# Outline of the EU Emissions Trading Scheme and Analysis of the Impact of Its Introduction♦

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## Introduction

European countries centered around the EU have been implementing various measures against global warming for more than a decade, such as carbon tax, self-action, voluntary agreements, use of the Kyoto Mechanism, and emissions trading. In Japan, additional policies and measures are also under consideration toward review of the Guideline for Measures to Prevent Global Warming. These policy measures taken by the EU can be thought to offer various suggestions for policymaking in Japan.

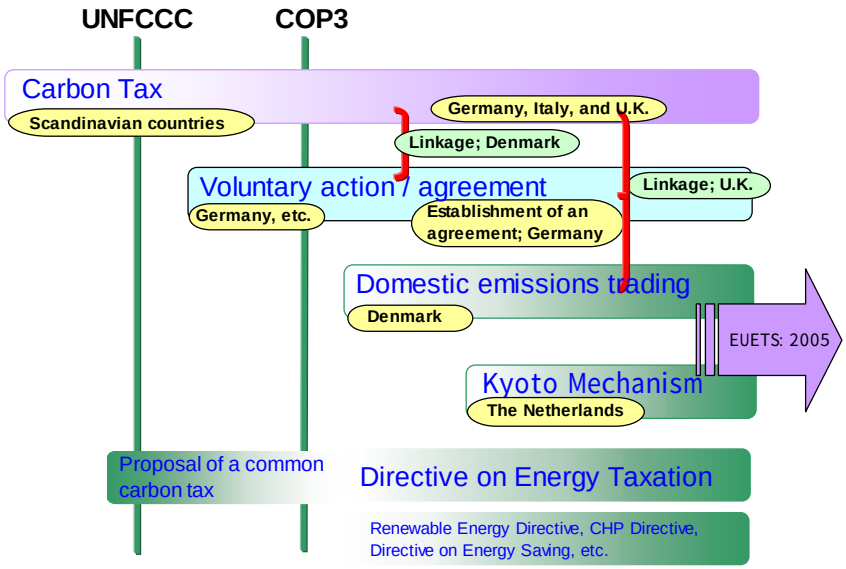
A series of policies in the EU has been implemented with the aim of reducing greenhouse gas emissions "within" the EU, but the EU's activities may also have various impacts on countries "outside" the EU. In particular, the EU Emissions Trading Scheme (EUETS[1]) that is scheduled to be introduced in January 2005 may influence the environment for investment in projects related to an international framework, the Kyoto Mechanism, and the distribution of Kyoto credits (such as CERs and ERUs[2]). Japan therefore must also pay attention to the characteristics and functions of the scheme.

Thus, this report analyzes the impact of the EU Emissions Trading Scheme (EUETS) on Japan and other countries outside the EU while organizing the noteworthy institutional aspects of the scheme.

## 1. Background of the Introduction of the EU Emissions Trading Scheme (EUETS)

Policy measures against global warming taken by countries within the EU started with the introduction of a carbon tax by Scandinavian countries in the beginning of the 1990s. Various policy measures have been promoted thereafter, such as voluntary action / agreement, emissions trading schemes in Denmark and the United Kingdom, and the schemes for purchasing Kyoto credits including ERUPT and CERUPT [3] in the Netherlands (see Figure 1-1).

Figure 1-1 Genealogy of EU's Global Warming-Related Policies

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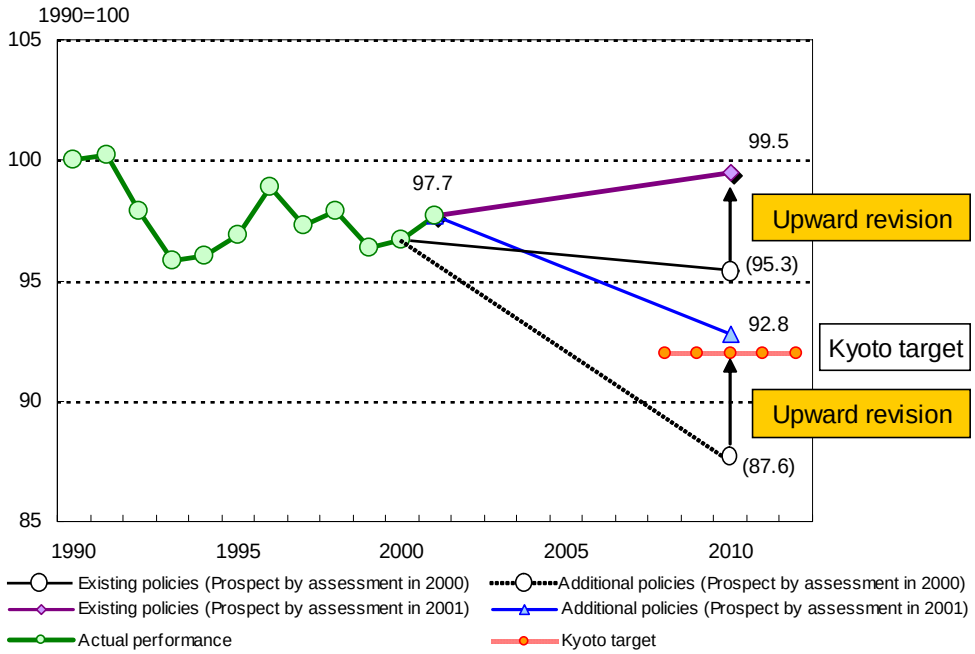
1 EUETS: EU Emissions Trading Scheme

2 CER: Certified Emission Reduction: Credits from CDM projects
ERU: Emission Reduction Unit: Credits from JI projects
CDM: Clean Development Mechanism: Mechanism in which developed countries (Annex I Parties) implement greenhouse gas reduction projects for developing countries (non-Annex I Parties) and emission reductions are issued as credits and are split by parties concerned.
JI: Joint Implementation: Mechanism in which developed countries (Annex I Parties) implement greenhouse gas reduction projects, and emission reductions are issued as credits and are split by parties concerned.

3 ERUPT: Emission Reduction Unit-Procurement Tender
CERUPT: Certified Emission Reduction Unit-Procurement Tender

On the other hand, a common carbon tax in the EU was examined in 1992-1997 as a unified EU policy. However, EU members could not achieve coordination, and consequently, only the minimum energy tax rate to be ensured by all members was stipulated. Although common frameworks within the region, such as renewable energy, CHP (combined heat and power), and promotion of energy savings, have been proposed and implemented, the EU as a whole has to take further additional measures to achieve Kyoto Protocol targets (see Figure 1-2). In such circumstances, discussions have been held on the introduction of the EUETS. Seen from the past background, this scheme is considered to have been proposed as an alternative to a common carbon tax.

Figure 1-2 Actual Greenhouse Gas Emissions in the EU and Prospect Thereof




(Source) EEA (European Environment Agency), Greenhouse gas emission trends and projections in Europe, 2002 and 2003

## 2. Characteristics of the EUETS

The EU Emissions Trading Directive[4] was adopted in July 2003, and the Linking Directive,[5] which stipulates a framework that makes it possible to use Kyoto credits (such as CERs and ERUs) in the EUETS, was adopted in September 13 2004. The EUETS will be in a trial period for the first phase of three years (2005-2007) and thereafter will be implemented in units of five years. The second phase (2008-2012) overlaps the first commitment period of the Kyoto Protocol.

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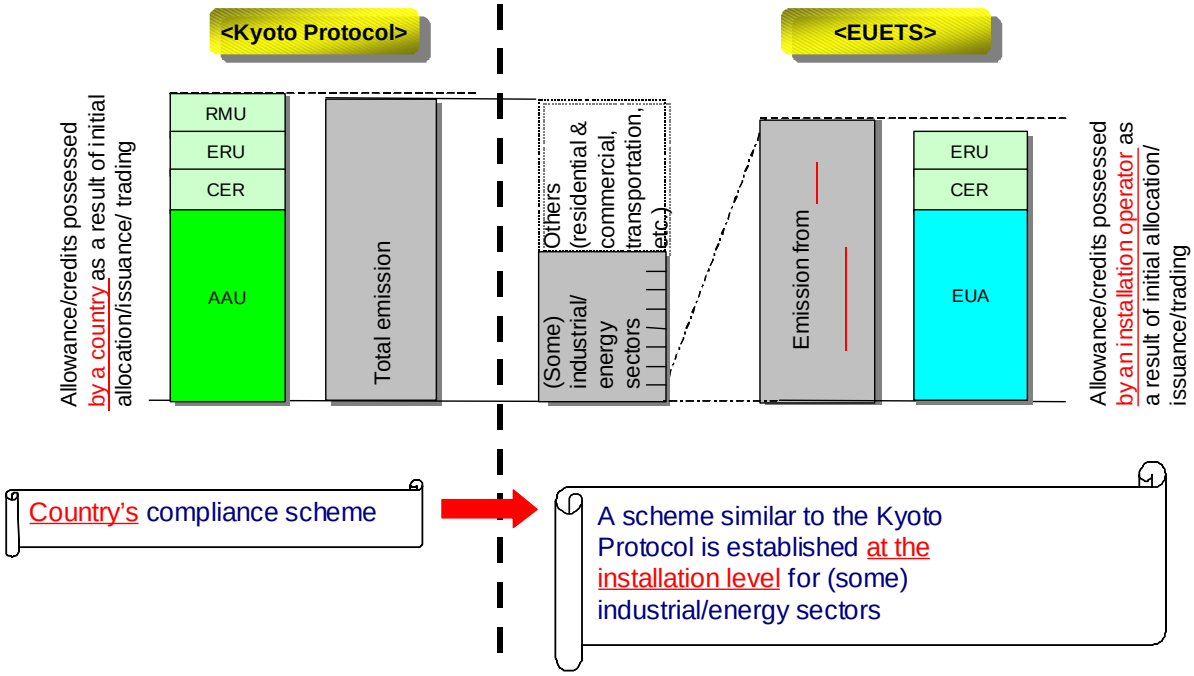
4 EU Emissions Trading Directive (2003/87/EC) adopted on July 22, 2003
"establishing a scheme for greenhouse gas allowance trading within the Community and amending Council Directive 96/61/EC"
http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf

5 Draft Linking Directive
First draft of the European Commission (COM (2003)403final) on July 23, 2003:
"amending the Directive establishing a scheme for greenhouse gas allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms"
http://europa.eu.int/eur-lex/en/com/pdf/2003/com2003_0403en01.pdf
Proposed amendments adopted by the First Reading of the European Parliament on April 20, 2004:
"European Parliament legislative resolution on the proposal for a European Parliament and Council directive amending the Directive establishing a scheme for greenhouse gas allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms (COM (2003) 403 – C5-0355/2003 – 2003/0173(COD))"
http://www2.europarl.eu.int/omk/sipade2?PUBREF=-//EP//TEXT+TA+P5-TA-2004-0303+0+DOC+XML+V0//EN&LEVEL=3&NAV=X
Complement to the EU deliberation process: Draft laws and ordinances prepared by the European Commission are deliberated at the European Parliament and the Council of the European Union. If a document adopted by the Parliament is not approved by the Council of the European Union at the first deliberation (First Reading), the second deliberation (Second Reading) will be held.

Figure 2-1 Position of the EUETS and Comparison with the Kyoto Protocol




The position of the EUETS can be summarized as follows in comparison with the Kyoto Protocol (see Figure 2-1). The Kyoto Protocol is a scheme that requires "countries" to hold the actual emissions below the total of the Assigned Amount Units (AAUs[6]), which are allocated initially, and credits (CERs, ERUs, and RMUs[7]). On the other hand, the EUETS establishes a similar scheme for each "installation" possessed by operators in (some) industrial and energy sectors with respect to each country's emissions. On this occasion, allowance initially allocated is different from the AAUs, but common[8] credits with those of the Kyoto Protocol are used.

The institutional characteristics of the EUETS are summarized below.

## 2-1 Participating Countries

Countries participating in the EUETS are the 25 EU member countries including the 10 countries that have newly acceded to the EU since May 2004 (in addition, Norway is planning to participate in the scheme in the form of linking with its own emissions trading scheme). This means that 24[9] out of 38 Annex B Parties with a numerical target of the Kyoto Protocol participate in the EUETS (see Figure 2-2). The emissions from these countries account for about 50% of those from Annex B Parties (see Table 2-1), excluding the countries that have withdrawn from the Kyoto Protocol, namely, the United States and Australia. The only major countries that are not included in the EUETS are Japan, Canada, Russia, and the Ukraine. Thus, the introduction and implementation of the EUETS is expected to have a significant impact on the international emission credit market, depending on the market players and the scale.

6 AAU: Assigned Amount Unit: Allowance assigned to countries under the Kyoto Protocol.
7 RMU: Removal Unit: Removal by sink activities in developed countries (Annex I Parties).
8 To be precise, there are credits that cannot be used in the EUETS (forest sinks and so on).
9 Cyprus and Malta do not have a numerical target of the Kyoto Protocol.

## 2-2 Setting of Allowance

The method of allocating initial allowance is one called "cap-and-trade" (see Figure 2-3). First of all, policymakers decide total possible emissions (cap) and allocation to each emitter, and then, emitters trade allowance to achieve the target. This method is different from "baseline and credit" in which differences (reduction) from "emissions forecasted" in the case where emission reduction measures are not implemented are converted to credits.

Figure 2-2 Countries Participating in the Scheme

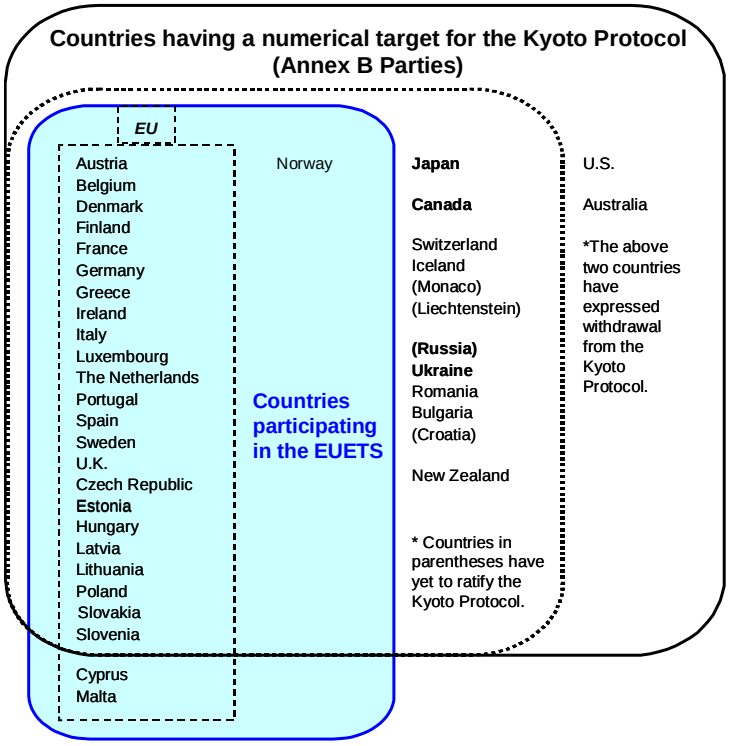


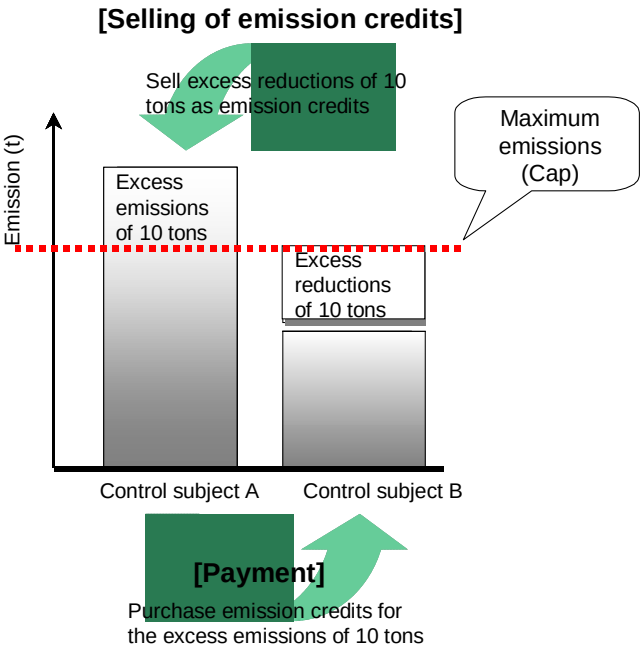

Table 2-1 Emission Shares of Countries Participating in the Scheme

| Actual emissions from Annex B Parties | Total GHG emissions [Mt/CO2] (2000) | Percent distribution |
|---|---|---|
| 15 conventional EU countries | 4,094 | 42% |
| 8 new EU countries | 720 | 7% |
| Norway | 58 | 1% |
| **Total of the EUETS** | **4,872** | **50%** |
| **Russia** | **2,007** | **20%** |
| **Japan** | **1,382** | **14%** |
| **Canada** | **737** | **8%** |
| **Ukraine** | **458** | **5%** |
| **Others (excluding the U.S. and Australia)** | **362** | **4%** |
| **Total** | **9,817** | **100%** |
| U.S. | 7,021 | |
| Australia | 498 | |

It is also another characteristic that this cap is not prepared by the European Commission but is prepared individually by each member state as a National Allocation Plan (NAP).[10] Although there are guidelines for formulating a NAP, each member can decide the cap on its own initiative unless it conflicts with the State Aid rules[11] (however, the European Commission has veto power in examination). Despite that the EUETS is the EU's uniform policy, binding allowances are set by the sovereignty of each member state, therefore, this scheme requires coordination at the European Commission for maintaining fairness in economic burden among members.

The control subjects for which an allowance (cap) is set are about 13,300 sites (prospect as of October 21, 2004), which are large stationary emission sources in

Figure 2-3 Cap and Trade



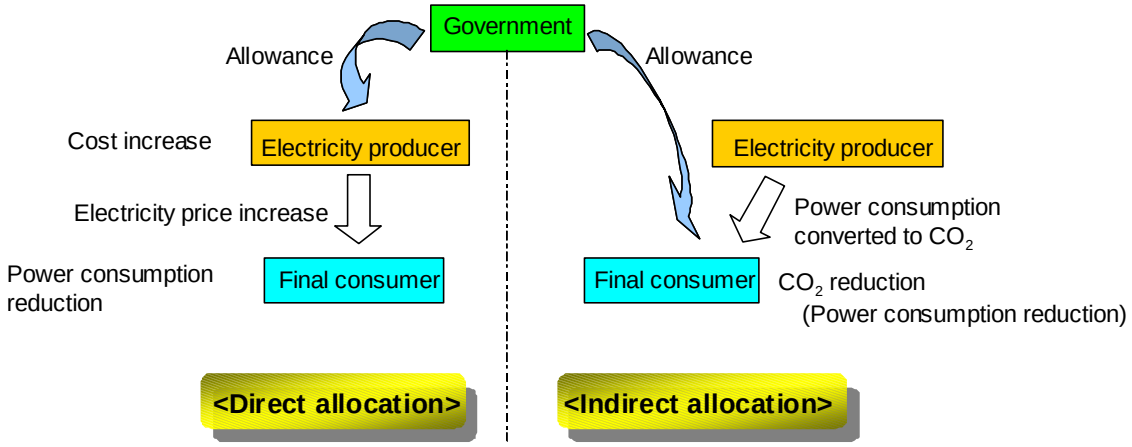

10 Article 9 of the Directive.

11 State Aid rules: These rules prohibit aiding a country that distorts fair market competition. The authority of judgment belongs to the European Commission. This means, here, allocating an unreasonably large amount of valuable allowance to a specific subject.

the industrial and energy sectors. Thereby, about half of $CO_2$ emissions in the EU are covered. Specifically, the subjects include installations with a rated thermal input exceeding 20 MW, oil refineries, coke ovens, iron production and processing sectors, mineral sectors (glass, cement, and ceramics), and others (paper and pulp).[12]

What should be noted here is the fact that for electricity, allowance is allocated not for emissions from consumers but those from power plants (this is called direct allocation: see Figure 2-4). This means that reduction in power consumption is not directly regarded as emission reduction by consumers. The act of reducing $CO_2$ emission through reduction in power consumption is brought by an indirect effect, that is, a rise in the consumer price of electricity. This is a contrast to the fact that reduction in power consumption by consumers is appreciated as $CO_2$ emission reductions under the U.K. emissions trading scheme and in the Nippon Keidanren's voluntary-action plan.

Figure 2-4 Direct and Indirect Allocation



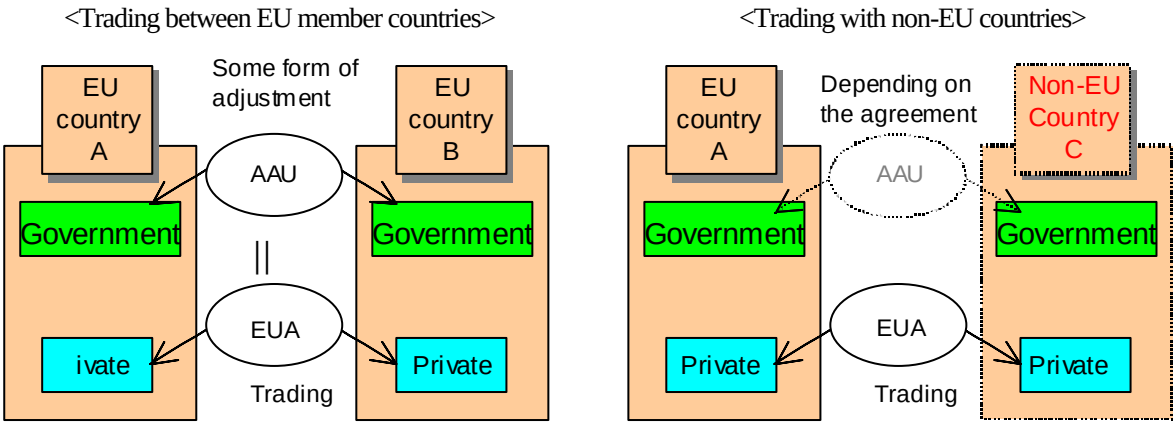

## 2-3 Relations with the Kyoto Protocol

The allowance used is unique to the EUETS, called "EU Allowance (EUA),"[13] and AAUs allocated to the government under the Kyoto Protocol are not directly traded in the EUETS.

This unique allowance is adopted not only for a technical reason, i.e. the trading scheme will be implemented from 2005 before the first commitment period of the Kyoto Protocol starts in 2008 and will also be implemented regardless of whether the Kyoto Protocol goes into effect, but also for the reason of avoiding companies' directly trading AAUs to prevent AAUs from flowing out to Japan and other countries and from flowing in from Russia and other countries. Incidentally, anyone can participate in trading.[14] This is possibly because of expectation that traders' participation will increase the market liquidity. Due to this, it is considered possible for Japanese companies to open accounts and participate in trading.

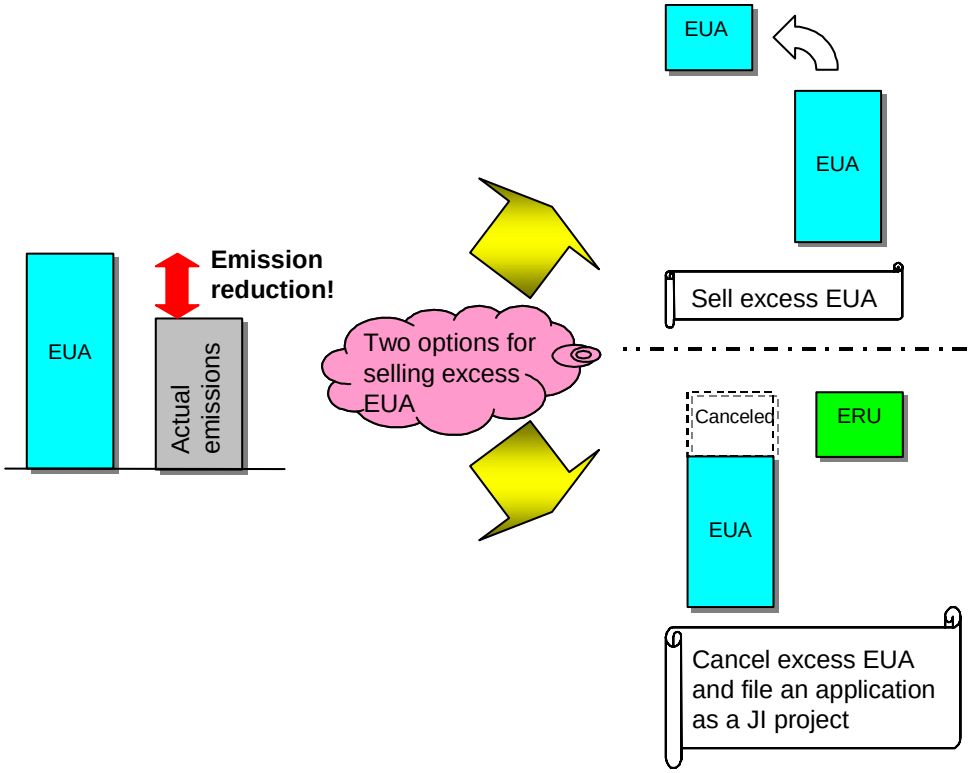
12 Annex I to the Directive.
13 EUA is the common name, and it is called "Allowance" in the Directive.
14 Article 19(2) of the Directive. Detailed requirements for participation are now in preparation (as of August 2004), but it is expected that simple requirements only are required, such as having an address within the EU.

Figure 2-5 Relations between EUA Trading and AAUs under the Kyoto Protocol




In terms of relations with the allowance under the Kyoto Protocol, the Directive also stipulates that transfers of EUAs by the private sector to another country within the EU will involve corresponding adjustments of AAUs possessed by relevant countries[15] (see Figure 2-5). From this, it can safely be understood that EUAs are equivalent to AAUs at least within the EU. On the other hand, the Directive stipulates that the EUETS shall be linked with emissions trading schemes of non-EU countries after conclusion of a mutual recognition agreement.[16] To put it the other way around, it must be noted that even if the Japanese government and companies purchase EUAs, AAUs will not be transferred to them, unless a mutual recognition agreement is concluded. The Directive does not include any specific descriptions about mutual recognition agreements, and all details thereof are left to future negotiations.

Figure 2-6 Choosing JI projects




At installations subject to the EUETS, it is possible to choose to cancel allocated EUAs and issue ERUs from JI projects[17] (see Figure 2-6). Therefore, Japan may implement JI projects in Central and Eastern Europe with large room for

15 Recital (10) and Article 19(3) of the Directive.
16 Recital (18) and Article 25 of the Directive.
17 Article 11b(2)-(4) of the draft Linking Directive. In the original text proposed by the European Commission, it was not allowed to implement JI projects at installations subject to the EUETS (excluding those that have already been started), but it has come to be admitted at the stage of passing amendments by the European Parliament.

emission reductions. Although this is "institutionally" possible, caution must be given as to whether it is actually possible. This point is to be mentioned later.

## 2-4 Use of the Kyoto Mechanism (Linking)

Under the EUETS, it is possible to use Kyoto credits (CERs and ERUs) for compliance (linking). The EUETS is also characterized by the fact that such linking will be implemented regardless of whether the Kyoto Protocol goes into effect.[18] Thereby, operators within the EU are given a clear incentive to invest in CDM/JI projects. As a result, these operators have the effect of encouraging the consideration and implementation of CDM/JI projects. In addition, this will also function to reduce operators' risk because investments in CDM/JI projects will not be wasted even if the Kyoto Protocol does not go into effect.

This linking can be used only for CERs from the first phase of the EUETS (2005-2007) before the first commitment period of the Kyoto Protocol. Incidentally, the Directive stipulates that CERs used in the first phase should be cancelled.[19]

## 2-5 Others

Other than the above, what are stipulated under the EUETS are maximum allowances subject to auction at the time of allocation, penalty for breach, inclusion of additional activities, installations, and gases (opt-in), temporary exclusion (opt-out), integration of subject installations (pooling), and subjects to the linking scheme. The outline thereof is summarized in Table 2-2.

Table 2-2 Other Characteristics of the EUETS

| | First phase: 2005-2007 | Second phase: 2008-2012 |
|---|---|---|
| **Allocation free of charge** *[Article 10 of the Directive]* | At least 95%<br>(=Auction is permitted up to 5%) | At least 90%<br>(=Auction is permitted up to 10%) |
| **Banking** *[Article 13 of the Directive]* | No provisions regarding carry-over of allowances to the next phase: left to each country's discretion | |
| **Penalties** *[Article 16 of the Directive]* | EUR 40 for each ton of $CO_2$ + carry-over of excess emissions to the next phase | EUR 100 for each ton of $CO_2$ + carry-over of excess emissions to the next phase |
| **Inclusion of additional activities, installments, and gases**<br>**Opt-in** *[Article 24 of the Directive]* | The scheme may be applied to installations with a rated thermal input not exceeding 20 MW, which do not have to be subject to the scheme. | The scheme may be applied to sectors that are now not subject to the scheme. |
| **Temporary exclusion**<br>**Opt-out** *[Article 27 of the Directive]* | Installations may be excluded from the scheme if as a result of national policies, they can reduce emissions as much as would be the case if they were subject to the EUETS. | Exclusion is not permitted. |
| **Pooling** *[Article 28 of the Directive]* | Operators of subject installations carrying out the same activity may form a pool (jointly become one subject to the scheme). Operators participating in a pool nominate a trustee. | |
| **Credits excepted from subject to linking** *[Article 11a(3) and Article 11b(5) of the draft Linking Directive]* | Sinks<br>Nuclear facilites (stipulated only for the first and second phases)<br>(Large-scale hydroelectric power … obligation to clearly specify impact) | There is room for sinks' returning to subject to linking. *[Article 30(o) of the Linking Directive]* |
| **Credits issued as a result of domestic reduction projects** *[Article 30(n) of the draft Linking Directive]* | – | There is room for issue of EUAs in respect of reductions resulting from domestic reduction projects (in transportation/civilian sectors, etc.) |
| **Supplementarity of linking** *[Article 30(3) of the draft Linking Directive]* | – | *No quantitative regulations<br>Obligation to prepare an NAP, and obligation to report every two years |

18 Article 11a(1) and (1a) of the draft Linking Directive.
19 Article 11a(1a) of the draft Linking Directive.

## 3. Present Trends over EUETS

### 3-1 Trends of National Allocation Plans (NAPs) for the First Phase

National Action Plans (NAPs) for the first phase were prepared with the due date set for March 31, 2004 (May 1 for the ten new members), but most member countries were rather in arrear (see Table 3-1). This is partly because there was not much time from the adoption of the Directive in July 2003 to the due date. In addition, elections and the political situation (Spain and France) as well as delay in collection of data by installation (Greece, Italy, and major nations in Central and Eastern Europe) also seem to have affected preparation of NAPs. As of October 20 2004, the European Commission has approved NAPs of 16 countries.

Allocations set in NAPs are generally recognized as being not challenging in terms of numerical targets, except those prepared by the United Kingdom and some others (see Table 3-2 for major countries' NAPs). The U.K.'s NAP was prepared in anticipation of a higher domestic target (-20%) than the Kyoto Protocol target (-12.5%), so numerical targets are challenging. Some of other countries, however, admit increase from the current emission level. This fact shows how it is politically difficult to set allowances (cap) for operators. It also clearly shows that all countries position the first phase as the "practice period for the trading scheme."

Methods of allocation also differ depending on the country (see Table 3-3). In countries that have their own national climate change programme, a NAP is prepared on the basis of the plan in some cases while it is formulated out of nothing in other cases. In addition, countries that formulate a NAP out of nothing formulate it on the basis of emissions forecast. Thus, there are many countries, which cannot be completely said to be necessarily showing a clear path to achievement of Kyoto Protocol targets. In addition, there are countries that make various exceptions, like Germany. In this manner, there are an extremely wide variety of options of allocation methods (see Table 3-4).

Table 3-1 Progress of Preparation of a NAP for the First Phase in Each Country

| | Countries that submitted a draft to the EU (On time) | Countries that submitted a draft to the EU (After the due date) | | Countries that have not submitted a draft to the EU |
|---|---|---|---|---|
| 15 conventional members | Austria*<br>Denmark<br>Finland *<br>Germany*<br>Ireland | Belgium<br>France *<br>Italy<br>Luxembourg<br>The Netherlands | Portugal<br>Spain<br>Sweden<br>U.K.* | Greece |
| 10 new members | Latvia<br>Slovenia | Czech Republic<br>Cyprus<br>Estonia<br>Hungary | Lithuania<br>Malta<br>Poland<br>Slovakia | |

(Note) Progress as of October 20, 2004
The submission due date is March 31 for the 15 conventional members and May 1 for the 10 new members.
The NAPs of countries written in red and underlined were approved by the European Commission. The next chance for approval will be in September.
* The NAPs of Austria, Finland, France, Germany, and the United Kingdom were approved subject to amendment.

Table 3-2 Characteristics of Major Countries' NAPs for the First Phase (1) Allocation

| Major Countries | Total allocation (cap)* ①[Mt-$CO_2$] | Total GHG emissions ② In 2000 [Mt-$CO_2$] | Content ①/② | No. of subject installations | Challenging level of total allocation |
|---|---|---|---|---|---|
| U.K. | 245 | 659 | 37% | 1,078 | 15% reduction compared to 1990 in 2010 |
| Germany | 499 | 993 | 50% | 2.419 | 0.4% reduction compared to 2000-2002 |
| France | 155 | 547 | 28% | About 1,390 | 2.4% reduction compared to emissions forecast |
| Italy | 241 | 539 | 45% | About 2,000 | 7% increase compared to 2000 |
| The Netherlands | 95 | 224 | 43% | 333 | 4% reduction compared to 2001-2002 |
| Poland | 286 | 376 | 76% | 1,166 | 20% increase compared to 1999-2002 |
| Slovakia | 31 | 50 | 62% | 209 | 19% increase compared to 2001 |
| EU in total** | About 2,170 | About 4,800 | 45% | About 13,300 | |

(Source) Prepared based on each country's NAP (As of October 20, 2004; the same applies to Tables 3-3 and 3-4 below)
Figures in ② are from the Interim Report of the Global Environment Subcommittee, Environment Committee, Industrial Structure Council (July 2003).

(Note) The NAPs of countries written in red and underlined were approved by the European Commission. (The same applies to Tables 3-3 and 3-4 below.)
*The total allocation ① is the annual average in the first phase (2005-2007).
**The total allocation for the entire EU does not include allocations in some countries for which numeric values are not clear. so the total allocation at this time is smaller than the actual total.

Table 3-3 Characteristics of Major Countries' NAPs for the First Phase (2) Methods of Allocation

| Major countries | Method of determining total allocation (cap) | Method of allocation to each sector | Special provisions for allocation |
|---|---|---|---|
| U.K. | Based on the CCP,*1 and in anticipation of reduction effects of the ETS | Based on the CCP, and reductions by the ETS are allocated to the electric power sector | |
| Germany | Following the trend toward achieving the Kyoto target<br>Not direct trend | Emission standard in 2000-2002 | Replacement during the first phase is treated not as cancellation and new allocation but as diversion.<br>An integrated target is set for an integrated plant, such as a steel plant.<br>The ex-post adjustment system is available.*2<br>Special provisions for process emissions and cogeneration |
| France | Forecasted based on emissions per unit production (basic unit calculated based on emissions in 1998-2001 is multiplied by production forecast)<br>Emphasizing that emissions per capita are small and thus there is little room for reduction. | | |
| Italy | Based on the National Research Programme (PNR). Emissions in 2010 did not meet the Kyoto target. | In consideration of emission standard in 2000 and future growth | Reserve for new installations is set with respect to each sector. *3 |
| The Netherlands | Middle of values set in the benchmark covenants and those forecasted by a research institute | Based on emission standard in 2001-2002, in consideration of future growth depending on the sector, differences in reduction rates depending on whether an agreement has been concluded | Separate assessment for electricity<br>Special provisions for process emissions |
| Poland | Following the trend toward achieving the Kyoto target | Based on standard in 1999-2002 (excluding minimum year), and in consideration of future growth and improvement of emissions per unit production | Separate assessment for electricity and cement plant<br>Bonus allowances are available for early action and cogeneration. |
| Slovakia | Based on emissions forecast | Based on standard in 1998-2002 for small-scale installations, and in consideration of future growth | Individual negotiations for large-scale installations |

(Notes) *1 CCP: Climate Change Programme
*2 The European Commission issued an order to amend.
*3 Reserve for new installations: Allowances saved in advance to be allocated to installations that are newly operated during the implementation period.
*4 BAT: Best Available Technique

Table 3-4 Characteristics of Major Countries' NAPs for the First Phase (2) Options for Allocation

| Major countries | Rate of reserve for new installations | Handling of residual reserve for new installations | Consideration of early action | Banking*3 | Exclusion (Opt-out) Additional application (Opt-in) |
|---|---|---|---|---|---|
| U.K. | 7.7% | Put to auction | △*2 | Not allowed | Opt-out is allowed. |
| Germany | 0.9% | Canceled | ○*1 | Not allowed | Opt-in is available. |
| France | 3.0% | Canceled | △ *2 | Allowed? | — |
| Italy | 16.2% | Sell Off | △ *2 | Not allowed | — |
| The Netherlands | 2.6% | To be determined (in the original plan, reallocated to existing installations)*4 | ○*1 | Not allowed | Opt-out is set at the government's discretion. |
| Poland | 3.1% | Put to auction | ○ *1 | Allowed *5 | Opt-out is available. |
| Slovakia | 2.0%? | Put to auction | △ *2 | Not mentioned | — |

(Notes) *1 ○ for early action: Favorable treatment is given to those who implement early action, by using appropriate adjustment factors at the time of allocation to sectors or installations. Bonus allowance is available in Poland.
*2 △ for early action: Early action is indirectly taken into consideration through several-year study of actual emissions, which are used as standards for allocation to sectors and installations. This gives some clemency to those who implement early action, but it cannot be necessarily said that favorable treatment is given to them.
*3 Banking: Banking of EUAs. Banking is available for CERs and ERUs, which are used as credits, within the scope of the Kyoto Mechanism.
*4 The European Commission has a policy of not allowing reallocation to existing installations.
*5 Allowed only emission reduction by new capital investment.

## 3-2 Points to Be Noted toward the Second Phase

The second phase overlaps the first commitment period of the Kyoto Protocol, and is thus considered to be the period of actual implementation that aims at full-fledged emission reductions. Attention will focus on what adjustments and settings will be made in allocation for the second phase that is scheduled in 2006, following the fact that formulated NAPs generally ended in setting not challenging numeric values and conditions in the first phase, as mentioned above. The impact of the Kyoto Mechanism on the international market will also attract attention. Specific key points are as follows.

- Challenging level of initial allocation (how much reductions are urged the industrial/energy sectors to achieve in anticipation of achieving the Kyoto Protocol target)
- Degree of freedom in using Kyoto credits (this must be described in a NAP: for example, how to conduct quantitative restrictions associated with supplementarity[20])
- Degree of freedom of compliance rules (propriety of banking[21] that also has impact on the next commitment period of the Kyoto Protocol)
- As another relevant trend, the supply and demand of Kyoto credits (the number of projects, and demand trends including those outside the EU)

20 Supplementarity: The Marrakech Accords to the Kyoto Protocol (Decision 15 and draft decision on the Kyoto Mechanism) advocates that the use of the Kyoto Mechanism (acquisition of credits, and emissions trading) should be supplemental to domestic emission reductions. However, it does not clarify how much use is supplemental. (From the very beginning, the Netherlands plans to deal with one half of excess emissions by the Kyoto Mechanism.)

21 Banking: Mechanism for carrying over allowances to the next commitment period.

## 4. Impact on Countries outside the EU and Direction of the EUETS

This part considers the impact of the introduction of the EUETS on Japan and other countries outside the EU from the viewpoint o f the characteristics of the scheme. Considerations are also given to the impact of the future direction of the EUETS, especially the direction of market expansion, on countries outside the EU.

### 4-1 Impact ①: Implementation of JI projects in Central and Eastern European Countries

In the original Linking Directive drafted by the European Commission, there was a clause that prohibits implementing a JI project for an installation subject to the EUETS. Therefore, Japan with the intention of promoting JI projects in Central and Eastern European countries had expressed concern for a period of time. In the end, this provision was deleted when the European Parliament passed the amended directive in April. There are thus no provisions constraining the implementation of JI projects.

However, the final draft Linking Directive contains a provision stipulating that the baseline[22] of a JI project must comply with the acquis communautaire.[23] Under ordinary circumstances, a JI project can be implemented at each country's discretion (in the case of the first track[24]), but this provision is considered to mean that the eligibility of a JI project is determined not at each country's discretion but based on rules set by the European Commission. It must be noted that there remains a risk of restrictions being put on the operations of projects in the future if the EU tightens eligibility determination.

### 4-2 Impact ②: Environment Surrounding the Kyoto Mechanism

The Linking Directive will give installation owners who have the obligation to comply with the EUETS an incentive to acquire Kyoto credits (CERs and ERUs).

In this scheme, credits held in the national register by operators who possess and operate installations are subject to linking,[25] and participants in trading who do not have the said obligation cannot convert CERs or ERUs into EUAs for the purpose of selling. Consequently, the scheme is expected to further accelerate investment in CDM/JI projects and purchase of CERs and ERUs by installation owners with the said obligation rather than those by traders for profit.

In addition, since the EUA market is relatively likely to have higher liquidity compared to the CER and ERU markets at this time, operators may have an incentive to convert CERs and ERUs into EUAs at an early stage.

Moreover, the "irreversibility" of the Linking Directive also needs attention. Since the Linking Directive does not include a provision stipulating the conversion of EUAs into CERs and ERUs to use, there is concern that CERs and ERUs are converted into EUAs in a unilateral way. In fact, EUAs can be converted into ERUs by choosing JI projects (mentioned above), and "de facto reversibility" thus exists. Therefore, the scheme is not necessarily "irreversible" from the institutional view, and it thus cannot be said that the EUETS hinders the distribution of Kyoto credits in the private sector. On the other hand, operators may not be able to freely implement JI projects in which EUAs are converted into ERUs (this process corresponds to the said "reversibility") due to the provision for the baseline of a JI project (mentioned above).

As above, the EUETS is expected to encourage installation owners with the obligation to comply with the EUETS to invest in CDM/JI projects and purchase Kyoto credits and thereby to cause the situation where Kyoto credits, once acquired, hardly flow out to the EU. As a result of this, it may become more difficult for Japan and other countries to ensure inexpensive CDM/JI projects or purchase credits in the future (however, actual movements will also depend on the supply and demand of EUAs, demand of Japan, Canada, and other countries for Kyoto credits, and prices thereof).

### 4-3 Direction: Meaning of Expansion of the EUETS Market

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22 Baseline: Forecast of emissions that would have arisen if a relevant JI project did not exist.

23 Article 11b(1) of the Linking Directive.

24 First track: If a host country of a JI project satisfies certain conditions (for example, preparation of a national registry necessary for credit management, and annual submission of the national inventory report), it can approve a methodology for the project and issue ERUs on its own. Countries that do not satisfy the conditions have to take approval procedures by the "Article 6 Supervisory Committee," which will be established under the United Nations Framework Convention on Climate Change (UNFCCC). This is called the second track.

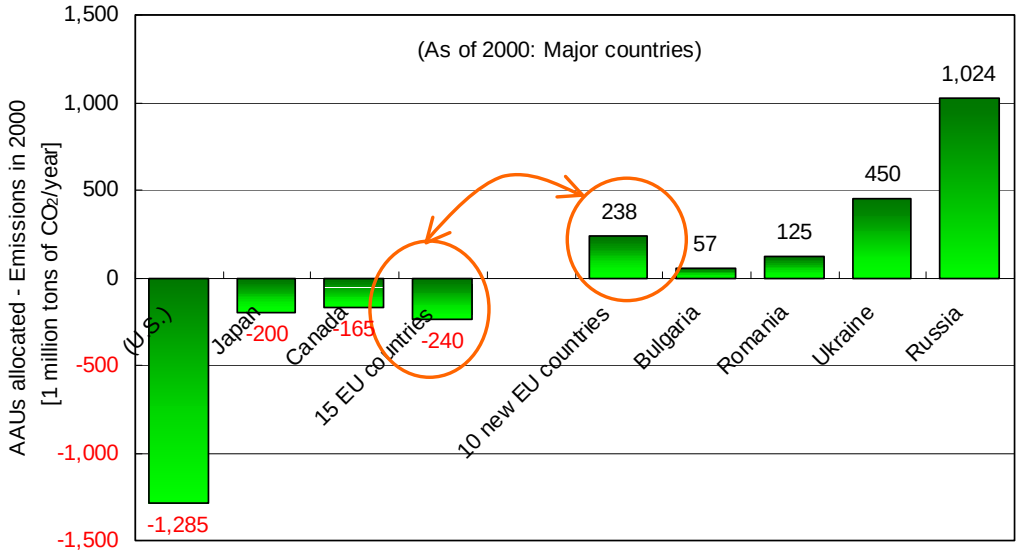
25 Article 11a(1) and (1a) of the draft Linking Directive.

The EUETS Directive provides for linking the market with other countries' domestic emissions trading schemes, and indicates that the market will expand to outside the EU. In a general sense, the meaning of expansion of the emission credit market is the provision of opportunities for more cost-effective emission reductions, and this is also advocated in the Directive.[26] However, attention must be given to the fact that the meaning of expansion of the EUETS market includes many other important elements.

The first element is the expansion of opportunities to use Kyoto credits. As mentioned above, incentives to acquire Kyoto credits have been increasing among EU member countries due to the existence of the Linking Directive. If a EU member country carries forward market expansion (market link) to Japan, Canada, or another country after ensuring credits, credits possessors will have more chances to sell credits.

The second element is the enclosure of countries with large room for emission reductions. As mentioned above, it is possible from the institutional view to access Central and Eastern Europe through JI projects, but there remains the risk of actual restrictions. From the EU's standpoint, this means that inexpensive JI projects can be developed not under the JI scheme but under the EUETS. Since the EUETS is a scheme to adjust AAUs along with the transfer of EUAs, it will eventually become possible to acquire AAUs at an extremely low price. An interesting fact is that in terms of actual greenhouse gas emissions as of 2000, while emissions exceeding Kyoto targets of the 15 conventional EU member countries amounted to about 240 million tons of $CO_2$, excess reductions by the 10 new EU member countries amounted to almost the same as the excess emissions (see Figure 4-1). In addition, if the EUETS is expanded not only to the 10 new EU member countries but also to the Ukraine and Russia, such opportunity will further increase.

Figure 4-1 Emissions and Reductions Exceeding Kyoto Targets




(Source) Prepared based on the Interim Report of the Global Environment Subcommittee, Environment Committee, Industrial Structure Council (July 2003) and others.

(Note) Major Kyoto Protocol Annex B Parties that are not on this graph: Croatia (+1), (Australia (-48)), New Zealand (-8), Norway (-7), Switzerland (-5), and Iceland (0).

Attention also has to be paid to new business chances inherent in the EUETS. If the EUETS becomes a de facto worldwide standard for emissions trading, many business chances, such as the installation and management of monitoring systems, certification businesses, the development and management of registries, and transaction businesses through inducement of market places, will roll in EUETS participants. In addition, since the EUETS precedes preparations for implementing the Kyoto Mechanism, the Kyoto Mechanism may be operated in the same manner as the EUETS.

26 Recital (18) of the Directive.

As mentioned above, the expansion of the market subject to the EUETS means the expansion of various strategic options for the EU. It must be noted that the EUETS may give EU member countries and EUETS participants advantage over measures against global warming taken by Japan and other countries, depending on the future direction.

## 5. Conclusion

It is expected that the EUETS will encourage operators in the EU to invest in CDM/JI projects and purchase Kyoto credits and that such credits will hardly flow out of the EU. In addition, options for EU strategies for measures against global warming have been diversifying due to the EUETS, and there is thus an increasing possibility that the EU will take the initiative in global-level measures against global warming, including the Kyoto Protocol.

To achieve the Kyoto target with high economic efficiency in such circumstances, Japan has to make political coordination in relation to the rules of the EUETS (including rules which will be set in the future) accordingly, including intergovernmental efforts to create a road map for cases where operators wish to implement JI projects in the EU (for example, conclusion of a memorandum of understanding (MoU)) and consultations to eliminate those which can become obstacles to the international use of the Kyoto Mechanism as stipulated in the Kyoto Protocol. At the same time, Japan also has to make efforts to enhance the certainty of credits that are achieved by the Kyoto Mechanism, through active promotion of excavation of inexpensive CDM/JI projects.

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