



CARBON EXCHANGES, PROGRAMS, REGISTRIES AND STANDARDS

In the current voluntary market in the United States, independent actors can buy offsets from a range of sources and in a range of markets both domestically and internationally. Each market sets their own rules, or standards, for requirements such as measuring, monitoring and verification. In a regulatory market, offsets must result in verifiable reductions of GHG emissions that meet the requirements of that system in order to participate and have value in that market. GHG offsets are likely to have a higher value in a mandatory market. Recent estimates put the potential value of US agricultural offsets alone at \$24 billion annually, depending on supply and price.¹

The following is a list of foreign and domestic as well as voluntary and mandatory exchanges, programs, registries, and standards. This list is not intended to be exhaustive; rather, it is meant to provide an overview of the range of current options.

EXCHANGES AND COMPREHENSIVE REDUCTION PROGRAMS

Chicago Climate Exchange (CCX) - A voluntary market that operates North America's only cap and trade system for all six greenhouse gases.

<http://www.chicagoclimatex.com/content.jsf?id=821>

Chicago Climate Futures Exchange (CCFE) - A derivatives exchange that currently offers standardized and cleared futures and options contracts on emission allowances and other environmental products.

<http://www.ccfex.com/>

European Climate Exchange (ECX) - ECX is a carbon trading platform in Europe. ECX futures and options contracts have both EU Allowances (EUAs) and Certified Emission Reductions (CERs) as their underlying units of trade.

<http://www.ecx.eu/index.php/About-ECX>

European Union European Trading Scheme (EU-ETS) - EU-ETS is the largest GHG emissions cap and trade system in the world, involving multiple countries and sectors. Under this Scheme, electrical and industrial installations must obtain a CO₂ permit, monitor emissions, and ensure emissions do not exceed the European Union Emissions Allowances (EUAs) that each holds.

¹ Energy Information Administration. *S.2191: America's Climate Security Act*. National Energy Modeling System (NEMS).



http://ec.europa.eu/environment/climat/emission/index_en.htm

Midwestern Gashouse Gas Accord – A collaboration of seven U.S. governors and two Canadian Premiers to establish a Midwestern Greenhouse Gas Reduction Program to reduce GHG emissions in the signatures’ states. The Program is still in the design phase.

<http://www.midwesternaccord.org>

Montreal Climate Exchange (MCeX) - A voluntary market that provides a market-based solution to help companies, and all those involved, in reducing air pollutant and greenhouse gas (GHG) emissions.

http://www.mceg.ca/aboutUs_overview_en

Regional Greenhouse Gas Initiative (RGGI) - A cooperative effort by ten Northeast and Mid-Atlantic states to limit greenhouse gas emissions. RGGI is the first mandatory, market-based CO₂ emissions reduction program in the United States.

<http://www.rggi.org/about>

Tianjin Climate Exchange - Facilitates the implementation of the Clean Development Mechanism of the Kyoto Protocol and establishes a carbon trading market in China’s Tianjin Binhai region.

<http://www.tianjinclimateexchange.com/index-en.html>

Western Climate Initiative – A collaboration of seven U.S. governors and four Canadian Premiers created to identify, evaluate, and implement collective and cooperative ways to reduce greenhouse gases in the region, focusing on a market-based cap-and-trade system. The Initiative is currently ‘voluntary’ with the first compliance period starting in January 2010.

<http://www.westernclimateinitiative.org>

REGISTRIES

California Climate Action Registry (CCAR) - A private non-profit organization originally formed by the State of California. The California Registry serves as a voluntary greenhouse gas registry to protect and promote early actions to reduce GHG emissions by organizations.

<http://www.climateregistry.org/about.html>

Environmental Resources Trust (ERT) - Established the world's first private emissions registry in 1997. Since its launch ERT has worked with major U.S. companies in key emitting sectors providing technical support to enable accurate emissions tracking using an on-line serialized registry system.



<http://www.ert.net/ghg/>

EU National Registries - Allowances traded in the EU ETS are not be printed but held in accounts in electronic registries set up by Member States. All of these registries are overseen by a Central Administrator at EU level who checks each transaction for any irregularities. In this way, the registries system keeps track of the ownership of allowances in the same way as a banking system keeps track of the ownership of money.

http://ec.europa.eu/environment/climat/emission/index_en.htm

New Hampshire GHG Registry - This registry is intended to quantify and submit greenhouse gas emissions reduction actions to a state database for safekeeping against some future federal requirements. This approach was developed through a collaborative of business, government, and environmental leaders to encourage early reductions in GHG emissions.

<http://des.nh.gov/organization/divisions/air/tsb/tps/climate/ghgr.htm>

New South Wales GHG Abatement Registry (NSW GGAS) - One of the first mandatory greenhouse gas emissions trading schemes in the world. GGAS aims to reduce greenhouse gas emissions associated with the production and use of electricity. It achieves this by using project-based activities to offset the production of greenhouse gas emissions.

<http://www.greenhousegas.nsw.gov.au/>

The Climate Registry - A non-profit collaboration among North American states, provinces, territories and Native Sovereign Nations that sets consistent and transparent standards to calculate, verify and publicly report greenhouse gas emissions into a single registry.

<http://www.theclimateregistry.org/>

US Dept of Energy 1605(b) GHG Registry - Program guidelines establish the requirements that must be followed by utilities, industries, institutions and others that choose to report, including the methods reporters must use to measure greenhouse gas emissions and sequestration, and to calculate emission reductions.

http://www.usda.gov/oce/global_change/gg_reporting.htm

Wisconsin Voluntary Emission Reduction Registry - Developed in response to state legislation calling for the development of a registry for voluntary air emission reductions occurring within the state of Wisconsin.

<http://dnr.wi.gov/air/vol/registry/>



GHG OFFSET STANDARDS

California Carbon Action Registry Forestry Protocol- The Forest Project Reporting Protocol and Forest Verification Protocol, of the California Registry, provide guidance to account for, report, and verify GHG emissions reductions associated with forest conservation, conservation-based management, and reforestation projects in California.
<http://www.climateregistry.org/tools/protocols/project-protocols/forests.html>

CarbonFix Standard- The CarbonFix Standard is a rulebook to ensure high quality forestation projects with the goal of fixing CO₂ from the atmosphere.
<http://www.carbonfix.info/>

Chicago Climate Exchange - CCX has developed individual standards for each of its offset project types, i.e. Agricultural Soil Carbon, Forestry Carbon.
<http://www.chicagoclimatex.com/content.jsf?id=781>

Clean Development Mechanism (CDM) Aforestation / Reforestation Methodologies - Approved methods for aforestation and reforestation projects by the Executive Board of the CDM.
<http://cdm.unfccc.int/methodologies/ARmethodologies/index.html>

Climate, Community and Biodiversity Alliance- The Climate, Community and Biodiversity Project Design Standards (CCB Standards) evaluate land-based carbon mitigation projects in the early stages of development. The CCB Standards foster the integration of best-practice and multiple-benefit approaches into project design and evolution.
<http://www.climate-standards.org/standards/index.html>

Climate Neutral Network- Intended to guide companies in the development of a portfolio of projects that is scientifically sound, highly credible, and that merits broad stakeholder support.
<http://climateneutralnetwork.org/standards.php>

Duke Standard- Provides farmers and foresters with comprehensive, user-friendly descriptions of how to change their land use practices to reduce atmospheric emissions. It also provides the principles and methods needed to verify those emissions savings are real.
<http://www.nicholas.duke.edu/institute/ghgoffsetsguide/willeystmt.html>

European Carbon Investor Services Voluntary Offset Standard- The Voluntary Offset Standard is intended to support the development of emerging carbon markets around the world, particularly those of a 'precompliance' nature, and support



international policy convergence with a view to long-term carbon market integration.

<http://www.carboninvestors.org/ECISVoluntaryOffsetStandardFINALJune.pdf>

GHG protocol - Provides both a corporate accounting and reporting standards as well as specific GHG-reduction project accounting protocols and guidelines.

<http://www.ghgprotocol.org/standards>

Gold Standard - The Gold Standard Foundation is a foundation, a project development method, and a credit label. Endorsed by 42 non-governmental organizations (NGOs) worldwide, it offers a quality label to CDM/JI and voluntary GHG offset projects. It issues credits in the voluntary market and only covers renewable energy and energy efficiency projects.

http://www.cdmgoldstandard.org/about_goldstandard.php

Green-E Climate- Green-E Climate is a voluntary certification program launched in 2007 that sets consumer-protection and environmental-integrity standards for GHG emission reductions sold in the voluntary market.

<http://www.green-e.org/about.shtml>

Greenhouse Friendly- Through Greenhouse Friendly, Australian businesses can market greenhouse neutral products or services, deliver greenhouse gas abatement and give Australian consumers greater purchasing choice.

<http://www.climatechange.gov.au/greenhousefriendly/index.html>

Intergovernmental Panel on Climate Change Good Practice Guide - The Good Practice Guide for Land Use, Land-Use Change and Forestry (LULUCF) provides supplementary methods and good practice guidance for estimating, measuring, monitoring and reporting on carbon stock changes and greenhouse gas emissions from LULUCF activities of the Kyoto Protocol.

<http://www.ipcc-nggip.iges.or.jp/public/gpplulucf/gpplulucf.html>

Plan Vivo- A system developed to help to mitigate climate change in developing countries, allowing rural communities to invest in their own future and therefore contributing to poverty reduction.

<http://www.planvivo.org/fx.planvivo/scheme/introduction.aspx>

Regional Greenhouse Gas Initiative (RGGI)- RGGI has developed prescriptive standards for specific project categories, to ensure that offsets are real, additional, verifiable, enforceable, and permanent. At this time, five project categories for CO₂ offset allowances are eligible under the participating states' regulations.

<http://www.rggi.org/offsets>



TUV SUD VER+ - The criteria for VER+ are mainly in line with those for the Kyoto Protocol project based mechanisms (CDM/JI). The main difference to regular JI and CDM activities is that VER+ projects are not registered with UNFCCC.

http://www.tuevsued.de/uploads/images/1179142340972697520616/Standard_VER_e.pdf

US Dept of Energy 1605(b) GHG Standards - The 1605(b) program guidelines establish the requirements that must be followed by utilities, industries, institutions and others that choose to report, including the methods reporters must use to measure greenhouse gas emissions and sequestration, and to calculate emission reductions. http://www.usda.gov/oce/global_change/gg_reporting.htm

VER+ - The VER+ Standard provides a global standard for voluntary GHG emission reduction projects. The criteria of the VER+ Standard are streamlined with those of CDM/JI, including the requirements of project additionality and corresponding tests that prove the project is not a business as usual scenario.

<https://www.netinform.de/GW/files/pdf/VER+%20GHG%2030.pdf>

Voluntary Carbon Standard- The VCS Program provides a robust, new global standard and program for approval of credible voluntary offsets.

<http://www.v-c-s.org/about.html>

Voluntary Offset Standard- The Voluntary Offset Standard (VOS) is a carbon offset screen that accepts other standards and methodologies using certain screening criteria. It currently accepts Gold Standard, VER projects and projects that employ CDM procedures but which are implemented in countries that have not ratified the Kyoto Protocol and are therefore not eligible for CDM.

<http://www.global-greenhouse-warming.com/voluntary-offset-standard.html>



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