

Case study

Silpen — No piece of production line equipment is too small for energy consumption optimization

Silpen

Silpen is a factory specializing in sponge production. It is part of the Sileks Corporation in North Macedonia.

After implementation of eTactica EMS solution, Silpen's **decrease in spent kWh per kg product was 67%** and time to reach **ROI was 4 months**. Facility management behavioral changes and production level process reorganization were huge optimizations with minimal cost.

The challenge

Through the partnership with eTactica, Smart Energy Solutions were able to perform an **energy audit of Silpen's manufacturing facilities by measuring the site's energy consumption per unit** and the efficiency of its technological processes.

After the data was collated and analyzed, it was discovered that **Silpen was paying 2x the industry standard for its electricity**.

After the audit, Silpen needed to address variables that affect its energy consumption levels. There were multiple areas to consider: Does shift scheduling impact production and energy consumption costs? If so, how can the workforce be optimized to address these issues? Also, what is the exact cost each production unit contributes to overall expense? And finally, how could Silpen optimize the "human factor" and educate its management to mitigate energy costs?

The solution

During the energy audit, Smart Energy Solution's priority was to assess and analyse existing units and identify individual consumption costs per unit. eTactica's EMS covered 2 main units and 8 production level branches.

The second undertaking that was paramount was **establishing the correlation between real-time data and Silpen's technical manufacturing processes and equipment** — this allowed to identify opportunities for optimization per production level unit.

After visiting Silpen's facilities, interviewing engineers and production teams, and understanding Silpen's production environment, the ideal EMS solution configuration for Silpen's software and hardware was defined — significant gains were achieved by educating facility managers to optimize equipment usage.

Utilizing soft measures and educational activities, **Silpen anticipates an additional 20% in energy reduction**, all by reiterating the cycle of measure, analyze, check, and act.

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The results

After the first 10 months:

- 4% energy consumption decrease, and a 45% production capacity increase
- ROI was achieved in only 4 months
- Decrease in spent kWh per kg product by 67%

67%

Decrease in spent kWh per kg product

4 mo

Time to reach ROI

33%

Cost reduction via tariff optimization

Natalija Cvetkovska,
CEO Smart Energy
Solutions

“eTactica’s energy management solution helped us connect the dots between our client’s energy consumption and technology processes in their production facilities. As an energy consulting company, it enabled us to propose changes that decreased the energy spend and provided greater control over the client’s costs after the first 2 months.

I highly recommend this energy management solution to any manufacturing company that wants to improve its energy efficiency and get valuable intel of energy consumption in its own facilities.”

About Smart Energy Solutions



Smart Energy Solutions is a part of eTactica Partner program as a young Macedonian company that helps customers to achieve quick savings by installing an energy monitoring system in their electrical systems to enable remote monitoring of power consumption and offer them specialist advice.



About eTactica

eTactica is an Icelandic company that specialises in helping organisations measure and optimize their electrical energy consumption costs with the application of an intelligent energy monitoring solution.