

09 / 0 1 6 3

Title: Energy Statement
Location: Croxley Green Watercress Farm and Fisheries
Address: Rousebarn lane, Rickmansworth, Hertfordshire, WD3 3GG
Date: 9 February 2009
Version: 501



Reference data:

CO2 emissions can be calculated from the average UK power station of 0.44 kg/kWh
 One litre of diesel fuel gives rise to 3.2 kg of CO2

Introduction

The energy statement relates to the running of the farm. The planning application includes the use of renewable energy.

It is believed that by having the correct staffing on site that the operation of the farm can be significantly improved and result in significant energy savings.

1. Calculate the baseline energy demand
 - a. Without planning consent

Activity	Annual Electricity use (kWh)	Annual Diesel use (litres)	CO2 emissions (tonnes)
On site farming use	14800	36500	123
Worker transport (8)		21900	70
Raw product transporting		5475	18
Off site processing	1000		0.5
Product transport		5475	18

- b. With planning consent but no renewable energy

Activity	Annual Electricity use (kWh)	Annual Diesel use (litres)	CO2 emissions (tonnes)
On site farming use	14600	3650	18
Worker transport (8)			0
Raw product transporting			0
Off site processing			0
Product transport		2700	9

- c. With planning consent and the renewable energy

Activity	Annual Electricity use (kWh)	Annual Diesel use (litres)	CO2 emissions (tonnes)
On site farming use	14600	3650	12
Worker transport (8)			0
Raw product transporting			0
Off site processing			0
Product transport		2700	9

- d. Adjusted baseline energy demand with planning consent

Additional managed plant growth for composting at the farm of 40,000 cubic metres equating to 6 tonnes of CO2 annually of air extracted carbon.

In both cases the equivalent of 14 tonnes annually of CO₂ (by air extraction) binded carbon.

No planning granted = 229.5 tonnes – 6 tonnes (air extracted) = 223.5 tonnes before CO₂ binding

Planning granted with full renewable used = 21 tonnes – 12 tonnes (air extracted) = 9 tonnes before CO₂ binding

Net emissions before water absorption calculations

- No planning = 209.5 tonnes emitted
- With full planning = 5 to 6 tonnes extracted