

# ENERGY

## MERRYSTREAM POULTRY FARM PERMIT NO. XP3836MQ

Date 24<sup>th</sup> June 2015

### INTRODUCTION

*Merrystream Poultry Farm* operations at the installation are party to a negotiated Climate Change Levy Agreement (CCLA) through a national trade body.

To bring about continuous improvement at the site, *Merrystream* has developed and implemented an energy efficiency plan to minimise the use of energy at the installation by:

- The purchase of energy efficient equipment
- Maintaining and operating equipment in an efficient manner
- Continually reviewing the operation and identifying areas or practices that would result in improved energy efficiency.
- Undertaking periodic reviews of the operations with the aim of identifying areas or practices that would result in improved energy efficiency.

Primary energy at the site is obtained from liquid petroleum gas, kerosene and electricity.

- **Liquid Petroleum Gas and Kerosene** are supplied to the site, on a required / delivered basis and is used as the fuel source for the heaters and generator respectively.
- **Electricity** is supplied to the site from the National Grid. The prime users of electricity at the site are processes such as lighting, ventilation systems and the conveyance of poultry feed.

*Merrystream* produces regular reports on the energy consumption of the installation.

*Merrystream* has undertaken investigations into the potential introduction of alternative energy sources/ supply techniques (including CHP and wind) but to date has not identified viable alternatives on either cost or visual impact grounds.

### **Basic Energy Requirements (2)**

Tables 1, 2, and 3 below summarise the energy efficiency measures currently in place at the installation.

**Table 1: Operating, maintenance and housekeeping measures**

Operating maintenance and housekeeping measures	Yes / No	Supplementary Information / Justification
Ventilation parameters, thermostats for temperature control	Yes	An In-house programme of scheduled maintenance has been developed and implemented
Motors and drivers	Yes	An In-house programme of scheduled maintenance has been developed and

		implemented
Regular heater service	Yes	An In-house programme of scheduled maintenance has been developed and implemented
Lubrication to avoid high friction loss	Yes	An In-house programme of scheduled maintenance has been developed and implemented
Generator maintenance	Yes	The generator is maintained by an approved third party contractor under a maintenance agreement.
Variable speed drives motors	N/A	Not applicable
Other maintenance activities within the installation	Yes	An In-house programme of scheduled maintenance has been developed and implemented

**Table 2: Physical measures**

Physical measures	Yes / No	Supplementary Information / Justification
1. Sufficient insulation of buildings, heated vessels and pipework.	Yes	<ul style="list-style-type: none"> <li>▪ Lagging.</li> <li>▪ Thermostatic controls</li> <li>▪ Electric trace heating – self regulating</li> </ul>
2. Provision of sealing and containment methods to maintain temperature	Yes	This insulation is maintained under the preventative maintenance programme
3. Simple sensors and timers to prevent unnecessary ventilation and loss of ambient house temperatures.	Yes	Simple sensors and timers are controlled under the automated control system.
4. Other appropriate measures	N/A	No further appropriate measures are employed within the installation.

**Table 3. Building service measures**

Building Service Measures	Yes / No	Supplementary Information / Justification
1. Energy efficient lighting is in place	Y	Energy efficient lighting is currently in place at the installation and as part of the efficiency programme the policy is to replace bulbs with energy efficient lighting as required.
2. Energy efficient climate control systems are in place including Space heating Hot water Temperature control Ventilation Draught proofing	Y	Energy efficient climate control systems are currently in place at the installation. Merrystream Poultry Farm commits, as part of the efficiency programme, to assess the continued viability of installing energy efficient climate control systems at the installation.
3. Other appropriate measures		No further appropriate measures are

	employed within the installation.
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The current design of Merrystream Poultry Farm is directed to a more efficient use in respect of energy conservation and environmental concerns. The sheds are designed to allow adequate air flow within the shed and facilities in keeping a constant set temperature.

This prevents the heaters from working too hard and burning excess fuel, plus from a welfare view the birds perform better in well-heated and well-ventilated sheds, Wall insulation will also assist in keeping sheds from losing heat unnecessarily.

With the exception of warm weather, the fans run in an intermittent pattern, thus conserving electricity and decreasing the amount of dust expelled from the sheds.

The feedback / relays / thermostats on the fan/temperature system will prevent extreme variations between set and actual shed temperature thus decreasing demand on the heating system.

Heat Exchangers have been fitted to two of the poultry houses as per variation notice.

Low wattage, long life bulbs will help to lower the cost on replacing lights and the amount of electricity used.

Overall, the design of the sheds enables the company and the environment to benefit to being more energy efficient, thus cost effective and less draining on reserves

