NATIONAL RESULTS – Germany, 2015-2018
FACTSHEET

STEAM UP

Summary

The Steam Up project aimed to assess the substantial and easily accessible energy-saving potential of steam systems in industries in order to support the EU objectives for energy efficiency. Steam Up presented concrete business cases to decision makers, based on 75 detailed audits from several European countries, ten of which have been executed in Austria.
Energy experts were trained in the Steam Up methodology and body of thoughts, as well as energy managers, end users, technical staff from all types of companies of various size and from all over the country. Moreover, the introduction of a capacity-building programme for technical staff and consultancies ensures a good return on investments.

Introduction to Steam Up

In all sectors of the European industry, there is a considerable and achievable energy-saving potential. Thus, the objective of the Steam Up project was to increase the energy efficiency of steam and to contribute to the CO_2 reduction by saving 55.6 GWh per year in the industry throughout Europe. The European industry has an energy-saving potential of 13%, 75% of which is found in industries that use steam and electrical motor systems. In general, these are large energy-intensive industries like chemicals, paper and pulp, food, and textile services. Steam Up therefore focused on these industries in Germany, Spain, Greece, Austria, the Czech Republic, Italy, the Netherlands, and Denmark.

Unique Selling Points of Steam Up

What made the Steam Up project different from other approaches are

- the focus on steam systems and potential alternatives,
- the attention to non-energy benefits (NEBs),
- the design and use of an energy management centre,
- the effort of bridging the gap between the technical staff and the decision makers (managers, board of directors),
- the aim to influence cultural behaviour and induce a cultural change,
- and the intention to increase the companies' commitment to energy efficiency (ISO50001, environmental policy, etc.).

Audits: savings and Non Energy Benefits (NEBs) achieved

In Germany 10 audits were carried out at small, medium and large sized companies in the sectors textile care/industrial laundry services, brewery, food industry, fabric production and industrial surface protection systems. The total energy saving potential of all audits is 3,988 GWh/a and expressed in money 268.162 € per year. Apart from the energy savings, the following Non Energy Benefits will be gained after implementation of proposed measures (for an exhaustive enumeration of NEBs visit our website)

1. less CO_2 emissions
2. reduced water consumption and costs
3. improvement of working safety conditions

Audit fact sheets for Germany and for other countries are available on the website.

Industry sectors audited:

1. Textile care/ Industrial laundry services
2. Breweries
3. Food industry
4. Fabric production
5. Industrial surface protection systems

Type of companies:

9 SMEs
1 Large enterprise

Total (estimated) Investments

1.425.727 €

Total (estimated) Savings

268.162 €/a

3,988 GWh/a

Most important Non Energy Benefits

Less CO_2 emissions

Reduced water costs

Maintenance benefits

More information for Germany

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Capacity building and expertise in Germany

In Germany were in total 26 energy experts trained in 12 hours in the Steam Up methodology. There yet highly qualified and experienced energy experts underline the Steam Up project body of thoughts.

Most of the trainees were auditors themselves and work for small and medium sized consultancies. Many of them were already specialized in energy consulting industrial companies and wanted to broaden their steam process optimization know-how.

Best practices in Germany and Conclusion

The companies which took part in the Steam-Up audits were all together aware of that Steam is a complex system and companies understood that there is a lot of potential within the audits. Many steam boilers were outdated and not working efficiently. Some could gain more efficiency by working on the system's insulation and electronical control facilities. Some boilers, however were too old for improving them in an economical reasonable way and therefore two companies decided already to replace the old system. Most of the companies were SMEs and did not have a systematic energy management implemented. The Steam-Up audit led companies to a better understanding of energy efficiency of their steam systems.

In the field of trainings in Germany concerning energy efficiency in steam related processes there is still work to do. There is a big network of official accredited energy auditors and superordinate institutions offer a wide spectrum of training issues. However, steam is still underrepresented and should be integrated in training possibilities for auditors as well as companies.