

# The Verified Carbon Standard (VCS) Program.

The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO<sub>2</sub>, which can be counted towards meeting Kyoto targets.

The Kyoto Protocol was an international treaty which extended the 1992 United Nations Framework Convention on Climate Change that commits state parties to reduce greenhouse gas emissions, based on the scientific consensus that global warming is occurring and that human-made CO<sub>2</sub> emissions are driving it.

The mechanism is seen by many as a trailblazer. It is the first global, environmental investment and credit scheme of its kind, providing a standardized emissions offset instrument, CERs.

A CDM project activity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers.

The mechanism stimulates sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets.

## Operating details of the CDM

A CDM project must provide emission reductions that are additional to what would otherwise have occurred. The projects must qualify through a rigorous and public registration and issuance process. Approval is given by the Designated National Authorities. Public funding for CDM project activities must not result in the diversion of official development assistance.

The mechanism is overseen by the CDM Executive Board, answerable ultimately to the countries that have ratified the Kyoto Protocol.

Operational since the beginning of 2006, the mechanism has already registered more than 1,650 projects and is anticipated to produce CERs amounting to more than 2.9 billion tonnes of CO<sub>2</sub> equivalent in the first commitment period of the Kyoto Protocol, 2008–2012.

## **Offset Project Implementation**

This section describes the offset project development process, from project design to commercialization, via the example of the Clean Development Mechanism (CDM). Although the project development process for projects implemented under voluntary offset standards can differ slightly from the CDM procedures, the CDM project cycle is a useful frame of reference to outline a process that is generally similar across programs.

### **Project Design**

The Project Design stage includes developing a project concept, choosing, or developing a baseline and monitoring methodology, and stakeholder consultations. All these elements are documented in the project design document (PDD).

### **Project Concept**

A feasibility study of a potential offset project is conducted to assess its technical feasibility, investment requirements, development, and operational costs, expected returns, administrative and legal hurdles, and project risks and pitfalls. Based on the results of the feasibility study, the project owner will decide whether to continue the development of the potential offset project.

### **Methodology**

An offset project methodology defines the rules that a project developer needs to follow to establish a project baseline and to determine project additionality, to calculate emission reductions, and to monitor the parameters (e.g., electricity produced by the project) used to estimate actual emission reductions. It is a generic recipe that can be applied to different projects of a given type (e.g., renewable energy production) and applicability conditions (e.g., grid-connected). Under several programs, if no approved methodology exists for a specific project type, a project developer can submit a new methodology for approval to the offset program (e.g., CDM, Gold Standard, VCS).

### **Project Design Document (PDD)**

The Project Design Document (PDD) describes the project activity in detail. It contains a description of the chosen technology and explains the methodology used to define the baseline scenario, to demonstrate additionality, and to calculate emission reductions. It also contains information on the monitoring of all relevant technical parameters (e.g., temperature, gas flow rates, electricity production, hours of operation, etc.) including how monitoring procedures will be established, measurements made, quality controlled, and records stored and accessed. It contains an estimate of the volume of emission reductions to be achieved by the project. Finally, it documents how the project contributes to sustainable development. The PDD is used throughout the implementation phase to ensure that the project performs according to the parameters outlined in the document.

## Stakeholder Consultation(s)

Offset projects under the CDM and most voluntary offset programs are required to provide evidence that the project's activities will not adversely impact local populations and other relevant stakeholders. To ensure that all relevant stakeholders have been provided an opportunity to comment on a proposed CDM project, the developer must inform them about the project through appropriate forms of media. The developer must respond to all stakeholder comments and describe a course of action to minimize negative impacts. The outcomes of the stakeholder consultations must be documented in the Project Design Document (PDD).

## Project Validation

Under the CDM, after the project developer has written the PDD, an independent UN-approved third-party auditor conducts the project validation. These auditors are called Designated Operational Entities or DOEs under CDM. The process of CDM project validation normally consists of five phases:

1. A desk review of the PDD,
2. On-site visits and follow-up interviews with project stakeholders,
3. A 30-day public comment period after the PDD has been made available via the internet,
4. Resolution of outstanding issues, and
5. The issuance of the final validation report and written by the DOE. After completion, the validation report and the PDD are submitted to the CDM Executive Board for review and registration.

Voluntary standards do not always require validation and sometimes combine validation and verification. For details please read the detailed [voluntary offset program descriptions](#) on this website.

## Host Country Approval

Final acceptance of a CDM project by the CDM Executive Board is not possible without the approval of the project's host country. The project documentation must be submitted to the relevant authority, which checks the project activity against national rules and regulations and confirms the project's compliance with the host country's sustainability criteria. This screening process and host country requirements vary from country to country.

Voluntary offset projects generally do not need host country approval.

## Project Registration

The CDM Executive Board's decision to register a project is based on the review of the PDD, the validation report, and public feedback. Once the CDM EB approves a project, it is officially registered as a CDM project.

In the voluntary offset market, most projects are directly approved by the project auditors and do not go through an additional registration process with the offset program body. An exception to this is the Gold Standard, where project approval is evaluated by the Gold Standard Technical Advisory Committee.

## **Project Monitoring**

Project developers are required to maintain records quantifying the emission reductions achieved during a project's implementation phase. These records, maintained in a monitoring report, must be in accordance with the parameters and procedures laid out in the original PDD that was validated by the DOE and registered by the CDM EB. Emission reductions are issued based on the monitoring report. Therefore, a project developer must make the trade-off between having continuous offset credit income (more frequent monitoring reports) and lower administrative costs (less frequent monitoring reports). There are no requirements as to how long or short a monitoring period must be, as they range from a few weeks to several years.

## **Project Verification**

The monitoring that the project developer has done is then evaluated and approved by a third-party auditor. To minimize conflict of interest under the CDM, the validating auditor cannot also conduct project verification; a different auditor must be chosen for verification. The project developer submits the monitoring report to the auditor along with relevant supporting documents. The auditor undertakes a desk review of the report to ensure that the monitoring has been carried out in accordance with the procedures in the original PDD. The auditor may also undertake a site visit, if appropriate. Following the desk review and site visit, the auditor prepares a draft verification report, highlighting any issues. Once the project developer resolves these issues, the auditor prepares the final verification and certification report, which also quantifies the actual emission reductions achieved by the project. Verification occurs in line with the project protocol's stated requirements.

In the voluntary market, this is usually the last step before the issuance and sale of offset credits can happen.

## **Project Certification**

The verification report is submitted to the CDM EB for certification and issuance of offset credits. The issued credits are then transferred to the registry account of the relevant project participant after the mandatory fees are paid to the [UNFCCC secretariat](#).

In the voluntary market, most emission reductions are directly approved by the project auditors and do not go through an additional certification process with the offset program body. An exception to this is the Gold Standard, where emission reduction approval is carried out by the Gold Standard Technical Advisory Committee.

## Commercialization

At the commercialization stage, a project developer sells the offset credits from a project to a buyer. The credits can either be sold directly to a company that uses them to meet its legally binding or voluntary emission reduction obligations, or they can be sold to a trading company that facilitates the transaction between the seller and the end-user of the credits. A contract to sell the carbon credits from a project can be signed at any stage during the project development cycle. Depending on the project developer's tolerance for risk, some will sign contracts as early as the planning stage (i.e., forward contracts) so as to lock in the price and other terms and insulate themselves from the risks of price volatility, while others will wait until the credits are generated, certified, and issued before selling them (i.e., spot market sales). The project developer usually receives payment for the credits only after they have been delivered. However, in a few cases, a project developer may receive an advance payment. Such payments are usually done if the project developer wants to bridge an investment gap or needs to meet cash flow requirements during the project's implementation. For more information on [How to acquire offset credits](#).