**011 ENERGY USAGE – Ditchford Bank Farm Poultry**

**Date: 02/02/2022**

**INTRODUCTION**

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The objective is to bring about continuous improvement at the site at Ditchford Bank Poultry, operated under permit JP3604MJ BY G O Few and Sons. The Farm 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 wood chip biomass boiler and a back up supply of liquid Petroleum Gas.

* **Biomass Boiler** wood chip biomass boiler supplies all of the heat for the chicken sheds; and
* **Kerosene** is supplied to all sheds for application of heat for the chicken sheds; and
* **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.

The operators produce regular records on the energy consumption of 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 program of scheduled maintenance has been developed and implemented |
| Motors and driveshaft | Yes | An in-house program of scheduled maintenance has been developed and implemented |
| Regular healer service | Yes | An In-house program of scheduled maintenance has been developed and implemented |
| Lubrication to avoid high friction loss | Yes | An In-house program 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 |

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|  |  |  |
| --- | --- | --- |
| Variable speed drives motors | No | Not applicable |
| Phase optimization of electronic control molars, such as inverters | No | Not applicable |
| Other maintenance activities within the installation | Yes | An In-house program of scheduled maintenance has been developed and implemented |

Table **2: Physical measures**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Physical measures** | | | | | **Yes/ No** | **Supplementary Information** *I*  **Justification** |
| 1. | Sufficient insulation vessels and pipework. | of | buildings, | heated | yes | Lagging.   * Thermostatic controls * Electric trace healing - self regulating |
| 2. Provision of sealing and containment methods to maintain temperature | | | | | yes | This insulation is maintained under the preventative maintenance program |
| 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 | | | | | **no** | 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 | Yes | Energy efficient lighting is currently in place at the installation. The operator commits, as part of the improvement program, to replace bulbs with energy efficient lighting as required at the installation. |
| 1. Energy efficient climate control systems are in place including    * Space heating    * Hot water   .• Temperature control Ventilation  . Draught proofing | Yes | Energy efficient climate control systems are currently in place at the installation. The permit holder commits, as part of the improvement program, to assess the continued viability of installing energy efficient climate control systems at the installation. |
| 3. Other **appropriate** measures | **no** | **No** further **appropriate** measures **are**  employed within the installation. |

The current and proposed design of Ditchbank Farm Poultry 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 *I* relays *I* thermostats on the fan/temperature system will prevent extreme variations between set and actual shed temperature thus decreasing demand on the heating system.

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

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| --- | --- | --- | --- |
| **Review**  **Completed** | **Review**  **Completed By** | **Changes/Additions** | **Next Review**  **Due** |
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