

# Energy savings on a dairy basis

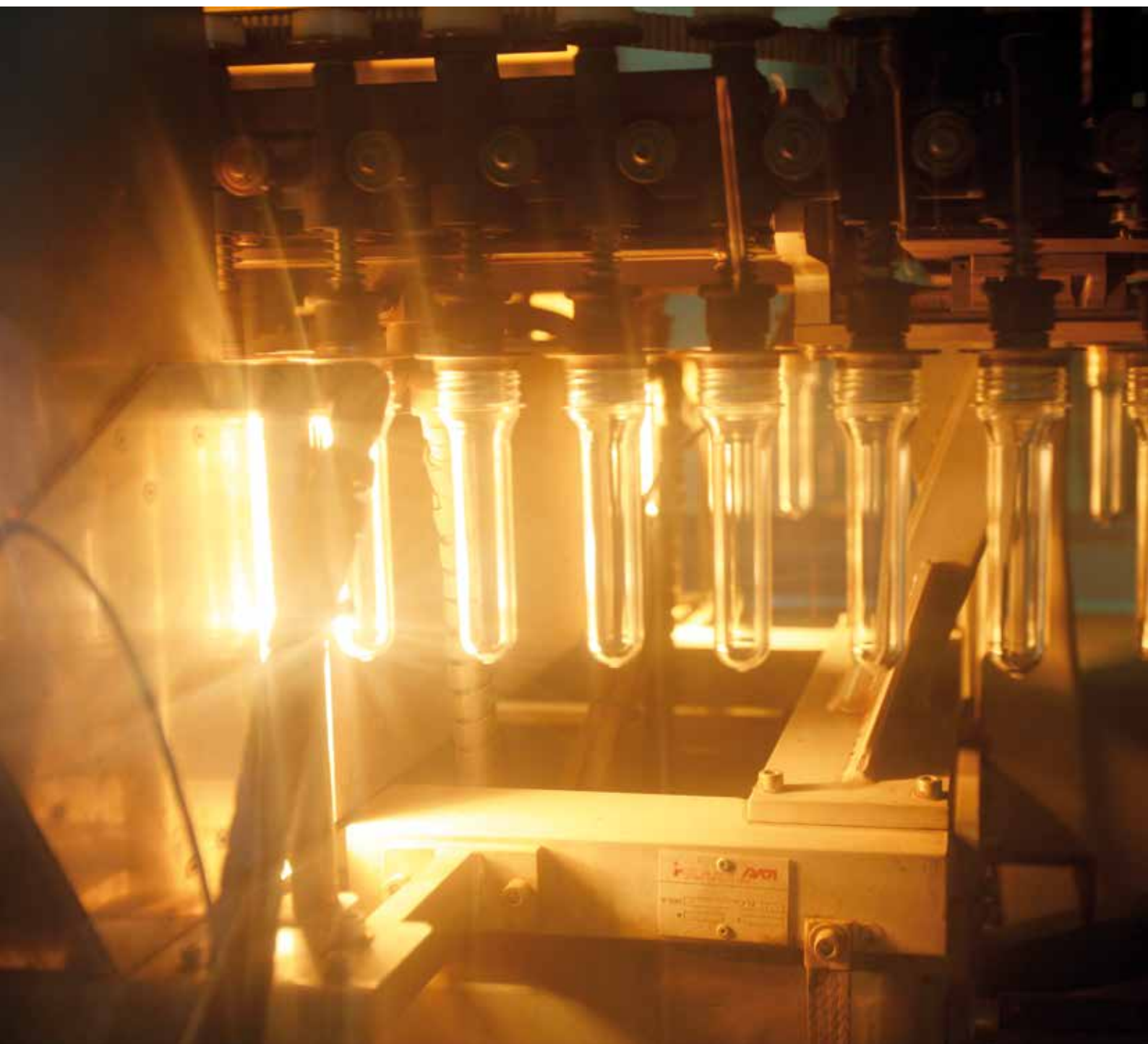




Photo © Charalambides Christis

When Charalambides Christis began operations in 1945 with two men and a cow, resource management wasn't much of an issue. Seventy years later, as the largest dairy company in Cyprus, collecting and analyzing data effectively is no easy task. In less than six months, the company implemented APROL EnMon in an effort to reduce resource consumption up to 20% over the next three years. More than that, though, the company now has a flexible platform that will allow it to build and invest for the future.



In addition to serving the Cypriot market, Charalambides Christis also exports around 17% of the goods it produces – from fresh milk and yogurt to famous Halloumi cheese – to 27 countries worldwide. Seventy years of growth have turned a family business into a multinational company with over 550 employees and an infrastructure that has grown to match.

With operations spanning multiple cities, collecting and analyzing data in a way that provides a holistic overview is quite a challenge, yet this is precisely what is required in order to react quickly in the event of a quality assurance or production problem. When it comes to maintenance and inspection, the traditional solution involves a team of technicians reading meters individually and documenting temperatures and consumption data manually.

In the past, this time-consuming routine tied up important resources at Charalambides Christis, sometimes resulting in the loss of valuable information and real-time data. But with a long history of investing in state-of-the-art technology to maintain its position as Cyprus' largest dairy producer, it is no great surprise that the company

would solve this challenge by seeking out B&R and the best solution for managing and reducing energy costs on the market: APROL EnMon.

#### **Measure, manage and improve**

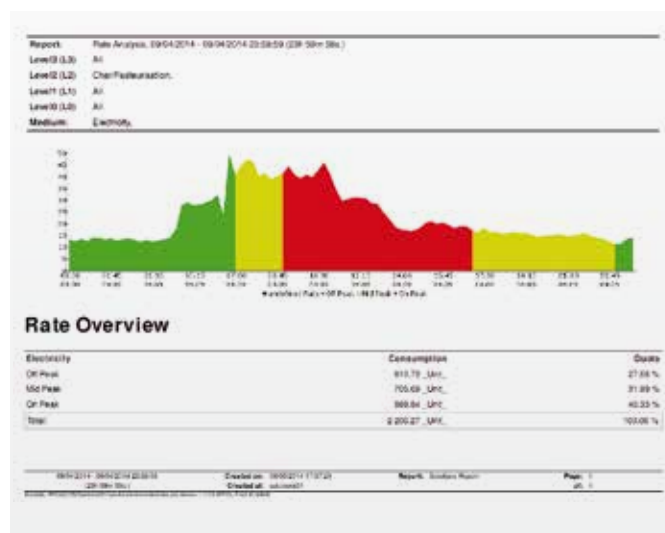
For Energy and Technical Services Manager Constantinos Dalmiras, it was important to find a solution that would centralize all collected data in a way that would make it easy to monitor and analyze – a solution that would integrate all relevant meters and process data into comprehensive dashboards for quick and convenient assessment of production and energy performance.

Further specifications included a very ambitious implementation schedule, the flexibility to accommodate expansion into a full-scale DCS and a strictly defined budget.

When presented with B&R's energy monitoring solution, APROL EnMon, Dalmiras knew it was the perfect fit for his requirements. With excellent support and using standard B&R hardware, the basic system was fully operational in less than six months – despite the implementation difficulties resulting from 24-hour plant operation – and already measuring data for electricity, temperature,



Rotative filling system in one of Charalambides Christis' factories.



Analysis of peak energy consumption using APROL EnMon.

humidity, fuel, thermal energy, milk processing and water throughout the company's manufacturing chain.

A short time later, it was possible to estimate the amount of potential savings in electricity, water and fuel consumption, a number that would give Charalambides Christis a full return on its investment within just a few months of implementation.

"We looked at various systems on the market but chose B&R because of the system's flexibility to expand into a DCS and the possibility to integrate other technologies such as condition monitoring. Other systems could not handle as many types of fieldbuses and inputs." Constantinos Dalmiras, Energy and Utilities Manager at Charalambides Christis.

### Comprehensive dashboards for all

Despite its extremely powerful range of functions, APROL EnMon is extremely simple to operate. One of Charalambides Christis' requirements was that the dashboards be easy to understand for colleagues in different departments. In other words, they wanted to have the right information presented in the right way to the right people.

With easily customizable screens, APROL EnMon does exactly that: offering faceplates with instrumentation meters for inspection technicians, plant performance indicators for production managers, monitoring of critical parameters for the quality assurance team and consumption cost data for the finance department – all in a single, uniform system.

### Expanding for even more savings

Encouraged by the success achieved with APROL EnMon so far, Charalambides Christis has decided to extend the distribution of data points and collect data directly from the machines in the production lines. This will shed light on all of the company's subsystems and allow it to target top consumers and prioritize improvement projects.

Subsequent goals include expanding to a full DCS solution and using B&R's condition monitoring system, APROL ConMon, for predictive maintenance – significantly reducing downtime and allowing for immediate reactions to problems in production. As the company moves forward, the potential for growth appears virtually limitless. A feasibility study for the full control of its HVAC and refrigeration systems is already underway. ←