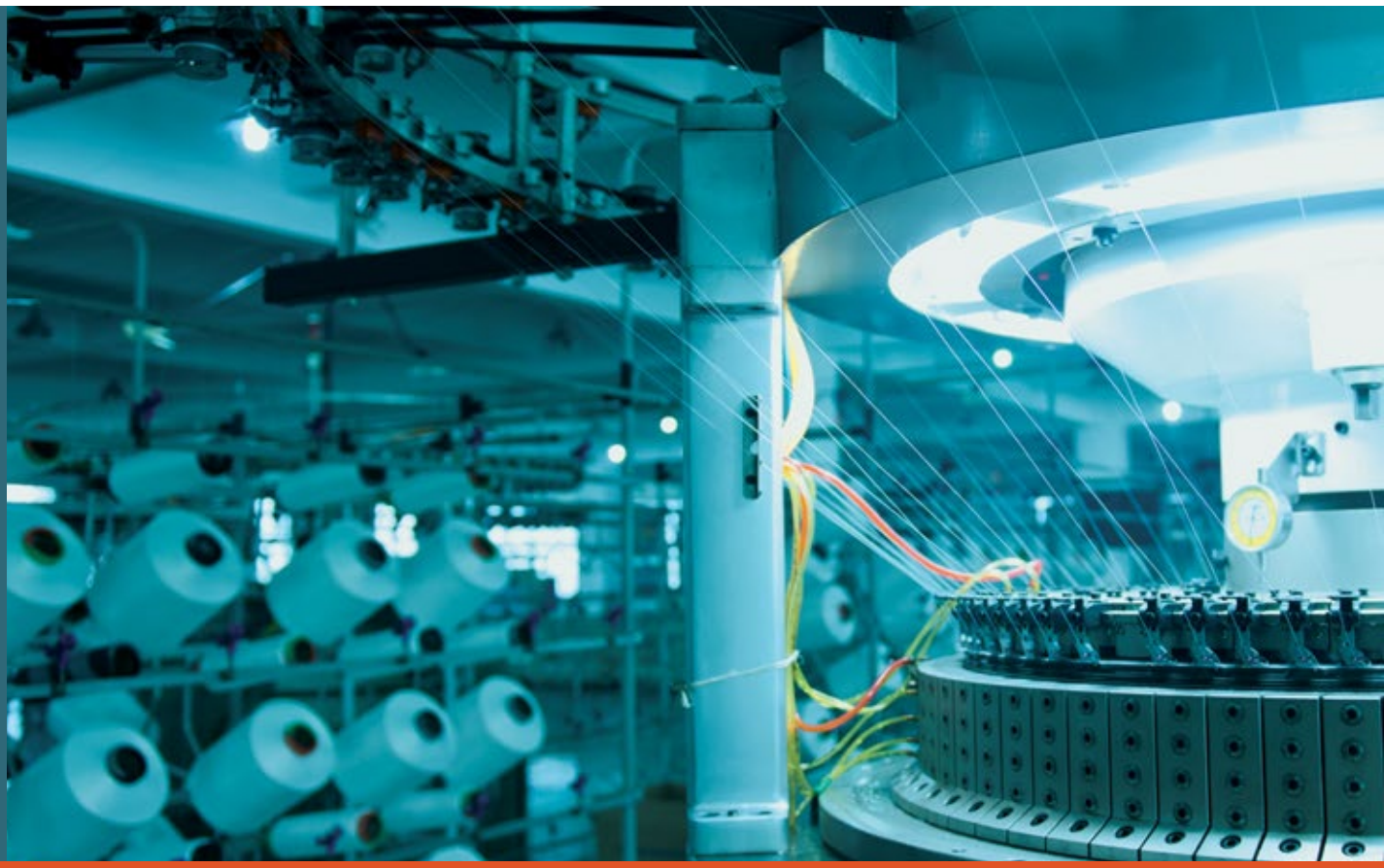
Time
for Energy Efficiency in Textile SMEs



SAVE ENERGY IN TEXTILE SMEs

ENERGY MADE·TO·MEASURE

OCTOBER 2016

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Foreword

In Europe we have 54.000 Textile companies and approximately 635.000 workers producing anything from high tech fibers or fabrics which protect other people to fashionable items generating wealth and jobs.

In 2015 the number of companies, the employment and the turnover of the EU textile sector as a whole have all slightly grown, for the first time in many years.

In Euratex we see how Sustainability in all of its very diverse forms lays at center of the business strategy of many European companies, whether they are large or small ones with some 9 people family-companies.

Energy is crucial in textile manufacturing and Energy Efficiency is one of the areas of sustainability in which improvement can even match costs reduction. Companies, therefore, thrive towards energy efficiency as long as they have the needed resources and have the know-how.

The SET project, part of the wider Energy Made to Measure (EM2M) campaign, has brought together technicians, companies and industry organizations of 11 European countries to directly assist about **150 companies** to understand and act on their energy saving potential.

The SET project has delivered its results in 12 languages notably the SET scheme. The latter is based on a new software for companies to monitor their energy consumption, learn best practices, and benchmark their own energy performance with their competitors or similar companies.

The next pages provide insight of what has been achieved and what will be pursued by companies in the near future.

None of the above achievements would have been possible without the dedication of the professionals who work in SET, the care for sustainability of the companies and the support of the European Union with its Intelligent Energy Europe programme managed by the EASME, the agency of the European Commission for the Small and Medium Enterprises.

What is SET?

Intro

Energy Efficiency in manufacturing industry has been a hot topic for a long time and yet companies seem not to rush on a mass scale to implement energy efficiency actions.

In small to medium size companies (SMEs) two major facts preventing actions relate to companies' limited awareness of the actual energy consumption and the tendency of considering energy as a fixed cost rather than a resource which needs to be managed.

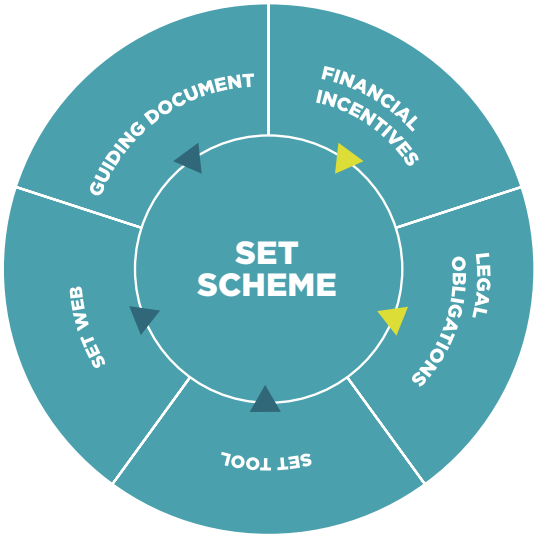
SET, Saving Energy in Textile, was set up to overcome these barriers in European textile companies through self-analysis of consumption, education on data collection, benchmarking and recommendation of tailored best practice.

In 30 months SET project teams developed a software to help the companies in collecting and monitoring their energy data, helped around 150 companies to self-assess and understand their energy performances, to compare with benchmarks and to identify how to reduce energy needs and costs.

Approach

Thanks to the results of previous experiences (ARTISAN and SESEC), the project team was aware of the fragmented and scattered supply chain, dominated by small companies with limited investment capacity or know-how on energy efficiency. Moreover, there was a great difficulty in establishing valid benchmarks for factories with different technologies and, because of different priorities in different countries, also in creating awareness and motivating to invest time and resources into Energy Efficiency (not substituting Energy Audits and ESCOs role).

The SET project partners defined a methodology to be easily implemented by companies made up of three fundamental phases: Data collection, Analysis of results, Comparative analysis.



DATA COLLECTION
ENERGY DATA
PRODUCTION DATA
ORGANIZATIONAL DATA
SPECIFIC PROCESS DATA

ANALYSIS OF RESULTS
BEST PRACTICE
PERFORMANCE ANALYSIS KPI

COMPARATIVE ANALYSIS
BENCHMARK
SPECIFIC ANALYSIS
GAMIFICATION

What has SET Delivered?

The SET Scheme is the major outcome of the SET project, designed for textile companies to autonomously assess the energy consumption and energy performances in their production process and, ultimately, to improve energy efficiency and saving.

SET Scheme is made up of 4 elements:

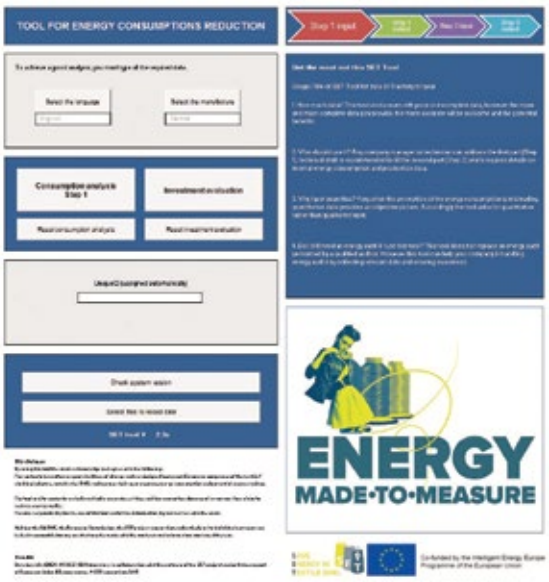
- SET Tool, a stand-alone software for self-assessment;
- SET Web, a web application for advanced benchmarking and comparison of the performances across years;
- a guiding document showing how to apply SET in the best way;
- information on financial incentives and legal obligation in the countries involved in the project.

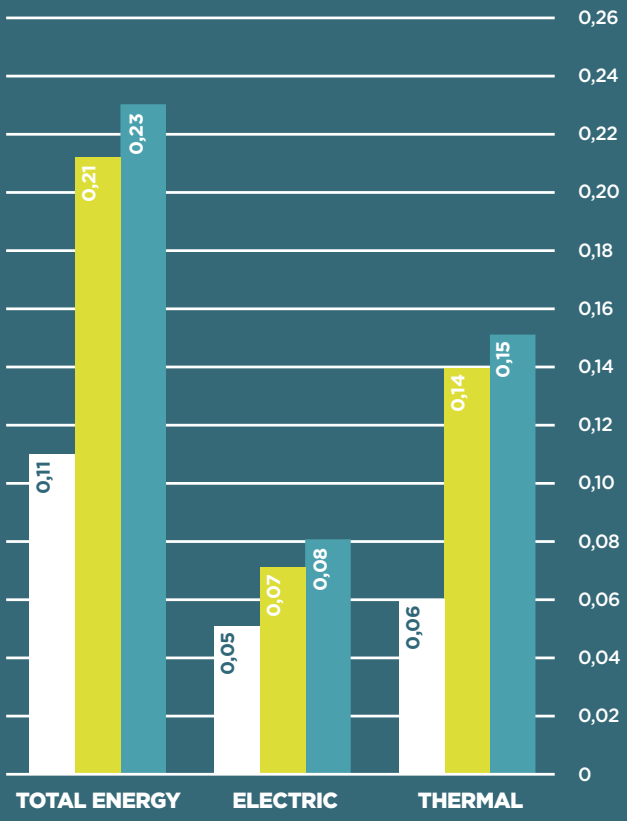
The SET Tool is a free 40.000 line code Excel application, downloadable from www.em2m.eu/tools. Its aim is to guide companies in collecting and organizing the factory data on energy consumption and production. On the base of this input, the tool calculates the factory's energy indices and offers a selection of suitable best practices, graphic consumption representations, analysis of return on investment, etc.

The SET Web is a web application which offers customized services depending on the users features. Primarily, it allows companies to benchmark, in strict confidentiality, their own energy performance data with data of comparable factories active in the same production processes. The web application is based on a constantly updated database and it is free of charge for companies which contribute by sending confidentially their own energy data collected through the SET Tool. The key point is that all data sent by the SET Tool to the SET Web are completely anonymous.

On the SET Web companies can:

- look at examples in the demo pages showing elaborations, graphs, benchmarks and all the services provided by SET;
- compare their factory's energy performance with those of similar European companies, thanks to customized and dynamic benchmarks built within the project;
- forecast models for energy consumption based on their technologies and production;
- compare their progress year by year.





Cost of energy per turnover (euro/euro)

With SET Web managers compare the company energy performances with the country statistic data (source Eurostat), and the most similar companies including potential competitors (source SET Web database). The latter does not represent a sector average. The service is free of charge and anonymous.

The SET scheme was applied in 11 EU countries with different business responses also influenced by new obligations (e.g. DE, BE), economic situation and companies' size. In the last project months the SET was extended to the 11th country.

Country	Objective	Selected companies	SET Scheme applied in	Valid datasets in SET Web
Germany	38	58	20	18
Czech Republic	20	24	20	20
Hungary	19	21	20	31
Belgium	19	30	6	8
Romania	20	21	22	21
Italy	19	17	27	28
Portugal	19	23	20	16
Bulgaria	3	3	3	3
Croatia	3	6	5	5
Lithuania	3	3	3	3
France	0	1	1	1
Total	**150**	**207**	**145**	**153**

Financial Incentives and Legal Obligations in Energy Efficiency

All over Europe, the textile sector faces important Energy Efficiency challenges. The energy efficiency target of the EU, expected to be achieved until 2020, is the beginning and bottom line of energy saving efforts across the European countries. The "Energy Efficiency Directive 2012/27/EU" gives important indications of how to implement this aim in legislation and industrial practice. Keeping the overview of the numerous existing and required energy saving efforts is often difficult. Therefore, the SET Scheme includes a review of legal obligation with the description of existing and upcoming legal requirements, which are especially of interest for the Textile Industry. Not only generally valid obligations are listed, also specific national overviews are given. The listed paragraphs contain input from 11 European countries (Belgium, Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Italy, Lithuania, Portugal, and Romania) and from an overall European point of view.

The review covers guidelines and legal requirements which:

- Are necessary to comply with
- Aim to improve energy efficiency
- Build the basis for the SET project team to develop the Energy Saving and Efficiency Tools (SET Tool) for SMEs of the European textile industry.

The legal obligation overview mainly focuses on energy procurement, energy infrastructure and energy limitations, regarding textile products and processes.

The SET Scheme offers information about existing financial opportunities on energy efficiency for textile companies. This review deals with the country specific aspects as well. It offers opportunities on investments (chosen or required) on energy efficiency that can be financially supported. The support measures taken into consideration include private or public incentives, grants, support schemes, and loans relevant to help companies' own investments in energy efficiency. Schemes for project proposals, which are strictly research-focused, are not taken into consideration at this stage.

The document details on:

- European support measures
- National support measures from the above mentioned ten European countries.

Collaborating with Textile Machinery Manufacturers

In early 2015 Euratex signed bilateral agreements with ACIMIT and VDMA for common actions for energy efficiency and sustainability in the framework the Energy Made to Measure campaign (including SET).

These two high value collaborations resulted in both VDMA and ACIMIT joining the SET Advisory Board and enabled technical know-how exchange as well as joint communication; for instance press conferences held at the world class fairs of TechTextile in Frankfurt (May 2015) and the ITMA fair in Milano (November 2015).

Euratex Director General: "*Working together with crucial partners of textile companies, the machine manufactures, has really pleased a lot. It helped our teams in developing the SET Tools and most importantly we launched a joint dialogue on how to make our European sector even more sustainable and competitive. After this experience we look forward for new collaborations for sustainable productions.*"

Thanks to the SET Tool a company discovered an energy cost higher than the national average for that consumption band; by analyzing the reason of such extra costs the presence of load peaks was observed, thus the company decided to change operation scheduling to reduce such peaks.

ACIMIT

Sustainable Technologies project

www.acimit.it

Sustainable Technologies is the project realized by ACIMIT, the Association of Italian Textile Machinery Manufacturers, in cooperation with the engineering firm D'APPOLONIA, with the aim of developing and promoting new models for production processes and efficient energy use through reduced environmental impact. At the center of the project is the ACIMIT Green Label, a certified document that aims to identify the energy and environmental performances of textile machinery and make them easily recognizable and comprehensible. ACIMIT project testifies the commitment of Italian textile machinery manufacturers to research and advance solutions that respond to sustainability criteria. This commitment translates into environmentally efficient technology solutions that provide significant benefits to users, in terms of reduced production costs.

"*By signing this agreement with EURATEX*," commented ACIMIT President Raffaella Carabelli, "*we intend to pursue our ongoing commitment to issues which we consider of interest to the entire European textile industry: sustainability and energy efficiency. Only through the involvement of the greatest possible number of operators in the industry we will be able to increase the competitiveness of all its components, relating to both the textile and textile machinery sectors*."

VDMA

Blue competence initiative

BLUECOMPETENCE
Textile Machinery
Engineering a better world

www.vdma.de

Energy-efficient textile machinery offers great saving potentials. VDMA Textile Machinery Association welcomes the Energy Made to Measure campaign and the SET project coordinated by Euratex, to pursue energy efficiency in the European textile industry. The textile machinery manufacturers affiliated with the VDMA are recognized for their leadership as regards innovations and quality. They constantly optimize machines, components and technology, also in view of sustainability, and thus offer the key for energy- and resource-efficient manufacturing processes.

The VDMA and its member companies undertake a wide range of efforts to promote sustainable textile production. Within the framework of the sustainability initiative the Blue Competence, the VDMA concentrates a variety of endeavours in order to make it more assertive. The VDMA guide "Conserving resources – securing savings-potential" gives an overview of important parameters and how both machinery and textile manufacturers can influence energy efficiency. The success stories of the VDMA member companies and the five analyses of the entire textile process chain show how profits can be increased through higher energy and material efficiency. With this background knowledge VDMA Textile Machinery took part in the Advisory Board meetings of SET to lay emphasis on transparent and comparable examples.

Christine Karin Schmidt, Head of Technology and Research of VDMA Textil Machinery told "*Material and energy efficiency offer the opportunity to increase competitiveness with sustainable measures. SET provides valuable impulses and demonstrates saving potentials in the textile industry*".

The Business Use in Europe

SET in Belgium

The Belgian textile competence centre CENTEXBEL, was in charge of the coordination of all SET activities in Belgium. This task mainly included the presentation of the SET-package to the Belgian textile companies, working in the field of the SET project and providing direct support to these companies. Some companies were visited directly. Other companies were invited to the Belgian SET-event, held on the 18th February 2016. The event was mainly attended by representatives of production companies.

Throughout the course of the SET-project, we have found that the Belgian companies already invested quite a lot in the field of energy efficiency. The driving factor was not only the high energy prices, but also the legal framework, which categorizes companies with a primary energy consumption exceeding 0.1Pj (per annum) as Energy intensive. Energy intensive companies have the obligation to periodically perform energy audits and subsequently set up a plan of action in order to reduce the energy consumption. This obligation has initiated a large gain of know-how in the field of energy efficiency for our companies.

In one of the Belgian companies that participated in the SET-project, CENTEXBEL was able to give direct support when setting up the official energy plan. The most important measures that were identified for this company include: replacing T8 lighting with newer T5 lighting, placing a frequency regulation on some of the aircompressors, PID - regulator for releasing blowdown & the compensation of cos(phi) by a condensator battery on one of the production lines. In total this company has dedicated at least 106.000 euros to implement the identified measures.

SET in Bulgaria

The Bulgarian national sectorial association BAATPE joined the second stage of the SET project in order to motivate and boost energy efficiency among the textile producers in the country. BAATPE took care of the whole awareness-raising campaign in Bulgaria and was the contact point for companies interested to use the project results.

In line with the project conception, the SET tool was tested on-site by 3 textile companies with the support of BAATPE experts. The general reaction was quite positive as all companies managed to identify weak points and to pick some best practices which they plan to implement in the short term. As a result, some of the planned energy-efficiency measures have already been realized and some savings have already been done at the mentioned companies.

Beside the on-site technical support, the national association also organized one training seminar on SET in the city of Pleven in order to promote the topic of energy efficiency among a broader number of textile enterprises. The event included an afternoon session in which the practical use of the SET tool was demonstrated. Overall 16 company representatives took part in the seminar and the feedback showed that most of the companies were satisfied with it and planned to use the SET tool at least once with the aim of investing in energy efficiency measures. An important conclusion was that there is still a lot of unused potential regarding energy efficiency in the textile industry and the companies need to undertake some measures to tackle this.

SET in Croatia

CEA the Croatian national Textile and Leather Industry Association is the SET national contact point and has been driving all project activities in the country. Thanks to close support and technical advices of ENEA, 5 Croatian companies received direct support to understand and adopt the SET Scheme while all other members of CEA (more than 50 companies) were made aware and familiarized with the functionalities of SET services.

Companies were addressed in national language via email, workshop, web and individual meetings. Energy experts of ENEA directly visited two plants in Čateks and in Jadran Tvornica Čarapa where they supported analysis of energy consumption and provided feedback on possible saving measures and related investments.

Some of the companies learned about the SET Tool via webinar which allowed them online training on operating the tool and provided an immediate result of the analysis of given data as for instance the companies Unitas (Zagreb) and Regeneracija (Zabok).

All these activities were performed under the promotional umbrella of the Energy Made to Measure campaign and got the attention of many national institutions which are involved in energy efficiency matters. Several authorities and some companies had already participated in previous EM2M acvities in Croatia during the SESEC project (2014); hence they were already familiar with the SET project way of working and the overall campaign.

As a result, 5 of the most important Croatian factories in the sector of textile industry contributed to the SET web database for performance comparison. The SET results were also discussed with national authorities, some of which are already familiarized with the project SESEC and SET Tool for clothing industry.

SET application in Croatia showed an interesting potential on energy saving mainly in the thermal energy, with values higher than 20% of thermal energy consumption and savings of electric energy near to 10%.

Recommended actions included: replacement of motors with high efficient models, steam generation optimization, heat recovery or interventions for compressed air. These highlighted promising benefits achievable with quite short payback time.

MR JURE BARIŠIĆ
Jadran Tvornica čarapa

The SET Tool for energy efficiency has helped us to compare the data collected in our factory with support of ENEA experts and to use this information according to current possibilities.

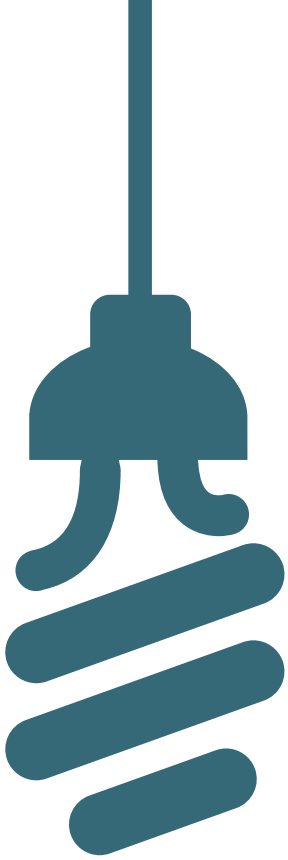
MR DAVOR SABOLIĆ
Čateks, CEO

[...] comparing our performances to those of other companies showed us where we are today, and where we should go in the future in respect to energy management.

MR LUKA ZULIN
Unitas

With relatively small amount of input data the tool offers a wide spread of consumption interpretation. This enables the user to make targeted investments.

SET in Czech Republic



The Czech Republic has made a substantial progress in the area of reducing industrial process energy demand. Despite this fact, the Czech industrial energy demand is in absolute terms still almost more than triple in comparison with the EU-15 average. There is a vast unexploited economic potential of energy savings with lower costs per unit of saved energy than common costs in the residential sector.

The main tool for implementing cost-saving actions in the industrial sector is the Operational Programme Entrepreneurship and Innovation for Competitiveness.

Two basic types of supported actions included:
- reducing building energy demand
- and enhancing energy efficient technologies.

This strategy fully supports and develops the SET project, which will enable Czech manufacturers in the textile industry to make major long-distance energy, organizational and investment decisions and to take substantive action to reduce energy intensity of individual companies. By using the results of comparative SET Tool with other European producers in the field, they receive the necessary information and documents for the above involvement in the Operational Programme Entrepreneurship and Innovation for Competitiveness.

Thanks to ATOK action with the SET, 20 Czech companies (in 2 cases with cooperation with ENEA, Italy) received direct support from ATOK project experts to understand and adopt the SET Tool including the validation of the SET Tool outcomes. About 60 companies were addressed in a very wide and carefully planned communication actions performed in the national language.

The seminars and presentations were organized in the main Czech textile districts with training sections allowing the firms to run the SET Tool and get an immediate feedback from their own data: Mladé Buky (east Bohemia) and Broumov (east Bohemia - 3 seminars for the members of ATOK, CLUTEX cluster and Czech Technological Platform for Textile).

Other promotional tools:
- Information campaign in the monthly review ATOK from the very beginning of the project (2014-2016),
- ATOK General assemblies - Meeting with company CEOs and professionals in the energy sector
- Exhibitions and Fairs – Techtextil - Frankfurt am M., International Textile Trade Fair STYL (Brno, south Moravia)
- Leaflets, banners, mailing, personal contact
- TEXCHEM conferences (colorists and chemists) and XXIV. Conference of International Federation of Associations of Textile Chenmists and Colourists (IFATCC) in Pardubice,

Now the ATOK activities are focused on gaining experience of the first 20 companies involved in the SET project (best practice), which can be used by other Czech companies after the project ends.

SET in Germany

SET in Germany was mainly promoted and managed by DITF-MR (Deutsche Institute für Textil- und Faserforschung) and IVGT (Industrie-verband Garne-Gewebe-Technische Textilien e.V.). The introducing SET seminar at IVGT premises in Frankfurt a.M. in September 2015, which was the 2nd European Workshop on Energy Efficiency within SET, attracted 40 participants, working in all stages of the textile production and textile engineering sector. At national level, the SET work activities started with identifying trends of national initiatives and legal requirements, which are relevant for the textile industry in Germany. This also includes assessing funding measures, supporting energy efficiency by the European Union and by the Member States. All these listed and available steps for energy efficiency were presented during the meeting in Frankfurt after a brief overview of the EU Energy Union policies. Particular attention was paid to the SET Tool offering self-assessment for textile companies.

Beside the technical features, the investment evaluator module was also promoted in detail.

In the wake of this, SET was promoted at the annual committee of managers in weaving, hosted as well at IVGT premises in Frankfurt on the 7th of October. Twenty experts of the weaving sector attended this technical workshop. The content of this session explicitly referred to energy consumption in weaving processing stages. The weaving machine model was presented, explained and discussed in detail.

Beyond these training events, SET was presented at the world class industry fair Techtextil in May 2015 in Frankfurt/Germany.

Plenty of fair visitors showed great interest on the energy efficiency project and caught up on detailed SET contents, which were on-site provided by DITF-MR. In addition, SET was locally promoted in several German textile companies in the fields of weaving, knitting, warp knitting and finishing. Employees, as well as, chief executives were locally coached and informed about SET.

Amazed about the comprehensive options, provided by the integrated SET scheme, all assisted companies could definitely benefit from the guidance of the German SET partners so far. During the meetings, precise and tailored analysis of companies' products and production processes with special reference to the energy consumption were performed and delivered potential for energy consumption reduction.

As a matter of fact, a lot of saving opportunities were detected and implemented. Through the intensive face-to-face collaboration, which was performed and maintained in Germany, companies could profit successfully from the SET achievements. Several companies used the SET Tool during the project time on their own without the assistance of the SET partners.

Testimonial

Wilhelm Zuleeg GmbH

Our company, the Wilhelm Zuleeg GmbH, settled in Upper Franconia, a northern Bavarian region of Germany, participated in the SET project as a producer of high-quality woven fabrics. Our products are predominantly produced on air-jet weaving machines. The air consumption of these machines strongly depends on speed, yarn titer, fiber type and yarn quality. Bearing in mind that around 30% of the total electrical consumption relates to the provision of compressed air, for us a major objective within the SET project was to optimize the specific air consumption. By applying the SET Tool, we identified several energy savings potentials. Good examples are for instance the reduction of the compressed air pressure level as well as the reduction of compressors stand-by times. As a result, a total saving of around 10% in the compressed air system infrastructure seems to be realistic. Furthermore, the optimisation of product specific machine parameters like blowing time of the relay nozzles is expected to reduce the air consumption by around 25-30%, without affecting the product quality. To sum up, we have realized savings of compressed air equivalent to 10% of our total electricity consumption; so we can save energy costs of around at least 20.000 €, without any investment. We can finally mention a new photovoltaic system installed to cover 8% of our current electricity consumption with renewable energy. That is in line with our company's energy policy which aims at progressively reducing the carbon footprint of our fabrics.

SET in France

In 2016 the SET project entered in France thanks to collaborations between Euratex and national organisations notably the UIT (Union des Industries Textil), the Techtera cluster and Prémiére Vision. These collaborations were enabled by the technical contribution provided by the SET partners Centexbel and ENEA and also with support of the European Technology Platform for the Future of Textiles and Clothing.

The project team was thrilled to launch activities in one of the largest EU country for textile manufacturing and in spite of the absence of French partners in the consortium. The textile industry in France accounts for more than 2300 companies mostly SMEs and active in all segments of textile manufacturing, from high tech technical textiles to fashion and interior. Companies are traditionally located around specific geographical areas, such as the Lyon cluster, and are integrated in the global value chain as visible in the industry fair of Prémiére Vision, one of world leading event for companies and fashion professionals.

In September a fully focused SET meeting was organized in Lyon and hosted by the cluster Techtera (Textiles and Flexible Materials) and allowed bilateral presentations to companies active in the technical textiles and high fashion market. The project tools were presented by the ENEA staff using the French version of the SET scheme and information material also in French. The formula of bilateral sessions allowed engineers to elaborate on tool functionalities and benchmarking based on the specific needs and interests of the participating companies. In one case, energy data monitoring using basic methods developed by a company was replaced by a real time monitoring upgrade using the SET software. The participation of the Holding Textile Hermès was also very much appreciated by the SET project team which gained feedback on SET functionalities and assess possible follow up in the French cluster area, in collaboration with Techtera.

Shortly after the Lyon experience, The SET partners Euratex and ENEA and the industry testimonial Marzotto joined a “Smart talk” session on energy efficiency for sustainable productions in the Smart Creation square of Première Vision. The smart talk session presented benefits of SET in a dynamic format with questions and shorts answers moderated by experts of C.L.A.S.S.

This collaboration offered the chance to introduce SET to textile companies in one the highest visibility platform in Europe and most importantly through the experience of an influential industry testimonial which applied SET extensively with both large and small companies across Europe.

SET in Hungary

In Hungary, the Hungarian Society of Textile Technology and Science (TMTE), the leading professional organization of the textile industry, undertook to carry out implementation of the SET project and to promote its results. In the beginning, the TMTE team supported by experts delegated by 7 Hungarian companies and in association with CITEVE (Portugal), responsible for controlling the regional working group, participated in the development and testing of the SET Tool, creating the Hungarian version and training the staff appointed by the 7 companies and in supporting the interested companies involved. In 2016, 12 additional companies were supported and in this phase the TMTE Team worked independently, also to train company staff to use the SET Tool.

Two ad-hoc events focused on energy efficient production, energy saving opportunities and demonstration of the best practices identified by the SET. Company feedback was very positive in spite of the remote locations of origins and fairly different company profiles. Companies' staff particularly appreciated the events as occasion to learn about best practices and to exchange ideas.

MR. GÁBOR KOROMPAY

General Manager of Albertfalvi Cérnázó Kft.

Do you consider energy efficiency to be an important factor of competitiveness of a textile company?
"Of course, it is an important factor, particularly because energy amounts to 10% of the operating expenses. However, beyond the economic considerations, a crucial component of competitiveness is the fact that our multinational buyer audits specifically our actions taken in favor of improving our energy efficiency. Any improvement of sustainable competitiveness can only be achieved if we regularly carry out measurements and analyze the respective data and the underlying root causes, also in this respect."

What results did you achieve installing LED lighting in your company?
"Insufficient illumination prompted us to initiate upgrading by supplementing the LED technology with motion detectors. Now, our production hall is illuminated only at places and in periods where and when it is needed. Thanks to this method, a 200% improvement of illumination has been coupled with 50% reduction of energy consumption in the production area."

Which other energy efficiency measures did you introduce?
"We have consistently striven to decrease consumption of heating energy and substituted advanced control devices for the old heating system. It is important to look for ways to achieve savings also by reducing the consumption of energy in production, in addition to the infrastructural developments. I fully agree with Mr. Bertram Rollmann (BAATPE) who paid much attention to the respective specific ratios. As to complete one of our key tasks in the future, we shall supply our equipment with metering devices in order to supply proper ratios needed in search for units to be improved."

SET in Italy

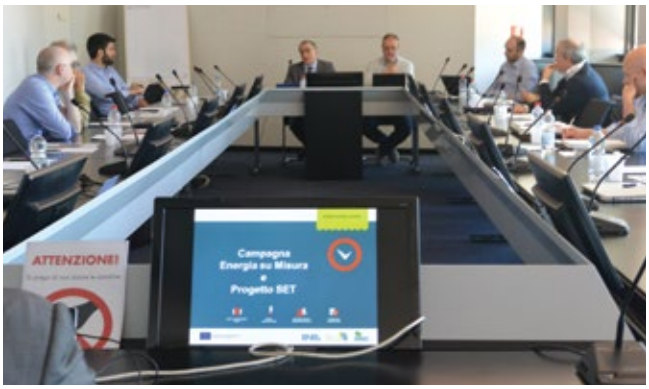
ENEA, the National Agency for New Technologies, Energy and Sustainable Economic Development, launched and managed all SET activities in Italy working very closely with 21 Italian companies. Thanks to its in house technical expertise, ENEA played a key role to develop the SET Tool and the SET web and to assist the SET teams in other European countries, notably Croatia, Czech Republic, Lithuania and France.

As many as 21 Italian companies received direct support to understand and benefit from the SET Scheme and more than 16 factories welcomed energy experts of ENEA in their premises to assist and validate the result of the SET software. A carefully planned, large scale communication action run by ENEA in collaboration with local organization enabled the experts to address about 100 companies in their mother tongue. Specific public events which included direct training were organized in the main Italian textile districts of Prato (Tuscany), Biella (Piedmont), Legnano, Varese and Como (Lombardy). Companies using their own data tested the SET Tool and received real time support to process their own data.

The synergy with the Energy Made to Measure campaign supported participation at events and received attention from local media. The success cases presented by companies' delegates were particularly useful to motivate peers based on the evidence of return on investments from successful energy efficiency. A leading example from the company Marchi & Fildi showed reduction of 30% of over 3 years of work, with partial assistance from the SET team. At an event in the city of Varese, the company Leggiuno testified its experience in identifying the most appropriate efficiency actions.

Strongly supported by the media campaign as many as 31 Italian factories (until September 2016) contributed anonymously to the SET Web database which enabled the SET benchmarking service.

Biella *The tool allows to extract valuable information from data which are already available in the company, but which are scattered across different offices and functions*



Como *The possibility to compare our performance with a set of anonymous firms very close to our technologies is an incentive to improve our efficiency*

MASSIMO MARCHI

CEO Marchi & Fildi

Why in your opinion should textile companies invest time and resources in Energy Efficiency, as they already face tough competition and complex economic situation?
The textile industry is traditionally a strong user of thermal and electric energy; for instance in spinning mills some 35% of the production costs are represented by electric energy. This number alone shows how important it is to invest in Energy saving for companies to be more competitive.

Your company has made great efforts to reduce energy consumption, what has been achieved and what are the key factors for success?
MARCHI & FILDI started to work on energy cost in spinning mills and after 3 years we managed to reduce the energy cost per product by 30%. This is an impressive achievement especially when you think how often companies struggle to reduce the production cost by few cents. There are several factors which took us there:

1. we appointed an Energy manager, a qualified profile dedicated full time to Energy saving,
2. we studied the production processes and identified the mix of investments to save energy
3. we opened our plants to collaboration with experts, including those of ENEA, who supported us in the adoption of best practices.

What was the role played by the SET project in the overall scheme of actions undertaken by Marchi & Fildi?
Our energy saving project is strictly connected to the Energy Made To Measure campaign and especially the SET project. At the beginning the SET Tool was very useful to measure the energy efficiency of our spinning departments: in other words we could benchmark our energy performances. We then learned how much room for improvement we had and how that justified appointing full time Energy manager. The SET tool also allowed us to identify some best practices immediately available and sometimes with a payback time of one year. Today SET has become a tool which we use to regularly measure our improvements in energy cost reduction. I finally wish to stress how SET is an important tool for the textile industry and that it is now up to the companies to make a wise use of it. That also implies allocating the right resources, especially human resources which, still today, are the companies' most precious assets.

Performance indicators in Italy

Based on the information provided by the companies the measures implemented or expected generated the following results: considering the cases of nine factories savings of 3.300 kWhe were identified for a reduction of 4,15% of the total electric energy consumption while, examining the cases of three factories, savings of 3.470 kWht were identified for a reduction of 14.5% of the total thermal energy consumption.[1] By visiting companies an evolution has been observed in Italy in the most recent years: LED lighting, cogeneration and electric energy re-phasing are already known and largely adopted while the quantity of energy for product unit is decreasing year by year; in parallel large margins of improvement have been identified, especially in thermal uses for processes like dyeing and finishing.

Improvement actions have often been identified, for example, by recovering heat from smokes or by improving efficiency in compressed air and ventilation systems.

Thanks to the national features and available incentives in many cases thermal energy savings resulting from heat recovery from smokes have had a very short payback time (2 years). Several companies reported branding or public communication as important driver to take action and work for energy efficiency. The benefits deriving from being more eco-friendly and sustainable were considered beyond the strictly cost benefits analysis.

Observed consumptions

Evaluating costs and energy consumptions per product unit in the textile industry is not easy because few sources are available and in general they are based on general sectorial average values (for example based on ATECO classification like Eurostat data elaborations) or literature papers on very specific cases, related to a specific technology or machinery applied to a narrow range of materials and conditions.

The SET project collected and structured a large quantity of data from the full factory processes. The SET observed energy cost per production unit in mechanical spinning of natural fibres between 5-10% while for fabric finishing and dyeing this value grows up to 20% and more. In similar way, even if with a great variance according to product type and technology, the energy consumption per production unit observed in the SET is around 5 kWhe per product kg in spinning mills while it is about 10-15 kWht per kg for fabric dyers (but with peaks of more than 40 kWht per kg).

It shall be stressed that the performances of factories supported in the project timeframe represent a very small sample of the sector and the data collected cannot, and shall not, be generalized. Nonetheless, the relevance of the energy costs remains a strong factor of competitiveness for the textile sector.

1. Disclaimer note: the above data are calculated based on real consumption and savings. However being the data sample quite limited, the conclusions presented cannot be generalised to the national apparel industry as a whole.

SERGIO TAMBORINI

CEO Gruppo Marzotto and Ratti

Your company is very committed to sustainable textile production, can you tell us the two main achievements and the key for this success?

The Group commitment to sustainable production and sustainability has been assumed as a must rather than an option for many years already. Sustainability is for the Marzotto Group and Ratti on the same level as Quality, Service, Products and R&D. Productivity, competitiveness, efficiency and respect for our Planet are the key issues that every day motivates all the people of Marzotto Group and Ratti in reducing waste generation, increasing material and energy efficiency, in line with the circular economy goals. We think that great benefits for sustainable productions can also be achieved thanks to a collaboration across the whole value chain, from fiber suppliers to fabric producers and up to garment makers. We are working every day to bring the idea that sustainability and fashion can coexist together.

Strong savings have been achieved over the past year in chemicals, water and energy consumption. Thanks, also, to the investments done, for example in one year, significant savings have been achieved, in the Marzotto Group as a whole, in terms of:

- Water -10%
- Electricity -15%
- Natural gas -15%.

In Ratti:

- Water -22%, 86.615.308 liters (*almost 90 Olympic swimming pools*)
- Electric energy -13%, 1.216.814 Kwh (*annual consumption of 2000 people*)
- Methane gas -29%, 1.385.816 m^3 (*annual consumption of 1000 families*).

How the SET project contributed to in this work in your company?

Monitoring the energy consumption is a key issue for the energy saving. The SET tool allows us to compare the energy consumption of the plant, year by year, giving the possibility of an immediate check of the quality of the investment that we have done. The SET has offered to us, and to our suppliers, a common approach to analyze and measure the energy performances of our factories and to make a comparison of the energy consumption with competitors. That also becomes a tool that incentives to do even better and even more. As the tool has been translated into several languages, it was possible to use it in most of our plants both in Italy (2 plants) and abroad (2 in Czech Republic and 3 in Lithuania). By using the SET software in Marzotto and Ratti, we are expecting a reduction of the consumption of about 5-7% of electric energy and about 10% of natural gas.

SET in Lithuania

Lithuanian Apparel and Textile Industry Association was a national coordinator for the SET project in Lithuania. The textile industry is an important sector in Lithuania. 8.263 employees were working in this sector at the beginning of 2016 and this figure even indicated the growing number of employment in the sector (employment in 2013 was 7.736 people, in 2014 - 7.626 people and 7.711 employees in 2015). Also production output of textile products in Lithuania is growing. Textile production volume in Lithuania was 385.307 thousand euros in 2015 (to compare with 225.191 thousand EUR in 2009 and 258.581 thousand euros in 2014). All these figures illustrate the importance of textile industry for the Lithuanian economy. Of course, the textile industry in Lithuania as well as generally in Europe is facing big competition at the moment and costs saving decisions are a priority for the Lithuanian textile SMEs to remain competitive on the global market.

Therefore the SET project, whose goal is to help textile companies to save their energy costs was well appreciated in Lithuania. The Lithuanian Apparel and Textile Industry LATIA as a SET project coordinator in Lithuania has made a major information campaign to present this project to the Lithuanian textile SMEs: network has been established with the official/government institutions in charge of energy saving during the implementation of the SET project; 60 textile SMEs received direct emails and information about the project. Project information was disseminated to all other Lithuanian textile SMEs through other partners like the Enterprise Lithuania and the Kaunas University of Technology. The Textile SMEs in Lithuania were informed regularly by email (at least once per month) on the SET project development activities.

SET presentation of LATIA General Assembly on 26 May, 2106.
Participation: 65 Representatives of textile SMEs

1 seminar was organized in order to introduce the SET project to the Lithuanian textile SMEs with participation of 10 Lithuanian Textile SMEs as well as one presentation of the SET tool was made at the LATIA General assembly with the participation of 65 representatives from the Lithuanian textile and fashion SMEs.

10 companies that did participate in the SET project seminar in May 2016 were testing the SET Tool by providing their data.

The SET Web is followed by 1 Lithuanian textile SMEs, but figures are likely to increase after the project has ended due to the Lithuanian Apparel and Textile Industry Association joining the SET Project just at the end of 2015 and had to catch up on all the activities already implemented by other project partners.

The Lithuanian Apparel and Textile Industry Association LATIA was actively involved in the coordination activities of the SET project, particularly: translation of the SET self-assessment tool to Lithuanian, updating the translation; translation of the SET flyer to Lithuanian; translation of the SET website texts and updating; translation of the SET Scheme Guidance for Companies to Lithuanian language; preparation of the report on the national financial incentives supporting energy efficiency measures in Lithuanian language; preparation of the report about national legal obligations supporting energy efficiency measures in Lithuania.

During the project several visit were made to the Lithuanian textile SMEs to assist them with the SET project information (SET Tool). It should be noted that most of visited companies have already upgraded their lighting and heating systems (ex. LED, new windows, etc). However, the major problem for textile SMEs in Lithuania is the lack of financial resources. Most of them are very well aware about latest technologies/ solutions available in the market to save energy costs, but majority of them prevail from the decision to invest into energy saving solutions. Market uncertainty is another main reason stopping Lithuanian textile SMEs from more considerable investments to upgrade their present technologies.

SET in Portugal

CITEVE, the technological Center for the Textile and Clothing Industry of Portugal is responsible for all project activities in Portugal and is also the SET national contact point. As many as twenty Portuguese companies have been supported during the SET project.

Two workshops took place in CITEVE premises, in April 2015 and January 2016, and were exclusively focused on energy efficiency in the textile industry. The workshops format provided for an introduction to companies on most used opportunities to improve energy efficiency in textile, and overview of legal obligations and available financial incentives. The second part introduced the SET objectives and results particularly the SET Tool and the SET Web which were thoroughly demonstrated to the company managers or technical staff. Several hands-on sessions with small groups of companies or bilaterally completed the training either in CITEVE or in companies' facilities.

The popular 2015 and 2016 editions of the Modtíssimo trade fair in Porto, served as additional dissemination platform.

In 2016 the CITEVE's survey on the impact of SET in companies gained evidence of positive results particularly for the SET tool, the recommended measures and the benchmark function. A few companies granted access to information about intention to implement energy efficiency measures, which include: reduction and control of compressed air leaks, installation of photovoltaic panels, installation of energy management systems, heat recovery in steam generators and production equipment, installation of variable frequency drives.

The investments already made and planned for the next years totals approximately 3.400.000 euros which, if fully implemented, will reduce energy consumption for 1522 toe/year.

PAULO OLIVEIRA

Industrial & Quality Manager in Filocora Tinturaria e Acabamentos Têxteis S.A.

Do you consider energy efficiency as a key point for Filocora's competitiveness?
Surely. As a Dyeing and Finishing company our energy costs are very significant, representing more than 20% of the turnover of the company, thus, we must invest in energy efficiency to reduce the cost as much as possible and increase our competitiveness.

What major steps have you have taken to increase the energy efficiency in your company?
Since 2004 we have realized three energy audits which have resulted in three rationalization plans. Those plans included, among others, the following energy efficiency measures: installation of variable frequency drives in all the biggest electricity consumers; heat recovery from dye house waste water; heat recovery from flash steam; increasing efficiency of lighting system first with installation of electronic ballasts and now with the plan to replace all actual lighting system by LED lamps; heat recovery in stenters.

Do you think actions like the SET project are important to help companies understanding how to reduce their costs increasing energy efficiency?
This kind of actions are important for the companies in different ways, depending on their situation regarding energy use. In our particular case, since we have been implementing energy rationalization actions for so long, this project was important for us to show other possible energy efficiency measures, to give us access to organized information regarding legal obligations and financial incentives to implement efficiency measures and also to provide benchmark values, which is something difficult to find.

You mention benchmarking as an added value offered by SET; how do you think your company can benefit from understanding its positioning in relation with similar ones?
Benchmarking our company with similar ones is important to understand if our investments in energy efficiency are producing results and our energy indices are at least similar with other alike companies or, in case of bad indices try to find answers for them.

SET in Romania

The national research centre INCDTP managed the SET activities in Romania with additional technical support by ENEA. The strong cooperation resulted in joint-teams composed of personnel of both organizations which in the first project phase assisted in understanding and using the SET Tool in a first group of 9 companies. In the following phase INCDTP autonomously performed all activities including direct support to companies with actions throughout the country.

Initially nine Romanian companies applied the SET Tool followed by other thirteen companies and that were assisted in the national language to use the SET Tool. A larger share of companies joined the informative/training events.

The INCDTP team organized and performed two SET ad-hoc events in the cities of Piatra Neamt and Giurgiu and four implementation sessions (bilateral visits) across the country, in areas where most of the Romanian textile industry is concentrated. These events featured presentations on SET, hands-on training on how to use the SET Tool and practice sessions for the application of the SET Tool. The success cases were explained by the companies' delegates to the participating companies providing evidence of energy efficiency actions successfully adopted. Overall the sessions had 59 participants, representatives of companies, textile clusters, regional vocational and technical schools in the textile and clothing sector.

Most companies appreciated the high added-value that the service offered at no cost and considered it as a starting point for continuous monitoring of energy consumption.

Based on the INCDTP survey, the SET impact in textile companies has been positive despite the difficulties of most of them in accessing funds for new technologies/ equipment, which are more energy-efficient.

The impact of SET was assessed in 5 companies which all presented information on implemented or planned measures resulting in a cumulative saving of up to 807.000 kWhe/year.

The energy efficiency measures considered, planned or already completed included (in random order): replacement of fluorescent lighting with LED tubes, installation of photovoltaic panels, recovery of heat from compressors, replacement of the existing compressors with others which are more energy efficient.

MARCELA RADU

General Director of Magnum SX

1) Was SET Tool useful for your company?
Sustainability is a key driver of our business, so we take very seriously the issue of energy efficiency. The use of SET Tool, a tool which is easy to understand and use, was very helpful allowing us to identify areas where we should take energy efficiency measures based on our real consumption data.

2) What are the energy efficiency measures taken into account?
For our company which is specialized in producing hosiery and socks lighting is a problem. Based on the SET Tool recommendations, the replacement of actual fluorescent lighting by LED is one of the measures taken into account, which will help us to reduce energy consumption by about 5%. Installing of the photovoltaic cells is another investment in energy efficiency taken into account.

PERFORMANCE INDICATORS IN ROMANIA

Based on the information provided by five companies the measures implemented or expected generate the following results:

- Investments in equipment to achieve energy efficiency already made or planned to be made have been reported for approximately € 870.000.
- Cumulative savings of up to 807.000 kWhe/year, with average reduction of 7% of the total consumption.

10 things to do to Save Energy

The list shows some of the most promising energy efficient measures for textile manufacturing. Measures from 1 to 5 are cross-cutting as they are not valid only for textile companies while they do provide extensive benefits in the sector. Measures from 6 to 10 are specific for some textile manufacturing processes.

5 Cross-cutting measures

1. Compressed air: reduction of network leaks, all pipe networks distributing air compressed usually have leaks; no leaks above 5% should be tolerated. Compressed air leaks often account for as much as 30% of the volume transferred. Depending of the energy price costs, the leaks can cost annually several tens of thousands of euro.
2. LED lighting replacing old lighting system with LED lights may offer a payback time of as little as 18 months.
3. Economizer for steam generators: installing an economizer to pre heat water with liquid gas can save around 5% of a boiler natural gas consumption.
4. Variable Frequency Drivers in motors reduces the engines' speed to guarantee use with the minimum amount of energy, e.g. drivers can be installed to ventilate or rooms conditioning.
5. Replacing old standard-efficiency engines with new high-efficiency ones (IE3 or higher) can bring consumption savings between 10% and 30% while generating the same power.

5 Process specific measures

1. Optimization of the ring diameter with respect to yarn count can lead to savings up to 10% of ring frame energy use.
2. Heat recovery from dye house waste water installation of a heat exchanger and water tanks and pumps for recovering heat from hot waste water.
3. Optimize bath ratios in batch dyeing machines can lead to significant savings since the water volume is significantly lower.
4. Heat recovery from stenter exhaust gases uses exhaust air heat to heat up fresh air supplied to the stenter or service water for wet finishing can produce savings up to 30%.
5. Optimize exhaust humidity to optimize the drying rates and the energy use, the air flowing through the oven (and therefore the exhaust rate) must be controlled analysing the moisture content of the exhaust air. This can lead to savings up to 20% of energy used for dryer/stenter.

Other good options: Installation of photovoltaic panels to produce eletricity; Implementation of an energy management system; Insulation of pipes and equipments; Power factor correction; Correct management policies for operating cogeneration plants.

Who did it

ATOK
Czech Republic

Association of Textile - Clothing - Leather Industry (ATOK) is the largest corporation of textile, clothing and leather enterprises in the Czech Republic. It represents about 40% of these industries, especially in textile and clothing sector. The main role of the Association in the sense of its statute is to represent and protect the interests of its members in the Czech Republic and abroad as well. Furthermore it develops relevant organizational activities in the sphere of economy, commerce, production, etc. This activity comprises also contacts and cooperation with organizations and institutes abroad. ATOK is the partner of other professional associations in the Czech Republic and also at the international level. Established in 1990, 56 member and partner companies.Structure: 40 production companies, 10 commercial – production firms, 6 educational and R&D institutions.Generally: The issues of the energy consumption and energy economy are interesting for all ATOK members as well as non members. With SET, the organisation extented its range of services to support the national companies by enabling the use of SET tools for companies and in cooperation with national clusters.

BAATPE
Bulgarian Association of the Apparel and Textile Producers and Exporters | Bulgaria

BAATPE is the Bulgarian national textile and clothing association which promotes the interests of its member companies located in Bulgaria.

The association has played a crucial role in engaging with the companies to transfer the SET results, in the early project phases the association has facilitated direct engagement with representatives of companies necessary for data collection. Using its network BAATPE worked directly with local textile companies in order to pilot-test the SET tool in national language and provide the necessary feedback on its use. Furthermore, it organized a training event promoting energy efficiency in general and the use of the SET tool in particular.

CEA
Croatian Employers' Association | Croatia

CEA and its branch association, Textile and Leather Industry, have joined the SET project's activities at its later stage to promote energy efficiency in the textile sector at national level. CEA work has enabled its member companies to appreciate and use in the mother tongue the SET tool to analyze energy consumption as well as to use training contents and the best practices identified during the project.

CEA appoints a contact person to support the use of SET results in Croatia and to create new synergies for energy efficiency in the sector.

CENTEXBEL
Belgium

Centexbel is the Belgian scientific and technical centre for the textile industry, located in the heart of the Belgian textile industry with strong links to the majority of the textile companies. Centexbel is the leading centre of expertise on textiles in Belgium as well as on of the main leading sector centre at a European scale. The R&D focus of Centexbel is on applied research, funded by private contract as well as national and international agencies. Regarding support for energy efficiency is worth noticing that over the last 10 years Centexbel delivered consultancy and audits in more than 100 Belgian textile companies. Centexbel contribuited to develop all SET results and to facilitate the uptake of results in Belgium and France.

CITEVE

Technological Centre for the Textile and Clothing Industry of Portugal | Portugal

CITEVE is the leading research centre for textile and clothing Industry based in Portugal and also recognized worldwide for its outstanding competences and strong cooperation with the industry, to which it enjoys privileged access.

In SET it has played an important technical and coordination role. CITEVE was deeply involved in the SET tools development, testing and delivery to companies. CITEVE has coordinated and performed the SET promotion campaign in Portugal, including production of the SET communication material and it has implemented training activities both in Portugal and Hungary. CITEVE appoints a contact person to support the use of SET results in Portugal and to create new synergies for energy efficiency in the sector.

DITF

German Institutes for Textile and Fiber Research Denkendorf, Center for Management Research | Germany

DIFT is one of the major research and innovation centres for the textile and clothing sector in Germany and it is strongly connected to the national industry. In SET the Center for Management Research has provided expertise in researching and developing tools for the direct benefit of the national and international fashion companies. DITF has played an important role in the project's coordination, development and technical aspects. The main technical contributions were crucial to help designing the SET tool, specifically the model for measuring efficiency in machineries, also in collaboration with VDMA, member of the SET advisory board. DITF also co-organised the dissemination events in Germany. DITF appoints a contact person to support the use of SET results in Germany and to create new synergies for energy efficiency in the sector.

ENEA

Italian National Agency for New Technologies, Energy and Sustainable Economic Development | Italy

ENEA is the Italian national agency for new technologies, energy and sustainable economic development and the national body most competent on energy matters. It is also the national Agency for Energy Efficiency.

The ENEA's branch department of Bologna has used its peculiar expertise in energy efficiency and its field-experience with textile/clothing production companies to play several major roles in SET, both technical/operational and coordinating with the project partners ENEA has developed the SET tool and its web-based application for benchmarking. Developing the SET tools ENEA has collaborated with the ACIMIT, member of the SET advisory board. in the implementation phase ENEA has supported dozens of companies in Italy, France Croatia, Czech Republic and Lithuania to apply the SET tools and gaining benefits from it. This international experience on the field also enabled the project team in direct critical appraisal of the SET tool and to improve the tool though several releases of updated versions. In 2014 ENEA has launched together with Euratex the Energy Made-to-Measure campaign. ENEA appoints a contact person to support the use of SET results in Italy and to create new synergies for energy efficiency in the sector.

EURATEX

The European Textile and Apparel Confederation | Europe

Euratex is the official body representing and promoting the interest of the European textile and apparel industry at international level, notably with the institutions of the European Union. The Euratex' membership is primarily composed by the official national sectorial associations in countries of Europe and of its neighbourhood area. Euratex has initiated SET and it has then played the double role of project coordinator and leading organisation to support results transfer throughout Europe. In the latter capacity Euratex has been in charge of the SET communication activities and has extensively collaborated with its Members. Euratex initiated in 2014 the Energy Made-to-Measure campaign. EURATEX appoints two contact persons to support the use of SET results and create new synergies for energy efficiency in the sector across Europe.

INCDTP

National Research & Development Institute for Textiles and Leather | Romania

INCDTP is the Romanian textile and clothing association and a national reference point to support manufacturing companies in innovating and performing testing and applied research.

In SET the partner main role was to facilitate the cooperation with the clothing companies in Romania and to align the project activities with companies' operational needs. INCDTP textile took an active and very effective role in promoting the SET results for the benefit of Romanian textile companies. INCDTP appoints a contact person to support the use of SET results in Romania and to create new synergies for energy efficiency in the sector.

IVGT

Germany

The Industrial Association for Finishing – Yarns – Fabrics – Technical Textiles (Industrieverband Veredlung – Garne – Gewebe – Technische Textilien e.V.), is Germany's biggest textile association representing the interests of approximately 200 member companies from the sectors of textile raw materials, finishing, yarns and fabrics as well as Technical Textiles. IVGT represents more than 60% of the German textile industry and a business volume of more than 6.6 billion EUR. As an industrial association IVGT operates to strengthen the general framework for textile production, support all professional, economic and political concerns of our member companies towards national, European and international institutions. IVGT acts as advisory body to all German Textile Research Institutes and is board member of the Forschungskuratorium Textil e.V. As part of the task force Energy of the Confederation of the German Textile and Fashion Industry which is linked to the Federation of German Industry (BDI). With SET the association worked to fine tune the self assessment tool and to promote to its national members.

LATIA

Lithuanian Apparel and Textile Industry Association, Lithuania

Latia aims to build professional links among apparel and textile community in Lithuania and Europe. The main Latia's input in the SET project was promotion of the SET results among the Lithuanian textile companies. For this purpose Latia facilitated translation of the energy efficiency self-assessment tools and promotional materials into the Lithuanian language. Latia supported organisation of training events in Vilnius and acts as the project's contact point in its country. LATIA appoints a contact person to support the use of SET results in Lithuania and to create new synergies for energy efficiency in the sector.

TMTE

Hungary

Hungarian Society of Textile Technology and Science (TMTE the Hungarian abbreviation of the Society) was established in 1948. The professional organization which has rich traditions includes 100 companies and more than 800 experts as of today. The organization works in close cooperation with Hungarian and foreign associate organizations, maintains extended connections with educational institutions, business federations and governmental institutions. In its portfolio of activities the association: represents the industry nationally and internationally, initiates and supports R&D and innovative activity of the industry, provides a one-stop source for information on and for industry and members, promotes the industry and the members internationally, defends the common interests of industry and members, providesvides information, advice and assistance for members on matters affecting their businesses. Working in SET the association has enabled Hungarian companies to understand, test and use the SET tools and supported uptake of energy efficiency measure.

SET and the next Energy Made to Measure

SET has successfully made and delivered a tool for the European textile companies to take action for the sustainable use of energy. As the third step of the Energy Made to Measure campaign, SET has driven textile companies towards energy efficiency.

More energy efficiency means less CO_2 emissions, less waste and, eventually, less costs.

The 150 companies involved and the encouraging quotes released by testimonials in these pages, in multimedia, in factory plants or at any of the 20+ events are the most rewording evidence of accomplishment for the SET project team.

Surely not all companies have already fully exploited the benefits during the limited timeframe of SET. Some technicians may have appreciated advices, some managers have decided to invest while other companies have chosen to wait until an opportunity comes up. Therefore we all need to keep working and achieve even more.

I believe that the unique added value of the SET project lies mainly on a fully operational self-assessment software and a growing EU wide database for tailored energy benchmarking.

These resources combined with the SET network of motivated professionals across Europe will enable continuity of SET for the years to come, both to use the tools and also to improve them with new functions and services.

I keep enjoying working on Energy Efficiency for the openness and the keen collaborations that this matter attracts. We have experienced these attitudes very often and at all levels: in small textile companies, large groups with their suppliers, national associations of machine manufacturers, industry associations, media, national institutions and international organizations like IEA, EASME, and the European Commission.

We look forward for the next step of the Energy (and Water) Made to Measure.

Mauro Scalia
Manager of Sustainable Businesses, Euratex

ENERGY
MADE•TO•MEASURE

www.euratex.eu/set

WATCH AND DISCUSS IT

https://www.youtube.com/watch?v=UeFgMUZsV7w

https://www.linkedin.com/groups/7463674

SET tools are available
for a free download here:
www.euratex.eu/set
set@euratex.eu

SAVE
ENERGY IN
TEXTILE SMEs

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