

Panther Solar Portfolio CO₂ Analysis Report

March 2019

Panther Solar Portfolio

CO₂ Analysis Report

Executive Summary

Aardvark Certification Ltd (ACL) has been instructed by John Laing Environmental Assets Group Ltd to assess and report against the carbon savings achieved by their 6.47MW solar portfolio which consists of a total of 1,099 individual domestic rooftop solar installations. This assessment considers the CO₂ savings made as a result of the solar portfolio's energy production and export to the grid.

Asset Introduction

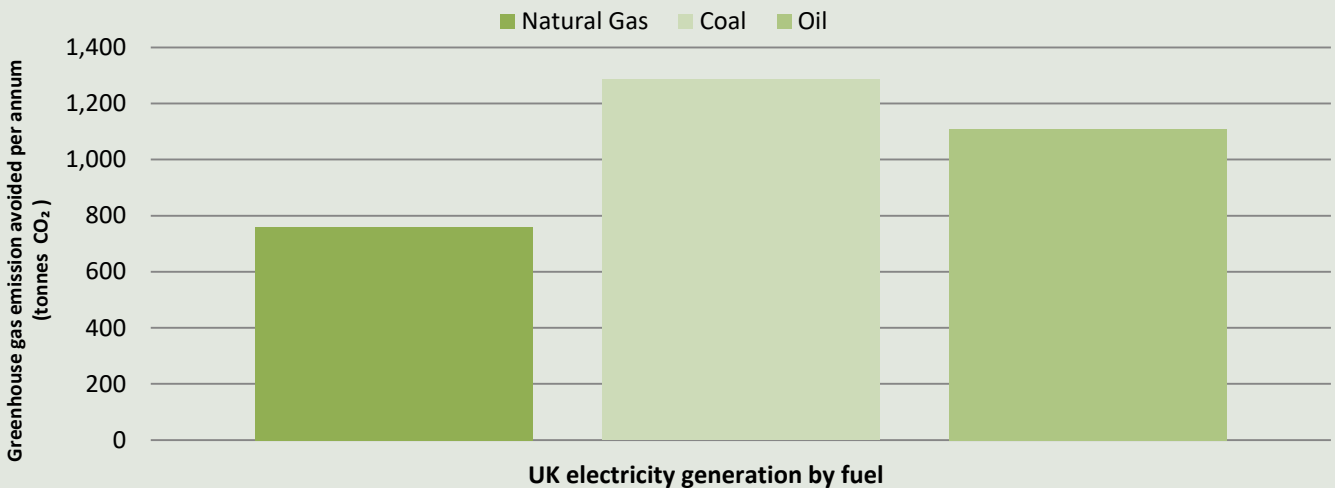
The Panther Solar Portfolio comprises of an array of ground mounted solar panels giving a total installed capacity of 6.47MW. Each year an average of 4,131MWh of renewable electricity has been produced. Since commissioning in January 2012 2015 the solar portfolio has produced 28,943MWh of electricity. During the course of the installations total lifetime it is anticipated that up to 99,747MWh will be produced.

The renewable energy generated by the solar portfolio is fed directly into the grid via the transformer. The grid management system converts the current generated by the generator into an AC current according the requirements and standards given by the local utilities operator.



CO₂ Savings

The preceding summary of energy generation from the solar portfolio enables illustration of the quantities of CO₂ that have been avoided had the Panther Solar Portfolios annual electricity production (4,131MWh) been produced by conventional fossil fuel sources.



GHG Emissions Avoided

Fuel Type	Average Annual (tonnes CO ₂ e)	Lifetime Saving (tonnes CO ₂ e)
Natural Gas	760	18,349
Coal	1,285	26,763
Oil	1,108	31,033

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Methodology

This report has been prepared in good faith by Aardvark Certification Ltd based on data obtained from the owner/operator of the asset reviewed. Our calculations of CO₂ savings are based on IFI Approach to GHG Accounting for Renewable Energy Projects. Baseline Emission Factors used in this analysis are taken directly from the Department for Business, Energy & Industrial Strategy Greenhouse gas reporting: conversion factors 2018.

Liability

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