# What is an Emission Reduction Purchase Agreement (ERPA)?

## Key points:

- ERPAs record the agreement between parties buying and selling carbon credits. They identify responsibilities, rights and obligations to manage project risks. They also define the commercial terms of the project including price, volume and delivery schedule of emission reductions.
- There are many different types of ERPA agreements that can be created, each with differing impacts on the project and its participants.
- ERPAs are often agreed between buyers and intermediaries representing community groups. While the ERPA is a binding legal contract between the buyer and intermediary, the agreement between the seller and the community members is often less clear and may not be binding. It is important to ensure that whatever agreement is made between individual project participants and the intermediary is clear and well understood by all parties.

The Emission Reduction Purchase Agreement (ERPA) is a vital document for the developer of a carbon offset project. At its core, the ERPA is an agreement between the buyer and seller of the carbon credits. The purpose of the ERPA is to record the agreement between parties. It identifies responsibilities, rights and obligations to manage project risks. It also defines the commercial terms of the project including price, volume and delivery schedule of emission reductions.

The key elements in any ERPA cover the following areas:

- Quantity and price of emissions reductions to be delivered.
- Delivery and payment schedule of emission reductions (see below).
- Consequences of non-delivery: what happens when the Seller fails to deliver the quantity of emission reductions stated, and what requests can the Buyer make, or penalties will the Seller have to pay?
- Consequences of default: what happens if the Buyer does not pay for the delivered emission reductions? What happens if the Seller gives false information? What happens if there are changes in the country regulatory structure?

This information sheet is part of a larger resource pack, Understanding the social opportunities and risks in forestry and bioenergy carbon offset projects. The resource pack has been developed by the Overseas Development Institute (ODI) on behalf of the Ford Foundation. For more information, please e-mail CCEF@odi.org.uk.

- General obligations of the Seller: for example, the Seller will be responsible for carrying out verification and certification (to ensure issuance of emission reductions), implementing the monitoring plan, general operations of the project, and delivery of emission reductions to the Buyer(s).
- General obligations of the Buyer: for example, the Buyer will be responsible to set up an account to receive delivery of emission reductions, pay for the emission reductions, and communicate with the relevant regulatory bodies (for example, in the case of a CDM project, the CDM Executive Board)
- Project risks: who is responsible for these risks, and are the risks manageable? (see below)

## Emission reduction pricing

The common pricing structures for emissions reductions include fixed or floating, or a combination of the two. These differ in their links to global carbon market prices.

- **Fixed price**: this is an agreed price per emissions reductions which will not change no matter how prices may fluctuate in the carbon market. This price structure is often preferred by Sellers who want more certainty of the revenue for budgeting purposes. It protects both the Buyer and Seller against market fluctuations.
- **Floating price**: this is a price that is linked to the market. While there is significant potential for financial gains for the Seller, both Buyers and Sellers could be left fully exposed to price fluctuations.

## Emission Reduction delivery and payment options[1]

There are three main options for the ERPA price agreement, each of which has different risks to the Seller. In general there are trade-offs between the level of risk to buyers and sellers, and the price of carbon credits. The key agreement types seen are **(1) spot agreements, (2) future delivery agreements and (3) options.**

### Type 1: Spot agreement

| | |
|---|---|
| Status of ERs | Issued, ready for delivery |
| Payment | Immediate, on delivery |
| Risk to Buyer | Negligible |
| Risk to Seller | Negligible |
| Price | Fixed |

A Spot Agreement is when emission reductions have been issued to the Seller and are ready for delivery to the Buyer. This means that the emission reductions will have been issued before the ERPA has been agreed to, which often does not happen. The Buyer pays the Seller immediately on delivery.

There is very little risk either to the Buyer or Seller in terms of non-delivery or non-payment. Some Sellers do not like Spot Agreements as it does not provide any upfront finance from the Buyer, which is often needed to meet project costs.

1 This information has been taken from the following report 'ERPAs: A Seller's Perspective': http://cdmdna.emb.gov.ph/cdm/secured/uploads/CDM1803195073306017_Emission_Reduction_Purchase_Agreement__ERPA__FINAL.pdf

### Type 2: Future delivery agreement

| | |
|---|---|
| Status of ERs | Not yet issued, to be delivered in the future |
| Payment | In the future (on delivery, or advanced) |
| Risk to Seller | Small to very large, depending on level of guarantee for delivery |
| Risk to Buyer | Small to large, depending on amount of upfront payment |
| Price | Various options |

In a Future Delivery Agreement, emission reductions have not yet been issued, but will be in the future. This is the most common agreement type, as ERPAs are usually made while the project is being developed (and therefore before emission reductions are issued). Payment is made either on delivery of emission reductions or in advance.

If the payment is made on delivery of emission reductions, and the Seller gives no guarantees of emission reduction quantities, the risk on both sides is very low. However, there can be substantial risks. If the Buyer provides payment upfront against future delivery, they risk losing the money if the project fails. The risk can be mitigated if, for example, the Seller gets a guarantee from a bank. If the Seller gives strong guarantees for emission reduction delivery, this can create a major liability: if the project fails, the Seller may have to pay penalties to the Buyer or replace the emission reductions.

This could have major implications here Sellers are small NGOs working with poor communities and individuals.

#### Box 1: Plan Vivo: Scheduling of carbon payments within a Future Delivery Agreement

Given the nature of the activities (tree planting mainly for timber) which generally have long timescales for returns (20-30 years), the scheduling of carbon payments is an important factor in projects. In the Uganda Plan Vivo project, Future Delivery Agreements are made with Buyers. Buyers purchase upfront all carbon credits that will accrue from a farmer, or a number of farmers, over the course of the project. Payments to farmers are front loaded over the first ten years, which helps farmers to cover some of the upfront costs involved.

The scheduling of payments also has implications for the sustainability of projects further up the supply chain. In the Plan Vivo case, carbon has been sold by the projects ex ante (i.e. before the carbon sequestration has occurred). This has advantages for the implementing NGO because they have early returns with which to cover investments. However, it introduces significant risks because the trees could be lost. If this happens after all payments have been made there may be few incentives for trees to be replaced.

### Type 3: Options

There are two different types of 'options' transactions that can be defined in ERPAs, which enable more flexibility in the contractual relationship.

#### a) Call Option

| | |
|---|---|
| Status of ERs | Not yet issued, to be delivered in the future |
| Payment | Buyer pays for the ERs on delivery |
| Risk to Seller | If Seller needs to keep the ERs for the Buyer, but there is no guarantee that the Buyer will purchase the ERs |
| Risk to Buyer | Negligible |
| Price | Fixed |

In a Call Option, a Buyer has the right (but no obligation) to buy emission reductions at a certain point in the future for a fixed price. The emission reductions would therefore be delivered at some point in the future, and the Buyer would pay for the emission reductions on delivery.

Clearly this is a highly attractive arrangement for the Buyer. If market prices rise above the fixed price, then they will be able to buy below the market price, whereas if market prices fall below the fixed price, they can cancel the option and buy from the market instead.

#### b) Put Option

| | |
|---|---|
| Status of ERs | Not yet issued, to be delivered in the future |
| Payment | Buyer pays for the ERs on delivery |
| Risk to Seller | Buyer unable to pay for CERs when the option is exercised |
| Risk to Buyer | Forced to buy CERs at a price higher than the market |
| Price | Fixed |

In a Put Option, a Seller has the right (but no obligation) to sell at a certain point in the future for a fixed price.

The emission reductions would therefore be delivered at some point in the future, and the Buyer would pay for the emission reductions on delivery. This is the opposite of the Call Option described above, and is very beneficial for the Seller.

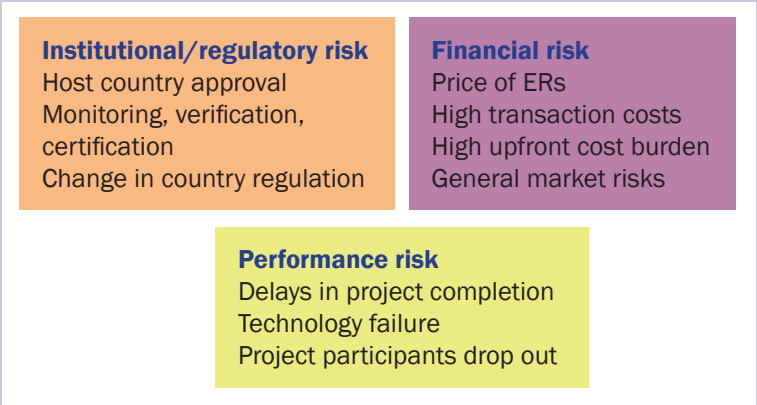
## Risks involved for Sellers

Clearly there are significant risks when entering into an ERPA. Risks relate to how the project will perform, the overarching institutional and regulatory risk, and financial and market risks.

There are several ways in which risks can be mitigated:

- Working with creditworthy buyers to reduce risks of default on payment. For example, multilateral development bank, governments, large companies and large NGOs tend to be more creditworthy.
- Including insurance mechanisms in project design. This could include standard insurance for undelivered credits, purchased through insurance companies, or more commonly a risk 'buffer' of carbon credits which are withheld from sale is often created to act as insurance.
- Agree upon a long term fixed and reliable volume of credits to sell.
- Agree on fixing the emission reduction price in a hard currency (USD/EURO).

**Figure 5: Types of risks in carbon offset projects**




## Implications for small rural producers

ERPAs for community-based carbon offset projects will usually be between buyers and an intermediary organisation which is representing a number of small producers. This can reduce some of the direct risks for small producers as sellers of carbon credits because they do not directly have to negotiate prices, take on the risk of non-delivery etc.

However, often the agreement between the intermediary and producers is less clear and may not be binding. This can also result in risks for small producers:

- If the intermediary cannot meet the terms of the contract with buyers, it is possible that the liability (e.g. the need to repay money for credits that have not been produced) is passed on to producers themselves.
- The intermediary may not be acting in the best interests of the producers it represents. For example, producers could be coerced into implementing activities which increase their exposure to risk (e.g. displacing land for growing food with tree planting that has much longer returns). This could occur even where the intermediary has good intentions.
- Intermediaries themselves may get into compromising situations if their agreements with producers are weak. For example, if they receive upfront payments for carbon from buyers and pay all of this to producers in the early stages of a project, they will have little financial control over producers for the remainder of the project. Producers could then discontinue activities that are generating carbon credits before the contract is finished.

It is clearly important to ensure that whatever agreement is made between individual project participants and the intermediary is clear and well understood by all parties.

### Further Resources:

**ERPAs: A Seller's Perspective:** http://cdmdna.emb.gov.ph/cdm/secured/uploads/CDM1803195073306017_Emission_Reduction_Purchase_Agreement__ERPA__FINAL.pdf

**Risk and responsibility in reduced emissions from deforestation and degradation:** http://www.odi.org.uk/resources/download/426.pdf

**ENCOFOR:** http://www.joanneum.at/encofor/tools/doc/Encofor%20Contracts%20Manual.pdf