

Verified Carbon Standard (VCS) and its rules and projects

VCS foundation

As a global benchmark for carbon, it was founded in 2006 by the Climate Group, the International Emissions Trading Association, the World Economic Forum and later joined by the World Business Council for Sustainable Development. The VCS Standard provides a global standard for GHG emission reduction and removal projects. It uses as its core the requirements set out in ISO 14064-2:2006, ISO 14064-3:2006 and ISO 14065:2007.

The VCS Program is among the most widely used quality assurance system for accounting for greenhouse gas (GHG) emission reductions in the voluntary carbon market. Used by more than 600 projects worldwide, the VCS Program is recognized and trusted to ensure GHG emission reductions and removals are real, measurable, additional, permanent, independently verified, conservatively estimated, uniquely numbered and transparently listed in a central database.

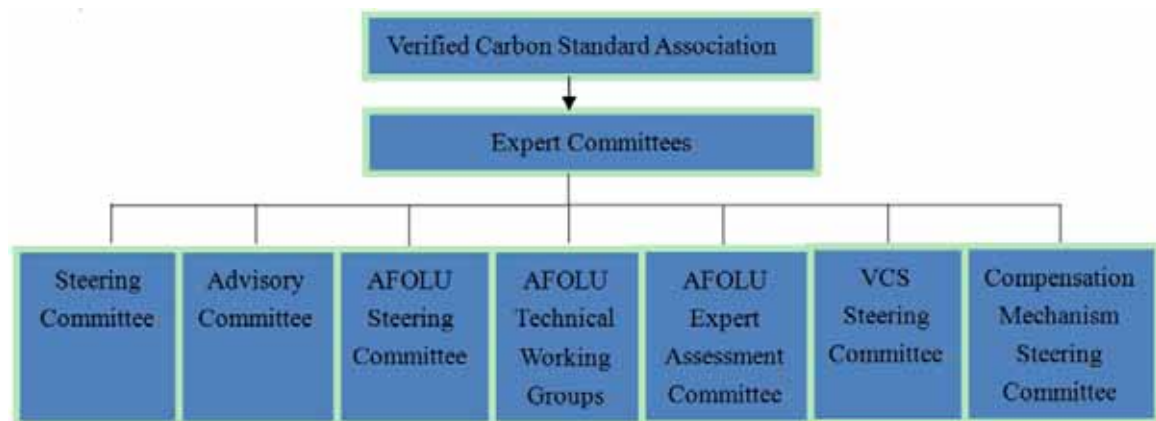
Scope of VCS program

The scope of the VCS Program includes:

- The six Kyoto Protocol greenhouse gases.
- Ozone-depleting substances as set out in VCS document ODS Requirements.
- Project activities supported by a methodology approved under the VCS Program through the methodology approval process.
- Project activities supported by a methodology approved under a VCS approved GHG program, unless explicitly excluded under the terms of VCS approval.

Excludes: Emission reduction under obligation or reduce HFC

VCS governance



Steering Committee

An expert steering committee was convened in October 2010 to create guidelines for developing standardized approaches for determining baselines and additionality, notably performance benchmarks and technology tests.

Advisory Committee

An Advisory Committee was convened in February 2011 to provide strategic input into the development of a new Jurisdictional and Nested REDD Initiative. The initiative will bring together input from advisory committee members and technical experts to create guidelines and criteria for integrated, jurisdiction-wide accounting and crediting of REDD projects, policies and programs.

AFOLU Steering Committee

The AFOLU (Agriculture, Forestry and Other Land Use) Steering Committee began work in 2007 to develop requirements for crediting projects that curb emissions or sequester carbon in Agriculture, Forestry and Other Land Use. The committee's work has made VCS a leader in crediting new project types and approaches in the AFOLU sector and a top global standard for crediting avoided deforestation projects. Today the committee is an integral part of VCS that continues to guide work in the AFOLU sector. Committee members are currently advising on our Nested REDD work as well as initiatives to credit new AFOLU project types.

AFOLU Technical Working Groups

AFOLU Technical Working Groups are convened to refine or develop AFOLU requirements for the VCS Program.

AFOLU Expert Assessment Panel

An AFOLU Expert Assessment Panel was established in 2009 to review the qualifications of potential AFOLU experts. AFOLU assessment panel members review the qualifications of AFOLU experts and recommend candidates to VCS.

VCS Steering Committee

Established in 2006, the original VCS Steering Committee of 19 global carbon market experts worked for more than a year to develop the first VCS Standard. The Steering Committee convened seven technical working groups to address specific topics, including governance, additionality, validation and verification, registry systems, forestry and land use, performance standards and general policy issues.

Compensation Mechanism Steering Committee

A Compensation Mechanism Steering Committee was established in 2009 to explore ways to incentivize the development of new, streamlined and broadly applicable methodologies. The steering committee developed a unique mechanism to reward VCS methodology developers when others use their work. Today VCS rebates 20 percent of the levy on every VCU issued to methodology developers when a project uses the methodology they developed. This establishes a real incentive for methodology developers to create new, broadly applicable approaches to curbing GHG emissions.

VCS definitions

Before developing a VCS project, terms concerned should be made clear and the definitions for main terms used in the VCS Program documents are provided as below. In addition, the definitions set out in *ISO 14064-2:2006*, *ISO 14064-3:2006* and *ISO 14065:2007* shall apply to the VCS Program.

➤ **VCSA: (Verified Carbon Standard Association):**

As EB in the CDM but not review individual projects (as do the CDM, JI and Gold Standard)

➤ **VVB(Validation/Verification Body):**

An organization approved by the VCSA to act in respect of providing validation and/or verification services in accordance with the VCS rules

➤ **VCU(Verified Carbon Unit):**

A unit issued by, and held in a VCS registry representing the right of an accountholder in whose account the unit is recorded to claim the achievement of a GHG emission reduction or removal in an amount of one (1) metric tonne of CO₂ equivalent that has been verified by a validation/verification body in accordance with the VCS rules.

➤ Proof of right:

The document(s) demonstrating the entity's right to all and any GHG emission reductions or removals generated by the project during the project crediting period or verification period, as the case may be. Distinct from right of use

VCS project crediting period

- For non-AFOLU projects and ALM (Agricultural Land Management) projects focusing exclusively on reducing N₂O, CH₄ and/or fossil-derived CO₂ emissions:

A maximum of ten years which may be renewed at most twice

- For all other AFOLU projects other than such ALM projects:

A minimum of 20 years up to a maximum of 100 years, which may be renewed at most four times with a total project crediting period not to exceed 100 years.

- Renewal of the project crediting period
- ✓ A full reassessment of additionality is not required.
 - ✓ The validity of the original baseline scenario shall be demonstrated
 - ✓ The updated project description shall be validated in accordance with the VCS rules.

VCS and other GHG program

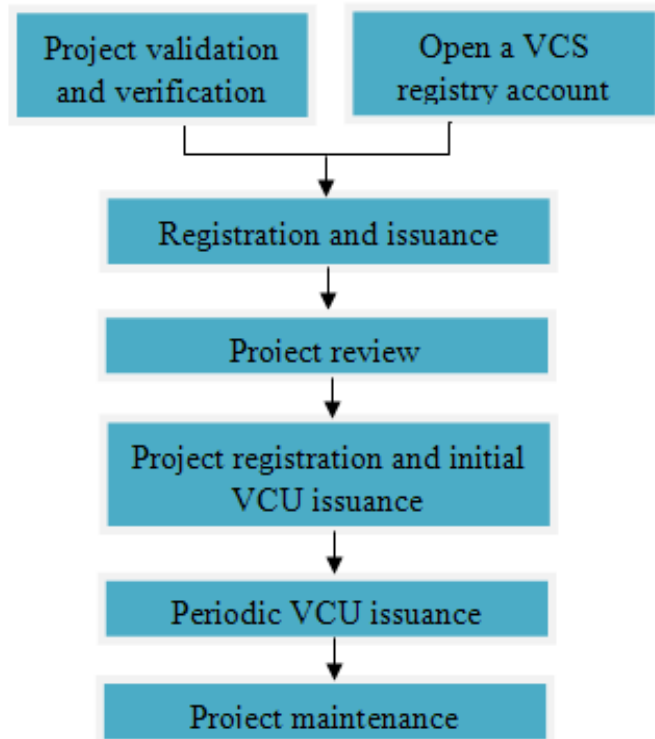
As one of the GHG programs, VCS program embraces some differences list as following:

- Projects may be registered sequentially under the VCS Program and an approved GHG program
- Project proponents shall not claim credit for the same GHG emission reduction or removal under the VCS Program and another GHG program.
- Projects registered under other GHG programs are not eligible for VCU issuance beyond the end of the total project crediting period under those programs

- Projects rejected by other GHG programs due to procedural or eligibility requirements can be considered under the VCS Program. But has to:
 - ✓ Provide reasons and documents of being rejected;
 - ✓ Full VCS validation.

VCS project registration process

In order to develop a project into a VCS project, the process for registration of projects and issuance of VCUs under the VCS Program must be went through, and these are presented in detail as following steps. Moreover, requirements including VCS program guide, VCS standard, Procedural including methodology approval process, registration & issuance process and Templates & forms including project description, monitoring report and so on should be followed.

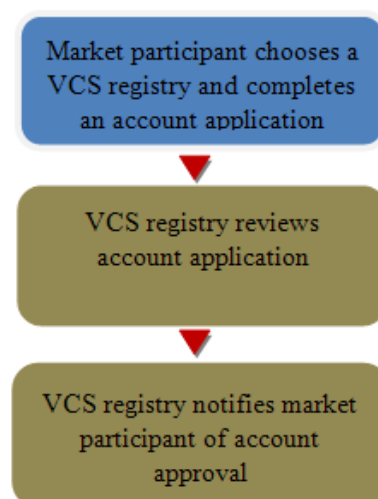


Pre-requisite:

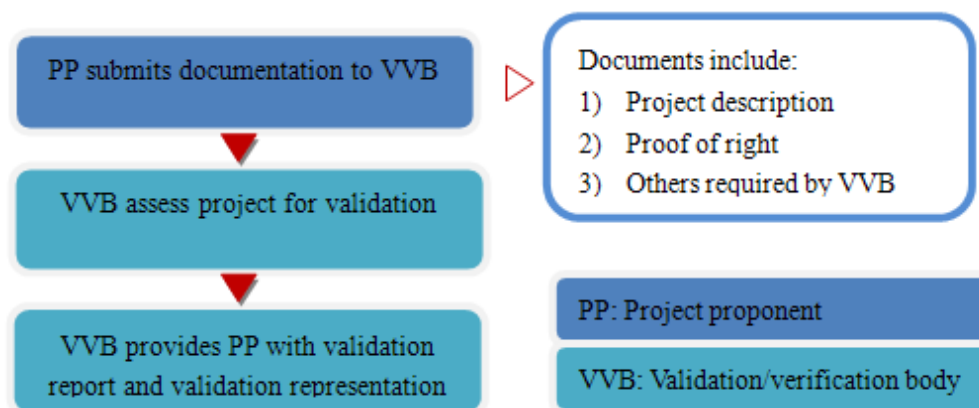
Opening a VCS registry account

Opening a VCS registry account is a pre-requisite for Step 2 (Registration and issuance request) and those that follow in the project registration process.

A VCS registry account shall be opened by any market participant who wants to issue, trade or retire VCUs as set out in following diagram.



Step1-1: Project validation



Documents submit to VVB (validation/verification body) include Project Description, Proof or right and others as required by VVB. Details are presented as following on the Project Descriptions, the most important part of the submit document for validation.

Content of Project Description

- Project details:
 - ✓ The project title, a summary, the sectoral scope(s) and project type.
 - ✓ The names, roles and responsibilities of the PP and any other entities
 - ✓ The project start date and project crediting period, and the project scale and the estimated net GHG emission reductions
 - ✓ A description of the project activities, a specification of the project location and geographic boundaries, and a description of conditions prior to project initiation.
 - ✓ Identification and demonstration of compliance with relevant laws, statues and other regulatory frameworks
 - ✓ Additional information relevant to the project
- Methodologies applied to the project
- A description of all data and parameters, available at validation, used for measuring, monitoring and calculating GHG emissions and net GHG emission reductions or removals, a description of all data and parameters monitored, and a description of the monitoring plan.
- A calculation of baseline emissions, project emissions, leakage emissions (if applicable) and net GHG emission reductions and removals.
- A summary of any environmental impact assessments conducted.
- A summary of relevant outcomes from any stakeholder consultations conducted.

- Evidence of proof of title and a demonstration that net GHG emission reductions or removals generated by the project will not be used for compliance with an emission trading program or to meet binding limits on GHG emissions.
- For AFOLU projects, where required, the project description shall be accompanied by a non-permanence risk analysis. Additional information relevant to the project

Additional information relevant to the project

VCS additionality- Project test

- Methodologies shall use a project test, performance test and/or technology test approach to additionality.

Project Test:

- ✓ Step 1: Regulatory Surplus: The project shall not be mandated by any systematically enforced law
- ✓ Step 2: Implementation Barriers: The project shall face one or more distinct barrier(s) compared with barriers faced by alternatives to the project:
 - 1) Investment barrier.
 - 2) Technological barriers
 - 3) Institutional barriers
 etc. financial (other than identified in investment barrier above), organizational, cultural or social barriers that the VCU revenue stream can help overcome.
- ✓ Step 3: Common Practice

VCS additionality- Program test

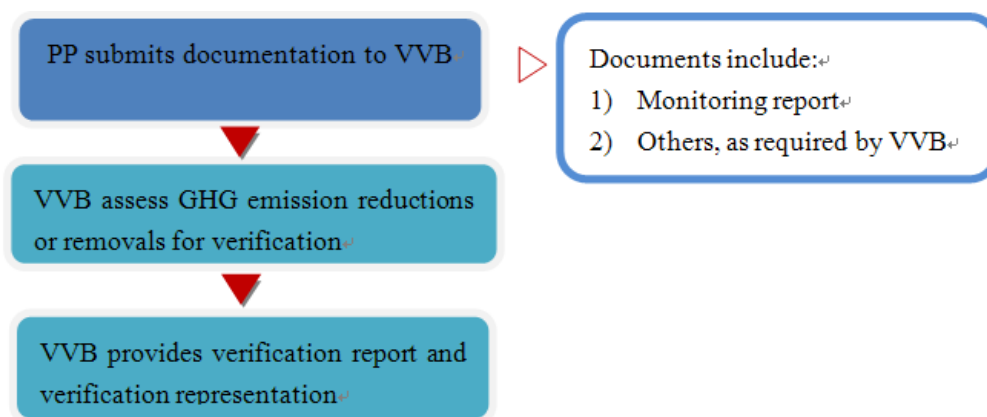
- Step 1: Regulatory Surplus:
 - ✓ The project shall meet with the requirements on regulatory surplus set out under the project test
- Step 2: Performance Benchmark
 - ✓ The GHG emissions generated (or carbon sequestered) per unit output by the project shall be below (or above, for sequestration) the benchmark approved under the VCS Program for the product, service, sector or industry and which is established to ensure that the project's performance is not business as usual.

VCS additionality- Technology test

- Step 1: Regulatory Surplus

- ✓ The project shall meet with the requirements on regulatory surplus set out under the project test
- Step 2: Technology Benchmark
- ✓ The project shall use a less emissions-intensive technology that meets specific technology and performance criteria, which results in crediting up to a pre-determined threshold (eg, market penetration) and ensures that the project is not business as usual. Projects that meet such eligibility criteria would also be deemed additional using the project test

Step1-2 Project verification



Content of Monitoring Report

- Project details:
 - ✓ The project title, a summary, the sectoral scope(s) and project type.
 - ✓ The names, roles and responsibilities of the PP and any other entities
 - ✓ The project start date and project crediting period, and the project location and title and reference of methodology
- Implementation status
 - ✓ Describe the implementation status of the project activity(s): Provide information regarding the operation of the project activity(s) during this monitoring period, including any information on events that may impact the GHG emission reductions or removals and monitoring. For AFOLU projects, describe how leakage and non-permanence risk factors are being monitored and managed.
 - ✓ Deviation from the monitoring plan: describe and justify any deviation from the monitoring plan in the project description
 - ✓ Grouped project: For a grouped project, provide relevant information about new instances of the project activity(s) and demonstrate that each new instance of

the project activity(s) meets the eligibility criteria set out in the project description.

- Data and parameters
 - ✓ Data and parameters at validation
 - ✓ Data and parameters at monitored
 - ✓ Description of the monitoring plan
- Quantification of GHG
 - ✓ Quantify the emissions and removals of baseline, project and leakage emissions
 - ✓ Summary of GHG Emission Reductions and Removal: Quantify the net GHG emission reductions and removals. For AFOLU projects, include net change in carbon stocks.
 - ✓ Additional information: include any raw data from monitoring, additional information used in the monitoring plan, documentation of activities conducted from the monitoring plan, diagrams, etc.

Note:

- Project start date is the date on which the project began generating GHG emission reductions or removals
- Non-AFOLU Projects VCS validation shall be completed within two years of the project start date
- Both validation and verification on a specific project can be undertaken by a single VVB

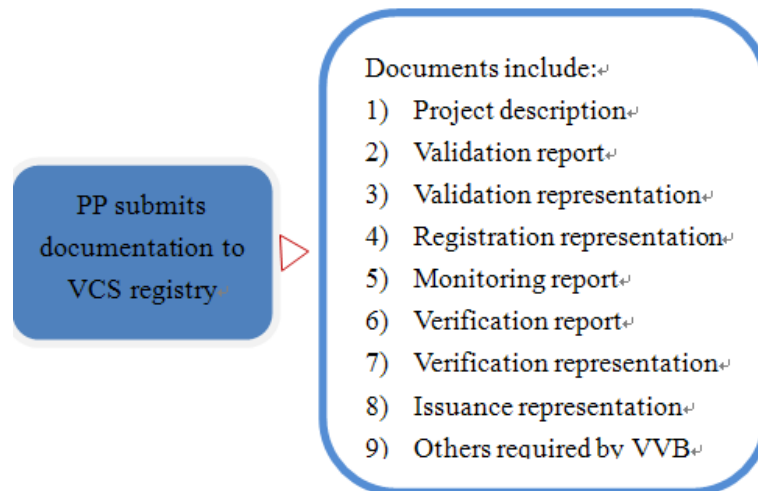
Step 2 Registration and issuance request

Registration of a project may be requested when the project has completed project validation but before the first verification of GHG emission reductions or removals.

The only entities that may initiate the project registration process are the project proponent, an entity to which the project proponent has assigned sole right to the GHG emission reductions or removals for the entire project crediting period, or the authorized representative of either of these entities.

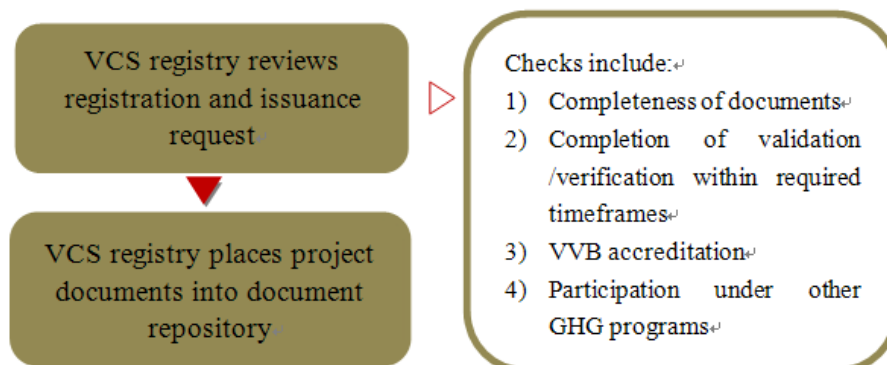
Where the project is presented for registration without VCU issuance, the relevant documents that shall be provided to the VCS registry administrator are the project description, the validation report, the validation representation, the registration

representation, and any AFOLU specific documentation, communications agreement, proof of right or proof of contracting.



Step 3 Project review

The VCS registry administrator reviews the project registration and VCU issuance request as set out in the diagram below,



The VCS registry administrator shall check the project to ensure:

- Each of the project documents is complete
- Each project document, with the exception of the project description, the non- permanence risk report, the validation report, the monitoring report and the verification report, is signed by the relevant responsible parties
- The GHG emission reductions or removals presented for VCU issuance have not been issued under any other GHG program

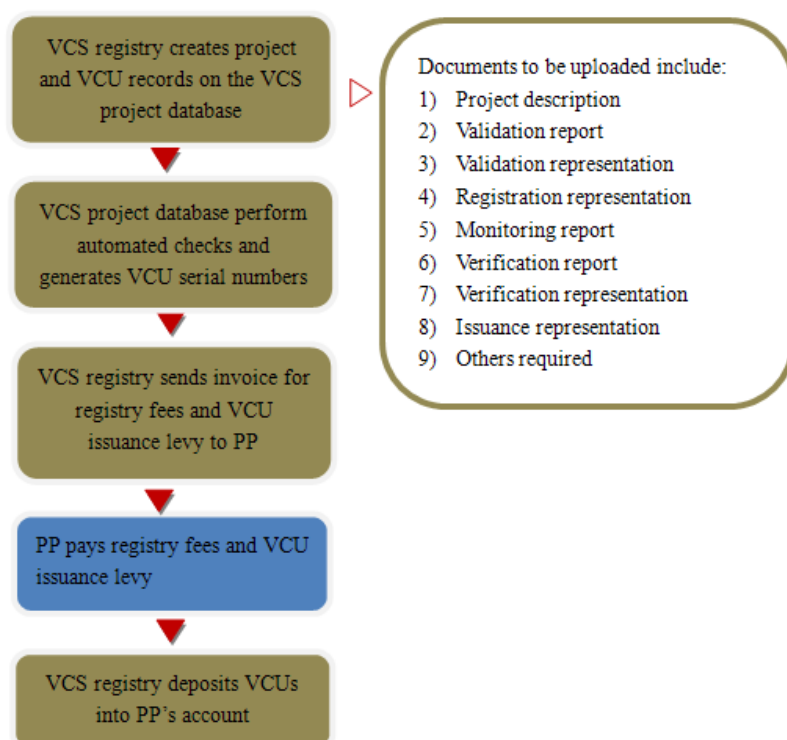
Step 4 Project registration and initial VCU issuance

The project is registered and the VCUs are issued on the VCS project database if the documentation supplied has been approved by the VCS registry administrator.

Where the project is presented for registration without VCU issuance, the project description, validation report, validation representation, registration representation and any AFOLU specific documentation or communications agreement shall be uploaded to the VCS project database as public documents. Any proof of right or proof of contracting shall be uploaded to the VCS project database as private documents (for VCSA internal auditing purposes).

Where the project is presented for registration and VCU issuance, the project description, validation report, validation representation, registration representation, monitoring report, verification report, verification representation, issuance representation and any AFOLU specific documentation, communications agreement or VCU conversion representation shall be uploaded to the VCS project database as public documents. Any proof of right or proof of contracting shall be uploaded to the VCS project database as private documents

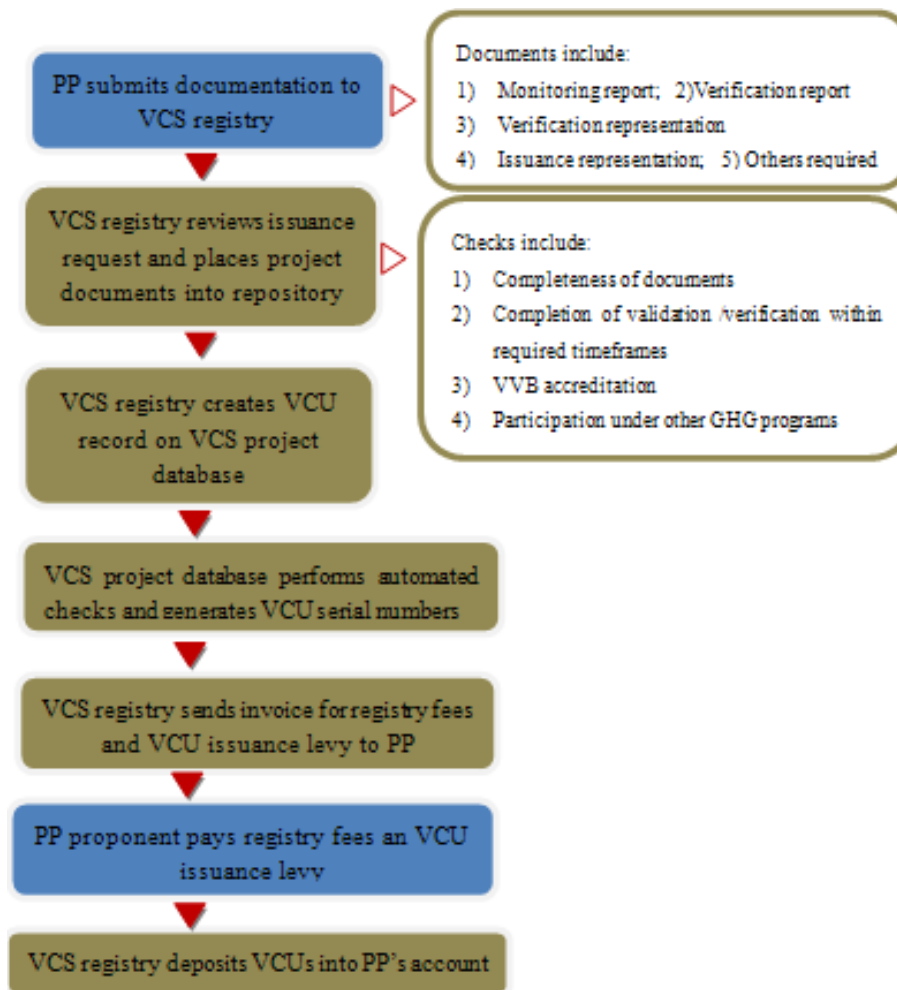
The project proponent may choose to make the project unavailable for public viewing on the VCS project database if it has not yet requested VCU issuance.



Step 5 Periodic VCU issuance

There may be issuance of VCUs subsequent to the initial issuance of VCUs to the project

- All and any periodic VCU issuances shall be initiated by the PP stated on the project record in the VCS registry and VCS project database or its authorized representative.
- Where another entity wants to become the PP, the process in the “release and accession of PP ” shall be followed. The new PP on the project record in the VCS registry and VCS project database or its authorized representative can then initiate VCU issuance.



Step 6 Project maintenance

If there is change of any information on the project, the project proponent notifies VCS registry that will updates project record on the project database.

Where the project proponent transfers the project from the VCS Program to another GHG program, it shall notify the VCS registry administrator of same and the administrator shall update the status of the project accordingly including the project reference number under the approved GHG program

VCS Projects and VCU Summary

Nowadays, there are 691 projects registered as VCS projects and the details are presented as following table.

Category	Projects registered	Projects registered privately*	VCUs issued	VCUs retired
Volume	691 (534 with VCUs issued; 157 without)	24	68,270,258	12,381,308

*Projects may choose to keep information private until they request VCU issuance

Comparison with VCS and CDM

As a voluntary carbon standard, VCS program embraces many distinguish with CDM programe, and comparison with the two kinds of carbon standards are presented as following.

Category	VCS	CDM
Objective	A standard for anyone who wants to participant in VCM	Flexibility mechanism designed to comply with mandatory framework
Participant	Any project participants wish to involved in voluntary market	UN members
Accreditation	NFCCC/CCAR/ISO14065	UNFCCC
Methodology	CDM/JI/CCAR/VCS	CDM
Project cost	Low	High
Complicity	Low	High
Scale	Mega	>1,000,000 tCO ₂ e
	Large	5,000-1,000,000
		N/A
		Exceeding the small projects

	Small		Renewable energy project: capacity <15MW; Energy efficiency project: improvement<60GWh/y; Annual emission reductions <60ktCO ₂ e/y
	Micro	<5,000	Capacity <5MW; Improvement<20GWh/y AER<20ktCO ₂ e/y
Credit period	Renewable 10 years up to 2 times		One off 10 years/ renewable 7 years up to 2 times
Start date	The date on which the project began generating GHG emission reductions or removals		The earliest date at which either the implementation or construction or real action of a project activity begins
Additional requirement	Validation completed within 2 years of the start date		Prior consideration within 6 months of the start date
Documentation requirement	VCS-PD, Proof of title, and that needed under CDM		LoA, MoC, PDD, ER, Stakeholders consultation report, EIA and FSR etc.

Case Study

A project developed by Easy Carbon and successfully registered as VCS project and CDM project is presented to explain the differences between the development as VCS project and CDM project.

Brief description of the project

The project was designed to utilize the local wind resources for electricity generation in Guangdong Province, P. R. China. The total installation capacity of the project is 49.5MW consisted of 66 wind turbines with unit capacity of 750 kW, and supplies annual electricity Guangdong Provincial Power Grid, an integral part of the China Southern Power Grid to replace the equal amount electricity that would be generated by the fossil-fuel power plants in the China Southern Power Grid and helping reduce GHG emissions generated from the high-growth, coal-dominated power generation.

CDM and VCS development

The project has successfully registered as VCS project and CDM project, and details are presented as following table.

Category	VCS	CDM
Documents supplied for registration	PP registration representation, Project description, Validation report, Validation statement	PDD, LoAs, ER and IRR spreadsheet, Validation report, Registration request form
Registration	03/2011 on VCS registry	09/2010 on UNFCCC website
Documents supplied for issuance	Monitoring report	Monitoring report,
	PP issuance representation, Verification report, Verification statement	Certification report, Verification report, CER spreadsheet, CDM form to submit verification and certification reports and request issuance,
Emission reductions	87,150 tCO ₂ e(11/04/2009-24/09/2010)	20,437 tCO ₂ e (25/09/2010-28/11/2010)
Project status	View issuance records	Request for issuance