

Approach to Japanese Emissions Trading Scheme Interim Report (Executive Summary)

Advisory Committee
on the Emissions Trading Scheme
Ministry of the Environment, Japan
May 20, 2008

Advisory Committee on Emissions Trading Scheme: Formation and Mandate

The Director-General of the Global Environment Bureau of the Ministry of the Environment, Japan, formed an “Advisory Committee on Emissions Trading Scheme” to explore concrete scheme designs taking into account the actual situations of Japan. This committee has been set up with the view to examining the effectiveness of, and the need for, an emissions trading scheme as a policy tool against global warming, with attention to situations overseas.

The Advisory Committee has the mandate of analyzing fundamental concepts and issues that constitute the basis of a possible emissions trading scheme and exploring the components of such a scheme as well as any necessary infrastructures for smooth implementation.

Meetings to Date

1st meeting: Thursday, January 31, 2008 14:00-16:00

- Future course of Voluntary Emissions Trading Scheme
- Recent trends in and outside of Japan (an update on emissions trading schemes in other countries, etc.)

2nd meeting: Thursday, March 6, 2008 12:00-15:00

- Discussion points of an emissions trading scheme (discussion points presented for each scheme component)
- Focused discussion (method of emissions allowance allocation)

3rd meeting: Monday, March 31, 2008 13:00-16:00

- Discussion points of an emissions trading scheme
- Focused discussion (allocated entities and coverage, covered gases, scheme period, and total allowance to be allocated)

4th meeting: Tuesday, April 22, 2008 13:00-15:30

- Discussion points of an emissions trading scheme
- Focused discussion (impact on international competition/carbon leakage, and cost containment measures)

5th meeting: Friday, May 9, 2008 13:30-16:30

- Focused discussion (international linkage, establishment of financial and market environment, and method of emissions allowance allocation)

6th meeting: Thursday, May 15, 2008 14:00-17:00

- Interim Report

Studies are ongoing.

List of Members, Advisory committee on the Emissions Trading Scheme
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Jusen Asuka	Professor, Center for Northeast Asian Studies, Tohoku University
Yutaka Ito	Senior Officer, Corporate Strategy Department & Listing Department, Tokyo Stock Exchange Group, Inc.
Kazutaka Okubo	Acting General Manager of the Marketing and Client Service Department, Partner of the CSR Promotion Department, Ernst & Young ShinNihon
Tadashi Otsuka (Chair)	Professor of Law, Waseda University
Yoshihiro Kageyama	General Manager, Environment Department, Tokyo Electric Power Company
Masayuki Sasanouchi	Senior General Manager, Toyota Motor Corporation
Noriaki Nagai	Senior Managing Director, Nomura Holdings, Inc.
Syuya Nomura	Professor, Chuo Law School
Yuji Noritake	General Manager, Environmental Sustainability Development Office, Corporate Environment Division, Ricoh Company, Ltd.
Nobuyuki Hirano	Managing Director, The Bank of Tokyo-Mitsubishi UFJ, Ltd.
Masaki Mita	Japan Representative, Argus Media Limited
Takeshi Mukawa	Attorney at Law, Mori Hamada & Matsumoto
Hideki Murai	Professor of Accounting, College of Commerce, Nihon University
Toru Morotomi	Associate Professor, School of Government and Graduate School of Economics, Kyoto University
Kenji Yamada	General Manager, Environmental Affairs Div., Nippon Steel Corporation

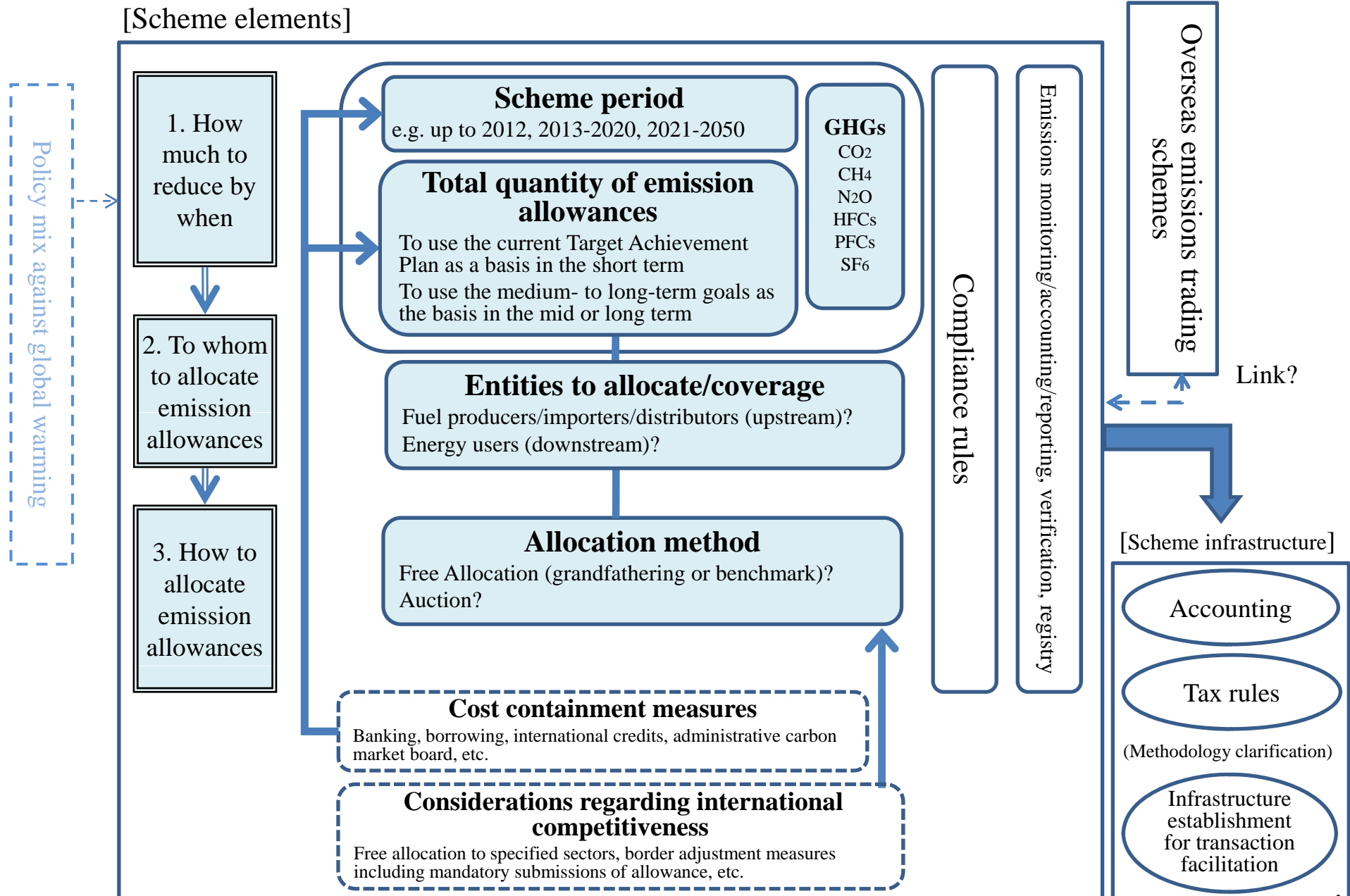
Observers: Ministry of Economy, Trade and Industry, Financial Services Agency

(In Japanese alphabetic order)

Background and Objectives of the Study on the Emissions Trading Scheme

- (1) For the solution of the global climate change, an international climate regime is needed in which all major emitting countries participate so that GHG (greenhouse gas) emission reductions efforts will be made on a global scale. In order to maintain sustained efforts and solidarity over a long time frame for the attainment of the long-term goal of “halving the global GHG emissions by 2050 from the current level,” a goal, proposed by Japan, much more far-reaching from those suggested to date, it is very important to ensure equitable role sharing among all countries. Japan’s basic principles in the international negotiations are to achieve the target under the Kyoto Protocol and to pursue this framework for the next international climate regime.
- (2) Policy tools to promote domestic countermeasures against global warming include: (a) direct regulations, (b) economic instruments including an emissions trading scheme, tax measures (an environment tax), tax exemptions/reductions and subsidies, (c) infrastructure improvements, and (d) awareness raising and education. Appropriate policy tools should be chosen and mobilized, depending on the nature of the specific measure to be promoted (size of the targets to which the measure would be applied, nature of the targets, which are the products or production/consumption, the cost of implementing the measure, etc.). Emissions need to be reduced efficiently and effectively through a mix of these policy measures.
- (3) Emissions trading scheme, one of these policy tools, have been implemented or are considered in a number of countries, and talks are being underway for the setting of international rules. With the advent of the G8 Hokkaido Toyako Summit that will take up climate change as a major agenda item, discussion of this issue is an impending task.
- (4) In view of all of the above, this Advisory Committee makes an in-depth study on the specific design of a possible emissions trading scheme, in order to contribute to decision-making concerning its introduction from the view point of effectiveness and feasibility, with due consideration to the current situation in Japan.
- (5) In the study of countermeasures against global warming, their impact and effects on domestic industries and employment will be considered in parallel with their effects as environment policy, with a view to developing integrated strategies for both the economy and the environment.

Key Elements of the Scheme Design



Scheme Options for Discussion

Several scheme options are presented, taking into consideration the current situation of Japan, given that an emissions trading scheme is to be introduced.

(1) Major Common Elements for All Options

Items	Draft ideas
Covered gas	<ul style="list-style-type: none"> ○ In principle, the six GHGs specified in the Kyoto Protocol ○ However, it is necessary to decide applicable GHGs and the sources of their emissions, depending on monitoring accuracy, the availability of the amount of emissions, and the share of each GHG within the total amount of GHG emissions in Japan. ○ It is realistic to start with a scheme for CO₂ emissions from fuel combustion plus any GHGs that satisfy the above criteria. ○ Option 1 are intended to relate to CO₂ emissions from fuel combustion. Options 2, 3 and 4 are applicable to all GHGs.
Scheme period/total emission allowances	<ul style="list-style-type: none"> ○ For the possible introduction of a domestic emissions trading scheme, it is necessary to clearly state that the objective is to realize the Low Carbon Society in the long term. In order to enable enterprises and consumers to have a clear long-term prospect and accordingly plan their research and development, capital investment in plants and product purchases, the specific scheme period and total emission allowances should be defined as below, for example: <ul style="list-style-type: none"> • First period: scheme launch through FY2012 Since this period is short, the targets already defined in the Kyoto Protocol Target Achievement Plan shall be the basis for yearly total emission allowances. • Second period: the period corresponding to the next international climate regime (for example, FY2013-FY2020) Japan's medium-term target achievement plan for the next international climate regime should be the basis for yearly total emission allowances. • Third period and thereafter: for example, FY2021-FY2050 Some signals should be sent to indicate that a scheme to structure the Low Carbon Society will continue in the long term.
Commitment period/surrender	<ul style="list-style-type: none"> ○ Every year, for the duration of the scheme period mentioned above, each entity with allocated emission cap should fulfil its commitments. That is, after the end of each fiscal year, each entity is obliged to surrender its emission allowances, equal to the amount of its emissions in that fiscal year, to the government.

Items	Draft ideas
Actions against non-compliance	○ In the event of non-compliance, a charge shall be levied corresponding to the amount of the excess emissions. This charge shall be sufficiently higher than that of the allowance price. In addition, the excess emissions shall be offset in subsequent period.
Flexible mechanisms	○ Emission allowances may be traded. This will permit any entity to use purchased allowances in addition to its own emissions reduction efforts. Thus, flexibility in determining the compliance of commitments will be enhanced, with pursuing a reduction in the overall social costs of the scheme. ○ For other flexibility mechanisms such as banking and borrowing, see “Cost containment measures” in the next page.

(2) Other Common Elements for All Options

Items	Draft ideas
Emissions monitoring/accounting/reporting and emissions verification	○ A framework design and the required accuracy with regard to a scheme for emissions monitoring/accounting/reporting and verification shall be explored, taking into consideration the moves toward the formulation of ISO and other international standards, commensurate with Japan’s current situation. The actual cases pursuant to the GHG accounting/reporting scheme under the Law Concerning the Promotion of Measures to Cope with Global Warming (“Climate Change Policy Law”) and pursuant to the “Monitoring and Reporting Guidelines” of Japan’s Voluntary Emissions Trading Scheme (“JVETs”) will be used as a reference.
Registry	○ The “JVET’s registry system”, already in use, shall serve to provide the terms of reference. Any necessary improvements due to differences in the size of the scheme and so on shall be explored with due attention to the actual cases of JVETs implementation. ○ If a linkage with the Kyoto Protocol is necessary, a possible system link with the national registry shall be explored.

Items		Draft ideas
Cost containment measures	Cost containment measures	<ul style="list-style-type: none"> ○ Banking shall be accepted since it serves as an incentive for early action. ○ Borrowing shall be accepted only within a certain ceiling, since it could delay emissions reduction efforts and have the risk of default, while it is effective as a tool to maintain flexibility. ○ Establishment of administrative carbon market board like the Carbon Market Efficiency Board now under consideration in the US shall be considered. ○ A price cap shall not be accepted, since it allows for expansion of the total emission allowances.
	Use of external credits	<p>[International Credits]</p> <ul style="list-style-type: none"> ○ Acceptance of the use of Kyoto credits (CER, ERU) and the like is conceivable. Alternatively, an open-minded approach with attention to future progress in international negotiations might be preferable, since the treatment of these credits in the next international climate regime is not clear. <p>[Domestic Credits]</p> <ul style="list-style-type: none"> ○ Acceptance of the use of certain types of credits that satisfy certain criteria, including additionality of an emissions reduction project and verification of the emissions reduction, may be conceivable through appropriate mechanisms. <p>* In all cases, a certain ceiling should be established.</p>
	International linkage to foreign schemes	<ul style="list-style-type: none"> ○ International linkage with schemes in foreign countries (admittance of the mutual use of emission allowances and/or credits of other country's schemes) may be explored for its advantages and disadvantages. At any rate, the design of the total scheme should be explored while keeping in mind the possibility of international linkage.
Consideration for industries exposed to international competition		<ul style="list-style-type: none"> ○ Industrial sectors that would be substantially affected in terms of international competitiveness or would run a major risk of carbon leakage should be specified. ○ For such specified industrial sectors, special treatments that are under consideration in the US and Europe (free allocation, border adjustment measures, etc.) shall be explored.
Infrastructure developments	Clarification of accounting and tax rules	<ul style="list-style-type: none"> ○ Accounting and tax rules are to a large extent already streamlined by the existing standards that contemplate Kyoto credits. It is, however, necessary to clarify how to treat emission allowances allocated under an emissions trading scheme. Appropriate action is necessary, using actual cases of JVETs as a reference and taking into consideration the international discussions at the IASB (International Accounting Standards Board) and other forums.
	Infrastructure for smooth trading	<ul style="list-style-type: none"> ○ Infrastructure should be improved to enable exchanges and financial institutions to appropriately play the role of price discovery and liquidity maintenance (function of the market) in order to promote smooth emission allowances trading.

(3) Methods of Allocating Emission Allowances

1. Choice between allocation by auction and free allocation

- In the initial phase of the scheme inauguration, free allocation for some period of time may be the rule, since the market price level is not yet established and the cost burden on the allocated entities should be considered. From the perspective of equity, the percentage of auction may be gradually increased in some sectors and industries, if possible.
- However, auction from the beginning may be conceivable for those options that presuppose cost pass-through (Option 1: allocations to fossil fuel producers/importers/distributors and Option 3: allocations to direct emissions from electricity generation).
- With respect to the impact on international competitiveness and the risk of carbon leakage, an empirical analysis might be conducted to identify sectors and industries that are substantially exposed to international competition and accordingly qualified for free allocations.

2. Free allocation

- From the standpoint of equity, adoption of benchmarks (that would take into account the availability of Best Available Technology [the most advanced and practicable energy saving technology], the relationship between actual data and emissions, and industry-specific average emissions intensity, etc.) might be considered to the extent possible.
- For sectors and industries for which the adoption of benchmarks is technically difficult, free allocations might be made as appropriate, taking into consideration early actions taken (reduction efforts prior to the inauguration of the scheme).

3. Allocation by auction

- Since few examples are available even in other countries, studies need to be conducted with attention to the progress of specific rule-making overseas.
- The application of auction revenues will be studied, with attention to case examples overseas (conceivable examples include channelling back to allocated entities, funding of research and development, supporting scheme administration costs, etc.).

(Reference)

Comparison of allocation methods		Advantages	Disadvantages
Free allocation	<p><u>Grandfathering</u> Emission allowances allocated based on the past record of emissions</p>	<ul style="list-style-type: none"> ● Low initial cost burdens on allocated entities ● Simpler rules than the benchmark method based on the record of past emissions alone 	<p>For allocated entities:</p> <ul style="list-style-type: none"> ● Sense of inequity because early reduction efforts are unlikely to be reflected in the allocations (a concern that the inactive would be given preferential treatment)
	<p><u>Benchmark</u> Emission allowances allocated based on industry-specific emissions intensity (emissions per unit of production)</p>	<p>For allocated entities:</p> <ul style="list-style-type: none"> ● Greater sense of equity if industry-specific standards can be developed ● Low initial cost burden 	<ul style="list-style-type: none"> ● Difficult to formulate refined standards for all industries
<p><u>Auction</u> Emission allowances allocated by auction</p>		<ul style="list-style-type: none"> ● Easy to provide allocated entities with a sense of equity since the allocations are through market price formation ● Simple rules for the government 	<ul style="list-style-type: none"> ● High initial cost burden on the allocated entities

(4) Options

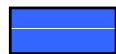
- All 4 options mandate absolute emissions caps to covered entities.
- An option is upstream allocation and other 3 options are downstream allocation.
- With regards to downstream allocation, we have options to allocate allowances to either electricity users or power companies. When allowances are allocated to electricity users, allowances are not allocated to power companies (so called “indirect emissions”). When allowances are allocated to power companies, allowances are not allocated to electricity users (so called “direct emissions”).

Option 1: Upstream Allocation

Option 2: Downstream Allocation (End-Use of Electricity)

Option 3: Downstream Allocation (Power Companies)

Option 4: Downstream Allocation (Responsibility Sharing)



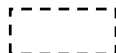
→The blue area represents upstream allocation (production/import/distribution of fossil fuels)



→The orange area represents downstream allocations (consumption of fossil fuels and electricity [indirect emissions from electricity generation]).

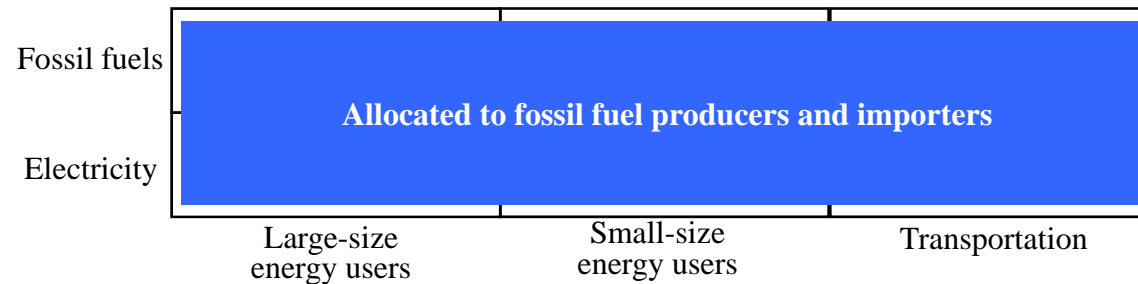


→The green area represents allocations to direct emissions from electricity generation (fossil fuel consumption in power plants). (Power plants consume fossil fuels and in this sense are downstream users, but are marked by a different color in order to distinguish them from allocations to indirect emissions from electricity generation.)



→The area within the dotted line is optional.

Option 1: Upstream Allocation



This Option ensures a high coverage by allocating allowances to producers, importers and distributors of fossil fuels. It anticipates that emissions reductions advance through the cost pass-through mechanism.

Items		Draft ideas
Allocated entities/coverage	Allocated entities	Upstream: fossil fuel producers/importers/distributors
	Treatment of electricity	(Allocations made to producers/importers/distributors of fuel for power generation)
	Allocation unit	Each enterprise
	Coverage/coverage rate	Fossil fuel = CO ₂ emissions from fuel combustion (nearly 100%) * Exclusion of the portion of fossil fuel used as a feedstock (for example, naphtha) ,not emitting CO ₂ , might be considered.
Allocation method		Entirely by auction. The corresponding portion of the auction revenue is channelled back to the allocated entities.
Emissions monitoring/accounting/reporting, emissions verification		Utilization of the current import procedures is possible.

Advantages	Disadvantages
<ul style="list-style-type: none"> ■ Coverage rate is high since all CO2 emissions from fuel combustion are subjected to the upstream. ■ This option is based on the concept that the cost to allocated entities (cost of acquiring an emission allowances, cost of emission reductions) is passed on to the energy users in the price and thereby serves to reduce emissions. According to economic theory, the same degree of reduction is achieved as that of downstream allocation, insofar as the cost is properly passed on. ■ Since the number of allocated entities is small, the administrative costs as well as accounting/verification costs can be kept substantially low. 	<ul style="list-style-type: none"> ■ Since the allocations are made directly only to a small number of upstream enterprises, there is the risk of a low sense of participation among the downstream enterprises and consumers who actually consume the fossil fuels, resulting in a lower motivation to reduce emissions. ■ Fossil fuel importers and others who have no opportunities to reduce emissions other than to reduce their sales volume would resort to the purchase of international credits, resulting in no progress in the reduction of domestic emissions. ■ This option is not consistent with the polluter-pays-principle

Option 2: Downstream Allocation (End-Use of Electricity)

Fossil fuels	Allocated to enterprises		
Electricity	Allocated to enterprises		Allocated to enterprises (vehicle service operators of a certain size)
	Large-size energy users	Small-size energy users	Transportation

This Option intends to provide a direct incentive for emissions reductions through allocating allowances to large-size energy users of fossil fuels and electricity (emitters of GHGs).

Items		Draft ideas
Allocated entities/coverage	Allocated entities	Downstream: large-size emitters in industry and business sectors (end-users of fossil fuels and electricity)
	Treatment of electricity	Allocated to indirect emissions (end-use of electricity)
	Allocation unit	Each enterprise
	Coverage/coverage rate	Enterprises subject to the accounting/reporting/disclosure scheme (approximately 60%)
Allocation method		Entirely by free allocation. Allocation by auction will be gradually introduced and the percentage of these will be raised.
Emissions monitoring/accounting/reporting, emissions verification		Existing laws (Climate Change Policy Law and others) would be utilized. Consolidated accounting and verification would be acceptable if the data collection is good.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ A strong sense of participation among the emitters is achieved. Hence, a greater motivation to reduce emissions are expected, since allowances are allocated directly to those who actually consume the fossil fuels and emit GHGs (in the case of electricity, the end-users). 	<ul style="list-style-type: none"> ▪ Since small-size energy users will not be included, the coverage is lower than that of upstream allocations (Option 1). ▪ Since the current accounting/reporting/disclosure scheme can be utilized, administrative costs and accounting/verification costs can be contained. But new cost burdens do exist. ▪ Electricity is only covered through indirect emissions allocations. There is a risk of decreased motivation for emissions reductions in the power plants.

*Note 1: A corollary option by which emissions intensity targets will be imposed upon power companies is also conceivable.

(*Note 1) Downstream Allocation (Emissions Intensity and Consumption Responsibility Sharing)

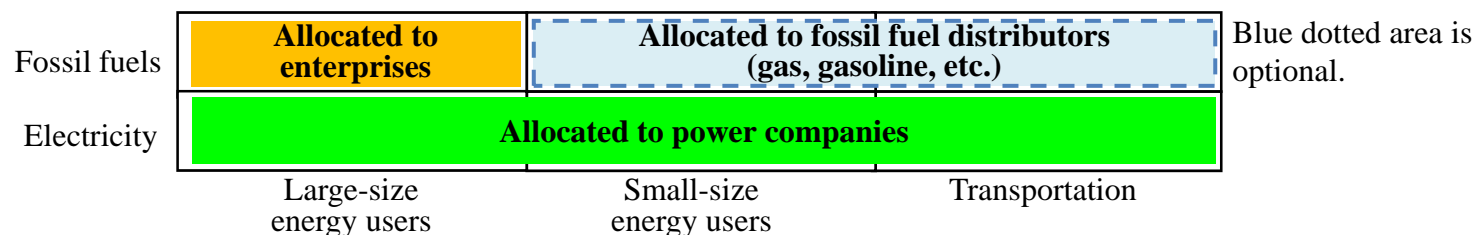
Fossil fuels	Allocated to enterprises		Allocated to enterprises (vehicle service operators of a certain size)
Electricity	Allocated to enterprises at a fixed electricity emissions intensity		Allocated to enterprises (vehicle service operators of a certain size) at a fixed electricity emissions intensity
An emissions intensity target is set for power companies with a fixed electricity amount (baseline and credit)			
	Large-size energy users	Small-size energy users	Transportation

By allocating allowances to large-size energy users of fossil fuel and electricity (GHG emitters), and setting electric emissions intensity targets to power companies, this option serves to provide direct incentives for emissions reduction and at the same time not to allow fluctuations in electric emissions intensity adversely affecting the reduction efforts of large-size energy users.

Item		Draft ideas
Allocated entities/coverage	Allocated entities	Downstream: Large-size emitters in the industry and business sectors (end-users of fossil fuels/electricity) and power companies (with pre-set emissions intensity targets)
	Treatment of electricity	Allocated to the user side as indirect emissions (end-use of electricity), but power companies will have pre-set emissions intensity targets. ➤ Power companies: Set emissions intensity targets; not responsible for the amount of electricity consumption ➤ Electricity users: Emission intensity is fixed; Responsible for emissions resulting from electricity consumption fluctuations
	Allocation unit	Each enterprise
	Coverage/coverage rate	Enterprises subject to the accounting/reporting/disclosure scheme (approximately 60%) (Emissions intensity of CO2 emissions from electricity of all sectors)
Allocation method		Power companies: Baseline and credit method by which they are issued a credit for the difference beyond the target (*) *If the emissions intensity target is not met, power companies buy allowances for the deficiency in emissions intensity multiplied by the amount of electricity (pre-set). If the target is more than met, the extra allowances computed in the same manner can be sold. Large-size energy users: Entirely free allocation. Share of auction gradually increased.
Emissions monitoring/accounting/reporting, emissions verification		Existing regulations (Climate Change Policy Law and others) would be mobilized. With respect to electricity, accounting and verification of power companies would be conducted separately for emissions intensity.

Advantages	Disadvantages
<ul style="list-style-type: none"> Reduction of CO2 emissions from electricity is sought by imposing emissions intensity targets on power companies, while electricity users are held responsible for their emissions resulting from electricity consumption. In this way, both power companies and electricity users are motivated to reduce emissions within their respective control. 	<ul style="list-style-type: none"> Scheme design becomes somewhat complex with regard to distribution of respective contributions to emissions reduction, etc.

Option 3: Downstream Allocation (Power Companies)



Allowances are allocated to power companies with regard to electricity as well as to other large-size energy users of fossil fuels. In this way, small-size energy users of electricity are covered while emissions reduction incentives are directly applied.

Items		Draft ideas
Allocated entities/coverage	Allocated entities	Downstream: Large-size direct emitters in the electricity, industry and business sectors (end-users of fossil fuels) (Optionally, allocation to fossil fuel distributors can cover small-size energy users of fossil fuel and the transportation sector.)
	Treatment of electricity	Allocated to direct emissions (combustion of fossil fuels in power stations)
	Allocation unit	Each enterprise
	Coverage/coverage rate	Enterprises subject to the accounting/reporting/disclosure scheme + CO2 emissions from electricity of all sectors (approximately more than 70%)
Allocation method		Power companies: entirely by auction. Mechanism to be made available to facilitate cost pass-through; Mechanisms are needed to offer emissions reduction incentives to both power companies and electricity users. (The same would apply if the allocation is made to fossil fuel distributors.) Large-size energy users: Entirely by free allocation. Auction will be gradually introduced and the percentage will be raised.
Emissions monitoring/accounting/reporting, emissions verification		Existing regulations (Climate Change Policy Law and others) would be utilized. For electricity direct emissions, the emissions and sales quantity of the power companies would be accounted for and verified.

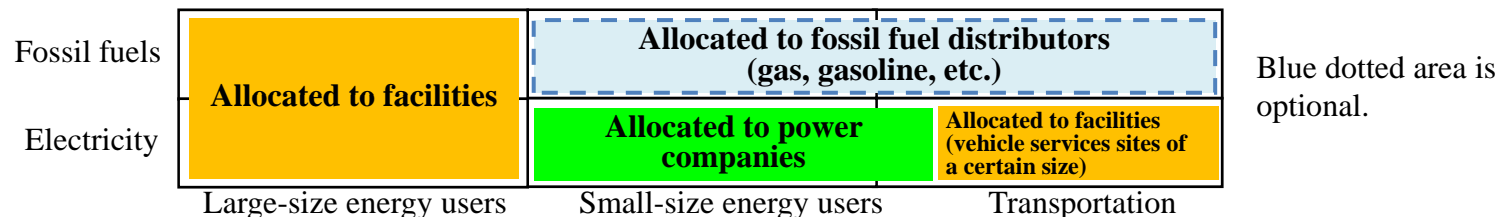
Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Since all electricity consumption is counted as direct emissions and allocation is made thereto, CO2 emissions from electricity will be fully covered. Accordingly, the overall coverage rate is greater than Option 2. ▪ Since the allocation is made directly to large-size energy users of fossil fuels, the emitters have a strong sense of participation and accordingly have greater motivation to achieve emissions reductions. 	<ul style="list-style-type: none"> ▪ Since the current accounting/reporting/disclosure scheme can be utilized, administrative costs and accounting/verification costs can be contained. But new cost burdens do exist. (The option to include an upstream allocation for fossil fuel use is not consistent with the polluter-pays-principle.)

(For reference) Overseas cases:

- EU-ETS corresponds to the orange + green areas of this Option.
- The Lieberman-Warner Bill in the US contemplates upstream allocation for oil and natural gas and downstream allocation for coal. Since electricity in that country relies mainly on coal, it resembles this Option (including part of the blue area).

*Note 2: Another option by which indirect allocation is made to large-size energy users of electricity is also conceivable.

(*Note 2) Downstream Allocation (End-Use of Electricity for Large-Size Energy Users and Power Companies for Small –Size Energy Users)



By allocating allowances to large-size energy users of fossil fuel and electricity, as well as to power companies with respect to electricity consumed by small-size energy users and the like, this option serves to provide a direct incentive for emissions reduction, and at the same time covers small-size electricity users and the like.

Item		Draft ideas
Allocated entities/coverage	Allocated entities	Downstream: Large-size emitters in the industry and business sectors (end-users of fossil fuels/electricity) and power companies (Optionally, distributors of fossil fuel used by small-size energy users and the transportation sector may be included as upstream allocated entities.)
	Treatment of electricity	Large-size energy users: Allocated to indirect emissions (end-use of electricity) Small-size energy users (all sectors): Allocated to direct emissions (incineration of fossil fuel at power stations)
	Allocation unit	Each facility site *or possibly each enterprise
	Coverage/coverage rate	Enterprises subject to the accounting/reporting/disclosure scheme + CO2 emissions from electricity of all sectors (approximately 70% or above)
Allocation method		Power companies: Entirely auction; it is necessary to create a mechanism by which both power companies and small-scale users are motivated to reduce emissions through preparation of methods to facilitate cost pass-through to small-size electricity users. *The same would apply if the allocation is made to fossil fuel distributors. Large-size energy users: Entirely by free allocation. Auction will be gradually introduced and the percentage will be raised.
Emissions monitoring/accounting/reporting, emissions verification		Existing regulation (Climate Change Policy Law and others) would be mobilized. With respect to direct electricity-derived emissions, emissions from power companies would be calculated and verified on the basis of the amount of electricity sold to customers other than large-size energy users.

Advantages	Disadvantages
<ul style="list-style-type: none"> Electricity consumption by small-size energy users and by households is regarded as direct emissions, to which allocation is made. Accordingly all CO2 emissions from electricity is covered, making the overall coverage rate of the scheme higher than that of Option 2. Since the allocation is made directly to large-size energy users of fossil fuels, the emitters have a strong sense of participation and accordingly have greater motivation to achieve emissions reductions. 	<ul style="list-style-type: none"> Distribution of electricity consumed by large-size energy users (indirect emissions allocation) and by others (direct emissions allocation) would be a challenge. (Option 3 avoids this problem.) Since the current accounting/reporting/disclosure scheme can be utilized, administrative costs and accounting/verification costs can be contained. But new cost burdens do exist. (The option to include an upstream allocation for fossil fuel use is not consistent with the polluter-pays-principle.)

Option 4: Downstream Allocation (Responsibility Sharing)

Fossil fuels	Allocated to enterprises		Allocated to enterprises (vehicle service operators of a certain size)
Electricity	Allocated to enterprises at a fixed electricity emissions intensity		Allocated to enterprises (vehicle service operators of a certain size) at a fixed electricity emissions intensity
An emissions intensity target is set for power companies with a fixed electricity amount (baseline and credit)			
	Large-size energy users	Small-size energy users	Transportation

The structure is the same as that of Option 2. While the same absolute emissions caps are imposed, enterprises will be responsible for their emissions intensity but the activity level will be treated separately. This Option is therefore of a responsibility sharing type. (See next page for details.)

- Given that some industries have set emissions intensity targets in the Keidanren Voluntary Action Plan, this Option can consider emissions intensity in setting emission caps. This Option may be utilized until 2012 as a legal scheme to ensure the attainment of the Kyoto Protocol commitments.
- In specific terms, the Keidanren Voluntary Action Plan (targets by sectors) that has been incorporated into the “Kyoto Protocol Target Achievement Plan (Cabinet Decision)” would be broken down to the individual company level. Industries that have set intensity targets in the Plan would be required to follow the rules mentioned in “Explanations” on the next page, so that they can continue their pursuit of the emissions intensity targets and also achieve absolute emissions targets. In this way, to start an emissions trading scheme is possible, while still being based on the currently ongoing program.
- Depending on the situation, this Option would be continued or replaced by Option 2 or 3 after 2013. Even beyond 2013, this Option might apply to industries that may be identified as vulnerable to the impact of international competition or to the significant risk of carbon leakage, and it is pointed out that an emissions trading scheme should be maintained in a long term so that research and development investment can be encouraged.
- Industries to which this Option may apply would be required to set emissions intensity targets based on world-leading technologies and operations. The national government will present guidelines for these.

	Item	Draft ideas
Allocated entities/coverage	Allocated entities	Downstream: Large-size emitters in the industry and business sectors (end-users of fossil fuels/electricity) and power companies (with pre-set emissions intensity targets) “Emissions intensity targets” and “Planned activity level” that constitute an emissions allowance will be attained under shared responsibility. *See “Remarks” below.
	Treatment of electricity	Allocated to the user side as indirect emissions (end-use of electricity), but power companies will have pre-set emissions intensity targets.
	Allocation unit	Each enterprise
	Coverage/coverage rate	Enterprises subject to the accounting/reporting/disclosure scheme (approximately 60%) (Emissions intensity of CO2 emissions from electricity of all sectors)
Allocation method		Power companies: Baseline and credit method by which they are issued a credit for the difference beyond the target (If the emissions intensity target is not met, power companies buy allowances for the deficiency in emissions intensity multiplied by the amount of electricity (pre-set). If the target is more than met, the extra allowances computed in a like manner can be sold.) Large-size energy users: Entirely free allocation
Emissions monitoring/accounting/reporting, emissions verification		Existing regulations (Climate Change Policy Law and others) would be utilized. Verification is required for emissions intensity setting and the actual data.
<p>[Explanations] * “amount of emissions” = “intensity” × “activity level”</p> <ul style="list-style-type: none"> ○ In Options 1, 2 and 3, only the amount of emissions is to be observed in terms of compliance. Namely, emissions intensity and activity level are not considered. ○ In Option 4, the amount of emissions matters for compliance, alike. An emissions allowance is allocated early in the fiscal year. The emissions allowance equal to the actual amount of the emissions must be surrendered to the government at the year-end. Within the allowance, the proportion between the target emissions intensity and the planned activity level are set in advance, and the responsibility for achieving each target will be treated differently as follows: <ul style="list-style-type: none"> (i) Emissions intensity: The allocated enterprise will be responsible for any increase/decrease in the emissions amount resulting from any deterioration/improvement in the emissions intensity. For example, if the emissions intensity target is not met, the obligation is fulfilled by the purchase of an allowance in the amount equal to the result of the deviation from the emissions intensity target multiplied by the planned activity amount (pre-set) Conversely, if the emissions intensity target is more than met, an allowance in the amount equal to the result of the improvement over the emissions intensity target multiplied by the planned activity amount (pre-set) may be sold. (ii) Activity level: Any increase/decrease in the emissions amount resulting from an increase/decrease in the activity level will be treated separately. For example, a fund created by contributions from allocated entities in proportion to their respective emissions amounts will buy/sell emissions allowances in the amount equal to the results of the emissions intensity target (pre-set) multiplied by a decrease/increase from the planned activity level, in the event of a deviation from the planned activity amount. Details of contributors to such a fund may require further discussion in the light of the polluter-pays-principle. 		

Advantages	Disadvantages
<ul style="list-style-type: none"> ■ Allocated entities can hedge the risk of increased emissions resulting from fluctuations in the activity level caused by changes in the economic circumstances. ■ To assume the responsibility for emissions intensity improvements and pursue technological development and production efficiency improvements fits the mindset of the manufacturing industry. ■ Equity can be enhanced, since this option can prevent from yielding profit just because of decreased activity level. ■ It is possible to reduce impact on international competitiveness by setting emission intensity target. 	<ul style="list-style-type: none"> ■ Can responsibilities for emissions intensity and for the activity level be clearly separated? Can such emissions allowance be incorporated into a legal framework? ■ How can the Keidanren Voluntary Action Plan targets be broken down to the individual company level? ■ All industries would be required to contribute to the fund. But only certain industries are eligible to buy/sell allowances from/to the fund on the basis of their increased/decreased activity level. Would this be acceptable to other contributors from the standpoint of equity? ■ The sense of responsibility for the activity level will diminish at the individual emitter level. There is some concern that the allocated entities will have a lower awareness of the need to control the emissions amount per sector.

Toward Further Development

In our study, we have discussed fundamental issues regarding emissions trading scheme, and, assisted by an overview and analysis of the precedents and approaches of other countries, we have clarified the image of the design elements, when Japan is to introduce such a scheme.

With due attention to our domestic current situation and circumstances, we have put forward several scheme options for discussion with comments on their respective advantages and disadvantages.

We are sincerely hopeful that the results of our work will serve as a platform for policy-making discussions on Japanese emissions trading scheme.

Meanwhile, we have identified the following items as requiring more detailed review and study:

- The details of basic rules for compliance, including the commitment period, surrender and action against non-compliance;
- Identification of the GHGs that would possibly be included in the scheme in addition to CO₂ emissions from fuel combustion;
- The detailed examination of the allocated entities and the corresponding coverage mentioned in the options;
- Practical methods, with the cooperation of the industries involved, of implementing a free allocation to individual enterprises (benchmarks, etc.);
- Analysis, collection and review overseas information on implementation rules by auction and the use of the revenue;
- More concrete terms of the cost containment measures;
- Analysis of the impact on the macro-economy by the implementation of a scheme;
- Identification of the specified industries that may be vulnerable to the impact of international competition or the risk of carbon leakage, and more concrete relief measures for the most severely affected industries;
- Further studies on the advantage and disadvantage of making international linkage, technical challenges and rule-making for international links;
- Clarification the accounting rules, in pace with the progress of the scheme design definition and international rule-making;
- Promotion of specific programs toward smooth trading;
- Comparative studies on the Options of this interim report.

The Advisory Committee will continue to study the aforementioned issues, with due attention to the circumstances surrounding global warming measures in and out of Japan as well as any reactions and responses to this Interim Report that may be received from all those concerned.