



Bringing ISO 50001 into life

Automotive industry case

*More and more industrial companies continuously discover the benefits of the [ISO 50001 certification](#). Not only it helps them to comply with the energy efficiency regulations coming from the top European level down to the local legislation, but it also provides them with a great opportunity to set up a process in which **energy savings are continuously being achieved**. Such process then contributes to a long term sustainability of their business from the energy perspective. The leading industrial companies have been discovering the benefit of such process and are working on a more detailed system of **monitoring and targeting of their energy** in specific areas of energy consumption. This, however, does not entail mere installation of submeters and monitoring their partial consumption. There is much more. One of such cases has been carried out at an automotive producer where HE Consulting worked with the local energy management team and achieved remarkable results with its [energy saving program QUEST](#).*

*This innovative method delivers savings systematically, quickly and permanently, and results in energy costs reduced by 5 – 15 % with an ROI of only about 12 months thanks to a systematic combination of its 3 pillars – **data, people and technology**.*

How we discovered potential

The program started with a **4-day energy review** site visit of the HE Consulting team. On the first day, the initial Kick-off meeting was attended by the Plant Manager, Maintenance Manager, Production Manager and the Energy Manager to put everyone on the same page and to get the necessary support for the process. The HE Consulting team coupled up with the local maintenance and engineering team to conduct the review and to identify **low-cost and no-cost saving opportunities**. During the 4 days the team walked around the production hall a couple of times to get acquainted with the production process and the operational regime and to assess the opportunities for improvement. At the end of the week, the initial findings and ideas were presented and discussed at the Closing meeting to the site management. Both parties of the program agreed they would meet in two weeks for the presentation of the results and to define the way forward.

Within two weeks from the Closing meeting the HE Consulting team drafted the key deliverables, the QUEST Report and the Opportunities Database. The report contained structured results of the energy consumption analysis and **quantification of the savings potential for the plant which amounted to 8% of the annual energy cost**. The Opportunities database was filled with the saving measures discussed during the Closing meeting plus a few more were added to the list. Each saving opportunity was described and quantified with estimated savings (in kWh and EUR), costs and simple payback. For example, a change of the hall ventilation rate through a 10% reduction in the HVAC motor power load (air supply by the air handling units) would lower electricity as well as gasconsumption by about 43,000 EUR per annum. The cost of this measure would include mere modifications of the control systems and were estimated to about 5,000 EUR.

Therefore, a simple payback of such measure would be 1 month (0,12 year). The HE Consulting team flew to the site to present both reports to the site management and **to start the implementation phase of the program.**

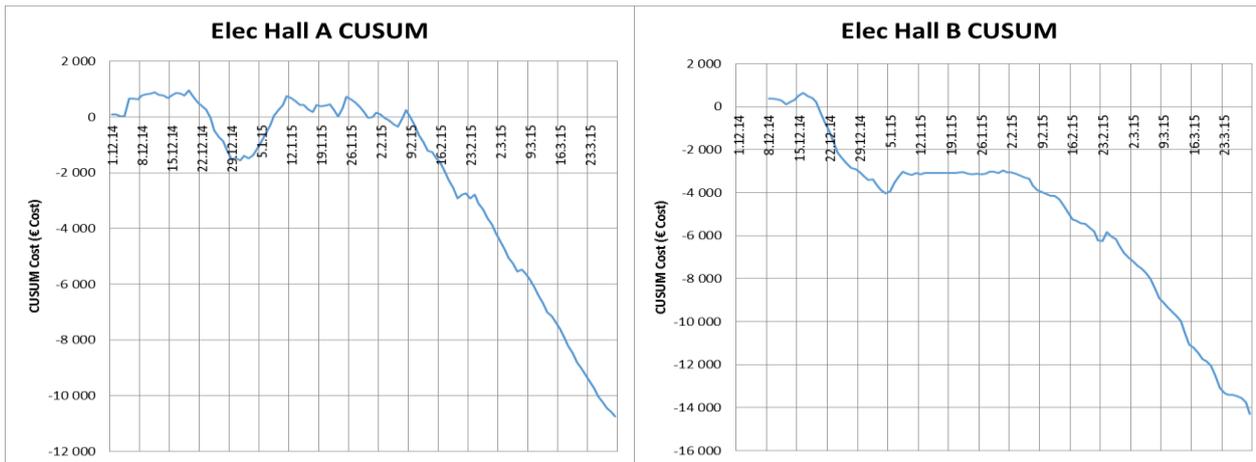
Implementation of savings opportunities

During the meeting with the site management, all saving opportunities were discussed in detail together with the numbers behind them. Each of the opportunities was agreed upon by the site management and the HE Consulting team and assigned priority. As requested the site management nominated an “Energy Champion” who would be responsible for overseeing the opportunities’ implementation and for continuous communication with the HE Consulting team who would provide external push and support throughout the whole implementation process. Regular weekly meetings were scheduled between the Energy Champion and the HE Consulting Project Manager to ensure continuous process in which energy related measures are regularly discussed and put on the table. Also, a process was agreed for the Energy Champion to send the energy consumption data and other relevant data to the HE Consulting Project Manager every week on Monday before the regular meeting. This way the Project Manager could prepare the data analysis and visualization as a material to discuss at the regular weekly meeting. Simultaneously, the HE Consulting team and the site management agreed they would meet once a month for a management meeting to discuss the overall ongoing results of the program and steer the ship.

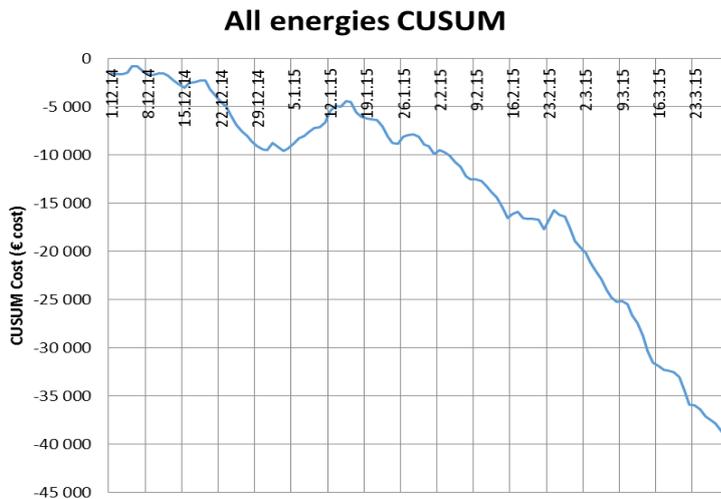
Seeing the results and communicating them to staff

After few weeks, the regular weekly meetings became a routine in which the Energy Champion together with the Project Manager discussed the energy consumption results. The results took a shape of **complex graphs and charts of individual areas of energy consumption with quantified savings** which had been achieved in the preceding week.

Taking the above mentioned example of reducing the ventilation rate in two production halls; this measure resulted in electricity savings of 11,000 EUR in Hall A and 14,000 EUR in Hall B within the first 4 months (see the charts below).



At the same time, actual topics and measures to be taken in the upcoming week were discussed, planned and tasks were divided. **This regular cooperation created a momentum which was slowly becoming a new standard, a new habit.** New standard not only for the Energy Champion but also for the Maintenance manager and his staff, the Production manager and his staff, the Plant manager and the operators on the shop floor. It literally resulted in a change of behavior in terms of focus on energy management.



Within four months from the start of the QUEST program, savings of 40,000 EUR (3% of annual energy cost) were reached through organizational changes and optimization measures and no technical investments were necessary (see the chart below).

Embedding in the system

During those four months, the Energy Champion learned the process of working the energy data into the valuable charts and graphs. It helped him to understand where the energy flows and what impact various activities within the plant have on the energy consumption not only in units of kWh, but **also in currency** (EUR). HE Consulting together with the site management created a simple visualization of the results which are put every week on the whiteboards at the individual production lines. The purpose is to give the operators on the shop floor a **direct feedback on what impact their actions have on the energy consumption**. Energy has become a hot topic during regular talks among the shift supervisors and the operators themselves. By May 2016 (18 months from the program start), the savings have reached 315,000 EUR and are continuously growing. The simple payback on the program covering the consultancy fees of HE Consulting and some small investments was thus about 5 months. The QUEST program contributed to embedding energy management into the company habits and initiated a process of creating an “energy culture”.

HE Consulting

At HE Consulting our main expertise is to help industrial clients achieve **significant energy savings** at their manufacturing facilities. Our approach is different from that of our competitors and from what most people believe **energy management** is about. The methodology we developed has proven to deliver for our clients large energy savings within only a short time period.

How can we support you?

- ▶▶ Preparation for ISO 50001 certification
- ▶▶ Energy Audits according to legislative requirements (406/2000, respectively, 27/2012/EU)
- ▶▶ Energy Assessments of individual projects (according to 406/2000)

However, we are not satisfied with merely identifying a savings potential for our clients and put it in a paper report. ISO 50001 certification or an energy audit with HE Consulting means that in addition to certification preparation or reaching compliance **we will not stop supporting you until the initially defined savings potential is delivered** and until you see this in a reduction of your energy bills. We call our unique methodology [QUEST](#), standing for quick energy savings technique.

What makes us different?

- We **make energy visible** in a way that you will understand. Different from conventional monitoring of consumptions we teach you to work with energy data in a new way.
- We **focus on the human factor** in energy management and help you with introducing the concept of „energy culture“ to your company, meaning a paradigm shift where the responsibility for energy consumption does not lie any longer exclusively with the energy manager.
- We use and deploy rapid and effective data tools and methods but will stay with you as long as it takes until you have acquired these and can **use them independently** without our support.
- We will ask you to pay for our services only after it is apparent that they will deliver the results and objectives that we have defined together at the beginning. This makes the program **self-financing**.

▶ **Get in touch** and discuss the potential of energy savings in your company with us.



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