

**Frequently Asked Questions about Carbon Credit Programs**  
**Missouri Mid-South Conference of the UCC**  
Revision Date 4/24/2013

1. Why and when did the German Evangelical Church (GEC) get interested in a ministry to Shannon County, Missouri?

Following WWI the Office of Homeland Ministries of the German Evangelical Church noted the struggling conditions in southern Missouri. The homesteads in the region were habituated by women and grandparents, and the logging methods had left behind a weakened economy. In 1929 the Shannondale property was purchased from a logging company for \$5 per acre and Reverend Vincent Bucher became the first Pastor/Manager of Shannondale Community Center... The mission of the GEC was to educate the people of Missouri on ways to use the forest land for income. In 1930 the State of Missouri Conservation Service initiated strong interest in stewardship of the land in the region by setting up ten tree farms. Shannondale remains as the only one of these most likely due to the development of a viable stewardship plan.

Under Rev. Bucher's leadership Shannondale led the community in stewardship practices and sustainable use of the land. He "kept one step ahead". Key endeavors/teaching projects were stewardship of oak and pine tree forests, raising/growing goats, livestock, chickens, strawberries and cucumbers. Research was done to find better ways to harvest which led to single tree cutting and division of the Shannondale tree farm into twenty 200-acre plots, which to this day are managed under a 20-year rotation program comprising maintenance, harvesting, and planting.

The simultaneous stewardship interests of the State of Missouri Office of Conservation in the region alongside the German Evangelical Church birthed and built the stewardship ministry at Shannondale.

2. What prompted Shannondale Community Center and Missouri Mid-South to begin exploration of the carbon credit programs offered under the Cap and Trade programs?

Jeff Fulk, current Pastor/Manager of Shannondale Community Center became interested in the carbon credit program in 2010. This is viewed as a means to enable SCC to become financially secure and thus continue the mission of serving, educating, and enhancing the lives and economic conditions of Shannon County residents.

3. Why is the Missouri Conference exploring participation in the Climate Action Reserve?

The potential income from carbon credits by participating in the Climate Action Reserve is viewed as the means to make SCC financial secure within 5 years. This source of income is anticipated to add \$20K to the annual revenue of the Shannondale ministry.

4. What MMSC legal entity is related to the Climate Action Reserve?

Shannondale Carbon, LLC is a Missouri Limited Liability Company which was established in 2010 for participation in the Climate Action Reserve. The Board of Trustees for Shannondale, LLC is the Executive Committee of the Missouri Mid-South Conference.

5. What was the result of the verification of the forest at Shannondale?

The re-verification of the forest at Shannondale was undertaken by Finite Carbon in 2012 and determined that the project was viable. .

6. What is a carbon offset?

A carbon offset is a tradable commodity defined as the capture or “sequestration” of one metric ton of carbon dioxide (CO<sub>2</sub>) gas into the Earth’s atmosphere over the life of the project.

7. What is a “cap-and-trade” system?

A cap-and-trade system is a market-based solution designed to mitigate global climate change. CO<sub>2</sub> emissions are capped and a target is set to reduce CO<sub>2</sub> to specified levels by a future date. Excess CO<sub>2</sub> pollution allowances are permitted by the government as long as they are offset by CRTs purchased by the polluting entity.

8. What is the Climate Action Reserve (CAR)?

CAR is the agency created by the State of California to administer a “cap and trade” program. California is the first state to legislatively mandate “cap and trade”. It is anticipated that other states and the Federal government will initiate similar programs in the future thereby expanding the market for CRTs.

9. What is the goal of Cap and Trade?

To encourage the development of sustainable “green” energy and steadily reduce carbon dioxide and other greenhouse gas emissions by attaching a cost to emissions which exceed acceptable levels. The scientific goal is to limit the rise in global temperature to approximately 2.0 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels by 2050 by reducing carbon dioxide and other emissions as part of a larger plan for curbing global warming. .

10. What does “Cap” mean?

Each large-scale emitter, or company, will have a limit on the amount of greenhouse gas that it can emit. The entity must have an “emissions permit” for every ton of carbon dioxide it releases into the atmosphere. These permits set an enforceable limit, or “cap”, on the amount of greenhouse gas (GHG) pollution.

11. What does “Trade” mean?

“CRTs” are generated by the long term commitment of forest owners to the sequestration of carbon. By creating the need and a market for CRTs, entities which contribute to global warming will have a financial incentive to reduce their emissions. .

12. What does CRT (Climate Reserve Tonne) mean?

One CRT is equal to one metric ton (tonne) of carbon dioxide equivalent (CO<sub>2</sub>e) emission reductions.

13. What or who is “Finite Carbon”?

Finite Carbon, a Pennsylvania Company, is an “aggregator” of carbon sequestration projects. The Conference has a contractual partnership with Finite Carbon to develop the cap and trade project at Shannondale. The Finite Carbon web site describes their business as follows:

“Finite Carbon’s unique end-to-end solution for landowners provides quick access to carbon markets. With an in-house team of forest carbon experts who are industry leaders with demonstrated experience in each step of the forest carbon project cycle, we offer the expertise and resources for successful implementation of forest carbon inventories, protocol selection, project design, verification management, and monetization of carbon offsets.”

14. What is Verification?

The verification process is performed by a California accredited verification entity. Which, in addition to determining the composition of the forest, also initiates a protocol for future monitoring and record keeping?

15. What happens if the forest is destroyed by fire or other natural disaster?

As offsets are issued to a forest owner, a percentage is placed into a mandatory buffer pool. If a forest suffers a natural disaster, such as fire or disease, offsets previously sold are replaced by the buffer pool. .

16. What happens if the landowner wants to voluntarily terminate the project?

The landowner may terminate the project at any time but would be required to replace the offsets that were issues. Offsets are replaced at a ratio determined by the length of time the project has been in effect. Initially CRTs must be replaced with 1.4 CRTs to every 1.0 CRT lost. The replacement formula reduces over time to a ratio of 1.0 to 1.0.

17. Who buys carbon offsets?

Many entities which emit CO<sub>2</sub> are already purchasing carbon offsets (CRTs) in anticipation of future legislation which will mandate cap-and-trade systems. In addition, some corporations in the United States are purchasing offsets as part of their corporate social responsibility ("CSR") programs and "green" marketing.

18. What is the process to qualify a carbon offset project?

- Complete a carbon inventory of the forest
- Select appropriate registry/protocol (e.g., CAR)
- Translate inventory into carbon model and management plan
- Prepare and submit project plan to chosen carbon registry
- Once plan is accepted and registered, hire third-party project verifier
- Submit project verification to registry and receive allocation of carbon offsets
- Market and sell carbon offsets in a selected broker's proprietary network
- Perform ongoing monitoring and verification, as well as periodic re-inventory of the forest.

19. How large is the market for carbon offsets? How large is it expected to be?

The current voluntary market, including pre-compliance buyers, is already worth more than \$300 million per year and is expected to experience significant growth during the next several decades. The California Air Resources Board is expected to need 230 million offsets between 2012 and 2020. Bloomberg, Barclays and Reuters all estimate that the value of a California Carbon Offset (CCO) will average approximately \$30/CCO during this same period.

20. Which program of MMSC is the focus of the carbon offset activity?

The 4,000 acre forest at Shannondale is the impetus for exploring the Conference's participation in a carbon sequestration project.

21. What is the potential value of participating in the Climate Action Reserve program?

The current value of the initial issuance of “historic credits” is estimated to be \$700,000 or more. In addition, the ongoing value of annually issued credits is estimated to be \$20,000 per year, which is in addition to the current logging income which ranges from \$25,000 to \$35,000. These amounts will vary depending upon the market value of CRTs at the time of their sale.

22. What is the duration of the contractual commitment to the project?

199 years.

23. What are the risks related to participating in the Climate Action Reserve program?

The law requires a forest owner to accept risk for reduction (reversal) in the CRTs produced by their forest. There are two types of reversals -- “unavoidable reversal” and “avoidable reversal”. An unavoidable reversal is a reduction of the CRTs caused by a natural disaster. An avoidable reversal is a reduction of the CRTs caused by a forest owner's negligence, gross negligence, or willful intent, including harvesting, development, and harm to the area within the offset project boundary.

24. What kinds of projects are eligible for registration?

Currently, the Reserve accepts the following project types:

- a. Coal mine methane capture and destruction
- b. Forest (reforestation, avoided conversion, improved forest management)
- c. Landfill gas collection and destruction (U.S. and Mexico)
- d. Livestock manure management gas capture and destruction (U.S. and Mexico)
- e. Nitrogen management
- f. Nitrous oxide abatement at nitric acid plants
- g. Organic waste composting
- h. Organic waste digestion (including co-digestion)
- i. Ozone depleting substances destruction
- j. Rice cultivation
- k. Urban forest

25. How many Climate Reserve Tonnes (CRTs) are issued per ton of carbon reduction?

One CRT is equal to one metric ton (tonne) of carbon dioxide equivalent (CO<sub>2</sub>e) emission reductions.

26. How do you sell CRTs once they are in your account?

All sales happen over-the-counter between buyers and sellers. Sale transactions for the Conference's account will be monitored by Finite Carbon.

27. Can CRTs generated inside California be traded outside California (e.g. as an offset for a project in a different state)?

For voluntary transactions, the answer is yes. If the question is whether CRTs may be recognized for regulatory compliance in another state, that will depend on whether the other state allows and/or recognizes CRTs as offsets in their program. Under California's cap-and-trade program, offsets may be used to meet a portion of an entity's compliance obligations, and offset projects under the four approved compliance protocols may be located outside of California. In addition, Pennsylvania has named the Reserve as a recommended source of offsets for businesses operating in the state.

28. What is the lifespan of a CRT? Do they expire?

CRTs do not expire – they represent a permanent reduction or removal of GHG emissions from the atmosphere. They can be retired, however, meaning that those CRTs cannot be traded again.

29. Who is allowed to register a project?

In order to register a project with the Reserve, you must have a project developer account. Any person or organization may obtain a project developer account regardless of location or affiliation. There is a \$500 annual account maintenance fee for project developers.

Sources

Climate Action Reserve FAQs -- [climateactionreserve.org](http://climateactionreserve.org)

Center for American Progress <http://www.americanprogress.org/>

Common Dreams.org

Draft of Project Implementation Agreement Application