

# OneNature Portfolio

100% renewables

## The Portfolio

This portfolio is of Verified Emission Reductions (VERs) from 100% renewable energy projects – not only solar, wind and hydro but also biomass and re-use of waste products like biogas. Renewables can be relatively expensive to set up and maintain compared to fossil fuels which are (currently) plentiful and traditionally relied upon by the industry and infrastructure developers. Carbon finance helps to change the equation: by selling the CO<sub>2</sub> reductions, project developers realise a new revenue stream which makes renewable projects more viable and price competitive.

The waste management element of the portfolio includes biogas capture projects. The gas is produced from, for example landfill sites, animal manure and waste water – and it contains methane which is 21 times more potent than CO<sub>2</sub> as a greenhouse gas. Biogas projects capture the gas and mostly use it to drive a combined heat and power plant to generate electricity and heat. If the project is operating at a household or community level, the biogas may be used for cooking.

The portfolio may also include Combined Heat and Power (CHP) plants using biomass fuels such as bagasse (a waste product from sugar cane farming) or wood chips. CHP plants are highly efficient because they produce useful heat and electricity simultaneously – compared to conventional power stations which produce electricity but emit the heat as a byproduct into the environment. Biomass harvested in a sustainable manner is a renewable resource; burning biomass releases only as much carbon as has been absorbed by the plants during their growth.

# Example 1

## Solar Lighting

Country: India  
Project partner: SELCO (The Solar Electric Light Company)



In rural areas of India which is not connected to any electrical grid system, kerosene is commonly used for lighting. Not only is the quality of lighting is extremely poor – barely illuminating small corners of a room – but kerosene also produces high levels of CO<sub>2</sub> and polluting smoke which gets trapped within homes.

Carbon finance is helping communities to withdraw this traditional energy source and replace it with 'clean' solar panels installed on roofs which can supply lighting and energy. Not only is this better for health, but it helps promote local industry – because it makes possible even simple things like working in the evening on sewing machines for crafts.

Two times Ashden Award-winner, SELCO, is our India-based partner in this project.

# Example 2

## Biogas

Country: The Netherlands  
Technology partner: ARA Carbon Finance



The southern Netherlands is an area with a long history of pig and dairy farming. The animal waste is typically held in large open lagoons where it naturally decomposes over a 6-9 month period before being applied to agricultural land as fertiliser. The whole process means that large volumes of methane are released to the atmosphere..

Led by a local agricultural research station five farms in Sterksel have adopted a new approach. They have installed anaerobic digesters and animal manure is fed directly into the digesters, where the methane is captured and used to run CHP plants. These range in capacity from 0.3 to 3.5 MW and are used to generate electricity for the local grid and heat for local buildings.

As a further benefit of the project, the digested manure at the end of the process is a much higher quality fertiliser than previously produced in the open lagoon practice.

## Standards

The CarbonNeutral Company has a world leading quality assurance programme covering all elements of carbon measurement and reduction. All emissions reductions sold for carbon offsetting by The CarbonNeutral Company have been verified to quality standards and, as a minimum, have met the requirements of The CarbonNeutral Protocol. Every tonne of carbon sold by The CarbonNeutral Company is guaranteed.