

Methane Capture Project



Idaho Dairy Methane Project

This project captures methane at two dairy farms in Idaho and uses it to supply local pipelines with natural gas.

Standard

Climate Action Reserve (CAR)

Country

USA

About your project

This project has enabled the installation of bio-digesters at the Whitesides farm in Minidoka County and the Westpoint farm in Gooding County. These two farms accommodate around 13,700 Holstein cows which produce approximately 120 pounds (54 kilograms) of waste a day. As manure breaks down it produces biogas which primarily consists of methane, which is 21 times more powerful than CO₂ as a global warming gas.

Before the bio-digesters were installed at these farms, the animal waste was stored in open lagoons, composted or used as fertilizer, allowing large volumes of methane to be released into the atmosphere. Installing bio-digesters has enabled the waste to be broken down in a closed environment which prevents methane gas from being emitted. There are 25 digester tanks at these two farms - 10 at Whitesides and 15 at Westpoint – which collect biogas for processing. Contaminates in the biogas are removed to create pipeline quality gas which is used to power the farms' boilers and supply local pipelines.

Idaho is currently the sixth fastest growing US state. This growth is expected to drive up demand for energy by more than a third by 2030. Implementing bio-digester technology to capture and utilize methane will help Idaho meet this energy demand with a sustainable source of local natural gas.



About agricultural methane biogas

Globally, livestock manure contributes roughly four per cent of total anthropogenic (human-induced) methane emissions. Methane is produced and emitted during the decomposition of organic material in livestock manure. Three groups of animals - swine, dairy and non-dairy cattle - account for 80% of methane from livestock. Methane released from manure management systems can be captured and used to produce clean energy by using an anaerobic digester. These digesters are air tight, oxygen-free containers which organic material like animal manure and food scraps are fed into. Naturally occurring bacteria in the organic waste breaks it down to produce methane gas - commonly known as biogas - along with an odor-reduced effluent. Using generators, this gas is then converted into electricity which delivers a twofold environmental benefit: it reduces the volume of methane released into the atmosphere and displaces electricity which would otherwise have been drawn from fossil fuel fired power plants.



How carbon offsetting helps the project

It is expensive to develop and operate methane capture technologies and that is where carbon finance can play an important role. Agricultural biogas projects like this one are not required by law to capture methane and often have to overcome financial and technological barriers to realize implementation. Carbon finance provides an additional revenue stream, helping to make these projects an attractive and viable option. In this case, the incentives from carbon finance are enabling the capture and combustion of biogas rather than allowing methane to escape into the atmosphere.

The reductions in CO₂ emissions achieved by this project are incremental to business as usual and measured by an independent verifier to internationally recognized standards. These are bought as carbon credits by clients of The CarbonNeutral Company to neutralize their own emissions.

Verification:

This project has been verified to the Climate Action Reserve Livestock Protocol.



Project area coordinates:

Westpoint Dairy Farm is located at latitude 42 45'14.17" North, longitude 114 48'12.86" West.

Whitesides Dairy Farm is located at latitude 42 43'13.68" North, longitude 113 31'38.19" West.