



A Rockwell Automation Company

Great Mountain Poultry Farm Layer Barn L5 Control System

The Client:

Great Mountain Poultry (GMPF) is a privately owned farm that will become Taiwan's largest layer farm. The future farm will consist of 16 layer barns housing 56,000 chickens per barn and will produce an

estimated 900,000 eggs per day, 350 days/year. Their goal is to produce high quality table eggs for the Asian consumer marketplace.

The Requirement:

GMPF would like to create a modern farm using automation to control environment, feeding, egg collection, and manure removal. The farm would also

like to monitor key data that will be useful in managing flock performance.

The Design Solution:

Traditionally, layer barn automation is done using a vendor supply 'canned' system. These systems provide little flexibility and are not maintainable by farm maintenance personnel. GMPF requested that a different approach be taken. They wanted an open concept system that could be modified as the farm evolves and their needs change. The ControlLogix platform from Rockwell Automation was proposed for the control system, and a feed/lighting scheduler was developed in-house using the .NET framework from Microsoft.

Two barns are controlled using one L62 processor, and a distributed Flex I/O network over ControlNet connects the field devices and motor starters to the programmable automation controller (PAC).

An HMI application was developed using RSView32 to provide an interface to the barn control system. The

barn manager is able to view each barn's:

- current environmental state
- various performance indicators affecting layering efficiency
- production level

The RSView32 application also allows the barn manager to override the control system if needed (e.g. disable rows from collection), as well as modify the alarm set points and environment control set points.

The construction phase included dedicated onsite construction supervision and commissioning services.

In summary, Great Mountain Poultry has an open and flexible control system that allows them to seamlessly evolve as their needs dictate without costly component upgrades.



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System Specifications:

- 1756-L62, ControlLogix PLC
- 1756-ENBT, Inter-PLC HMI communications
- 1756-CNB/D, Distributed I/O
- 1756-IR6I, isolated RTD module
- 1756-IF16, Analog Input Module
- 1756-OF4, Analog Output Module
- Flex I/O
- RSView32, Barn HMI application
- Cisco switch, c/w 1GB fiber backbone.

For further information or to contact a Hinz office near you, please check our website at:

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