

evolution markets

EXECUTIVE BRIEF

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Kyoto's Carbon Currency: Assigned Amount Units (AAUs) Explained

Detailed answers to “Frequently Asked Questions” on the tradable commodity under the Kyoto Protocol’s International Emission Trading program.

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Evolution Markets recently brokered the first trade of Assigned Amount Units (AAUs). The transaction of 200,000 AAUs took place between an Eastern European government and a Japanese corporation. Assigned Amount Units are the carbon currency of the Kyoto Protocol, yet not much information has been published about the details of “International Emissions Trading” of AAUs as laid out under Article 17 of the Kyoto Protocol.

International Emission Trading was designed to meet an environmental target (an aggregate emission level of 5% below 1990 among Annex I countries) at the lowest economic cost. To this end, the aggregate target volume of Annex-I countries’ emissions will be distributed in the form of assigned amounts at the beginning of the first

commitment period. Emissions trading will then enable market forces to reach the most efficient distribution. In an early market, trading AAUs provides risk managers with a low risk opportunity to manage their GHG related exposure. At the same time trading provides sellers with the funds to undertake additional green investments prior to 2008.

By answering “Frequently Asked Questions” this Executive Brief aims to provide a comprehensive background on Assigned Amount Units in the GHG market.

1. What are AAUs?

One AAU represents the tradable right to emit one metric ton of CO₂-equivalent. Assigned Amount Units are the unit of measure for a country’s “assigned amount” under the Kyoto Protocol. The assigned amount is the total amount of greenhouse gas emissions that each country listed in Annex B of the Kyoto Protocol has agreed to not exceed in the first commitment period (2008 to 2012)¹. From 2008, each Annex B country will have their assigned amount available in form of a quota - an upfront 5 year budget - in a national registry. AAUs are the core unit of the Kyoto Protocol. (Also see question 3 and 7 below.)

2. What can I do with AAUs?

AAUs can be used to comply with requirements for the Kyoto Protocol by Annex B governments and by authorized legal parties (see question 9 below). Many observers believe that most Annex B countries will push their emission reduction obligation to legal entities within their borders. Regulated entities within those Annex B

1 Throughout the FAQ we refer to Annex B countries (of the Kyoto Protocol), even if the Kyoto Protocol in some provisions refers to Annex I countries (of the UNFCCC). The Kyoto Protocol prescribes reduction and limitation commitments for Annex I countries as quantified in Annex B. The annexes are almost identical, except for Belarus and Turkey, which are included in Annex I but not in Annex B.

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companies may be able to use AAUs for compliance depending on the rules of the country within which the entity resides.

3. What is the difference between AAUs and “carbon credits”?

AAUs are part of a country’s assigned amount. Assigned amounts are *quotas*, meaning that the total number of emission allowances (AAUs) for the period of 2008-2012 has been *allocated* and no action can be taken by market participants, short of changing the rules, to create additional AAUs. Since AAUs are allocated in advance they are available for trading and transfer from the start of the first commitment period.

All Kyoto *credits* (CERs, ERUs, RMUs), on the other hand, are *project based*. Project based emission reductions credits are derived from the difference between a baseline and the actual emission reduction level achieved after implementing the GHG mitigation project. Kyoto credits are only issued after the reductions have been verified. A specific amount of reductions from a project will hence be available only on a year-by-year basis, depending on performance of the project.

Forward purchases of CERs, ERUs, and RMUs therefore carry a much higher risk than forward purchases of AAUs. Also, AAUs have no restrictions on bankability for future compliance periods as opposed to CERs, ERUs and RMUs.

4. What are the risks of buying AAUs?

Because AAUs are part of an allocation and not project based, the principal risks to a buyer are that the seller fails to deliver or that the buyer will not be authorized to use AAUs for compliance in his country. A country could fail to issue AAUs if a) the country has reached its “commitment period reserve” (see question 14) or b) if the authorizing country fails to meet the eligibility requirements to participate in International Emissions Trading under the Kyoto Protocol. A well drawn contract can help to protect against these risks.

5. How can I buy AAUs today?

You can buy a forward contract or call option for AAUs today. However, in order to actually *transfer* the AAUs to the buyers account, the Kyoto Protocol has to enter into force and the buyer has to be authorized by its government and have a registered account within an Annex B country’s registry.

6. What is the value of AAUs?

In a forward market prospective AAUs have the significant advantage in that they are not subject to approval processes as is the case of prospective carbon credits such as CERs and ERUs. Prospective AAUs are therefore expected to trade at a premium compared to prospective credits, which are project based and exposed to additional performance and baseline risks.

7. How many AAUs does my country have?

Article 3.7/8 of the Kyoto Protocol defines a country’s assigned amount as follows²:

In the first quantified emission limitation and reduction commitment period, from 2008 to 2012, the assigned amount for each Party included in Annex I shall be equal to the percentage inscribed for it in Annex B of its aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A in 1990 [...], multiplied by five.

In other words: A country’s base year (normally 1990) CO₂ equivalent emissions times the reduction commitment as agreed in Annex B, expressed in percentages times 5 years (for 2008-2012). For example: Japan agreed to cut its CO₂ equivalent emissions to 6 % below its 1990 levels. Its assigned amount is therefore:

$$5 \times (94\% \text{ of its 1990 levels})$$

A country can express all or part of its assigned amount in the form of tradable Assigned Amount Units, which are then recorded on a central registry. At the end of the first commitment period, a country must demonstrate compliance with its GHG emission reduction targets by holding as many or more AAUs, CERs, ERUs, or RMUs as it has actual GHG emissions during the period 2008-2012. Therefore, for compliance purposes AAUs are the equivalent to CERs, ERUs, and RMUs.

8. Who owns AAUs?

Governments initially will establish their assigned amount and register all or part of their assigned amount on a central registry. A government can allocate all or part of its AAUs to legal entities, e.g. for JI projects or under a domestic emission trading system. These AAUs are subsequently owned by these entities and can then be traded.

² There are special provisions with respect to carbon sinks, Economies in Transition, etc. Please refer to the full Article 3.7 of the Kyoto Protocol for more detail.

9. Who can buy AAUs?

Forward contracts and call options on AAUs can be sold today and any legal entity can buy them. However, for the actual transfer of AAUs to take place, the legal entity needs to be registered on one of the domestic registries in Annex B countries (see question 12). Legal entities may only engage in these activities, however, if their authorizing Annex I party meets the eligibility criteria to participate in International Emissions Trading under the Kyoto Protocol at the time. Legal entities can use AAUs for compliance purposes only when authorized by their government.

10. Who can sell AAUs?

Once AAUs are issued with serial numbers, any holder of AAUs can freely sell them, domestically and among Annex I countries.

11. How and when are AAUs issued?

For the establishment of the assigned amount pursuant to Article 3.7/8, a party must fulfill the following criteria by January 1, 2007, at the latest:

1. Participating country has to be a party to the Kyoto Protocol;
2. Its assigned amounts (AA) must have been calculated and recorded;
3. A national system for the estimation of greenhouse gas emissions must be in place;
4. The country must have set up a national registry;
5. The country must have submitted an annual greenhouse gas inventory report;
6. The country must have provisions to record and submit supplementary information on the assigned amount.

After a review at the latest conducted at the end of 2007, the assigned amount pursuant to Articles 3.7 and 3.8 is recorded and fixed for the commitment period.

12. How are AAUs transferred?

AAUs are transferred between or within national registries that are operated by Annex I Parties. Each AAU has a unique serial number to ensure proper tracking of the transaction and to prevent

fraud. Registries record trades within a country (on the same registry), between nations (registry-to-registry) as well as additions to the registries, such as CERs. This system can accommodate government-government trades, government-entity trades (and vice versa) and entity-entity trades.

13. Are AAUs bankable?

Yes, AAUs are fully bankable from year to year and into the next compliance period.

14. What is the “commitment period reserve”?

Potentially countries could emit above their assigned amount and not acquire AAUs to cover the excess emissions (“over-emitting” or “under-buying”). Also, Parties could allow sales of AAUs that do not correspond to emission reductions below their assigned amount and bring themselves into non-compliance (“overselling”), a risk that is introduced by the possibility to trade AAUs. At present, no financial penalty is proposed to deter overselling.

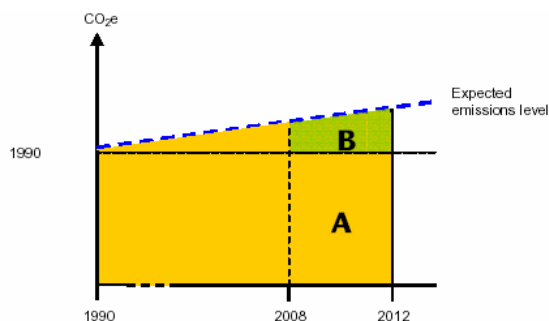
However, the agreement reached in Marrakech requires that Parties hold a share of their assigned amount in a “commitment period reserve” in their registry to reduce such risk. The commitment period reserve is 90% of a country’s assigned amount or 100 per cent of five times its most recently reviewed inventory, whichever is the lowest. A government might therefore default on delivery if it exceeded its commitment period reserve. This risk has to be addressed when drafting the contract.

15. Why are governments selling AAUs?

Governments could take on a role as bank/insurer: by selling low-risk AAUs out their AAU budget and by obtaining payment upfront, governments can then use the funds to finance domestic emission reduction projects that carry a higher risk. These projects may achieve the same or even higher volume of emission reduction than the net volume of sold AAUs. This is known as “project backed AAUs”. By taking on performance risk and leveraging their credit rating, governments in this way can effectively use AAUs as “venture capital” for projects.

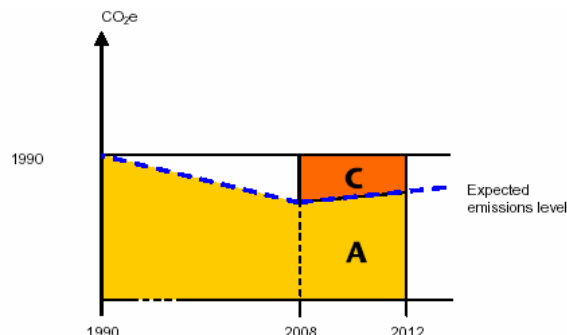
16. Assigned Amount Units - scenarios

Graph 1: AAUs < Net Emissions



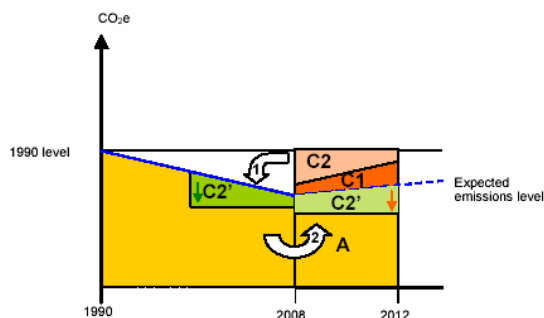
A country has expected emissions of **A+B** during 2008-2012. AAUs will be allocated based on its Kyoto Commitment. In this case (Graph 1) a country commits to reduce CO₂e emissions to 1990 levels. It therefore has to reduce amount **B**. Amount **A** is allocated in form of AAUs at the beginning of the compliance period.

Graph 2: AAUs > Net Emissions



In this case (Graph 2) a country commits to keep CO₂e emissions at 1990 levels during 2008-2012. AAUs are allocated based on this goal (**A+C**). Since emissions decreased since 1990 and are not expected to reach 1990 levels by 2012 (**A**), a country has surplus AAUs (**C**) that it can sell.

Graph 3: Project-backed AAUs



1) A country sells part of its AAUs (**C2**) and uses the funds to implement emission reduction projects during the pre-compliance period (**C2'**).

2) Early projects will, obviously, start reducing emissions earlier – in fact having reduced more net emissions by 2012 than equivalent projects starting only in 2008: **C2'+C2''**, instead of only **C2''**.

This Executive Brief is intended to encourage discussion on the emerging global market for GHG emissions. Evolution Markets has no specific policy position on this issue.