How do forest carbon offset projects work?

Carbon registries & markets

Because carbon offsets are purchased by another entity to compensate for emissions made elsewhere, all carbon offsets should be real, additional, verifiable, permanent, and enforceable (Figure 13). These criteria are generally achieved through the adherence to detailed protocols set by independent carbon registries. Registries monitor and supervise the listing, reporting, verification, and tracking of carbon offsets. This does not apply to all of the latest carbon offset programs, however.

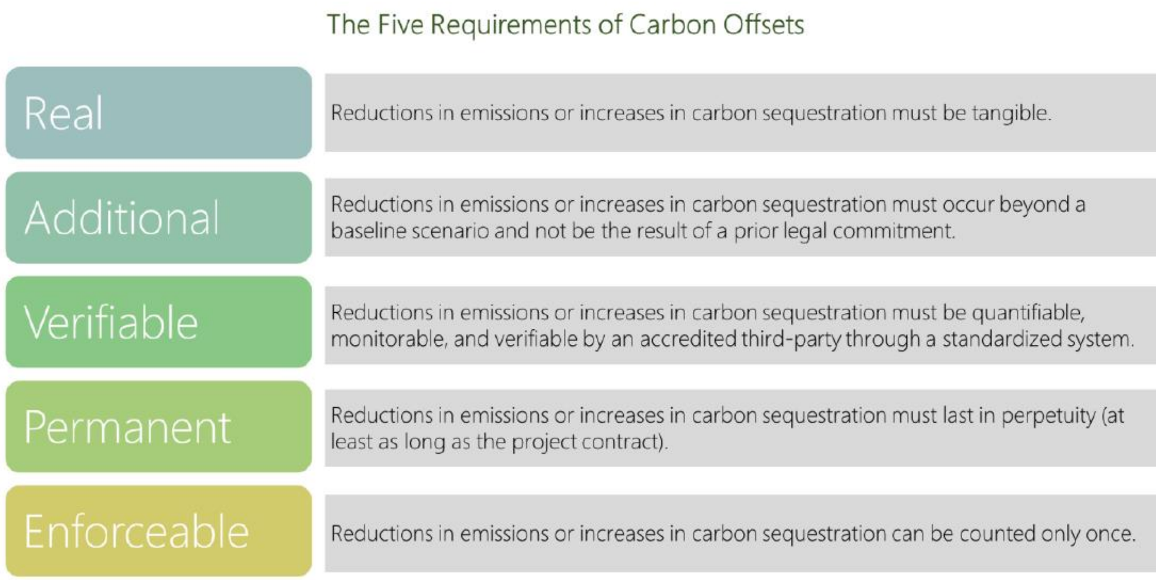

Figure 1

Each registry may have multiple protocols for use with different types of carbon offset projects. For example, the protocol for developing and quantifying the generated carbon offsets for a tree-planting project will differ from an improved forest management project. And under different registries, the protocols for developing the same type of carbon offset project may differ. The most common registries for forest carbon projects are American Carbon Registry (ACR), Climate Action Reserve (CAR), and Verra's Verified Carbon Standard (VCS). For forest carbon projects in the Northeast, ACR is more commonly used compared to the other registries, but there are some new programs for small forest parcels that use protocols being developed under Verra's VCS. There are also other registries

Note: The content of this publication draws heavily on several similar publications produced by the Vermont Department of Forests, Parks and Recreation.

developed or in development for specific sectors, for example, City Forest Credits is designed for municipalities and Wild Carbon for forest preserves.

Carbon offset projects may be developed for either the *compliance* (regulatory) market or the *voluntary* market. The distinction between these two types of markets pertains only to the GHG emitter – the offset purchaser – and not the seller of carbon offsets. In compliance markets, there is a government mandate for emitters to reduce emissions, while in the voluntary market there is no mandate.

Compliance market

Under compliance markets, GHG emitters are required by law to reduce their emissions but are provided the option to purchase allowances from other regulated emitters or buy offsets from carbon sequestration or emissions-reduction projects. For example, California's Cap-and-Trade program allows emitters to buy a percentage of their required emissions reductions from carbon offset projects, but the amount that emitters can offset is decreased over time. This market is overseen by the California Air Resources Board (ARB). In the Northeast, the Regional Greenhouse Gas Initiative (RGGI) cooperative market establishes regional caps on emissions from the power sector. The RGGI compliance market has not become established yet for forest carbon. As more governments regulate GHG emissions, we may see an expansion of compliance markets. Currently, these markets are not generally well-suited for northeast forestland owners because California's Cap-and-Trade program restricts the number of offsets purchased from projects located outside of the state of California and RGGI is not currently used for forest carbon projects. Some new programs for small landowners may address this restriction[1].

Voluntary market

Unlike the compliance market, participation in the voluntary carbon market is not required by law and any individual or entity seeking to mitigate emissions may purchase offsets on the voluntary market. For this reason, protocols developed under the voluntary market generally follow more flexible accounting and measurement guidelines than those on the compliance market. Less regulation can mean that carbon offset prices span a wider range than in the compliance market and more factors affect the price, including the type and location of the project, additional project benefits, marketing, and demand. The voluntary market also includes a larger variety of forest carbon protocols, including protocols that more easily allow for the aggregation of multiple forest parcels into a single carbon offset project.

---

[1] See the table of forest carbon markets at the end of these publications or on the website www.northeastforestcarbon.org as some new programs appear to be available for either voluntary or compliance markets. This field is changing rapidly.

Note: The content of this publication draws heavily on several similar publications produced by the Vermont Department of Forests, Parks and Recreation.