** Chair: Enno Harders, Federal Environment Agency

Person	Comment
Enno Harders, Chair of session	Current Status of Emission Trading: 1. Regarding the current status of ET, a lot of new ideas identified during the first pilot phase (2005-07) are taken over to the second phase. 2. ET is the most powerful instrument out of the toolbox that government has. Therefore, the exchange of ideas about this system is very useful in reducing greenhouse gases, especially with Japan.
Input by Meike Söker (on behalf of Franzjosef Schafhausen)	"Current status of ET discussion in Germany and the EU" 1. During the first phase, Germany as well as other member states learned how to deal with industry to make a better second phase. 2. A proposal for the third phase is discussed at the EP and the Council. A general architecture is more or less agreed on (longer term period (8 years), linear reduction, etc. It is designed for achieving the 20% reduction target for the whole EU. It will be revised for achieving the 30% reduction target for the EU, if the agreement on the post 2012 regime at the international level in which other industrialized countries and major developing emitters take compatible commitments. 3. Auctioning: Attempt to get 100% auctioning for the power sector and to harmonize for other industry sectors; Exclude some specific sectors that are exposed under the international competitiveness. Germany supports the idea, because of its dependence on export-oriented industries; Commission proposed two criterium for exclusion: how much the sectors are affected by CO2 costs, and how much they are exposed to the international competitiveness. Free allocation is applied if the sector fulfill the both criterium; Germany proposed to exclude all sectors whose emission value added is below 4kg CO2/EUR (steel, lime, cement, refineries, etc.) from auctioning.
Input by Reo Kawamura	"Current status of ET in Japan: Experimental Implementation of Domestic Integrated Market" *Please view the presentation in the Annex to these minutes.* The voluntary emissions trading scheme was launched in 2005. The third round is implemented in 2008. The participants in the scheme invest for emission reduction projects, one thirds of whose cost will be subsidized by the government. If participants fail to achieve the targets set in advance, they have to return the received subsidies. The explementary scheme that integrates the voluntary emissions trading scheme, Keidanren´s voluntary approach, and emissions trading scheme for SMEs was launched in 2008 under the Fukuda vision announced during the G8 Tokyo Summit.
Input by Felix Matthes	"Current status of ET discussions in the USA" *Please view the presentation in the Annex to these minutes.*

	Identify the future trend on key features of the US scheme, on the basis of several proposals submitted to the US Congress. Upstream schemes seem to disappear, trend upstream for transportation; Increasing debate on allocation in the US: new way of allocation: increasing interest in indirect allocation, to the distribution companies. To equalize the power price difference between the restructured and the non restructured states in the US.
Enno Harders, Chair of session	General questions leading the discussion: How to allocate to participants? Auctioning or not? Impact on the market: Money game or speculation How to finance CCS projects in Germany?
Meike Söker	Auctioning should be used. Emission certificates should not be given to emitters for free. How is the CCS designed? What is the framework regulating the CCS in the future? These questions need to be answered first. Target for companies, how are they made in Japan? Are the sectors defining the targets?
Reo Kawamura	It is difficult to coordinate the target setting in different sectors. There are 130 different target-setting methods. Each business sector has a secretary who coordinates the target setting for each participant. If one business sector has an absolute target, it is difficult to distribute the target among companies belonging to the sector.
Felix Matthes	Distribution /network companies who deliver to final consumer. Power plant operators have to take the full price of CO2. The distribution companies can take the revenue of sales, to stop energy price rising.

Time	**Content**
Thursday, Nov 27, 16.30-18.00	**Session 2: Devising Japanese ETS / Questions on German Experiences** Chair: Stefan Thomas, Wuppertal Institute

Person	**Comment**
Stefan Thomas, Chair of session	General questions leading the discussion: What could be done to reduce price volatility? Would the following be viable/effective options? What could be done to reduce such risks? Would the following be viable/effective options?
Input by Tadashi Otsuka	"Estimation and Legal Issues on ETS in Japan" *Please contact the author for any further information or a copy of his presentation*
Input by Felix Matthes	"Lessons-learned from German ET – Issues for Japan?" *Please view the presentation in the Annex to these minutes* ETR and ETS are discussed alternatively in academics; but in real politics

	there would have never been introduced a tax at a level of about 25 Euro per ton CO2. There has been a price crash at some point in time (see chart), which is most likely due to over-allocation We have seen about 10 percent emission abatement after introducing carbon pricing. The separation between cap-setting and allocation process is important. Technicalities and data are key Pilot phase is extremely important to avoid the ETS being contaminated. The distortion of the price signal depends on the allocation method. So text books economics does not hold truth. Compatibility with other policy objectives, e.g. promotion of renewable energy should be taken into account. For renewable energy promotion, the price of certificates should be high. On the other hand, a wide use of international credits from CDM/JI projects lowers the price. Think through the whole value chain. Careful assessment of policy mix. Separate benchmarks for different fuels lead to less price signal on the market (less reductions), as well as to increased market distortions and loss of competitiveness. Only few sectors in the EU are both trade exposed and energy intensive (more than 10% energy costs of total costs), and thus would qualify for some sort of compensation. Through trading within the EU ETS, privatization of compliance of international commitments may take place. On one hand, compliance of private companies is safeguarded by imposing 100 Euro. On the other hand, the government control of compliance is given away. Because transfer of ETS certificates (EUAs) between companies located in different member states implies a transfer of AAUs.
Reo Kawamura	How should carbon leakage be addressed?
Felix Matthes	To address carbon leakage: opt-out of commitments is one option, but it will not bring about reductions. Therefore, free allocation is better. However free allocation does not help to address an increase of electricity price for manufacturing industries. Therefore another option is: direct compensation, e.g. subsidies for new investments in order to prevent these new investments to go abroad. Summary: if there are leakage problems, you better solve them outside the ETS.
Thomas Langrock	First of all, emissions trading is compatible with the Kyoto Protocol. Be careful with formulating policies that are interrelated with the ETS, e.g. energy efficiency, ETS, Renewables.
Input by Naoyuki Yamagishi	“Seeking a Japanese Way: WWF's view on an effective ETS in Japan” *Please view the presentation in the Annex to these minutes*
Input by Frieder Frasch	“Lessons-learned from German ET – private sector perspective” *Please view the presentation in the Annex to these minutes*
Input by Enno Harders	“Administrative Issues” There are two major issues: Allocation, and reporting and monitoring. Regarding the MRV, third party verification is important to ensure the

	integrity of the system. On compliance: intend to keep it as simple as possible. But stiff penalties are necessary, as well as additional sanctions. In 2005, 22 cases were sanctioned. On linking: make sure that linking the EU system to other national ETS does not affect integrity of the system.
Input by Rie Watanabe	"Cap and Trading System – Translating Theory into Practice via Politics" *Please view the presentation in the Annex to these minutes* Questions to German speakers: Is a cap and trading scheme perceived as the instrument to control emissions from the industrial and energy sectors? If so, what are the necessary elements to reconcile the conflict between economic prosperity and climate protection? Questions to Japanese speakers: Is a cap and trading scheme perceived as the instrument to control emissions from the industrial and energy sectors? If so, what are the necessary elements to reconcile the conflict between economic prosperity and climate protection? If so, from where will the Japanese scheme start? Less stringent than the first and the second phase of EUETS, similar to the first and the second phase of EUETS, or more stringent than the EUETS based on the lessons learned in the EU?
Reo Kawamura	Regarding the industries´ views, it depends very much on the sectors; some are now quite positive; yet automobile and energy intensive industries are still very negative on ET. Industries participate in the experimental scheme because PM Fukuda said. Or in order to prove that ET does not work in Japan. We need a compromise approach in an experimental scheme.
Junya Nishikawa	Keidanren and many other companies are very interested in realizing a low carbon society. But ET should start with a test phase.
Andreas Kraemer	Japan can avoid two mistakes that the EU made: national allocation plans, as many problems associated with the ETS came from the NAPs; and grandfathering, if you start with grandfathering you need to make clear from the beginning that you will introduce auctioning later. The third mistake we make all over the world: setting the cap to high. A cap set at a high level will more likely provide emissions reductions, but then prices collapse. So opt for flexible targets.
Felix Matthes	You can rely on studies (prices, costs), but the uncertainty should not be on the environmental side. Fix the ETS target first, and then deal with the uncertainties on the economic side. Grandfathering is bad, but auctioning is always opposed. So start with free allocation, and "tax away" the windfall profits.
Harald Neitzel	Come back to the overall goal of the workshop: support the decision making process in Japan by transferring lessons-learned from Germany and the EU. Thanks to Mr. Kawamura for being so frank in analyzing the situation in Japan. Next time, we should invite BDI and Keidanren, and focus more on communication strategy, not only on analysis.
Enno Harders	Political leadership does not come by itself. There must be consensus first, and then leadership can be exerted on the basis of this consensus. EU ETS would not have been possible without grandfathering in the first phase. But it should end up with the auctioning.

Naoyuki Yamagishi	The discrepancy of positions between METI and the industrial stakeholders is widened: Industry is now ready to discuss binding commitments after 2012. In addition to leadership, external pressure on Japan (from US, EU) is important for an internal reform.

Time	Content
Friday, November 28, 9.30-10.45	**Session 3: Linking Domestic Emissions Trading Systems Towards Creating Global Markets** Chair: Dirk Weinreich, Federal Ministry of the Environment

Person	Comment
Dirk Weinreich	Thinking about linking different ETSs right from the beginning is important. Regional efforts are less effective.
Input by Jusen Asuka	"ETS in Japan – Effectiveness, efficiency, and concern on carbon leakage" *Please view the presentation in the Annex to these minutes*
Yasuhiro Shimizu	Three issues when addressing potential carbon leakage: 1) to have some exemptions from national policies, such as free allocation. 2) to reduce product costs, such as tax rebates. 3) sectoral approaches/international cooperation.
Jusen Asuka	Skeptical about border adjustment, in particular vis-à-vis the US. Sectoral approach will not change the picture very much. Because carbon leakage is only a very small cost factor and only for few sectors.
Tadashi Otsuka	Is it suitable to compare the best steel plants in China with the average in Japan?
Jusen Asuka	The average efficiency of steel production in China is very low, compared to that in Japan. Japanese companies are competing with the best Chinese companies, not with the average ones.
Input by Martin Bergfelder	"ICAP" *Please view the presentation in the Annex to these minutes*
Junya Nishikawa	If the US restricts use of offsets and CDM, would it also be negative to linking of ETSs? If Japan does not have an absolute cap, or if it applies price controls, would the system be "linkable" to EUETS?
Martin Bergelder	The US is very critical on any direct or indirect transfers of money to developing countries, i.e. China, and critical about CDM. If the price of EUETS and the USETS would converge, it would be easier to talk about linking. If one system has a price cap, this will automatically affect the other systems that are linked with the scheme. The main issue for linking at this stage is sound MRV, and cap setting. In the US and in Australia, the discussion on price controls/price caps tend to fade away already.
Meike Söker	If the EU would have a problem with a Japanese price cap also depends

	on the level of price cap; a cap at a very high level, say, 400 Euro per ton or so, might be something one could agree upon. But it is necessary to consider other measures that work against speculation and drastic price rises.
Tadashi Otsuka	Two characteristics of Japanese ETS discussions compared to EUETS discussions: 1) strong allergy against money game, therefore ideas of price control; and 2) discussion on indirect (electricity) versus direct emissions.
Martin Bergelder	On price control: Discussion on money game may be theoretical. On direct and indirect emission: Ensuring no double-count of emissions is most important.
Reo Kawamura	Consumer emissions (from electricity) should also be controlled through other measures than ETS.
Input by Hitomi Kimura	"Emerging Japanese Emissions Trading Schemes and prospects for linking" *Please view the presentation in the Annex to these minutes*
Dirk Weinreich	Nice perspectives on further development of the Japanese ETS. How likely are mandatory caps from 2013 on?
Hitomi Kimura	Of course, this is a personal view, but I believe that we are gradually moving towards absolute and mandatory targets.
Jusen Asuka	So you are optimistic that steel and other industries will change their minds towards absolute targets?
Hitomi Kimura	Maybe they do not change their minds; but absolute targets may be designed in a way that it does not inflict with their interests.
Meike Söker	A voluntary system with absolute targets will only work with very loose targets, or one needs additional incentives to participate.
Naoyujki Yamagishi	Since companies can choose between absolute and intensity targets, and since they can also choose to show allowance either at the beginning or at the end of the phase, this hinders companies to calculate their real costs and investment needs.

Time	Content
Friday, November 28, 11.15-12.45	**Session 4: Cooperation on CDM and Private Sector Issues** Chair: Reo Kawamura, Federal Ministry of the Environment

Person	Comment
Input by Junya Nishikawa	"Emission reductions projects development and the market from Japanese private sector perspective" *Please view the presentation in the Annex to these minutes*
Input by Wolfgang Seidel	"Emission Reductions Projects Development and the Market in Germany" *Please view the presentation in the Annex to these minutes*
Naoyujki Yamagishi	What would you recommend Japan for using JI as a parallel strategy to ETS?
Wolfgang Seidel	JI is an interesting mechanism to initiate reductions in the sectors not covered by ETS. Main problem of course, additionality.
Jusen Asuka	Who is buying ERUs from Germany? What is the difference between domestic JI and domestic off-set mechanism within EUETS?
Wolfgang Seidel	Compliance buyers buy German ERUs, but also large utilities, in part as a public-relation strategy. There is no additional offset-option other than JI so far. Domestic offsets are only under discussion.
Input by Yasuhiro Shimizu	"NEDO's Kyoto credit acquisition program" *Please view the presentation in the Annex to these minutes*
Input by Sachiko Ai	"The current movements for a "Low Carbon Economy" in Japan and a new trust scheme for transactions" *Please view the presentation in the Annex to these minutes*
Input by Ingo Ramming	"Views from operating companies on JI" *Please view the presentation in the Annex to these minutes*
Input by Yuji Mizuno	"Proposal for CDM reform" *Please view the presentation in the Annex to these minutes*
Jürgen Rosenow	Besides the delivery risk, there is a political risk: what is the scope of using CERs and ERUs after 2012? To Mizuno-san: why excluding biomass, and do free-rider problem take place if skipping the additionality test?
Yuji Mizuno	Biomass is different to solar and wind. We need to solve monitoring questions in biomass: transportation. On free-riders, the current system also allows the existence of free-riders.
Ingo Ramming	If we would have long-term reliability, we would have a completely different market.

Yasuhiro Shimizu	How do I evaluate private sector purchasing certificates from the GIS?
Jusen Asuka	A transfer of the AAUs is not allowed under EUETS. Will this a problem for linking EUETS to Japanese ETS?
Ingo Ramming	This is an issue for after 2012.
Tadashi Otsuka	Why don't German companies use trust-fund for small CDM projects?
Ingo Ramming	Getting into primary projects only makes sense for larger companies. The business model to involve smaller companies is too risky.

Time	Content
Friday, November 28, 12:45-13:30	**Final Discussion**

Person	Comment
Tilman Santarius	"Summary of two days of discussion" On status quo: extensive overview On Competition, carbon leakage: extensively discussed. Measures available to address carbon leakage have also been quite comprehensively discussed (from free allocation through border adjustment to international cooperation) One dimension of linking: linking national ETSs. Other dimensions: linking with international (flexible) mechanisms. Reo Kawamura mentioned the further development of CDM at the international level; linking to future developed of the CDM (e.g. sectoral CDM) or other sectoral agreements is important for Japan. On CDM: extensive exchange of practical experiences between traders and project developers; view from companies; suggestion for reforming CDM Institutional setting: only brief discussion. Compliance, monitoring, reporting, third party verification Issues only touched in passing: Governments give away their control of compliance, as compliance has been privatized through handing out EU EAUs. Political Economy issues, i.e. Importance of strong leadership: Lessons-learned from the EU (grandfathering/free allocation, and loose caps: mistake or strategy for building consensus)
Reo Kawamura	It is important to continue this series of workshops, maybe next time in Tokyo. It maybe better to diversify the discussions in the future by inviting a broader ranged of people that are rather sceptical, including BDI and Keidanren representatives.

Jusen Asuka	It maybe interesting in the future to be informed how government authorities in Germany and the EU control and sanction non-compliance.
Harald Neitzel	Most interested in continuing this dialogue in the future. Continue to help Japanese decision-makers convince reluctant industries that ET is a good thing. I hope that next time we can have more business representatives to participate in the workshop. We should include CCS issues in a future workshop. Maybe second week of June next year, when German government representatives go to Tokyo, there could be further discussion as well.

Annex

Power Point Presentations of Participants

Berlin, November 27/28, 2008

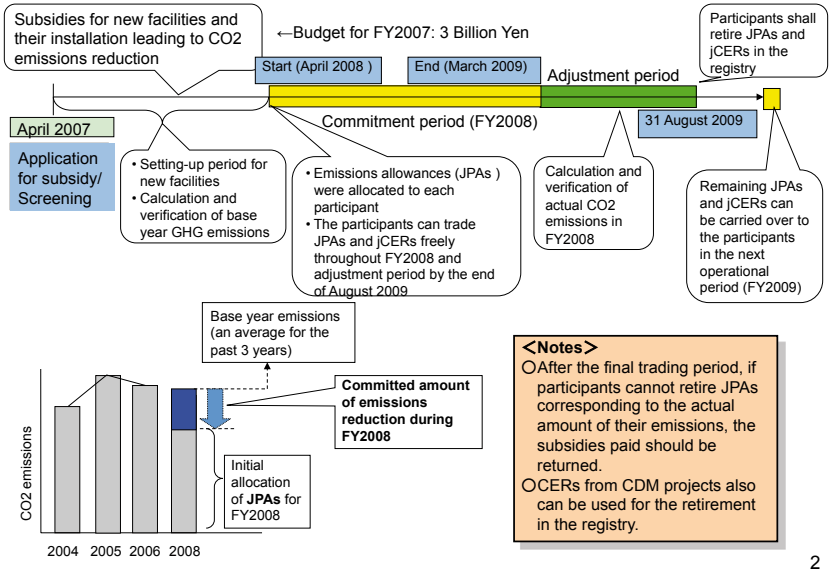
Current status of Emissions Trading: Experimental Implementation of Domestic Integrated Market

Reo KAWAMURA

Deputy Director, Office of Market Mechanisms,
Ministry of the Environment

November 28, 2008

Japan's Voluntary Emissions Trading Scheme (JVETS) 3rd round



The Result of JVETS 1st round (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 round (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)

Meanings of JVETS

- **JVETS is the first experiment of real "Cap-and-Trade" emissions trading scheme for Japan**
- **Good opportunity to learn actual practice managing emissions trading such as:**
  - Formation of efficient and accurate verification system
  - Establishment of Monitoring and Reporting Guideline
  - Development and maintenance of emissions reporting and registry systems for accurate accounting of allowances
- **JVETS proves that C&T does actually work in Japan**

"Action Plan for Achieving a Low-carbon Society"(1)
(Cabinet Decision on July 29, 2008)

Introduction

I. Japan's targets
1. Building agreement on a fair, equitable, and effective post-2012framework
2. Setting quantified national targets
3. Support for other countries' efforts

II. Dissemination of innovative technologies and existing advanced technologies
1. Development of innovative technologies
2. Dissemination of existing advanced technologies

III. Framework to move the whole country toward reduced carbon
◎1. Emissions trading
2. Tax system
3. Visualization
4. Formulating standards and frameworks to facilitate flow of capital into environmental business

IV. Support for regional and citizens' initiatives
1. Reducing carbon by using the functions of agriculture, forestry and fisheries
2. Creating low-carbon cities and regions
3. Frameworks for learning about low-carbon and sustainable societies
4. Urging changes to business styles and lifestyles

"Action Plan for Achieving a Low-carbon Society"(2)
(Cabinet Decision on July 29, 2008)

III. Framework to move the whole country toward reduced carbon

1. Emissions trading (Key Points)

- The government will commence an experimental introduction of an integrated domestic market for emissions trading this autumn, with the inclusion of as many sectors and companies as possible.
- Design of the system:
  - ➢Consistent with the Kyoto Protocol Target Achievement Plan and with the Keidanren Voluntary Action Plan
  - ➢Scheme in which participating sectors and companies set their targets by energy intensity or emission volume and trade various types of emissions allowances and credits
  - ➢Make use of existing and under considered systems
- The government intends to use the experience thus gained, to identify the conditions necessary to be met, the issues of design to be dealt with and other relevant matters in the event an emissions trading scheme is to be fully introduced.

Introduction of an experimental nationally-integrated market for emissions trading
(Global Warming Prevention Headquarters' Decision on October 21, 2008)

Objectives

- Potentials for establishing a trading market building on real and sound demand are examined in order to achieve emission reduction and promote technological innovation
- Aiming to reveal conditions required in case of a full-scale implementation of emissions trading through identifying market designing problems and preferable scheme options fitting Japanese industries which prioritize manufacturing and technology.
- Avoidance of "money games" (over-speculation) is examined through this experimental emissions trading.

Introduction of an experimental nationally-integrated market for emissions trading
(Global Warming Prevention Headquarters' Decision on October 21, 2008)

Key Features(1)

- Three types of markets are integrated.
  - Emissions Allowances (Voluntary target setting)
  - Domestic Credits (Joint project by a large corporation and a small- and medium-scale corporation; Baseline and credits)
  - Kyoto Mechanisms Credits (e.g., CDM credits)
- Covered gases
  - CO2 from energy consumption.
- Voluntary cap settings
  - Participants set their own targets and submit them to the Government.
  - The Government examines the validity of targets and allocates allowances.
  - Interim review and annual follow-up are implemented in Government Councils

Introduction of an experimental nationally-integrated market for emissions trading
(Global Warming Prevention Headquarters' Decision on October 21, 2008)

Key Features(2)

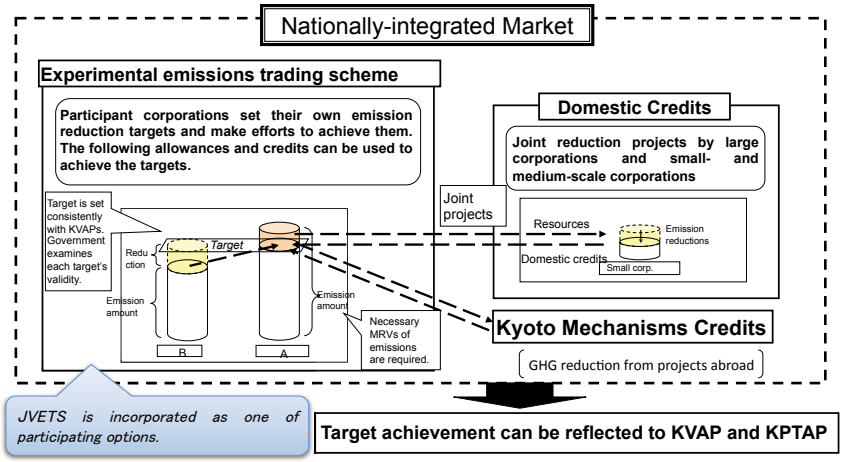
- Target setting methods
  - Members of Keidanren Voluntary Action Plan (KVAP) → KVAP targets
  - Non-members of KVAP → Target setting methods similar to JVETS
  - Both quantity and intensity targets are allowed for KVAP members.
- Timing of issuing allowances
  - Quantity target setters can receive allowances at the beginning or end of FY.
  - Intensity target setters receive their allowance at the end of FY
- Categorized MRVs
  - KVAP members' MRV can be in accordance with each KVAP's procedure.
  - Those who want transactions of allowances must have third-party verification.
  - Non-members' MRV will be similar to JVETS procedure.

Introduction of an experimental nationally-integrated market for emissions trading
(Global Warming Prevention Headquarters' Decision on October 21, 2008)

Key Features(3)

- Management of target achievement and allowances
  - The Government will establish the system for checking target achievements.
  - Those who want transactions of allowances must have their accounts in the system (similar to accounts in JVETS' registry)
  - Those who do not transact their allowances need not have the accounts (The Government just checks their target achievements within the system.).
- Trading
  - Trading participants can join the scheme by opening their accounts in the system.
  - Trading participants should report the transaction results periodically to the Government.
  - The Government will provide price-related information to participants to maintain sound trading.

Experimental nationally-integrated market for emissions trading



Key points
- In the **nationally-integrated market**, various allowances and credits are available for target achievement.
- Follow-up work is scheduled at the beginning of 2009 and in the fall 2009.

Introduction of an experimental nationally-integrated market for emissions trading
(Global Warming Prevention Headquarters' Decision on October 21, 2008)

Schedule

October 21, 2008	•Nationally-integrated market has been announced. •Recruiting participants has been started.
Mid of December, 2008	Tentative deadline for recruiting participants for FY2008
January-March, 2009	Interim review on the validity of each application by government councils reviewing KVAPs
June 30, 2009	Deadline for KVAP participants to decide whether they would have third-party verification.
August 31, 2009	Deadline for participants to submit their monitoring reports on CO2 emissions in FY 2008
Mid of October, 2009	Deadline for participants to verify their monitoring reports
Mid of November to December, 2009	•Deadline for retirement of allowances and credits •Government councils examine the results above, and follow-up KVAPs' achievement.

Thank you for your attention!

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Current Status of ETS discussions in the USA

Fourth German-Japanese Workshop on
Economic Instruments for Climate Protection

Dr. Felix Chr. Matthes
Berlin, 27 November 2008

ETS in the US
Starting points

- **USA is the biggest global GHG emitter**
  - (still) in absolute terms
  - per capita – for the foreseeable future
- **USA did not ratify the Kyoto Protocol**
- **GHG emissions increased from 1990 to 2005/2006 about 16 / 15%**
  - Population increased about 19 / 20%
- **Emerging debate on national climate policies during the last years**
  - at the state level
  - at the federal level
- **Focus of this presentation is on ETS**
  - climate policy is more than ETS

ETS in the USA at state level
Variety of approaches

- **Regional Greenhouse Gas Initiatiative (RGGI)**
  - 10 US states
  - emission reduction target 1990 level at 2009, 10% below 1990 level by 2019
  - cap-and-trade scheme for power generationn, starting in 2009
- **Western Climate Initiative**
  - 7 US States and 4 Canadian Provinces
  - emissions reduction target 15% below 2005 in 2020
  - elaborated cap-and-trade scheme, starting in 2012, extended scope from 2015
- **Other emerging proposals**
  - Florida, etc.

ETS in the USA at the federal level
Variety of approaches (1)

- **Bush administration**
  - no significant climate policy
  - legal cases MA ./. EPA
  - wide range of Congress proposals
- **Obama administration**
  - medium and long-term emission target (1990 level by 2020, 80% by 2050)
  - there will be an US ETS
    - targets
    - points of regulation
    - allocation
    - cost containment

ETS in the USA at the federal level
Variety of approaches (2)

- **Key proposals in the Congress**
  - Boxer-Lieberman-Warner (S. 3036)
  - Bingaman-Specter (S. 1766)
  - Markey (H.R. 6186)
  - Dingell-Boucher (draft)
- **Letter of 10 moderate democrats**
  - structuring the debate
- **Waxman ./. Dingell appointment**

ETS in the USA at the federal level
Variety of approaches (3)

- **Targets**
  - Dingell-Boucher
    - 6% below 2005 in 2020, 44% below 2005 in 2030, 80% below 2005 in 2050
  - Markey
    - 2005 level in 2012, 20% below 2005 in 2020, 85% below 2005 in 2050
  - Boxer-Lieberman-Warner
    - 4% below 2005 in 2012, 19% below 2005 in 2020, 71% below 2005 in 2050
  - Bingaman-Specter
    - 2006 level in 2020, 1990 level in 2030, [≥60% below 2006 in 2050)

ETS in the USA at the federal level
Variety of approaches (4)

- **Point of regulation: pure upstream schemes disappear**
  - trend: downstream schemes for large sources
  - Trend: upstream schemes for other sectors
- **Allocation: more auctioning, new approaches, adoption of (perverse) EU ETS provisions**
  - clear trend: more auctioning
  - new approach: allocation to distribution companies (background bizarre regulatory differences between the states)
  - trend: climate investments
  - new feature (for US debate): new entrant allocation
- **Revenue spending**
  - Technologies, compensation, buy-in

ETS in the USA at the federal level
Variety of approaches (5)

- **Cost containment**
  - trend: from safety valves and price caps towards borrowing and more use of offsets
  - different institutional settings
  - new role of border adjustments?
- **Use of (international) offsets**
  - domestic sinks as a controversial topic
  - strong limitations for international offsets

ETS in the USA at the federal level
The letter of 10 Senators

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Institute for Applied Ecology

- **Key asks**
  - Cost containment
  - Heavy technology investment
  - Treatment of states
  - Compensation for (residential) consumers
  - Competitiveness (protectionist and/or adaptation) measures
  - Agriculture and forestry
  - (No) state preemption, federal uniformity
  - Revenue use: prevention from wasting, fraud, abuse

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Thank you very much

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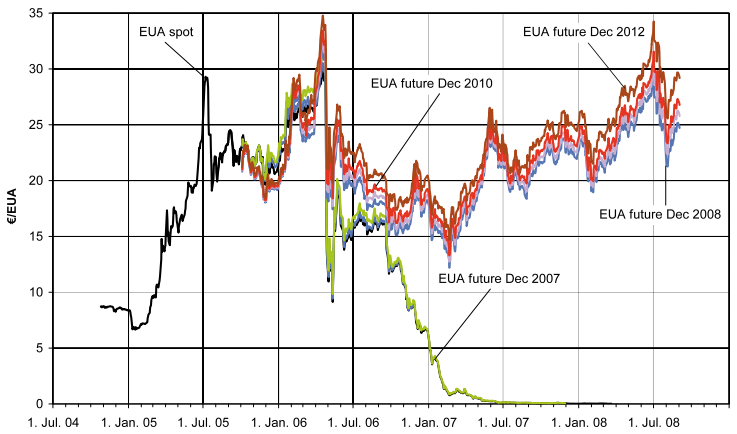
Lessons-learned from German (???) / EU ETS – Issues for Japan

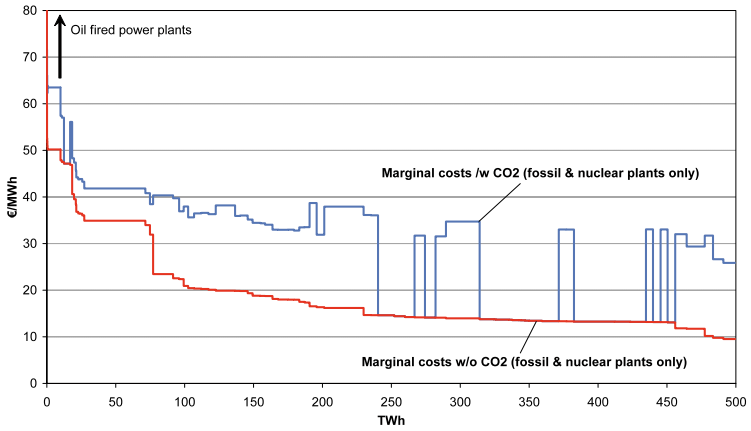
Fourth German-Japanese Workshop on
Economic Instruments for Climate Protection

Dr. Felix Chr. Matthes
Berlin, 27 November 2008

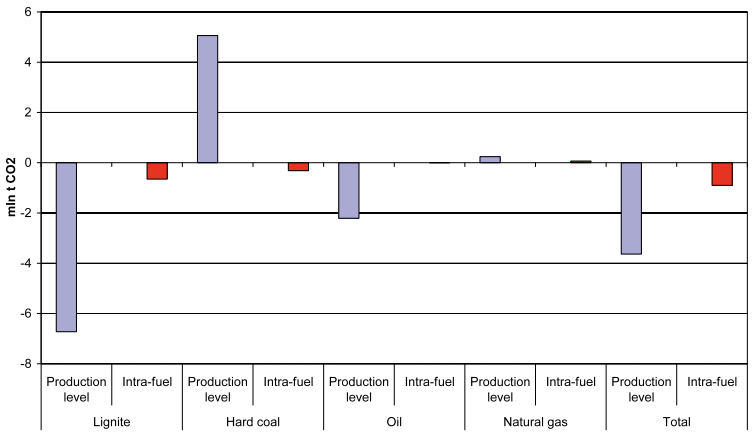
Experiences from the EU ETS
Mandatory downstream ETS can work



Experiences from the EU ETS
Even in EU ETS P0 abatement occurred (1)



Experiences from the EU ETS
Even in EU ETS P0 abatement occurred (2)



"Chinese walls" between cap-setting and allocation to installations are key (1)

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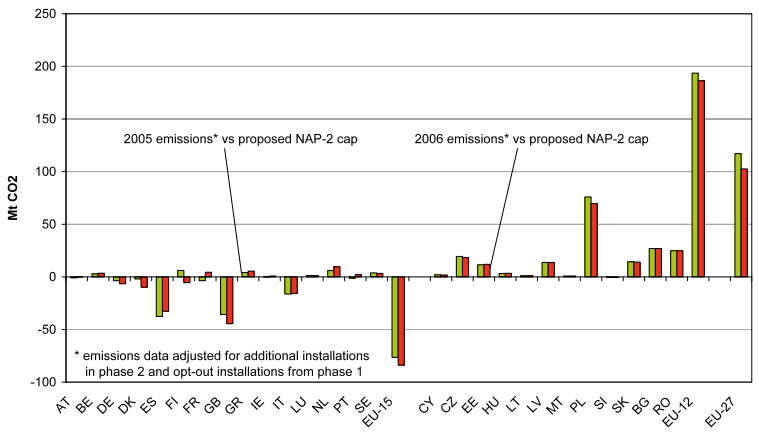

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"Chinese walls" between cap-setting and allocation to installations are key (2)

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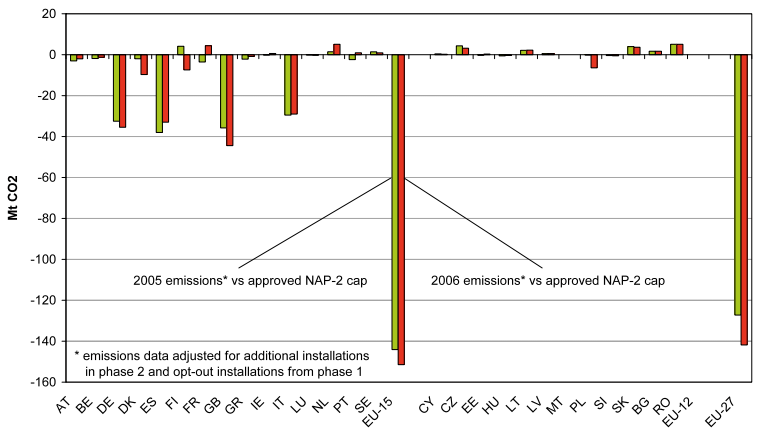

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Allocation is not only about distribution Static, dynamic and allocation efficiency

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CO_2 price signal creates incentives for				Optimal level of		Optimal intensity for	
				demand/ product innovation	production	CO_2 (energy, fuel, other inputs)	Energy
Incentivized optimization is				System-wide		Plant-specific	
Distortion of CO_2 price signal = loss of economic efficiency = higher allowance prices in future				Comprehen-sive price signal. Least distortion	Price signal for optimal production at given demand	Price signal for optimal specific CO2 emissions at plant level	Price signal for optimal energy efficiency at plant level
Auctioning				X*	X	X	X
Free Allocation	No updating		Historic emissions	(X)	X	X	X
	Updating (incl. new entrant allocation)	Benchmarks based on	All parameters (products, technology, inputs and/or fuels)	(X)	X	X	X
			Capacity only	(X)	(X)	X	X
			Product-specific only	O	(X)	X	X
			Product- and technology-specific	O	O	(X)	X
			Product-, technology- and input-/fuel- specific	O	O	O	X
			Historic emissions	O	O	O	O

O - not ensured. X - ensured. (X) - ensured in general, but depends also from other factors. X* - ensured in general, if no carbon leakage can be assumed

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Allocation is not only about distribution Efficiency & competition distortions

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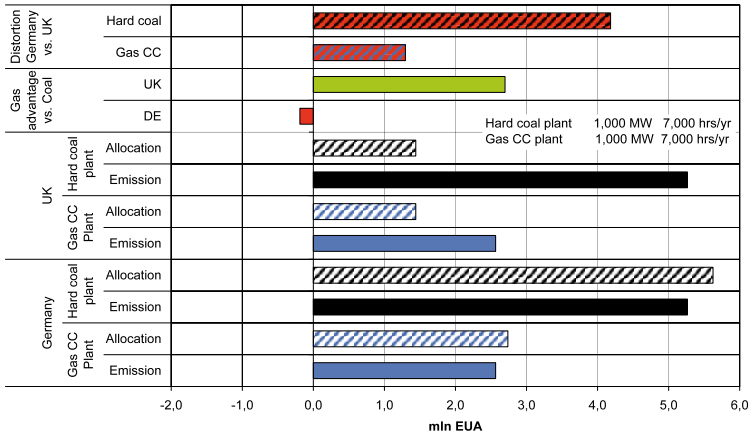

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Allocation is not only about distribution
Allocation efficiency is important

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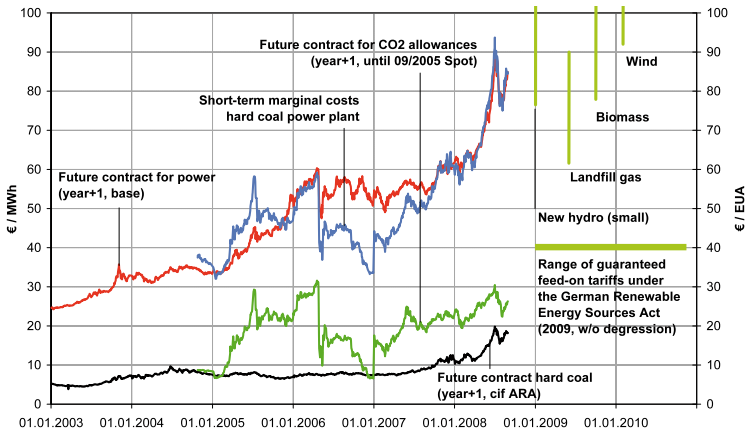

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Market interactions & the value chain
Energy market regulations DE & PL

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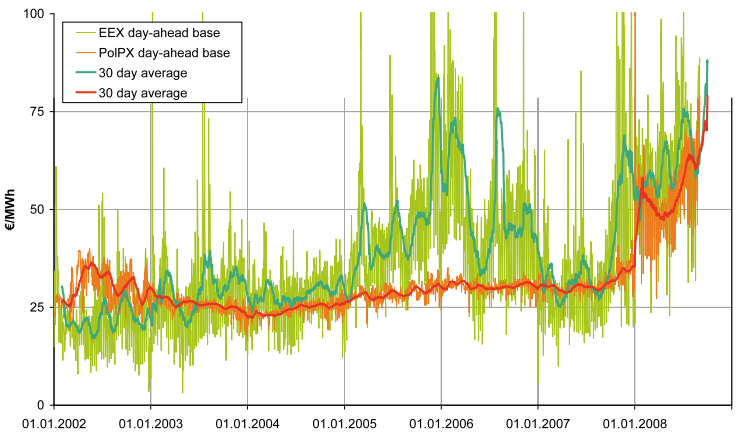

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Different competitiveness effects
More options then free allocation (1)

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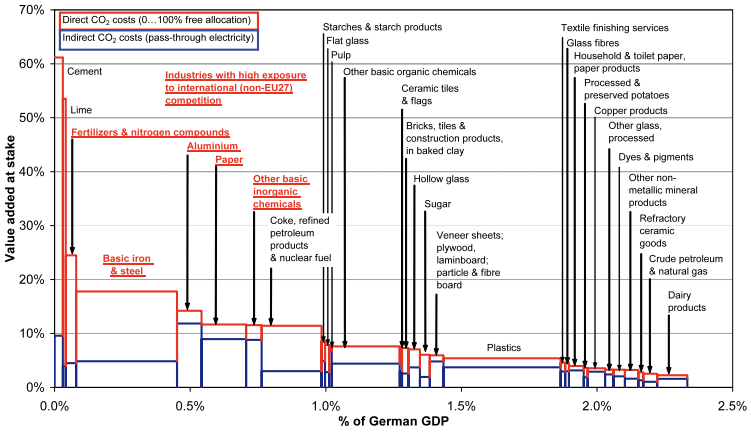

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Different competitiveness effects
More options then free allocation (2)

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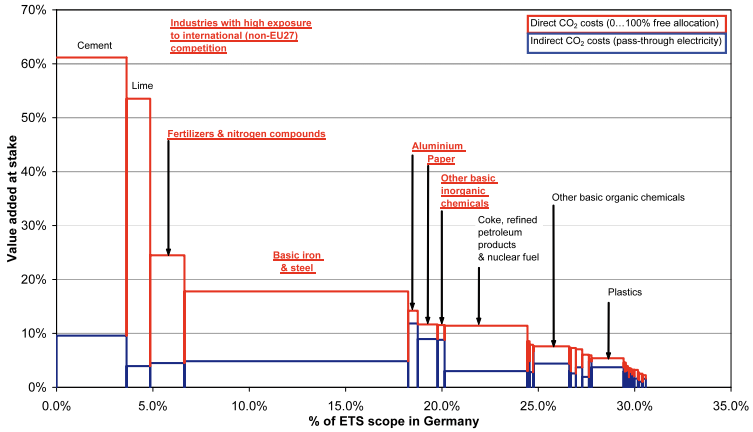

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Interactions between different policies
Careful assessment is needed

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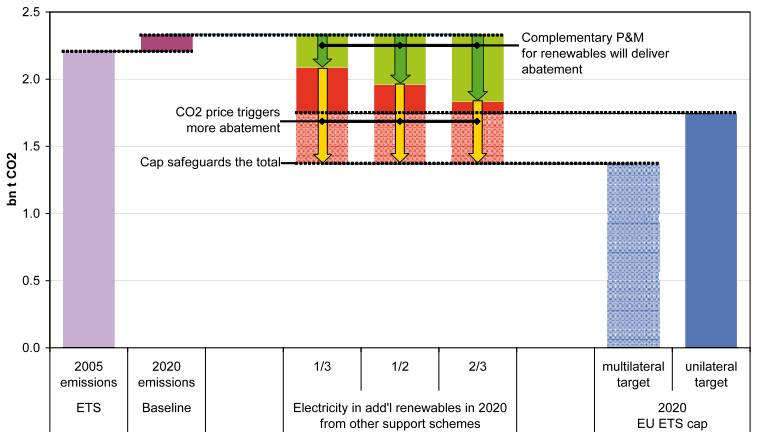

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Kyoto Mechanisms and the EU ETS
Strong ties

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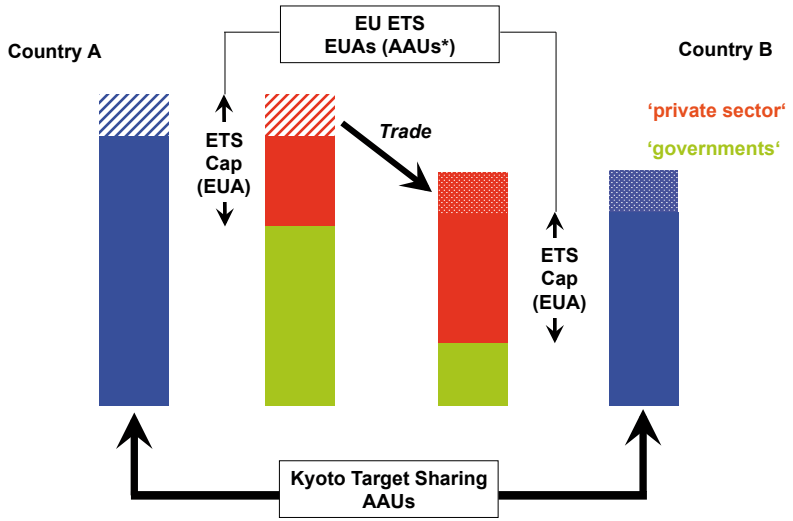

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Lessons learnt from the EU ETS
Some conclusions

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- Downstream ETS can create a uniform price signal
- Undistorted CO2 price signals create emission abatement – and innovation
- Separation between cap-setting and allocation process is key
- Allocation does not only matter with regard to distributional, distortions of CO2 price signal will affect static, dynamic and allocation efficiency, new entrant allocation as a key problem
- Technicalities and data are key, pilot phase was an extremely good idea
- Leakage concerns must be taken seriously, but free allocation is not the only (effective) option to tackle leakage
- Policy and regulatory interactions must be assessed carefully
- A smart policy mix is important, carbon pricing is necessary, but not necessarily sufficient

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Sustainable energy strategies
= I^3 + T + FSM^2P + BPT + IF = ETS & more

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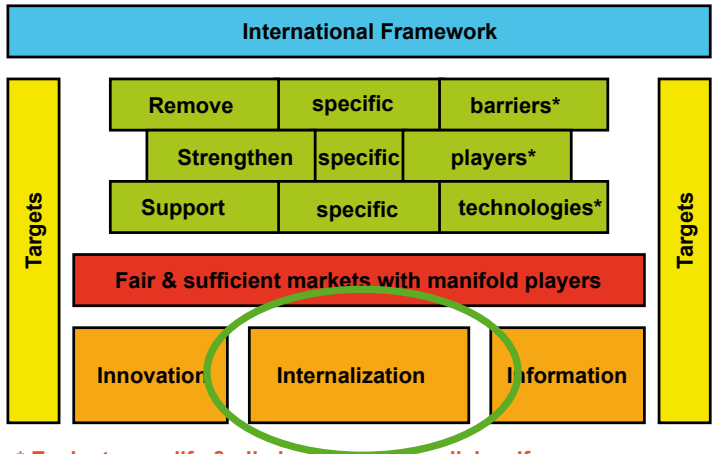

* Evaluate, modify & eliminate specific policies, if necessary

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Thank you very much

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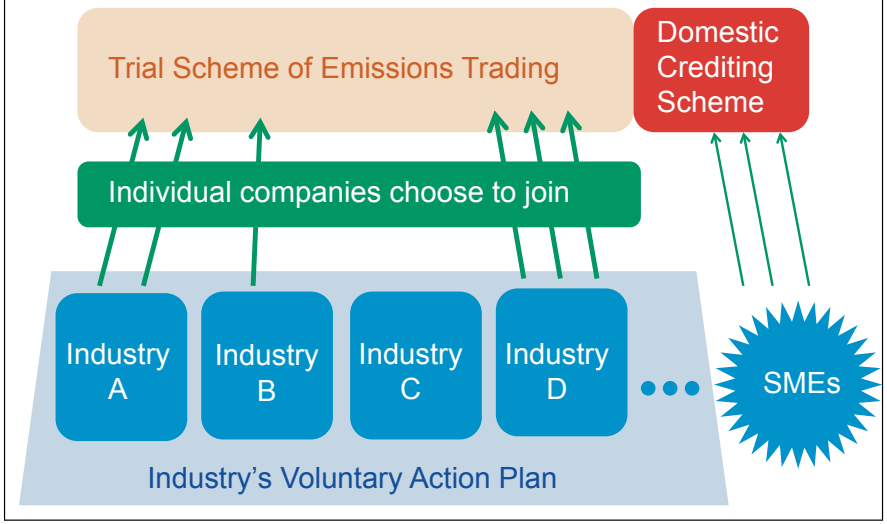
WWF for a living planet

Seeking a Japanese Way

A view on an effective ETS in Japan

Naoyuki Yamagishi
Head of Climate Change Programme, WWF Japan
IGES/Wuppertal Institute Seminar (Berlin)

Starting with the Trial



Assessment of the Trial ETS in Japan

Good!

- ✓ Learning by doing, not talking
- ✓ Building market environment / infrastructure
  - ✓ e.g. market places, exchanges, contracts, registry, legal nature of allowances

Bad!

- ✓ No economy-wide cap; no initial allocation, either
- ✓ Voluntary participation
- ✓ Voluntary targets
- ✓ Intensity targets

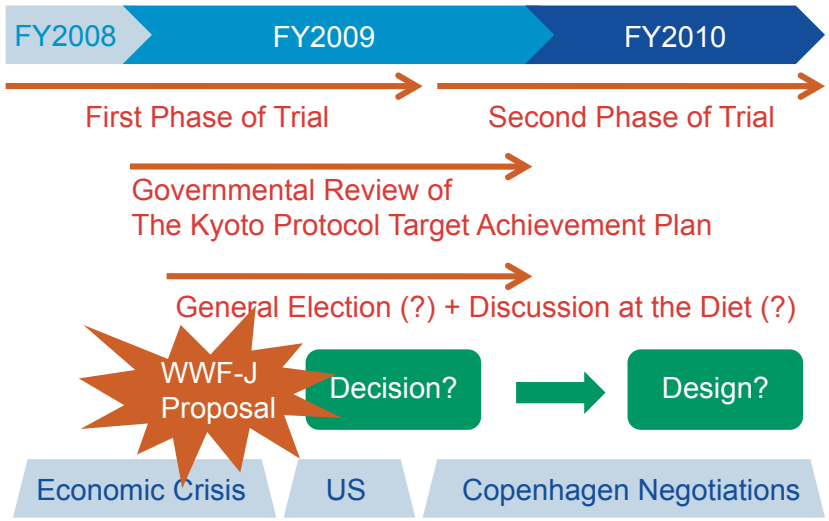
- ➢ This is NOT a comprehensive trial of cap and trade.
- ➢ No additional reduction is expected.
- ➢ Learning will be limited, though not necessarily useless.
- ➢ Based on the lessons, we need to swiftly move to a full trial.

Basic Design Principles

- ➢ Strong cap with a mid- and long- term targets
  - in line with 25-40% by 2020; at least 80% by 2050
- ➢ Fair allocation to create positive incentives
  - Mix of auctioning, benchmarking and grandfathering
- ➢ Phased development of the scheme
  - Keep it simple first and then expand and deepen
- ➢ Compatibility with other ETS in the world
- ➢ Robust yet objective criteria for foreign credits
- ➢ Positive interaction with other policies in non-ETS sectors

The Best Strategy — Stealing lessons from EU and US state-level experiences

When?
One Dreamy Scenario



Tentative Ideas for a "Japanese" Way

Supporting Manufacturing Industries

- ✓ Japanese industries are typically good at incremental, steady improvements
- ✓ To facilitate such improvements in low carbon solutions, more should be done in addition to the scheme itself
- ✓ Need to build effective carbon finance schemes that improve accessibility to low carbon technologies

In Asia

- ✓ The ETS should not only focus on low-carbon opportunities within Japan but also should facilitate technology cooperation and financing low-carbon technologies in Asia
- ✓ An additional reduction requirement on top of the domestic emission reduction target is necessary

Thank you for Listening!

For WWF Japan's 2007 Proposal for an ETS (*Decarbonizing Japan*)

Executive Summary:
http://www.wwf.or.jp/activity/climate/lib/ETS/080312ETSReportES_ENG.pdf
Full Report:
http://www.wwf.or.jp/activity/climate/lib/ETS/080312ETSReport_ENG.pdf

WWF Japan is planning to launch a new ETS design proposal in mid-2009.

Any questions? : yamagishi@wwf.or.jp

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firstclimate

Lessons Learnt from German ET

A Private Sector Perspective

Frieder Frasch, Client Relationship Manager

www.firstclimate.com

Overview

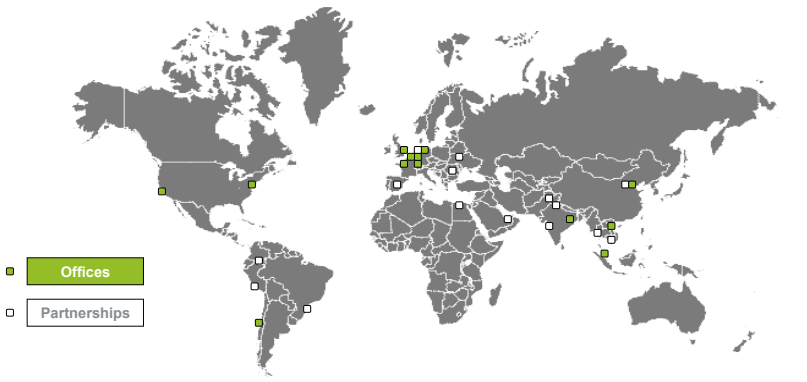
First Climate – 10 Years Experience in the Carbon Market

A leading carbon asset management company

- Early 2008: First Climate established through merger of 3C and Factor
  - Factor Consulting + Management AG (founded in 1999 in Zurich, CH)
  - 3C Group (founded in 2003 in Frankfurt / Main, Germany)
- Assets under management (2008): EUR 250 million
- Turnover: EUR 12 million (2007), EUR 30 million (expected in 2008)
- offices on 4 continents
- 100+ employees
- Member of International Emissions Trading Association (IETA), International Carbon Reduction and Offset Alliance (ICROA) and Carbon Markets and Investors Association (CMIA)

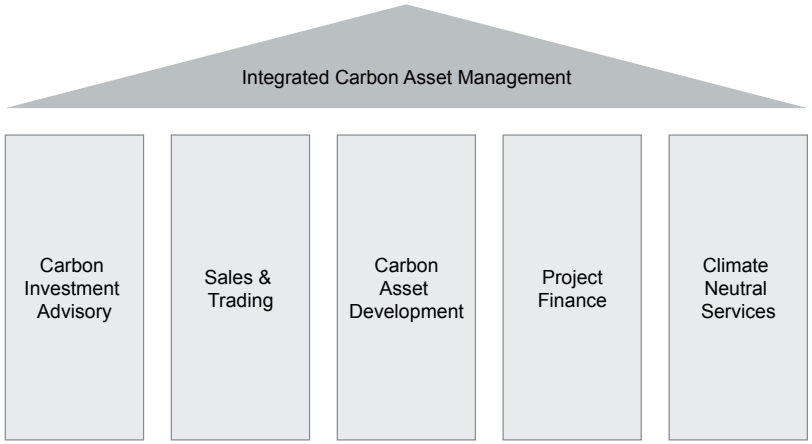
Global Player: Offices on 4 Continents

Washington, D.C. | London | Frankfurt | Zurich | Berlin | Beijing



San Francisco | Santiago de Chile | Paris | Luxembourg | Kolkata | Hanoi

First Climate's Core Competencies



Overview

1 First Trading Period 2005-2007

Framework of the First Trading Period

- First Trading Period was intended as a **set up phase** to allow participants to get accustomed to the policy shift
- Highly complex **allocation rules** (grandfathering, benchmarks, early actions - 58 combinations)
- ET was introduced under high **time pressure**
- Lots of **legal problems** had to be solved on national and European level

Effects on ET installations

- Complexity of allocation rules made **decision making difficult**
- Time restrictions led to high **procedural uncertainty**
- Legal disputes led to **high costs** and increased **uncertainty**
- Most SMU relied on **external consultants** to support them in the
  - Allocation process
  - Monitoring issues
  - Integration of ET in business process
  - Trading and hedging strategies

1 First Trading Period 2005-2007

Development of Trading activities

- Steadily **increasing trade volumes**
- More and more participants, mainly **utilities** and **large industrial** companies
- A few large emitters can **dominate the market**
- **Overallocation** of about 90 million EUAs in the German market
- **Price collapse** in April 2006 (Peak price 35 €/EUA, a few cents in early 2008) shows that market works

Lessons Learnt

- Robust **database** is important to set an adequate cap
- Sufficient **preparation time** is crucial for installations
- Transparent **allocation rules** are important
- **Administrative burden** needs to be minimized

Overview

0 Profile First Climate

1 First Trading Period 2005-2007

2 Second Trading Period 2008-2012

2 Second Trading Period 2008-2012

Framework of the Second Trading Period

- EU commission reduced cap of most national allocation plans to **ensure shortage**
- More time for **preparation**
- Administrative efforts have been reduced
- **Transparent allocation rules** with less flexibility
  - Benchmark or grandfathering according to sector and age
  - Sale of EUAs to reduce "windfall profits"
  - de-minimis-allocation for small installations
- Delayed allocation
- **High flexibility** on use of **CDM and JI** credits, but also high uncertainty
  - Connection between CITL and ITL
  - Use of certain project types for compliance (large hydro, unilateral, etc.)
  - Use of credits after 2012
- Uncertainty about **third trading period** halts many projects

2 Second Trading Period 2008-2012

Effects on ET installations

- Generally the **energy sector is short** and the **industrial sector is long**
- Focus shifted from administrative tasks to a more **carbon asset management**
- **Abatement** measures are started – especially fuel switch
- Companies start **trading and hedging** regularly
- Many large utilities set up **origination units** for primary CDM and JI credits

2 Second Trading Period 2008-2012

Development of Trading activities

- Still **increasing trade volumes**
- **Financials** (funds, hedgefunds, banks) engage in ET
- **More exchanges** and **different products** (options)
- Many SMEs **swapped** their CDM/JI quota
- High **correlation of EUAs to oil**

Lessons Learnt

- Legislators have resolved some of the problems of the first trading period
- Companies react on **price signals**
- **Regulatory framework** should be as clear as possible
- Clear **long-term perspective** is necessary
- **Anxiousness** about post 2012
- ET is still mainly considered **a cost driver**

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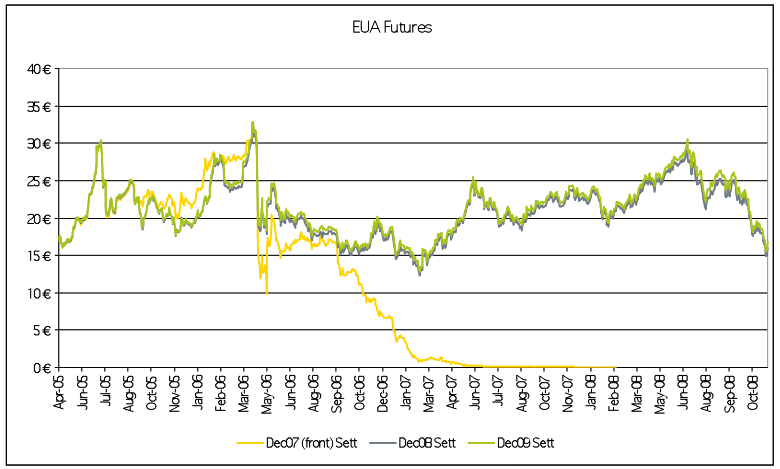
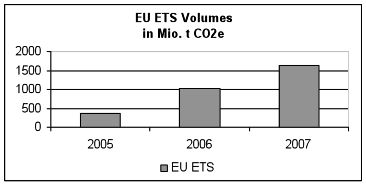
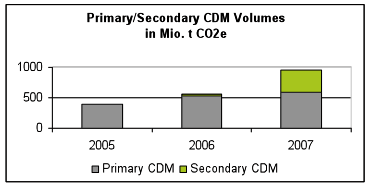
1 First Trading Period 2005-2007

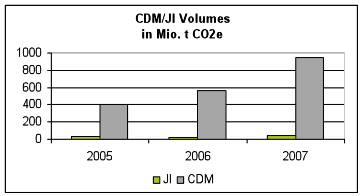


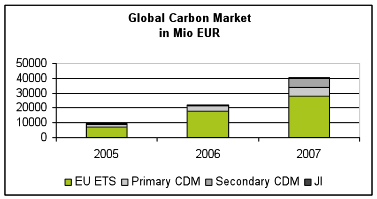
Source: EEX, ECX

1 First Trading Period 2005-2007









Source: Point Carbon

![Wuppertal Institute for Climate, Environment and Energy]

Wuppertal Institute
for Climate, Environment
and Energy

Cap and Trading Scheme

Translating Theory into Practice via Politics

Presentation at
Fourth Germany-Japan
Workshop
27 November 2008

Rie Watanabe
Research Group
Energy, Transport, and Climate

Cap and Trading Scheme - Theory

Definition

- Government sets an upper limit of the total emissions discharged by entities covered by the scheme.
- Government issues a set number of allowances, and allow entities to trade permits, thereby putting a price on carbon.
- Entities are obliged to control emissions discharged by them below the limit, or to purchase allowances from other entities if their emissions exceed the limit.

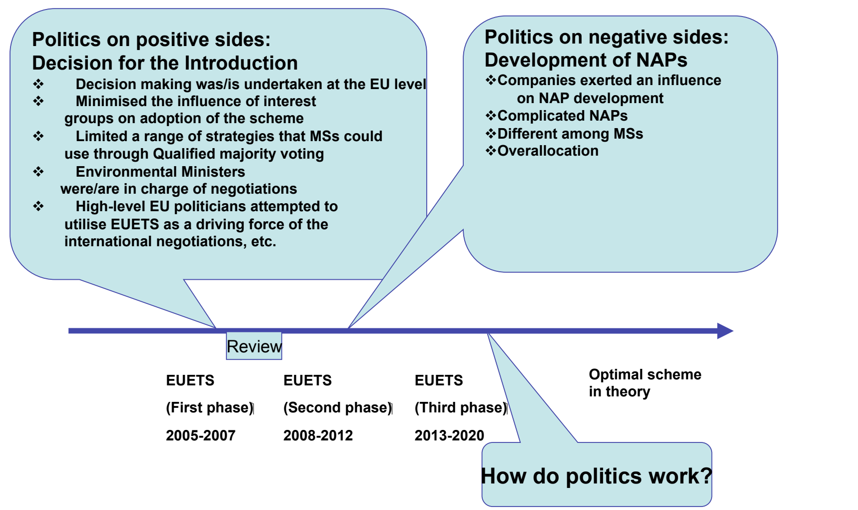
Benefits

- Contol the total amount of emissions at the limit set in advance.
- Provide the private entities flexibility to determine on the way to control emissions in a cost efficient manner.
- Enchance technology deployment/development through pricing the carbon.

Cap and Trading Scheme - Practice in the EU

	Theory	The first and second phase of EUETS	The third phase EU ETS proposed by the Commission (COM(2008)16 final)
Trading Period	Long enough to enhance technology innovation	2005.01.01 - 2007.12.31 (3 years, the first phase) 2008.01.01 - 2012.12.31 (5 years, the second phase)	2013.01.01- 2020.12.31 (8 years) 21% reductions in the sectors covered by ETS between 2005 and 2020 and a linear reduction (1.74% per year even after 2020, review in 2025) to provide long-term predictability
Gas Coverage	As many gases as possible if the accuracy of monitoring/ verification is ensured	CO_2 (2 billion tonnes of emissions, half of total EU's CO_2 emissions)	Plus N_2O emissions from the production of nitric, adipic and glyoxalic acid production and PFC emissions from the alminium sector
Sector Coverage	As many sectros as possible, perhaps not for small emission sources	Combustion/ energy, Oil refining Coke production, Pulp and paper, Lime, Cement, Iron and steel, Ceramics, Glass	Plus petrochemicals, ammonia and alminium
Allocation method	100% auctioning	▪ Grandfathering ▪ Auctioning possible up to 5% (first phase), 10% (second phase)	In principle, auctioning (power sector and CCS) For other sectors, starting with 80% benchmarking towards full auctioning in 2020 to address „carbon leakage."
Penalty	Far above the price of emissions allowances	40€ 100€	100 €

Cap and Trading Scheme - Politics in the EU



Questions to the Japanese speakers

- What is the political situation in Japan? Has the industrial stakeholders changed their positions? Ready to agree on initiating a cap and trading scheme?

cf. In the past, cap and trading scheme = a limit on economic growth
Voluntary approaches is the instrument to control emissions from the industrial and energy sectors.

- If so, what are the main factors to change their positions?

No decrease in domestic emissions, a global trend to utilise a cap and trading scheme as an instrument to control emissions from the industrial and energy sectors, in particular the US situation

- If so, from where will the Japanese scheme start? Less stringent than the first and the second phase of EUETS, similar to the first and the second phase of EUETS, or more stringent than the EUETS based on the lessons learnd in the EU?

Questions to the German speakers

1. Is a cap and trading scheme perceived as the instrument to control emissions from the industrial and energy sectors?

- If so, how can the conflict between economic prosperity and climate protection be reconciled?

- How can „carbon leakage“ be avoided?
- Is 8 years long enough to enhance technology innovation (if long-term perspective is provided)?
- Is a full auctioning accepted by most of industrial stakeholders? Do industrial stakeholders consider emissions allowances as something simlar to materials whose cost must be incoporated in cooporate strategies?

Wuppertal Institute
for Climate, Environment
and Energy

Many thanks for your attention !

For further information
please visit our website:

www.wupperinst.org

Japan-Germany workshop on the ETS

ETS in Japan :

Effectiveness, Efficiency and Concern on the Carbon Leakage

Jusen ASUKA
Tohoku University, Japan
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Nov. 28, 2008 Berlin

Contents

1. Effectiveness

Born to be ineffective ?

- Voluntary, not stringent and no penalty
- No verification of emissions needed if the regulated companies will not sell the allowance
- Questionable (?) quality of the domestic offsets

2. Efficiency

Born to be inefficient ?

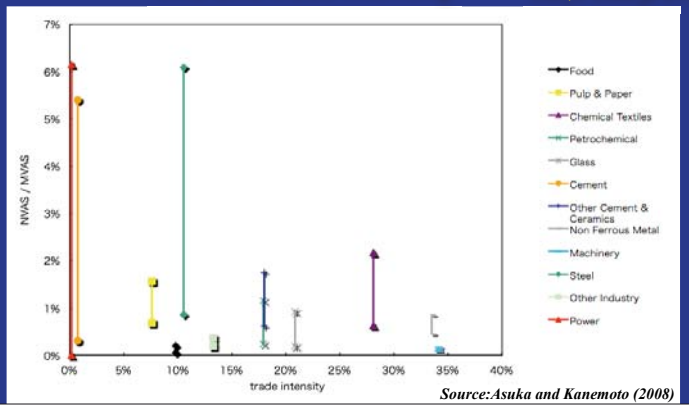
- Free allocation
- Intensity target
- Up-dating of the allocation
- Price control (guidance?) by the government

3. Value at stake in Japan

Impacts of ETS on Industrial Sector (case of Japan)

VAS and trade intensity

CO_2@1500 JPY/ton



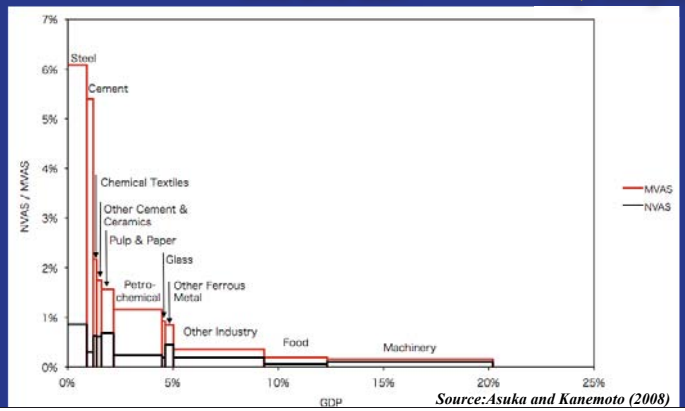
Source:Asuka and Kanemoto (2008)

3. Value at stake in Japan

Impacts of ETS on Industrial Sector (case of Japan)

VAS and GDP

CO_2@1500 JPY/ton

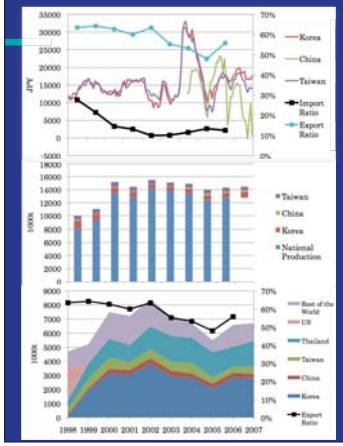


Source:Asuka and Kanemoto (2008)

4. Price difference and Trade pattern: case of steel

4. Price difference and trade pattern: case of steel

Will carbon leakage really happen?



Price difference (domestic price - import price), export ratio and import ratio

Domestic production, import from abroad

Export from Japan

Case of flat steel (1998-2007)

1. Japan's competitors are Korea, Taiwan, and China
2. So far, no clear relationship between price difference and trade pattern

Source:Asuka and Kanemoto (2008)

5. China specific factors

5. China specific factors

Rapidly changing economical/ political/business environment

- Energy conservation
- Voluntary self-restriction on export
- Economic integration

5. China specific factors

Efficiency: Better than Japan's average

Comparison of the energy intensity among steel making plants both in China and in Japan (MJ/ton, as of 2004)

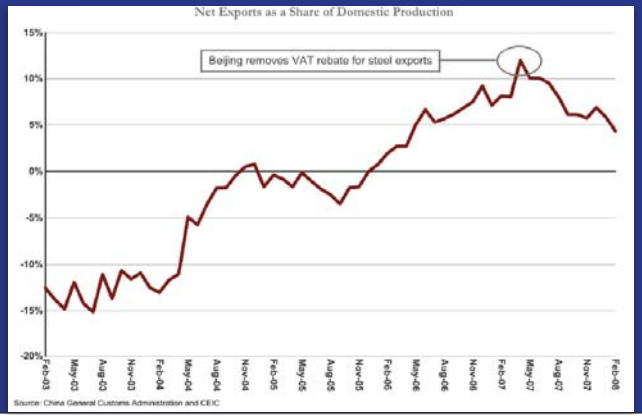
		Energy consumption intensity	Cokes making process	Sinter making process	Iron making process	Steel making process with converter	Casting process with rolling mill
①	China big enterprises	20.64	4.16	1.94	13.65	0.99	2.72
②	China small enterprises	30.59	6.71	3.18	17.32	2.20	8.40
③	China best enterprise	17.45	2.58 (Bao steel)	1.52 (Hanzou steel)	11.57 (Bao steel)	-0.11 (Wuhang steel)	1.57
④	Japan average	19.20	2.78	1.55	11.59	-0.08	1.81
Differences inside of China	② - ①	9.95	2.54	1.24	3.68	1.21	5.68
	② - ③	13.14	4.13	1.65	5.75	2.31	6.83
	① - ③	3.19	1.58	0.42	2.07	1.10	1.15
Differences between Japan and China	① - ④	1.43	1.38	0.39	2.05	1.07	0.90
	② - ④	11.39	3.93	1.63	5.73	2.28	6.58
	③ - ④	-1.76	-0.20	-0.03	-0.02	-0.03	-0.24

Source: Ning Yandong and Tonooka Yutaka (2008) "Study on Production Formation and Energy Consumption in Chinese Iron and Steel Industry", Energy and Resources, Vol.29, No.5, 313-318.

5. China specific factors

Effects of the voluntary self-restriction

Change of the steel export ratio of China



Source:Peterson Institute (2008)

6. Conclusion

Let's be optimistic!

- Anyway, better than nothing
- Post-2012 target is crucial for the real implementation/improvement
- Myth of carbon leakage?

Alles Gut!

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ICAP

Fourth German-Japanese Workshop on
Economic Instruments for Climate Protection
organized by the German and Japanese Ministries for the Environment, IGES and the Wuppertal Institute

Berlin, 28 November 2008

Martin Bergfelder
ICAP Project Manager
German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

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Overview

- **What is ICAP?**
- **Who is ICAP?**
- **How does ICAP work?**
- **State of play**
- **Role of ICAP in the global carbon market**
- **Outlook on ICAP work program 2009**
- **Summary**
- **Questions for discussion**

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What is ICAP ?

- **Partnership** of countries and regions that are actively pursuing the development of **carbon markets** through implementation of mandatory cap and trade systems with absolute caps, est. in Lisbon on 29 October 2007
- **Open Forum** to share best practice and learn from each others' experiences
- Enhance the design of the different systems by **ensuring** that **design compatibility** issues are recognized at an early stage
- **Make possible** future **linking** of trading systems

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Who is ICAP?

- **European Union Members**
  European Commission, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, United Kingdom, *Denmark*
- **Regional Greenhouse Gas Initiative (RGGI) Members**
  Maine, Maryland, Massachusetts, New Jersey, New York
- **Western Climate Initiative (WCI) Members**
  Arizona, British Columbia, California, Manitoba, New Mexico, Oregon, Washington
- **Other Members**
  Australia, New Zealand, Norway
- **Observers**
  Japan, Tokyo Metropolitan Government, Ukraine

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How does ICAP work?

" *The forum will convene regularly and define a work program, including joint research and studies. It will identify barriers, including barriers posed by applicable state, federal and national laws, and it will identify solutions with the view to developing recommendations for consideration by each of the signatories hereto"*

- ***Steering Committee*** *(11 members, Chair 2008 CAL), Plenary, Project Manager, Assistant Project Managers*

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und Reaktorsicherheit

State of play: ICAP work streams in 2008

- MRVCE conference, report and experts network
- Auctioning conference
- Closed door workshop on allocation
- Side event in Poznan

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MRVCE

- **MRVCE conference in Brussels on 19/20 May 2008**
  - Conference report still under revision, to be published soon
- **MRVCE experts network**
  - Established in July 08, ICAP members + observers to share best practises and experiences
  - Works with external consultant + ICAP SC subcommittee on MRVCE report
- **MRVCE report**
  - Outline best practises and identify possible barriers with a view to linking ETS
  - Final version in Feb 2009

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Key messages from MRVCE conference

- **MRVCE** is the **backbone** of a Robust Carbon Market
- Hard cap and avoidance of over-allocation critical to success of a carbon market. Robust **MRV** requirements **facilitate cap setting outside margin of error**.
- **Single blueprint** for international MRVCE **unlikely but** end result must be the same ("**A tonne must be a tonne**"). As long as countries have a sound and accurate monitoring policy, **some differences** in MRVCE will **not hamper linking** in the future
- **MRV capabilities** are **key** for deciding on **scope** of ETS.
- Clear **rules** needed on **content and frequency** of emission **reporting**. **Lack of transparency potential barrier for linking** as the market with the weakest reporting requirements may significantly influence the market sentiment of all carbon markets.
- **Sound data release policy improves functioning of** the **market** and avoids undue price volatility and undesired 'spill-overs' to linked markets
- **Need to share best practices** in design of regulatory framework for MRVCE

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Public conference on Auctioning I

- Auctioning carbon allowances – towards robust auction design and implementation - 14 November 2008, Washington, DC
- Focus on technical aspects of designing and implementing carbon allowance auctions and what coordination may be necessary across carbon markets
- Political speeches by Hon. Mary Nichols, California Air Resources Board, California; Brice Lalonde, French Ambassador for Climate Change
- Presenters from governments and stakeholders, participants from Japan and US federal government
- Presentations and a Conference report will soon be published at **www.icapcarbonaction.com**

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Public conference on Auctioning II – Key messages

- Auctioning should be the ultimate goal for the allocation regime because
  - Allocation significantly matters for efficiency
  - Uniform price signal is distorted by free allocation approaches
  - Effective international climate policy will require funds – auctioning is the best way to raise these funds and to avoid windfall profits.
- Auction should be frequent (at least quarterly), transparent, simple
- Method of auction does not impact ability to link. However, auction vs free allocation could matter – at least from a political standpoint („state-aid" issue in related markets)

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Closed door workshop on allocation

- 13 November 2008, Washington, DC
- Open and strategic discussion on allocation issues and potential impacts for linking
- Japan (MoE) did participate
- Format of a closed meeting proved to be valuable to ICAP partners and will therefore be continued to tackle other issues in 2009

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ICAP Side event at COP 14 in Poznan

- 5 December, 6-8 PM
- EU Pavilion
- Presentation of MRVCE project and outcomes of auctioning conference
- Outlook on ICAP work program 2009

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Role of ICAP in building the global carbon market

- Forum to discuss critical issues regarding linking of emissions trading systems amongst governments behind closed doors
- Build trust amongst governments
- Highlight the key role of C&T as an effective climate policy response
- Outcomes of UNFCCC COP 15 and developments at US Federal level in 2009 will be important factors for the future of ICAP and the global carbon market post 2012

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Outlook on ICAP work program 2009

- Continue MRVCE work stream
- Establish ICAP expert network on Auctioning to exchange best practises and follow-up to the Auctioning conference
- Possible subjects for closed door workshops in 2009 include coverage/scope, competitiveness and offsets. Next workshop in the first half of 2009 is likely to be held in British Columbia.
- Public conference on MRVCE in Asia, more likely in the second half of 2009

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Summary

- ICAP is the international forum for public authorities to discuss ETS design and linking issues
- ICAP partners are exchanging best practises and cooperating to facilitate harmonization and linking of existing and emerging ETS
- ICAP is a bottom-up approach complementing but not supplanting the UNFCCC process
- The ultimate goal is a global carbon market
- ICAP welcomes the participation of Japan

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Questions for discussion

- How can ICAP contribute to the creation of a linkable ETS in Japan?
- What are the specific elements of a „Japanese way“ to ETS that should be taken into account when exploring possible linkage with EU ETS and other emerging systems?
- What are the common interests of Japan and Germany regarding ETS and how could we further enhance our collaboration both bilaterally and within ICAP to pursue them?

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Thank you very much for your kind attention.

Martin Bergfelder

martin.bergfelder@icapcarbonaction.com

Emerging Japanese Emissions Trading Schemes and prospects for linking

Hitomi Kimura
Researcher (LL.M.), IGES, kimura@iges.or.jp

Fourth German-Japanese Workshop on
Economic Instruments for Climate Protection
Organised by the German and Japanese Ministries for the Environment, IGES and the Wuppertal Institute
27-28 November 2008, Heinrich Böll Stiftung, Berlin

Characteristics of Japanese climate policy in introducing ETS

- **Reactive and UN-based multilateral focused approach, with careful balancing between U.S. and EU rather than strong leadership (Oberthür and Ott 1999)**
  - **→Late domestic consensus, vague position, but high possibility of achieving commitments**
- **"Step-by-step approach"**
  - **→Rather than introducing mandatory ETS early on, started with**
    - **1) Keidanren Voluntary Action Plan (1997)**
    - **2) Japanese Voluntary ETS (2005)**
    - **3) Voluntary trial ETS (2009)**
- **Few usage of economic instruments and preference for regulation/ voluntary approach (in consideration of industries)**
  - **→ Negative against money game under ETS and stick to real ER through technology development**

Preliminary assessment of JVETS

- **Pros**
  - **Accumulation of knowledge**
  - **Low and decreasing cost**
  - **Policy-mix:**
    - **CDM**
    - **Subsidy (-2009.4)**
    - **Voluntary absolute target (binding with penalty for participants)**
- **Cons**
  - **Limited participants without major emitters (domestic consensus)**
  - **Small market size/few trading / low incentive under pledge & review/baseline & credit**
  - **Indirect link with CER (No direct link with mandatory ETS)**

Phase	I (2005.4-)	II (2006.4-)	III (2007.4-)	IV (2008.4-)
Target participants + trading participants	31+7	61+12	61+25	73+TBD
Total target (Mt-CO2) (Percentage of Japan's emission)	0.27Mt-CO2 (0.019%)	0.21Mt-CO2 (0.015%)	0.23Mt-CO2 (0.017%)*	0.32Mt-CO2 (Estimates) (0.023%)*
Emission reductions (Mt-CO2) (Percentage of Japan's emission)	0.37Mt-CO2 (0.027%)	0.28Mt-CO2 (0.02%)	-	-
Cost/t-CO2 (JPY/t-CO2) (USD/t-CO2)	2,000-4,000 JPY/tCO2 (USD20-40/tCO2)	1,080JPY/t-CO2 (USD10/t-CO2)	1,766JPY/t-CO2 (USD17/t-CO2)	758JPY/t-CO2 (w/out subsidy) (USD7/t-CO2)

Current change of position to ETS
:Political leadership toward the G8 summit

- **Fukuda Vision**: **Trial-ETS (2009-)**
  - **14%** (2005-2020)(potential with sectoral approach), 60-80% (2005-2050)
  - Official 2020/2030 target to be announced in 2009
- **Liberal Democratic Party (LDP)**: Mandatory ETS (2010-)
  - **25%** (1990-2020), 60-80% (1990-2050)
- **Democratic Party of Japan (DPJ):** ETS (2010-)
  - **25%** (1990-2020), 60% (1990-2050)
- **Industry**
  - Sudden acceptance as international trend (Keidanren, Feb 2008)
  - Strong opposition still seen by steel/power
- **Government**: Detailed design of ETS by 3 committees
  - Cabinet Office: Mandatory ETS (2010-)
  - METI: 14% possible
  - MoE: ≧**25%**

Possible barrier for linkage: Proposal of MoE/METI

- No clear position (MoE: ICAP Observer)
- Stringency of target
  - Lenient environmental effectiveness due to modest 2020 reduction target
- Allocation method
  - Indirect emission, Grandfathering
  - Less trading due to ex-post allocation by intensity target, thus leads to liquidity shocks for absolute scheme at the time of adjustment (Sterk et al. 2006)
- Compliance
  - Price cap (METI, (MoE))
  - Less environmental integrity due to no strict penalties (METI)
  - Cost-containment measures (MoE)

Possible barrier for linkage: Proposal of MoE/METI

- Gases
  - Less possibility of cost-saving through different coverage of gases: 95% from energy-related CO2
- Flexible mechanisms
  - Less strict rules for offsets than Track 2 JI, provides subsidy to the developer
  - Different definition of credits harm the market liquidity (Kimura 2006)
- Less problematic
  - Less concern for environmental effectiveness due to output increase (Marschinsky 2008) since intensity reduction should be converted to absolute
  - Borrowing can be unacceptable if weaken environmental integrity (Flachsland 2008, Haites and Mullins, 2001), but proposal limit borrowing (MoE)

Prospects for linkage: JVETS (2005-) and Trial-voluntary ETS (2009-)

- Non-binding "arrangement" with EUETS promising (amended §25-1b of the EU-ETS Directive proposed)
  - Difficulty in linkage with mandatory EU-ETS (§ 25-1a)
  - Contractual agreement not attractive due to involved risk
  - No controversy in including intensity target, converted to absolute in the end by multiplying production (Trial-ETS)
- Linkage with other voluntary ETS (e.g., Canadian ETS) possible, depending on design compatibility
  - Stringency of target (compliance mechanism)
  - Duration of trading periods (different period under trial-ETS)
  - Direct/indirect emission
  - Definition of credits: quasi movable property/tangible assets
    - Excess mission reduction unit, Kyoto credits, domestic offset (Trial-ETS)
    - Japan Allocation, j-CER (JVETS)
  - MRV procedure: Registry etc.

Prospects for linkage: future mandatory ETS

- (1) Purely political arrangement
  - Governments decide whether to report to Diet foreign affairs committee as crucial administrative arrangements
- (2) Binding international treaty with foreign countries
  - Only by the Cabinet (Constitution§ 73), but treaty making avoided, taking at least one year
- (3) Mutual recognition of allowances (by reciprocal rules in the domestic law of participating jurisdictions)
  - Depends on technical compatibility
  - Contractual agreement unlikely, due to its involved risk

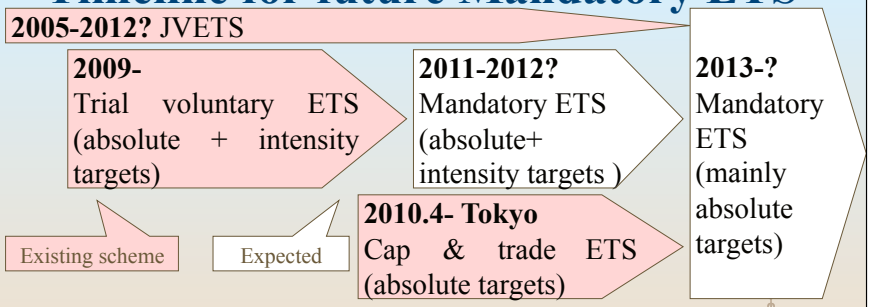
→ Cabinet's amendment of the existing "Law for the Promotion of Actions to cope with Global Warming" most realistic, but uncertainty remains due to political uncertainty (LDP vs. DPJ)

→ If linkage involves budget (e.g., common system), only the Cabinet can submit to the Parliament (§73-5)

Linking Tokyo Metropolitan Government ETS

- **Introduction of mandatory ER/ETS (April 2010-2014)**
  - Core measure to reduce **25%** CO2 emission (2000-2020)
  - Around 1,300 big entities (fuels, energy, electricity (consumption)≧1,500kl oe)
  - Baseline CO2: average emission (2005-7) x ER Rate
- **Positive about linkage**
  - **ICAP** Observer (2008-)
- **Legal issues** for earlier introduction
  - Can Tokyo make arrangement/agreement with other countries/ states without the consent of national government? ->No. California's case less problematic in case of "**arrangement**" (≠agreement), or no clear intention to increase the State power against the Federal Government (Echikson and Wedeking 2006)
  - Probably no **compensation** problems in case of vanishing local system due to credits characteristics, but necessary to give credits to **early reduction** ? ->Yes.
  - Expected to push national-level mandatory ETS ?

Timeline for future Mandatory ETS



- **The earliest linkage: Possible after introduction of mandatory ETS between 2011-2012 through the government's political arrangement or Cabinet's amendment of Law for the Promotion of Actions to cope with Global Warming, but after 2013 realistic**
- **Compromise: Consideration for early reduction by the local ETS**

Conclusion

- **No direct links to mandatory ETSs foreseen during trial- ETS except indirect links through CDM until 2013 (direct link after 2013 after introduction of mandatory ETS)**
- **Indirect link through increasing dependence on CERs, promote low carbon society in the Asia-Pacific region (EU: focus on domestic effort)**
- **Japanese medium-sized market would be affected by the volatility of larger markets (e.g., EU-ETS) as a price-taker, thus need careful consideration**
- **Japanese direct link depends on an early adjustment of critical design elements**

Emission Reductions Projects Development and the Market
- from Japanese Private Sector perspective -

27 Nov, 2008
Berlin

MITSUI & CO.,LTD.

Contents

MITSUI & CO.,LTD.

1. Emission Reductions Market in Japan

MITSUI & CO.,LTD.

Demand and Supply (-2012)

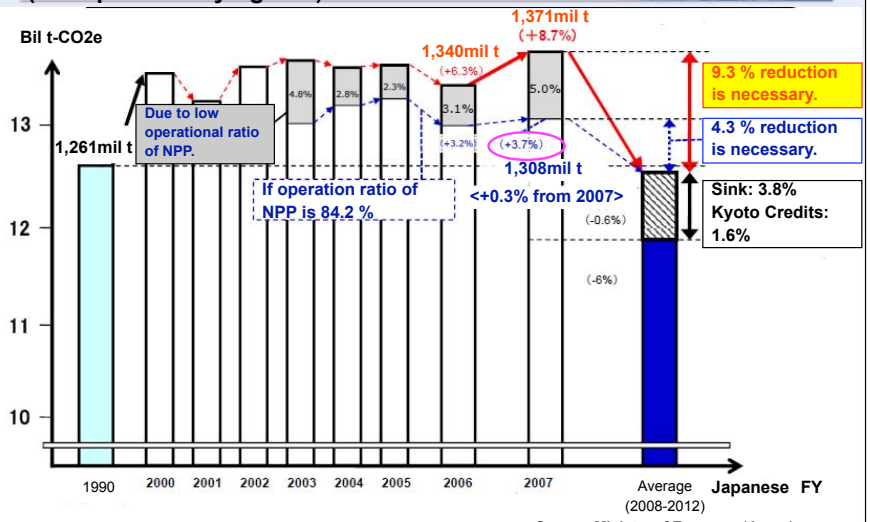
Potential Demand from Industrialized Countries (2008-12)		Potential Supplies (2008-12)		
Country or entity	KMs demand (MtCO2e)		Potential surplus of AAUs (MtCO2e)	Potential GIS (MtCO2e)
EU	**1,940**	Russian Fed	3,330	(0<???)
gov't (EU-15)	540	Ukraine	2,170	(1,000 -1,200)
private sector (EU ETS)	1,400	EU-8+2	1,720	(100-700)
questionable P&Ms	*(200)*	Other EITs	85	???
Japan	**450**	**TOTAL**	**7,305**	**(1,100-1,900)**
GoJ	100			
private sector	350			
add'al demand	*(200)*			
RoEurope & NZealand	**45**			
gov't	20			
private sector (Norway and NZ ETSs)	25	CDM and JI Potential (MtCO2e)		
add'al demand	*(20)*			
Australia	**0**	CDM	1600	(1,400-2,200)
		JI	230	(180-280)
TOTAL	**2,435**	**TOTAL**	**1,830**	**(1,580-2,480)**
gov't	660			
private sector	1,775			
add'al demand	*(420)*			

UNEP: 1,560 MtCO2e
Morgan Stanley: 1,100 MtCO2e

Source: State and Trends of the Carbon Market 2008 (World Bank)

MITSUI & CO.,LTD.

Japanese GHG Emission (2007 preliminary figures)



Source: Ministry of Economy (Japan)

Demand & Supply (2008)

2008

- Supply of ERs from CDM/JI is still tight.
- Market is volatile.
- Demand is influenced by several factors.

Europe

- Policy (EU ETS/Renewables), Credit Crunch other commodities (oil, gas, coal), weather etc.

Japan

- Buying apatite of Large scale buyers. (affected by operation of nuclear power station energy demand in recession phase)

Not so affected by launching “Test version” of Emission Trading Scheme.

Current Movement

Due to a) lower yield of CERs/ERUs than expected,
b) progress in development of GIS scheme in some countries,
c) progress in understanding pros. and cons. of GIS scheme.

⇒ Some “Private Large Users of emission reductions” have started to consider procurement of AAUs from some GIS schemes, on the conditions that:

a) Japanese Government will(have) support(ed) such procurement by Private Sector.
b) the relevant GIS scheme realize transparency and quality.
c) definitive price of AAUs is lower than that of CERs/ERUs.

2. Mitsui’s Activity and Strategy

Profile

As of Mar/2008 otherwise specifically mentioned

Profile

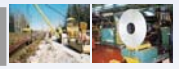
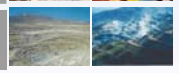
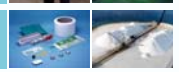
- Foundation: July 1, 1876
- Establishment: July 25, 1947
- Number of Employees (Consolidated): 42,621
- Subsidiaries and Associated Companies: 558
- Financial Information (FY 2007)
  - Revenue USD 50.3bil
  - Net Profit USD 4.1bil
  - Total Assets USD 85.0bil
    (1 USD = \ 114)
- Long Term Credit Ratings
  - Moody's A2
  - S&P A+
- Market Capitalization (Oct/2008)
  USD 23 bil

Global Network

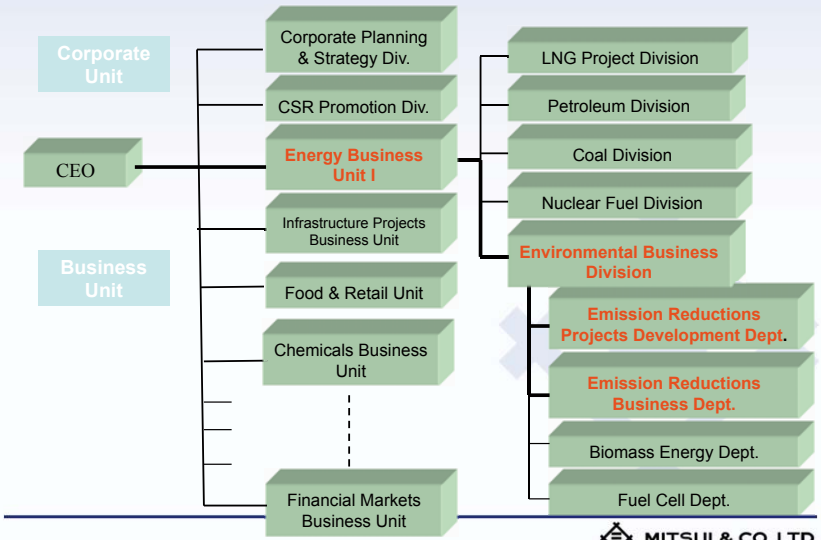
- Number of Offices (Jun/2008)
  - Overseas: 149 (68 countries)
  - Domestic: 12

Mitsui's Various Business Field

- Mitsui & Co., Ltd. has been operating the global business under the 15 business units.

Iron & Steel Product B.U. (ex. pipeline)		Energy B.U. I & II (ex. oil & gas)	
Mineral & Metal Resources B.U. (ex. mining)		Food and Retail B.U. (ex. demand chain management)	
Infrastructure Projects B.U.		First Consumer Service B.U. (ex. apparel)	
Motor Vehicles B.U. (ex. automobiles)		Second Consumer Service B.U. (ex. real estate)	
Marine & Aerospace B.U. (ex. ships, airplanes)		Information, Electronics and Telecommunication B.U. (ex. e-commerce, IT)	
First Chemical B.U. (ex. biotechnology)		Financial Markets B.U	
Second Chemical B.U. (ex. Plastic products)		Transportation Logistics B.U. (ex. shipping)	

Mitsui's Organization Chart



Mitsui's Activities

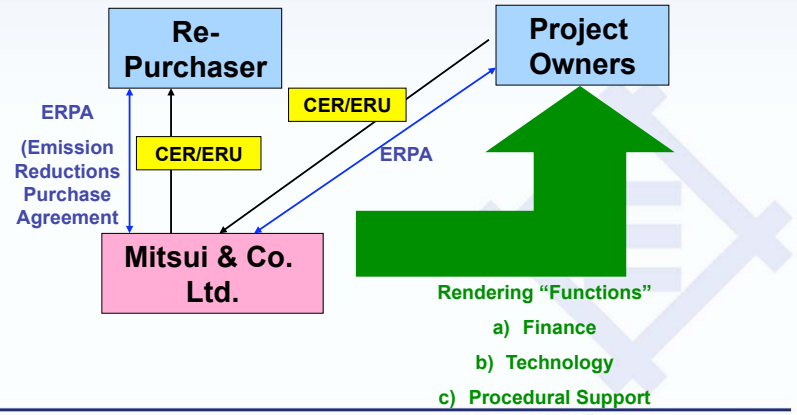
To be more involved in GHG reduction, Mitsui develop CDM/JI/GIS all over the world:

- **Project finding and identification**
- **Feasibility Study and Project procedural arrangements**
  (Including: baseline study, PDD, Monitoring Plan, Validation, Application for Host Country approval, Verification, etc.)
- **Project Structuring :**
  - Finance Support
  - Equity investment
  - Equipment supply and construction management
  - Provide & introduce relevant technology & partner with methodology
  - Development of Methodology etc
- **Marketing & off take of CERs/ERUs/VERs/AAUs**
  - Assist client's emission reductions financially through CER/ERUs purchase.
- **General Outlook of Mitsui CDM/JI experience / 100 mil tons until 2012**
  - 13 Projects registered with the UNFCCC / CDM Executive Board accounting for 25 mil tons by 2012. Further 12 Projects currently under registration or validation process, accounting for 25 mil tons by 2012. Another 25 to 50 mil tons+ projects under preparation.

Case 1

MITSUI & CO.,LTD.

Purchase at the price lower than market level, considering our contribution to the project.



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Case 2

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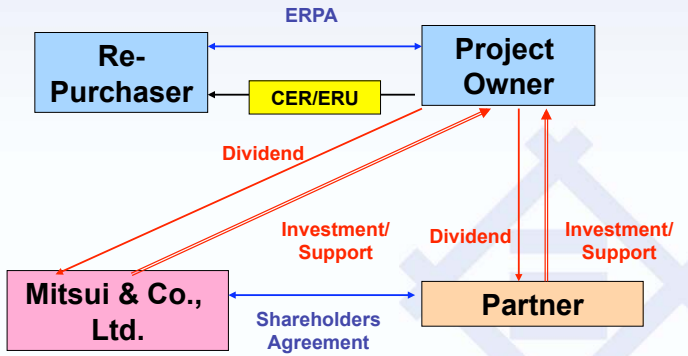

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CONFIDENTIAL

Mitsui's Activities

MITSUI & CO.,LTD.

Sales: over 50 million tons worth in place.→100 Millon tons

- Customers to be Major utility companies, steel sector, Chemical sector and assembling industries such as Electronic Appliances.
- Start marketing of EU clients.

Brokerage : 6 million tons in place.

- Customers to be Major Electricity Companies.

Approximately 50% of the Japanese compliance buyers, who have bought carbon credits till date conducted their first deal with Mitsui.

Starting development & marketing based on whole word by utilizing of our global network.

MITSUI & CO.,LTD.

Projects 1/3 : Biogas

MITSUI & CO.,LTD.

Landfill Gas Projects

Capture and flare methane produced by the landfill using a highly efficient controlled flaring system.

Swine Manure Gas Projects

Capture and flare methane from manure treatment system of pig farms by installing anaerobic digesters.

MITSUI & CO.,LTD.

Projects 2/3 : Renewable Energy

MITSUI & CO.,LTD.

Wind Power Projects

Supply electricity to the local grid to replace electricity generated mainly from fossil fuel and contribute to sustainable power generation in the region.

Hydro Power Projects

Supply electricity to the local grid to replace electricity generated mainly from fossil fuel and contribute to sustainable power generation in the region.

MITSUI & CO.,LTD.

Projects 3/3 : Mining & Chemical Industries

MITSUI & CO.,LTD.

CMM Utilization Projects

Extract CMM (coal mine methane) from underground coal mines to produce electricity and/or utilize as industrial gas and city gas.

N2O Abatement Projects

Abate N2O by installing catalysts in fertilizer plants. N2O is a by-product gas produced in the manufacture of nitric acid.

MITSUI & CO.,LTD.

Mitsui's Strategy

MITSUI & CO.,LTD.

(1) Project Development

- To achieve our contract volume target (80-100 mil tons) by end-2012.
- Project development with
  (a) strategic partners and
  (b) reliable local partners (project owners, agent, developer)
- Considering the time available until end-2012 and looking beyond 2012, to take up
  (a) large projects,
  (b) projects requiring new technologies,
  (c) projects that are easy to "replicate" and
  (d) projects that will significantly contribute to the society

MITSUI & CO.,LTD.

Mitsui's Strategy

MITSUI & CO.,LTD.

(2) Marketing

Classification of buyer	Customers	Activities
Large Scale Buyers	Power utility companies Steel mills, Petrochems, Cements, Chemicals,	ERPAs have been signed with almost all major buyers in this category.
Middle/Small Scale Buyers	Other compliance buyers Financial Institutions	Co-work with trust bank in Japan.
Japanese Government	NEDO (New Energy and Industrial Technology Development Organization)	Public tender process is required.
European Market	Compliance buyers in EUETS	Co-work with Mitsui London office / Cantor CO2e
Other Market (Example: USA)	ERs risk takers Retail buyers	VERs marketing

MITSUI & CO.,LTD.

Mitsui's Strategy

MITSUI & CO.,LTD.

(3) Investment

- Participation in projects = Securing "upstream resource"
- Searching for opportunities to invest in
  (a) Projects,
  (b) Technical Partners and
  (c) Carbon Funds.
- **We have to expand our function as a team in order to be selected as a partner from Project Owner of CDM/JI Project.**

Investment History

MITSUI & CO.,LTD.

- **Invested into World Bank Carbon Fund etc.**
  - In 1999, Mitsui invested US$6mil in World Bank Prototype Carbon Fund, a pioneer of CDM development, and seconded total two persons as Deal Manager (develop CDM projects) to the WB. We learned the know-how to develop CDM/JI projects through this investment.
  - Mitsui also invested in World Bank Umbrella Carbon Fund and Japan Greenhouse Gas Reduction Fund, established in 2004 and seconded two persons to the Fund as Deal Manager.
- **Alliance with CantorCO2e**
  - In 2002, Mitsui invested in CantorCO2e, a subsidiary of the Cantor Fitzgerald Group, one of the world's leading brokerage firms.
  - CantorCO2e is a leader in the development of international greenhouse gas emissions trading and have facilitated about 100 mil tons of CERs.
  - Offices are located in London, Toronto, Mumbai, Santiago, Mexico, San Paolo and across the USA.
  - CantorCO2e and Mitsui brokered the first CERs to Japan, CERs created from Chile swine manure projects.

MITSUI & CO.,LTD.

Investment into N.serve

MITSUI & CO.,LTD.

- N.serve Environmental Services GmbH.
  - N.serve is very young venture company which execute CDM/JI project development especially in the field of N2O abatement projects. They developed "methodology" for this type of project and developed a lot of N2O abatement projects all over the world.
  - Key technology in N2O abatement projects is "Catalyst".
  - There are few companies which can supply reliable catalyst all over the world and N.serve have exclusive relationship with the most major supplier "Johnson Matthey (UK)" in developing projects in some key area.
  - As a result of our investment and execution of several agreements, **we, as a team could make an integrated proposal to project owner** where,

    a) Johnson Matthey will supply Catalysts

    b) N.serve will render whole procedural and monitoring support

    c) Mitsui will off-take CERs/ERUs from the project and consider to render some finance to the project.

MITSUI & CO.,LTD.

Investment into Climate Change Capital

MITSUI & CO.,LTD.

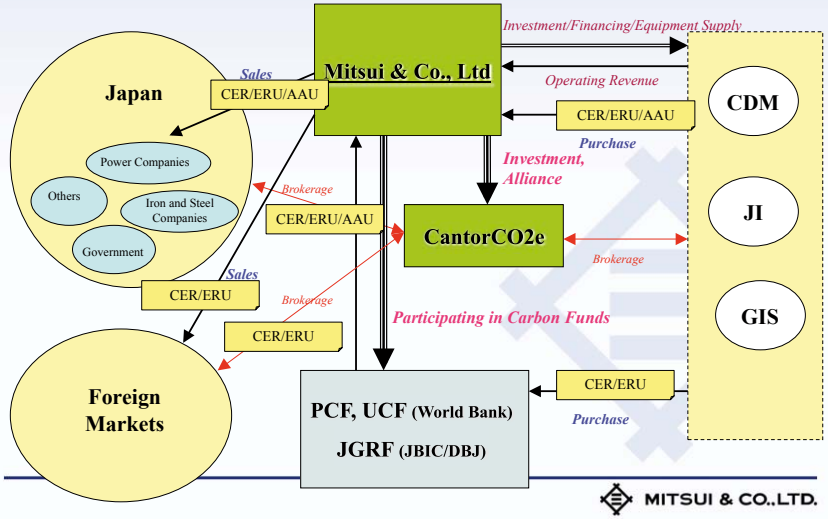
- Climate Change Capital Group Limited.
  - Climate Change Capital (CCC) is one of world leading companies in the field of "low carbon economy".
  - CCC render the advisory service to the government and important players like BP, Shell, etc.
  - Some founders of CCC and key persons in CCC are the member of UK's governmental panel for "low carbon economy". Hence, they could catch up the "policy" for low carbon economy at the earliest stage.
  - At the same time, CCC operates several "Funds", including without limitation, Carbon Funds, Renewable Energy Fund, Clean Tech Fund etc.
  - AUM (Asset under management) is more than 1.6 bil USD.
  - All of the said funds are operated under the concept of contribution to realize the "low carbon economy".

⇒ **Emission reduction itself is just the finance tool. We, Mitsui, have a lot of other opportunity to contribute to realization of low carbon economy.**
THIS INVESTMENT IS THE FIRST STEP FOR SUCH MOVEMENT.

MITSUI & CO.,LTD.

Mitsui's Activities

Marketing and Sales Activities *Development of CDM/JI/GIS Projects*

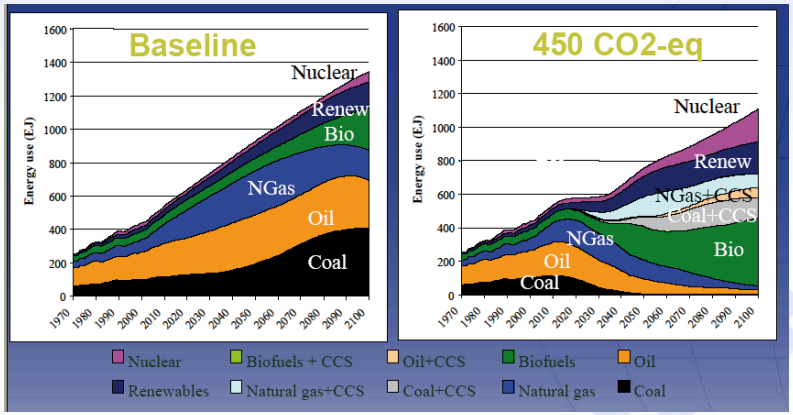


3. Additional

Mitsui's Strategy (FOR ENTIRE BUSINESS)

- Movement to realize "Low Carbon Economy" should dynamically change the business environment both in short / long term.
- **Mitsui have to consider to reflect the impact of such movement into all business models.**
- We, Environmental Business Division, should make an out put of quantitative, short/middle/long term analysis based on
  - a) International Political Discussion
  - b) Domestic (for all main country) or inter area Political Discussion
  - c) Information of value of "Emission Reduction"
  - d) Technological Situation

HOW TO ACHIEVE? (From Energy Resource Perspective)



Mitsui's strength in CCS project

MITSUI & CO.,LTD.

- **Participation in Callide Oxyfuel Project by Coal Division**
  - Mitsui has invested in Callide Oxyfuel project in Central Queensland, Australia, which retrofit the existing boiler to oxyfuel generating 30 megawatt electricity. The project schedules to start producing electricity by the end of 2010.
- **Diversified organization**
  - **Environmental Business Division**
    - On-the-ground intensive track record in Project identification, Project CDM development, Project structuring, Off-take credits in Emission Reductions Projects
    - Broad knowledge accumulation in climate change policy arena
  - **Coal Division**
    - Knowledge accumulation in clean coal issues
    - Outreach to potential storage venue player
  - **E&P Division, LNG Division**
    - Outreach to potential storage venue player
  - **Infrastructure Projects Business Unit**
    - Extensive track record in power plant projects
  - **Iron & Steel Product Unit**
    - Outreach to anti-corrosive special quality piping

MITSUI & CO.,LTD.

Callide oxyfuel project

MITSUI & CO.,LTD.

Scope:

4 Yr project duration

Boiler refurb.

2 x 330 TPD ASU

Oxy-comb. Retrofit

75 TPD CO2 recovery

Trucking to CO2 reservoir

Injection and monitoring (50kt)

MITSUI & CO.,LTD.

MITSUI & CO.,LTD.

THANK YOU FOR YOUR LISTENING !

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Manager
Emission Reductions Projects Development Dept.
Environmental Business Division
Energy Business Unit I

MITSUI & CO.,LTD.

Umwelt Bundes Amt D E H S t
Für Mensch und Umwelt Deutsche Emissionshandelsstelle

Emission reductions projects, development and the market in Germany

Dr. Wolfgang Seidel
German Emissions Trading Authority
"Administrative Procedures, Quality Control,
JI (DFP)/CDM (DNA)"

German-Japanese Workshop on
Economic Instruments for Climate Protection
28 November 2008, Berlin

Umwelt Bundes Amt D E H S t
Für Mensch und Umwelt Deutsche Emissionshandelsstelle

Current Status of CDM (November 2008)

Registered projects: 1190*

Projects in the pipeline: 2961*

Issued CERs: 204 million*

CER expected until 2012: 1537 million*

issuance success of 95.5 %

projects under validation 76,5 % chance of being registered

Market Price issued CER (9 Nov 2008): 15.65 EURO

*Source: „UNEP Risoe CDM/JI Pipeline Analysis and Database, November 1st 2008" http://www.cdmpipeline.org/

Umwelt Bundes Amt D E H S t
Für Mensch und Umwelt Deutsche Emissionshandelsstelle

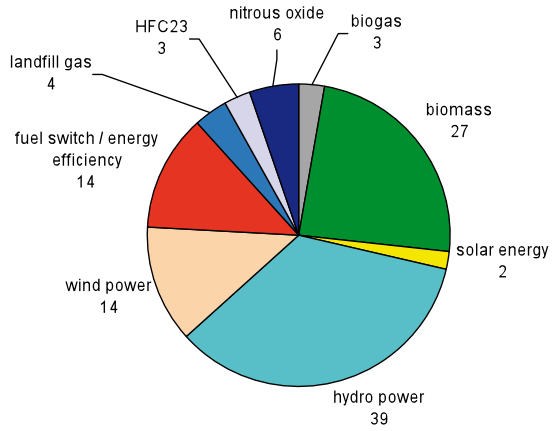
Projects with German LoA or LoE (including rejected projects)

	Total	CDM	JI abroad	JI Germany
Total	245	137	9	99
Application for Endorsement (LoE)				
requests	66	14	9	43
finished procedure	45	10	8	27
approved	39	10	8	21
Application for Approval (LoA)				
requests	179	123	0	56
finished procedure	165	112	0	53
approved	119	112	0	7

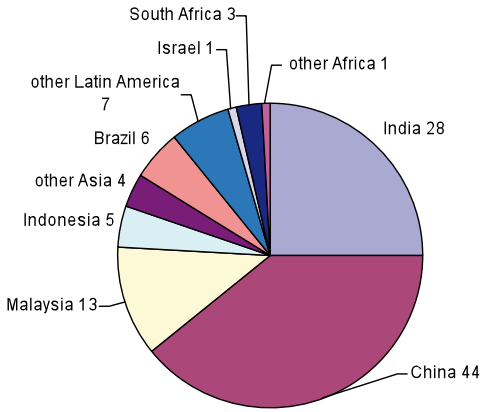
Projects with German LoA or LoE

	Total	CDM	JI abroad	JI Germany
Total	245	137	9	99
Project Categories				
Biogas	12	6	0	6
Biomass	37	30	3	4
Solar Energy	3	3	0	0
Hydro Power	46	46	0	0
Wind Power	19	17	2	0
Fuel Switch/Energy Efficiency	46	20	2	24
Landfill Gas	7	6	0	1
HFC 23 Destruction	3	3	0	0
N2O Destruction	18	6	1	11
Geothermal Energy	1	0	0	1
PFC Destruction	1	0	0	1
Mine Gas	52	0	1	51

CDM project types (number of projects with German LoA)



CDM host countries (number of projects with German LoA)



Programmes of Activities as CDM projects

- Two levels
- Simplifications for small scale possible

Program level => JPoA-DD

– Project boundary definition (geographically)

– Description of the program strategy

– Voluntary participation

– Definition of program activity

(Program) activity level => JPA-DD

– General description for PoA

– Description of a real (example) activity

- Additionality is required both on program and activity level

Programmes of Activities - Advantages

- Small saving potentials can be developed by PoA
- PoA can help to achieve a reasonable cost-benefit ratio with regard to the organisational effort involved and the economic benefits
- Vast carbon saving potential, especially in energy efficiency and with PoA modernisation of the country's heating systems et cetera could be promoted
- PoA has the potential to become an important project category for CDM

Programmes of Activities – Examples (1)

"Pilot Programmatic Joint Implementation Project in North Rhine-Westfalia (JIM.NRW)"

- Joint Implementation (JI) in Germany
- Reduction of CO2 emissions in NRW from installations, which are not covered by the EU-ETS, particularly from medium and small sized companies
- Energy saving by implementation of energy efficiency measures in steam production and heat production processes in industry, manufacturing gas as well in public and institutional facilities both - with and without fuel switches
- Project participant: Energieagentur NRW

Programmes of Activities – Examples (2)

PoAs "RWE Climate Bonus Project Heat Pumps" and "Bayerngas Ökobonusprogramm Gewerbe- und Industriekunden"

- Joint Implementation (JI) in Germany
- Focus on commercial and industrial sector
- Conversion of heating systems (from fuel oil, coal, liquid gas and natural gas) to electric powered heat pumps (RWE) or to natural gas and to gas-powered heat pumps (Bayerngas)
- New installation of electric or gas-powered heat pumps
- Increase of energy efficiency
- Project participants: RWE Power AG and Bayerngas GmbH

Programmes of Activities – Examples (3)

PoA "Aktiver Klimaschutz - Energieeffizienz - Prämie für Haushalte"

- Joint Implementation (JI) in Germany (not yet approved)
- Focus on private households
- Change average household energy use through behavioural changes and small investments in energy efficient technologies by
  - provision of information
    - energy saving tips
    - energy use benchmarks
    - economic incentives (not only to landlords, but also to tenants)
- Project participant: EWE AG

Potential PoAs

Rural electrification through REN

Off Grid solar home systems

Grid-connected biomass based system

Rural delivery of heat through REN

Rural lighting through low-energy light bulbs

Distribution of low-energy light bulbs (Compact Fluorescent Lamps - CFL) to households, schools, health clinics or further users

- Substitution of usual light bulbs with low energy efficiency

Improving the CDM

Improved access to CDM project activities by specific host parties

Standardized multi-project baseline

Multiplication factor for CERs für specific project activity types s

Inclusion of other LULUCF activities

Inclusion of Carbon Capture and Storage

Sectoral CDM with a pre-established ambitious baseline

Sectoral crediting against a previously established no-lose target

Nationally appropriate mitigation actions (NAMA)

Sectoral Trading

Don’t forget Joint Implementation!

Almost all Annex I parties are now eligible for Track 1
(except Greece, Croatia, Belarus and Australia)

Track 2: 5 projects approved and 155 in the pipeline (255 Mio. t CO2eq. exp.)

Track 1: New web interface at UNFCCC but information is scarce !

Many improvements similar to CDM proposed, especially for Track 2

But JI offers more scope for flexibility and simplicity in procedures

This is true especially for programmatic JI!

The future of Joint Implementation

The EU supports the continuation of JI in Track 1 and Track 2 after 2012

In a capped environment CDM projects would need to become JI projects – provisions for graduation need to be established

JI can be used as a complement in Annex-I-states to facilitate emission reduction activities in the sectors outside the scope of emissions trading

The proposal for the revision of the EU ETS Directive includes the option for Domestic Offset Projects (Art. 24a).

Further Information

German Emissions Trading – General Information on JI and CDM:
http://www.dehst.de/JI-CDM

Manuals and Reports for Downloading:

German CDM Manual – Guidance for Applicants

German JI investor country Manual – Guidance for Applicants

German JI host country Manual – Guidance for Applicants

UNFCCC: http://cdm.unfccc.int/index.html

Thank you for your attention.

Dr. Wolfgang Seidel
German DNA and DFP
E-Mail: German.dna.dfp@uba.de
Internet: www.uba.de/emissionshandel

NEDO's Kyoto Credit Acquisition Program

Yasuhiro SHIMIZU

Executive Director
Kyoto Mechanisms Promotion Department

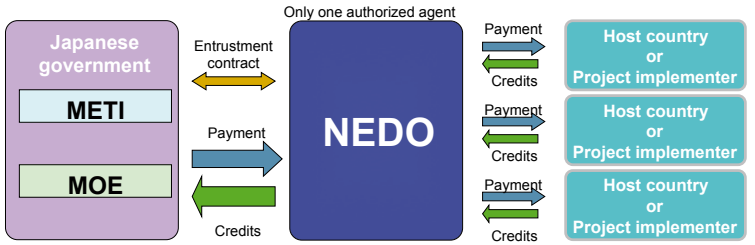
November 28, 2008

New Energy and Industrial Technology Development Organization

What is NEDO?

◆NEDO is an independent administrative agency created by a special law in order to implement Japanese government policies. One of NEDO's tasks stipulated by the law is to acquire "Kyoto credits" for the Japanese government to fulfill its obligation under the Kyoto Protocol.

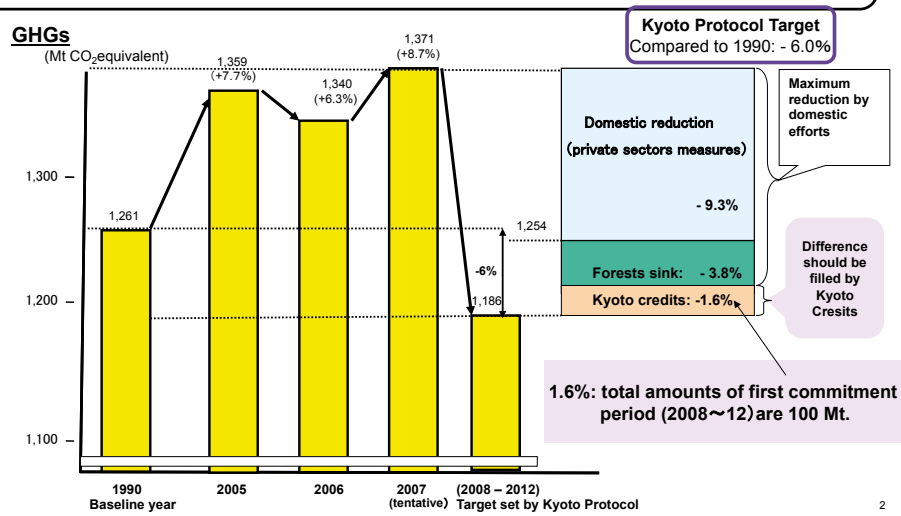
◆NEDO is commissioned and empowered by the Ministry of the Environment (MOE) and the Ministry of Economy, Trade and Industry (METI) to implement all necessary measures to acquire Kyoto credits.



*** Acquisition budget is around 80 billion yen in FY 2008.**

Japanese Plan to achieve Kyoto Target

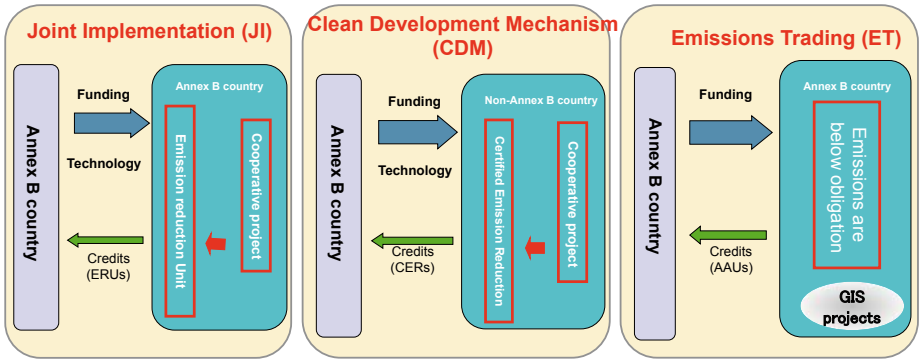
The Japanese government has revised its "Kyoto Protocol Target Achievement Plan" in March, 2008, which sets the amounts of Kyoto Credits NEDO is going to acquire.



1.6%: total amounts of first commitment period (2008～12)are 100 Mt.

Kyoto Protocol Flexible Mechanisms

The Kyoto Protocol stipulates three schemes for Annex B countries to acquire "credits" from other countries.



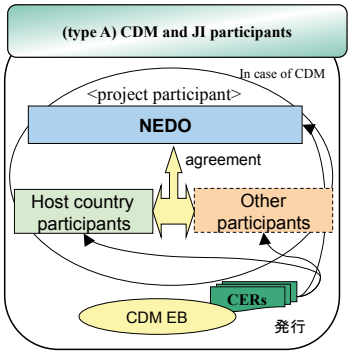
NEDO is aquiring CERs, ERUs , but AAUs are limited to one which will be greened under GIS (Green Investment Scheme).

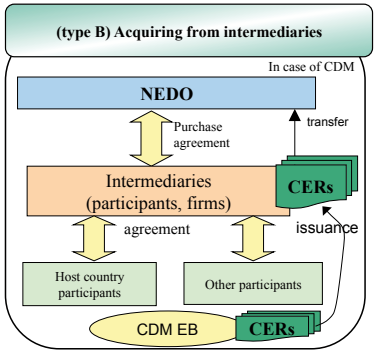
Outlines of NEDO's program

(Type A) Acquiring credits from CDM EB as Project Participant
- NEDO would promote projects from the beginning and become project participant which has the right to receive credits from CDM EB etc under Credit Purchase Agreement.

(Type B) Acquiring credits from intermediaries
- NEDO would have Credit Purchase Agreement with entities which have acquired or have rights to acquire credit from primary project participants.

(Others) Acquiring credits from governments and other credit holders
- NEDO would acquire credit, inter alia, greened AAUs of GIS, from governments and from other credit holders.





Budget of the Kyoto Mechanisms Credit Acquisition Program (in principle Payment on delivery)

Contract year	2006FY	2007FY	2008FY
Maximam amount that can be contracted.	12.2 billion yen	40.7 billion yen	81.2 billion yen
Credit Delivery Years	2006FY～2013FY	2007FY～2013FY	2008FY～2013FY

Type A

Support for Project formulation

NEDO will help project developers to formlate CDM or JI project by providing necessary suport to prepare PDD (Project Design Document) with its F/S program. After formulation of projects, NEDO will purchase credits with its "credit acquisition program.

Project Planning Stage		Project Implementation Stage		
•Feasibility Study •PDD preparation	-validation or determination -CDM EB or JISC* Registration	Initial cost (When Project begins)	・Monitoring ・Verification	•Credit •Purchasing (Payment on delivery)

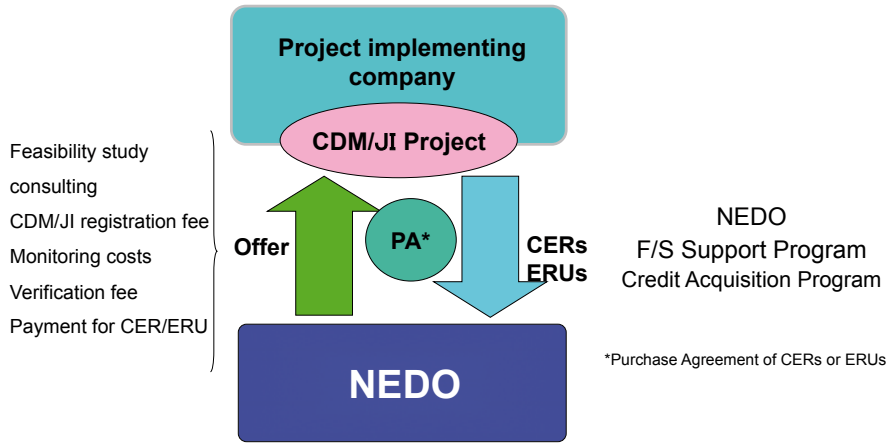
NEDO F/S Support Program

NEDO Credit Acquisition Program

*JI Supervisory Committee

Type A

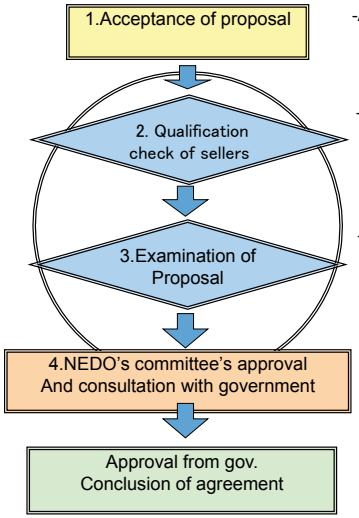
What Can NEDO Offer Project Developers?



NEDO can also provide developers with information on Japanese advanced environmental technologies which can be deployed in the projects.

Type B

Credit acquisition through Public Procurement Procedures



-Although NEDO is open for proposals for anytime, every 15th of May, July, September, November and January are official due time for application of proposal from sellers.

-NEDO will convey the first screening by checking sellers qualification.

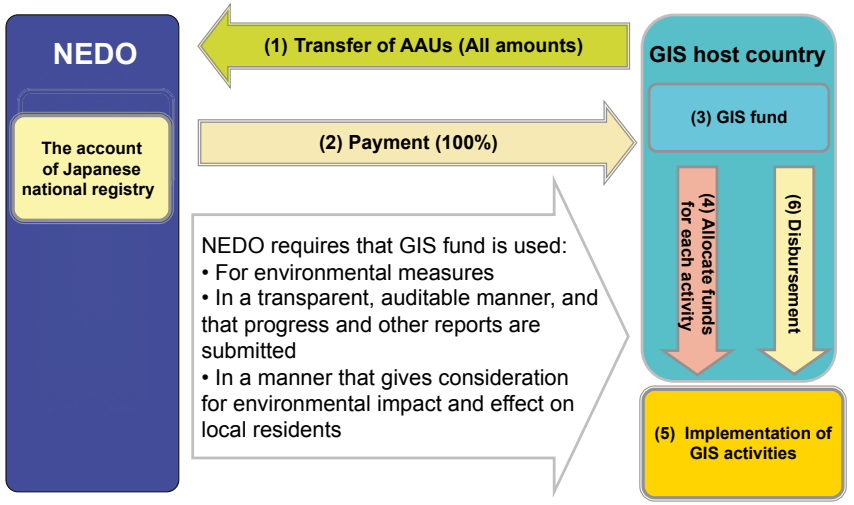
-NEDO will examine the contents of proposals from various viewpoints, including price, risk of project, environmental consideration of project, etc, utilizing advice from external experts.

-All proposals need approvals from the contract committee of NEDO. If NEDO approves proposals, NEDO would sent them government for consultation.

GIS

Flowchart of GIS Framework (Example)

If GIS host countries can provide a GIS scheme, NEDO can contract AAU* purchase agreements.



*Assigned Amount Units

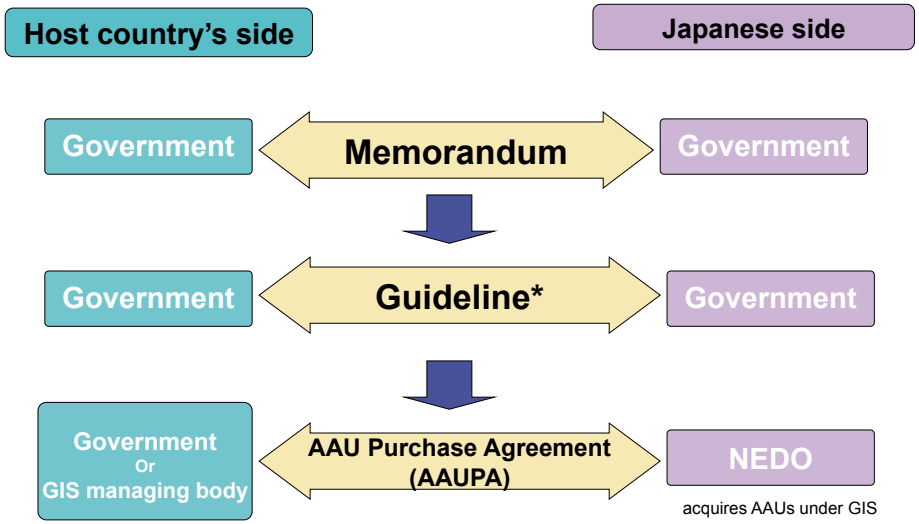
GIS

Examples of Categories for GIS Activities

- ◆ Energy conservation
- ◆ Fuel switching
- ◆ Renewable energy
- ◆ Emission reduction of GHG other than CO_2
- ◆ Other environmental improvement activities
- ◆ Capacity building, etc.

GIS

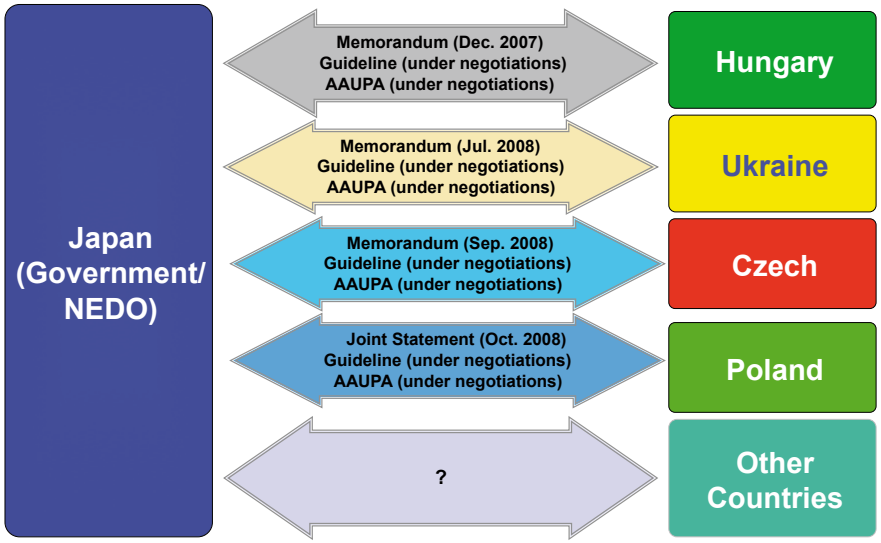
3 Steps of Purchase Agreement (AAUPA)



*Based on a country's circumstances, it may be possible to omit the guidelines procedure.

GIS

Consultations with GIS host countries



THANK YOU !

Kyoto Mechanisms Promotion Department
http://www.nedo.go.jp/english/
km-ap@nedo.go.jp
shimizuysh@nedo.go.jp

Status Update on Carbon Markets in Japan and a New Trust Scheme for Transactions

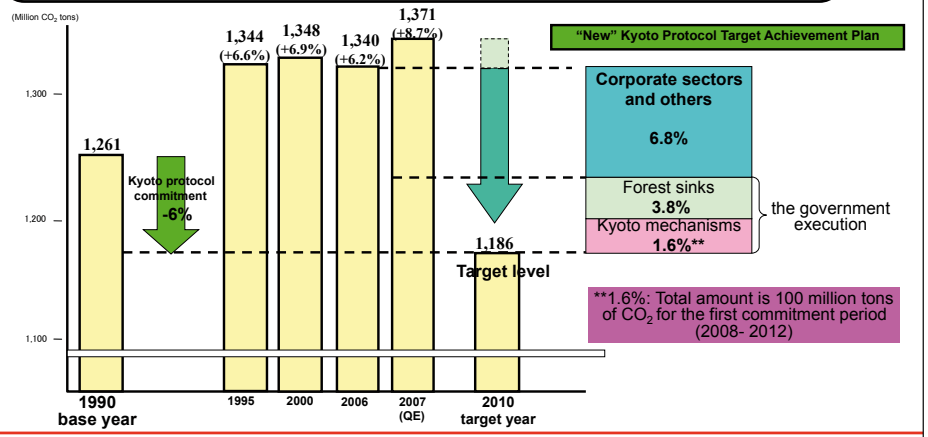
on the occasion of the 4th German-Japanese Workshop
on Economic Instruments for Climate Protection

November 2008 in Berlin

Sachiko Ai
Mitsubishi UFJ Trust and Banking Corporation

Current situation in Japan

- To achieve the commitment of the Kyoto Protocol, Japan has revised the **"Kyoto Protocol Target Achievement Plan"** in March 2008, and also decided the **"Action Plan for Achieving a Low-carbon Society"** in July with a long-term target.
- In addition, in June, **Nippon Keidanren** made a public commitment that their **"Voluntary Action Plan"**, which is indispensable to meet the target, will be achieved with certainty.

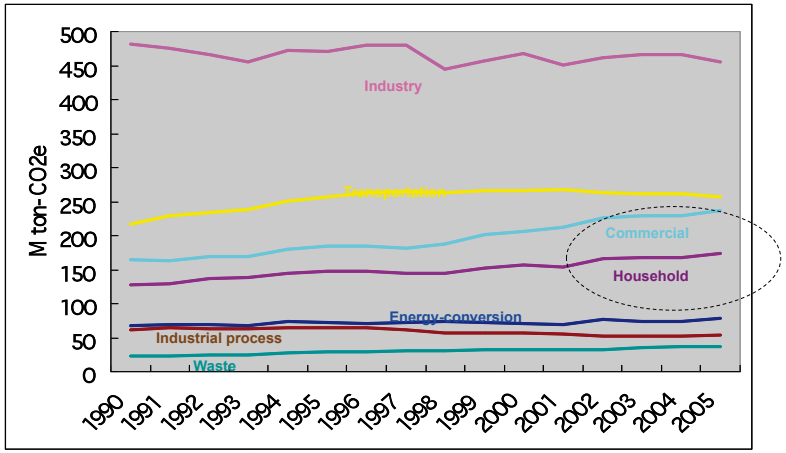


(source: the revised Kyoto Protocol Target Achievement Plan)

Trend of emissions amount by sector

- Carbon emissions has increased more than 30% in Commercial and Household sectors.

⇒ The carbon offsetting scheme targeting individuals has spread.



(source: the revised Kyoto Protocol Target Achievement Plan)

Voluntary Action Plan and Japan's target

- "New" Kyoto Protocol Achievement Plan places greater emphasis on the importance of voluntary action plans in effort to meet the target.

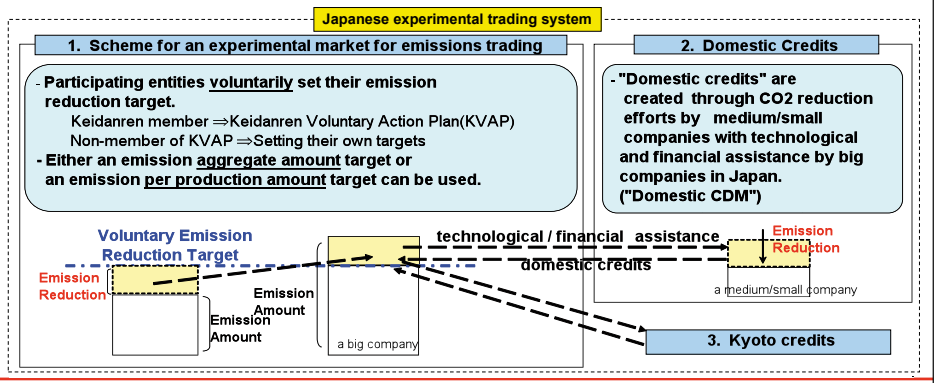
  - The results of Keidanren（Japan Business Federation）'s Voluntary Action Plan has been monitored by the government since 2006.
  - Keidanren and each business sector have made action plans to meet their targets.
    These plans cover 80% of emissions from Industry and Energy-conversion sectors combined and 50% of all sectors.
  - While the Keidanren's Plan covers Industry and Energy-conversion sectors, other plans cover such sectors as Transportation and Commercial.

(source: the revised Kyoto Protocol Target Achievement Plan)

An Experimental Nationally-Integrated Market for Emissions Trading

Comparison between EU and Japanese Trading System

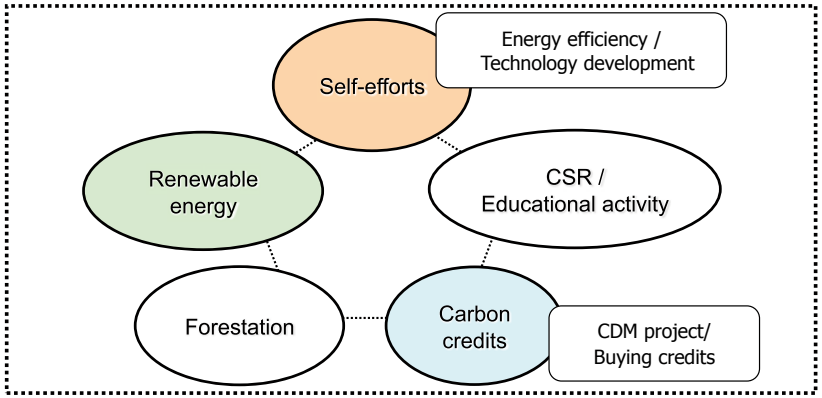
	EU	Japan
Corporate Participation	Mandatory	**Voluntary**
Allowances	Allocated by Governments	**Set by companies**
Tradable Credits	-EUA -Kyoto credits	**-Emission reduction unit** **-Domestic credits** **-Kyoto credits**



(source: based on the government announcement on 21th October 2008)

Portfolio of measures to reduce GHG emissions

- To meet their targets under the Voluntary Action Plan as the urgent task, many companies are considering "portfolio" of measures with energy efficiency and cost in mind.
- MUTB provides solutions for those companies in emission credits business.



Situation of emissions trading in Japan

...Several issues to buy credits in Japan...

Difficult to handle carbon credits

- Administrative procedure is complicated
- Forward credits have several risks such as delivery risk

No active marketplace in Japan

- Limited access to buy credits
- Little chance to buy small amount of credits
- No index for carbon price
- Expensive cost for administrative procedure

Major players in Japan

Players were limited to big companies

- company with a large amount of supply (e.g. trading companies)
- company with a large amount of demand (e.g. power companies)
- consultants

⇒ MUTB had to deal with those issues when buying 10,000 tons of Kyoto credits for the purpose of carbon offsetting in its own main office building in March 2007.

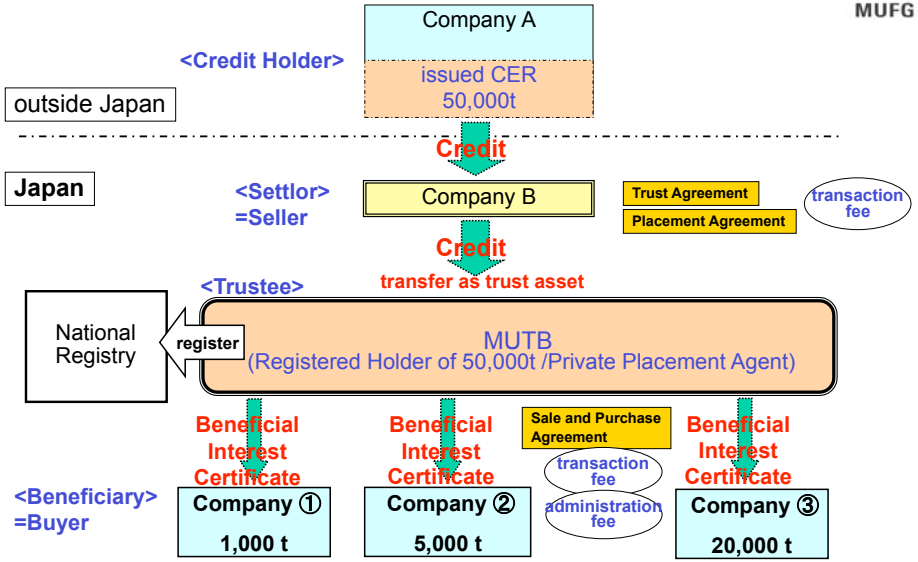
⇒ Taking this challenge as a business opportunity, MUTB has developed a new trust scheme as a solution.

The first "Emissions Trust" by MUTB

- MUTB has released the first "emission trust" with 50,000 tons of issued CERs in December 2007.
- This "trust" scheme is NOT an instrument for investment, BUT for selling small amount of CERs with administrative function.

- Seller (Settlor) a Japanese Trading Company
- Trustee Mitsubishi UFJ Trust and Banking Corporation (MUTB)
- Buyers (Beneficiaries) a chemical company, an insurance company, a bank, service industries, etc.
- Selling amount 1,000t to 20,000t
- Reasons why buyers take interests
  1) CSR (to offset emissions from office buildings / events)
  2) Providing environment-oriented products and services
  3) Meeting a part of its Voluntary Action Plan of Keidanren for reducing emissions

New Trust Scheme



*All figures are for the purpose of discussion only.

A new trust scheme as a solution for Japanese CER buyers

<Benefits for CER Buyers>

- Small amount /No Delivery Risk
- Kyoto Credits to meet the Voluntary Action Plan / CSR
- Outsourcing the complicated administrative procedures
- Agreements/contracts in Japanese under Japanese Law

A new trust scheme as a solution for Credit Holders

< Benefits for Credit Holders >

- Securing the stable distribution channel in Japan, utilizing MUFG client network
- Reducing the complicated administrative works for the sale and the helpdesk function, etc.
- Having a good publicity effect in Japan

Credit Holder: Deal Sourcing + MUTB: Distribution to Buyers → **Contribution for Global Warming Countermeasures**

Examples of utilizing credits

- Buyers of our "Emissions Trust" and potential buyers see the benefits of acquiring credits as below:

CSR strategy / Environmental strategy
- carbon offsetting for offices, events, conferences

Providing environment-oriented products / services
- utilizing the credits as a differential marketing tool

Meeting the voluntary emissions reduction target
- meeting the target under the Voluntary Action Plan
- meeting in advance the requirements to be imposed in future regulation by EU etc.

MUFG and MUTB

MUFG Overview

Mitsubishi UFJ Financial Group, Inc.		
Representative	Capital	Established
President & CEO: Nobuo Kuroyanagi	1,383 billion yen	2 April 2001

	Bank of Tokyo-Mitsubishi UFJ	Mitsubishi UFJ Trust & Banking Corporation (MUTB)	Mitsubishi UFJ Securities
Representative	President: Katsunori Nagayasu	President: Kinya Okauchi	President: Hiroshi Aoki
Capital	996.9 billion yen	324.2 billion yen	65.5 billion yen
Established	25 August 1919	10 March 1927	4 March 1948
Function	Bank	Trust Bank	Securities

About MUTB

Corporate Name	Mitsubishi UFJ Trust and Banking Corporation Financial Institution registered with Kanto Local Finance Bureau (registration number 33)
Location	4-5 Marunouchi 1-Chome, Chiyoda-ku, Tokyo, Japan
Membership	Japan Securities Dealers Association The Financial Futures Association of Japan The Investment Trusts Association, Japan
Authorized conservation group for investors	None
Capital	324,279 million yen（as of end of March 2008）
Main Business	Trust business, Banking business, Brokerage service for real estate, Transfer agent service
Established	March 1927

For the potential settlor

INFORMATION ABOUT PRIVATE PLACEMENT AGREEMENT

The Securities and Exchange Law of Japan has been amended to the “Financial Instruments and Exchange Law” from the end of September 2007. Under the new “Financial Instruments and Exchange Law”, Certificates of Beneficiary is regarded as “securities” and distribution of Certificates of Beneficiary are subject to regulations of market offering like other securities.
The information contained in this page is required to be described because this document may be deemed as advertisement for offering.

- MUTB can enter into “Private Placement Agreement” (not underwriting) with Settlor of the new trust scheme so that we distribute Certificates of Beneficiary to potential investors on behalf of Settlor.
- Under the “Private Placement Agreement”, the following expense will be charged on Settlor.
  -Commission for private placement (Amount: to be determined)
- The amount of “Commission for private placement” has not been determined, as terms and conditions of Certificates of Beneficiary and the timing of our commencement of distribution has not been fixed.
- Please read carefully documents to be delivered to Settlor before Settlor enters into “Private Placement Agreement” with us.

Disclaimer

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An Investor's view on JI and the Carbon Market

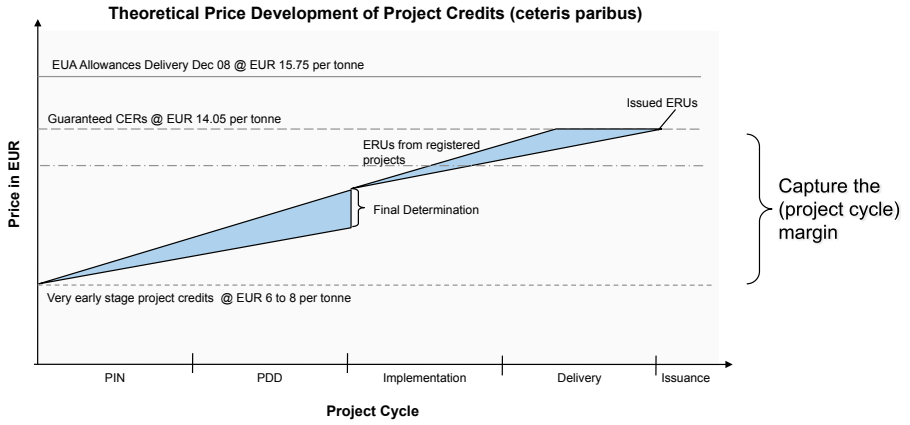
Fourth German-Japanese Workshop on Economic Instruments for Climate Protection 28th Nov 2008

Carbon Trade & Finance is a joint venture between Dresdner Bank and Gazprombank

Carbon Trade & Finance

- Carbon Trade & Finance (CTF) is a joint venture between Dresdner Bank and Gazprombank to capture opportunities in the carbon market. The joint venture invests in primary projects generating Emission Reduction Units (ERUs), with a focus on Russia and the Commonwealth of Independent States (CIS).
- Moscow Advisory company (CTF Consulting) was established in August 2007.
- The Italian Ministry of Environment selected CTF in April 2008 to advise on and facilitate Joint Implementation (JI) projects in Russia and the CIS countries.
- Carbon Trade & Finance ranked 1st for trading Emissions Reductions Units (ERUs) in both the primary and secondary markets in the 2008 Environmental Risk rankings.
- The Russian JI market offers significant opportunities for Annex 1 countries and corporates in the EU ETS to supplement their efforts in reducing emissions in order to meet their Kyoto and EU targets and diversify their carbon portfolios.
- We see tremendous opportunities in Russia and CIS especially in the oil, gas and power sector and in the area of energy efficiency.

"Riding" the Project Cycle

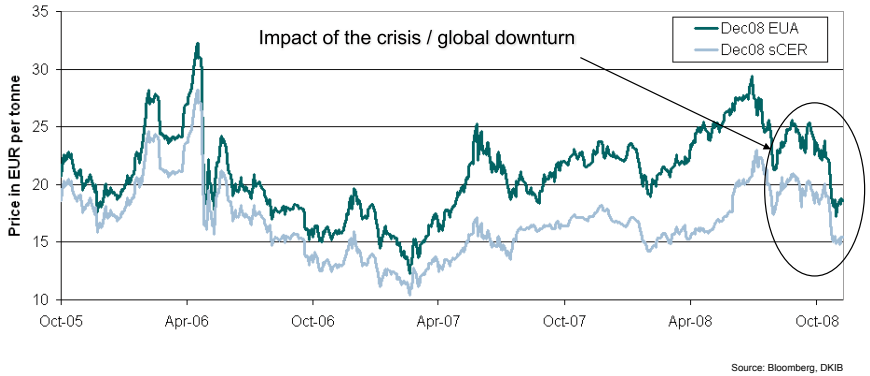


How to manage the Delivery Rates?

	%	Amount of ER, t CO2-eq
Total risk score of the project, Total Emission Reduction (Best estimate)	100%	3,547,133
of which:		
"Risk free" Emission reduction (secured ER)	73%	2,598,051
Emission reduction "at risk" (unsecured ER)	27%	949,083
of which due to:		
Delay of commissioning	0%	0
Technical breakdown during operation	8%	291,226
Input	4%	136,428
Output	15%	521,429
Force-Majeure*	0%	0
JI/CDM registration**	0%	0

⇒Portfolio Diversification vs. Project / Country Knowledge

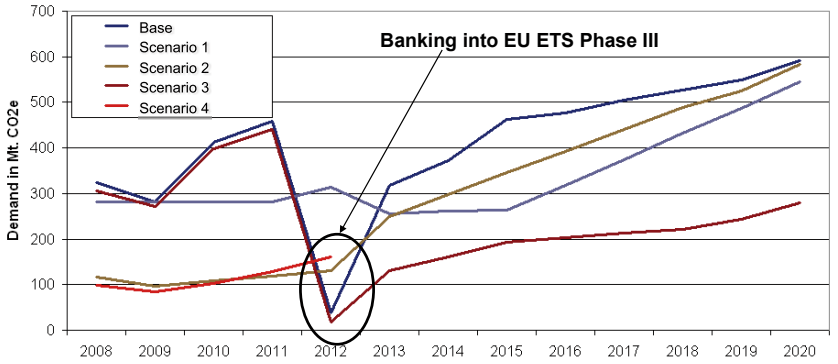
Historical Development of EUAs and sCERs



Source: Bloomberg, DKIB

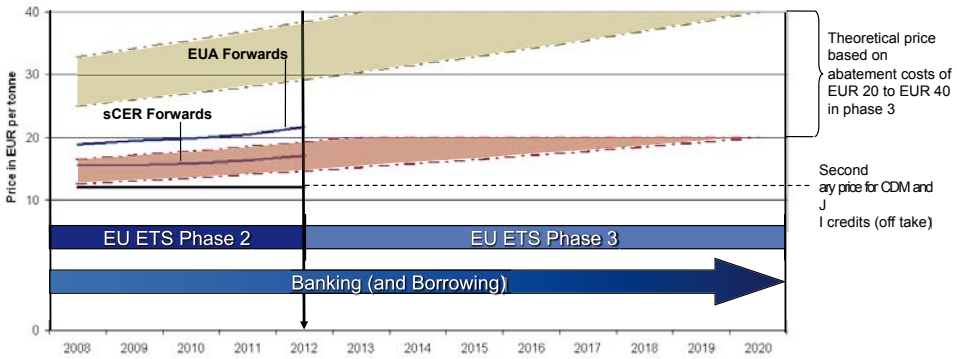
Great uncertainties over future demand in the EU ETS, nevertheless 2006 Price Crash unlikely
⇒ saved by Phase III

Saved by Phase III …



⇒ but how will Phase III look like?

…but Prices most likely at more "realistic" Levels



… or, do we get a Global Carbon Deal…?

The European Union is struggling to deliver on its promises to cut carbon emissions.

Source: The Economist, illustration by Peter Schrank

Some of the world's most powerful leaders argue that this crisis is a call to speed up the creation of a new energy economy.

Source: Newsweek

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Proposal for CDM reform

Yuji MIZUNO
Market Mechanism Project manager
Institute for Global Environmental Strategies

Paradox of the additionality test

- Additionality test prevents make things happen.
  - ⇒ Registration is uncertain. There is a risk of rejection.
  - ⇒ Normally, the CDM doesn't cover investment cost. Moreover, it raises upfront cost.
- Project owners can not rely on CDM income.
  - ⇒ They must expect CDM income as "additional," which means bonus.
  - ⇒ They must be conservative in calculating future income, such as excluding CER sales, which makes the project non-additional.

One proposal for CDM reform

- Removing additionality test for specific types of project.
  - ☞ Renewable energy, such as wind power, geothermal, photovoltaic, solar thermal.
  - ☞ Other specific projects may be included, but it is needed to specify the eligible technologies first.
  - ☞ It is easier to begin with renewable energy, which emit no GHGs and have no leakage effects.

Why removing additionality test

- To promote "additional" GHG reductions as well as SD in host countries.
- To give predictability for entities who rely on CDM income as essential revenue.
- Predictability is needed to incentivize entities to achieve something ambitious. (=additional emission reductions)
- Automatic registration will give predictability.

Why removing additionality test?

- It is clear that projects such as wind power, geothermal, photovoltaic and solar thermal are not profitable without additional incentives.
- The lifetime of those facilities is more than 10 years, which may be longer than a crediting period. After the crediting period, it will contribute to net reductions.
- CERs from those projects are merely 10% of the expected total CERs up to 2012.

Double Dividends

- In the future, CER income alone may make renewable energy projects economically viable, without the support such as feed-in-tariff.
- A double dividend can be expected; while the CDM helps achieve additional GHG reductions, the host countries may be relieved of the cost burden to maintain the subsidies.

Issue to be considered

- Expected demand and supply of amount of CERs.
- Eligible countries to apply.
- Shortening crediting period in return for automatic registration.
- Including biomass energy.

Thank you very much

The views expressed herein are solely those of the presenter. They do not reflect the views of IGES or other researchers.