

Manufacturing Facility for a Multi National Health & Hygiene Company

In 2006 Autometers were approached by leading global health and hygiene company to advise on they could monitor & Log their energy consumption remotely without the requirement to “walk around”. Autometers attended site and established the following;

Customer Requirement

To enable existing HV & LV kWh meters to be remotely read, logged and have the ability to view historical 30 min profiles.

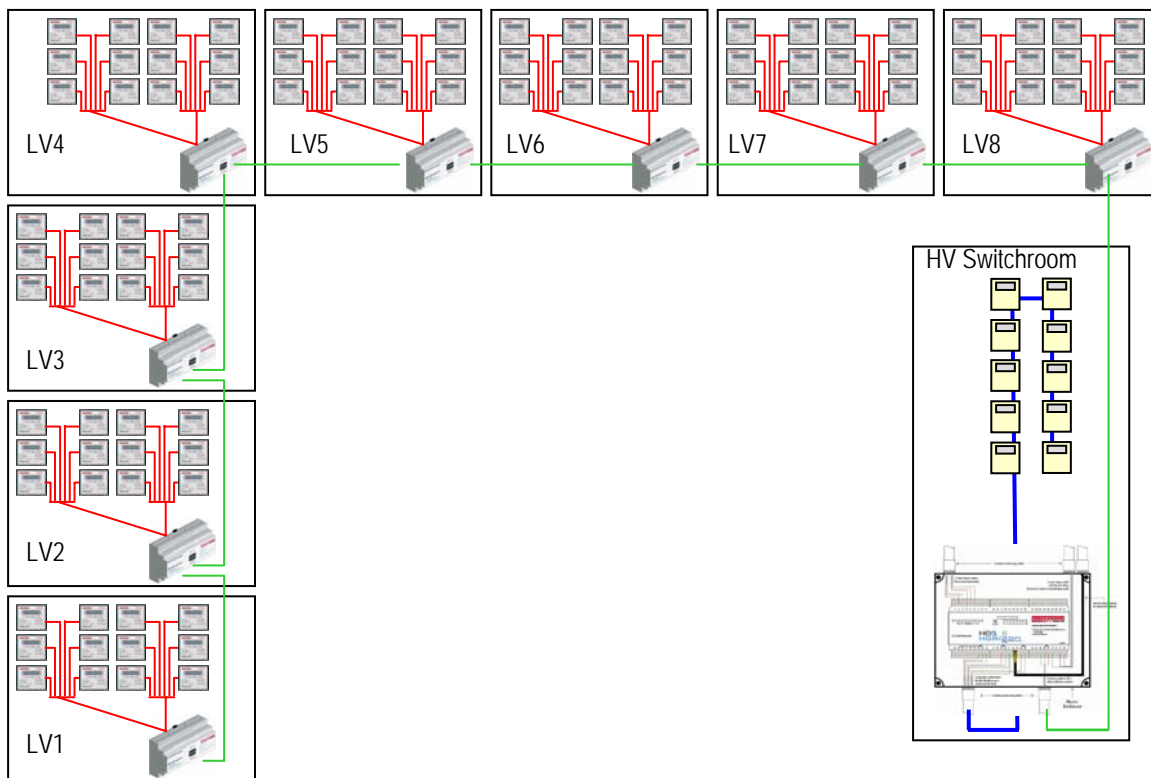
Installation

10 HC meters – Areva Micon Units located in the HV distribution Room.

106 LV Meters – Various Types with Volt free Pulse outputs all located in 8 off LV Switch boards.

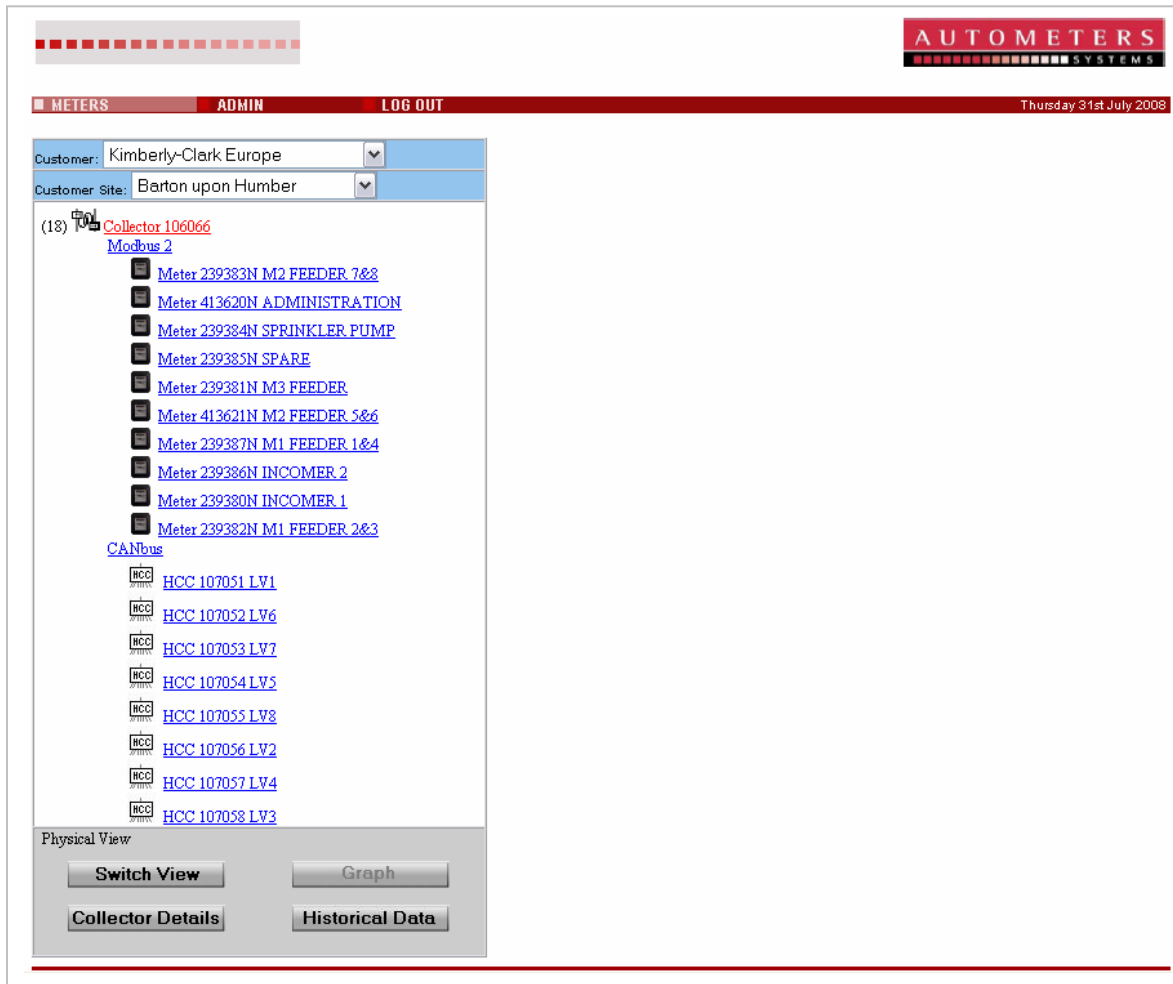
Solution

- Protocol conversion to be written to enable Micon Devices to be read by HC1 via MODBUS.
- Fit HCC(16 Channel CANBUS collector) in each of the switchboards. Wire pulses from each meter into HCC and network HCCs back to a Master Collector – HC1 on a CANBus network.



All Protocol conversions were completed, Horizon equipment fitted. All installation and cabling between devices was carried out by client nominated contractors. Once completed Autometers were commissioned to check, the installation & Coms/Pulse wiring and to instigate the HC network onto the Horizon Website.

Below is a copy of the “physical” Screen configuration from the network connected.
Modbus 2 = 10 HV Micon devices
CANbus = 8 HCC Pulse collectors each accepting up to 16 pulse inputs from kWh meters.



The screenshot shows the AUTOMETERS SYSTEMS web interface. At the top right, the logo and date 'Thursday 31st July 2008' are visible. The main navigation bar includes 'METERS', 'ADMIN', and 'LOG OUT'. The configuration page is for 'Collector 106066' at 'Barton upon Humber'. It lists 10 Modbus 2 devices and 8 CANbus HCC pulse collectors. The CANbus devices are HCC 107051 LV1 through HCC 107058 LV3. At the bottom, there are buttons for 'Switch View', 'Graph', 'Collector Details', and 'Historical Data'.

As the Client Objective was to be able to read, view, Log, analyze data from all meters, an ALL METERS collector was created in the Logical View. This enabled kWh registers from all 106 meters to be viewed, exported to excel etc from a single point.

Case Study

Customer: Kimberly-Clark Europe
Customer Site: Barton upon Humber

(0) [All Meters](#)

Logical View

Pulse	TARIFF - A PULSE			TOTAL PULSE		
	Count	Factor	Value	Count	Value	Measure
BH16 FANS POWER (MCC2)	9609800.00	1.00	9609800.00	9609800.00	9609800.00	kWh
BH16 ANCILLARY POWER (MCC1)	2633009.00	1.00	2633009.00	2633009.00	2633009.00	kWh
BH14 FANS POWER (MCC2)	815119.50	1.00	815119.50	815119.50	815119.50	kWh
BH14 ANCILLARY POWER (MCC1)	3463314.50	1.00	3463314.50	3463314.50	3463314.50	kWh
BH16 MAIN MOTION POWER (MCC3)	5199090.00	1.00	5199090.00	5199090.00	5199090.00	kWh
BH14 MAIN MOTION POWER (MCC3)	5255780.50	1.00	5255780.50	5255780.50	5255780.50	kWh
M2 DUST BOOSTER FANS MCC	1787158.00	1.00	1787158.00	1787158.00	1787158.00	kWh
BH14 PACKAGING DISTRIB BOARD	274310.50	1.00	274310.50	274310.50	274310.50	kWh
BH13 PACKAGING DISTRIB BOARD	577708.00	1.00	577708.00	577708.00	577708.00	kWh
BH13 AIR HANDLING UNIT	8435343.00	1.00	8435343.00	8435343.00	8435343.00	kWh
BH14 AIR HANDLING UNIT	8066301.00	1.00	8066301.00	8066301.00	8066301.00	kWh
M2 UTILITIES BOILER PLANT PANEL	5677482.00	1.00	5677482.00	5677482.00	5677482.00	kWh
M2 CENTRAL SYSTEMS TRIM CULL & HVAC	4672916.50	1.00	4672916.50	4672916.50	4672916.50	kWh
BH16 HAMMERMILL POWER	3025659.00	1.00	3025659.00	3025659.00	3025659.00	kWh
BH14 HAMMERMILL POWER	2875310.50	1.00	2875310.50	2875310.50	2875310.50	kWh
BH5 MCC2 PROCESS FANS	9863588.00	1.00	9863588.00	9863588.00	9863588.00	kWh
BH5 MCC1 ANCILLARY POWER	4605663.50	1.00	4605663.50	4605663.50	4605663.50	kWh
WASTE ROOM CENSYS MCC	5409517.50	1.00	5409517.50	5409517.50	5409517.50	kWh
COMPRESSOR No 1	3119862.50	1.00	3119862.50	3119862.50	3119862.50	kWh
BH5 MCC3 MOTION POWER	6276659.50	1.00	6276659.50	6276659.50	6276659.50	kWh
BH5 MCC4 HAMMERMILL	5507634.00	1.00	5507634.00	5507634.00	5507634.00	kWh

Using the data collected from the Horizon System the client was able to establish areas and times of high load consumption and Max Demands. This analysis enabled production Machinery start times to be offset to ensure Max Demand was kept to a reduced level. This combined with the 30 Min kWh profile produced by the system enabled the energy buyers to discuss their usage and demand levels with various energy providers and a cost saving of over £100,000 in the first year of installation to be achieved.