

# Case Study

## Implementing a successful Energy Management System (EnMS) with our employees

"We managed to reduce the greenhouse gas emissions by over 10 percent in only two years and to reduce the energy cost by more than 700,000 Euros per year. This result was only achievable by actively involving all employees in our energy management system."

Hellmut Böttner, Energy Management Representative, FUJITSU; Claudia Wenger, Idea Management, FUJITSU



### Initial situation at the Augsburg facility

Since 1987 computer and storage systems have been developed and produced in Augsburg for worldwide commercialization. As the last and only location in Europe we produce up to 13,000 systems per day with 1,500 – 2,000 employees depending on the incoming orders. The Augsburg facility has its own development, production, procurement, logistics, sales and services and data centers for our customers, for tests and for production.

### The challenge

The electricity consumption in 2012 was as high as the consumption of 10,000 typical private households in Germany. Due to the increasing costs for electricity and gas and increasing consumption the energy costs rose from €1 million to €4 million in ten years. Our management therefore decided to analyze this trend and reverse it in all areas.

### The solution

An energy team was appointed. On the basis of the available electricity meters and the analyses of the Fraunhofer Institute the meter infrastructure was completed. The electricity consumption values of all essential areas are now available on the Intranet in periods of hours, days and months.

The energy team developed a concept to actively include all employees. The first step was a so-called "Idea collection". The employees were invited to present their ideas to an expert team. After the presentation and discussion of the ideas there was direct feedback about the implementation.

The second step was the start of the "Energy competition", together with the workers council. Here we assessed:

- Behavior,
- Consumption and
- Ideas.

The behavior of the departments was checked and assessed once a month by members of the energy team and the workers council. The consumption was compared with the consumption of the previous month. The ideas (more than 450!) were assigned to the relevant departments.

After five months the department with the winners was recognized with a special party and a monument. The continuous information flow in works meetings, via mails and information boards was the essential basis for the active involvement of all employees.

### Location Augsburg

Factory for computer and storage systems  
incl. development, production, procurement, logistics, sales, services  
and data centers

Foundation: 1987

Employees: over 1500 up to 2000 (depending on incoming orders)

Production capacity: 13,000 systems per day

Electricity consumption: ca. 33 GWh per year

Gas consumption: ca. 10 GWh per year

Website: [www.fujitsu.com/de/about/local/augsburg/](http://www.fujitsu.com/de/about/local/augsburg/)

### The challenge

Steadily increasing energy costs for electricity and gas:

In 10 years fourfold increase of costs despite high efforts like usage of heat recovery, night setback, calorific value boiler at the heating, usage of ground water and free cooling for air conditioning and the data centers.

### The solution

Introduction of an energy management system with detailed analyses including all employees by quality management and idea management and the workers council.

## Benefits

- Savings of 10% CO<sub>2</sub> emissions at the Augsburg facility in 2013 compared to 2011
- Savings of about 700,000 Euro for energy and energy taxes per year
- Increase of energy efficiency of typical products of 10% in one year

## The benefit

About 10% reduction of greenhouse gases was achieved at the Augsburg facility in 2013 in comparison to the year 2011 through the introduction of an energy management system. This corresponds to a value of 500,000 Euro. Additionally energy taxes savings of 200,000 € per year were achieved based on German energy legislation.

In a properly designed "Energy Advisor" the energy savings ideas of the employees were summarized and published on the Intranet.

A second edition has already been published and distributed to interested customers and institutes like IHK, VDE and VDI.

The energy efficiency of typical products (displays, desktops, notebooks, servers and workstations) could be improved by 10% in only one year due to the special commitment of our product managers and product developers. This is a big advantage of our products and a special benefit for our customers.

The Bavarian Environmental State Office called the introduction of our energy management system a "Good example from operational practice" with the title "With team spirit and ideas to success".

## Certificates

In April 2014 the Augsburg facility was certified by the „Deutsche Gesellschaft zur Zertifizierung von Managementsystemen (DQS)“ for the implementation and maintenance of an Energy Management System (ISO 50.001).



The Augsburg facility is the first location in Fujitsu to be certified to the international standard ISO 50 001

Fujitsu honored the Augsburg facility with The Environmental Contribution Award (2nd place) and the words:

FTS Augsburg has established the Energy management project, which aims to reduce energy costs and to be an energy efficient factory.

## Certificates

- CERTIFICATE Energy Management System acc. to ISO 50001:2011 (Deutsche Gesellschaft zur Zertifizierung von Managementsystemen (DQS) – **without any non-conformity!**)
- Environmental Contribution Award from Fujitsu (runner-up)
- ÖKOPROFIT-Award from city of Augsburg



At the beginning of 2013 Fujitsu's Augsburg facility was awarded the ÖKOPROFIT- Company 2012/2013 prize for special engagement in operating environmental protection. The award was the result of an external assessment of the environmental and energy management system incl. consideration of the energy planning, the energy performance indicators and other energy aspects.



## Conclusion

The successful implementation and maintenance of an energy management system is essential for the production in Europe. With the support from all employees substantial savings were achieved in Augsburg in the areas of energy consumption, greenhouse gas emissions and costs.

Even more important for our customers is that we improved the energy efficiency of our products by around 10% in only one year. We save energy on the customer's side and in our production. The certificates impressively confirm the success of activities by the employees in Augsburg. The team thus contributes to climate protection, reduction of greenhouse gas emissions and their own job security.

A key element for the success of an energy management system is the involvement of all employees. A concept including "Idea collection" and "Energy competition" can increase the motivation of the employees significantly.

Good collaboration with the experts of the facility and asset management is a further essential part of the successful implementation and maintenance of an energy management system.

## About Fujitsu Augsburg

The Augsburg facility is one of the most modern factories worldwide for computers and storage systems.

It is the only one in Europe and includes its own research, development, production, and data centers for IT products and solutions.

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