

EMAS website

<http://ec.europa.eu/environment/emas>

## EMAS in figures

In 2006, EMAS has experienced a substantial growth by 12.8 % in numbers of sites: A total of 5,380 companies, institutions and public authorities live and work under the management of EMAS. This equals to more than 1.6 Mill. people in 3.568 organisations.

## Registered organisations and sites

Austria	258	451
Belgium	33	334
Bulgaria	0	0
Cyprus	0	0
Czech Republic	26	27
Denmark	112	278
Estonia	2	2
Finland	42	50
France	17	17
Germany	1,489	1,979
Greece	51	54
Hungary	8	11
Ireland	8	8
Italy	586	671
Latvia	0	0
Lithuania	0	0
Malta	1	1
Luxembourg	1	1
Netherlands	13	17
Norway	27	27
Poland	7	7
Portugal	54	59
Slovak Republic	3	3
Slovenia	1	1
Spain	676	843
Sweden	84	85
United Kingdom	64	364
<b>TOTAL</b>	<b>3,568</b>	<b>5,380</b>

## Leading industrial sectors:

Sectors	Organisations
• Chemicals	263
• Food and beverages	263
• Sewage and refuse disposal	242
• Fabricated metal products, except machinery and equipment	230
• Electricity, gas, steam and hot water supply	181

## Leading service sectors:

Sectors	Organisations
• Hotels and restaurants	220
• Public authorities	189
• Transport	114
• Other business activities	153
• Education	151

## News

## Mahle Filter Systems, St. Michael, Austria improves compressor efficiency with subsequent energy savings

Mahle produces piston systems, air management systems and liquid management systems and is a key supplier to the automotive industry. Growth since 2003 has brought an increase in staffing from 200 to 1,900 employees.

Mahle runs six compressors producing an enormous 152m<sup>3</sup>/min of compressed air and another three compressors producing 14m<sup>3</sup>/min. These compressors are equipped with refrigerant driers in order to de-vaporize compressed air. They are energy intensive, with efficiencies as low as 10-15%. Working through their environmental management programme, Mahle tasked a team with improvements to the effectiveness of their compressors. This was achieved through repairs and leakage reduction, improved energy management procedures and improved training and awareness for operations staff. Production was optimised with respect to waste heat and the boilers' control system was renewed. Waste heat from compressors was directed to the heating systems in the production halls and several office buildings. This saved 232 m<sup>3</sup> or 36% of heating oil per year. Despite the company's growth of 14.8 % since 2002, the heating oil consumption has decreased to the level of the early nineties.

For further information please visit the web site <http://www.mahle.at/C125705E004FDAF9/vwContentByKey/W26FHNTJ520MARSEN>.

## Innovative solutions for sustainable and efficient energy in Europe

The EC's LIFE fund has supported more than 130 innovative energy projects since its inception in 1992. In its latest publication, **Life and Energy**, 24 examples of innovative energy projects have been published. They cover a variety of themes –energy production and distribution, industry and commerce, buildings and households and transport. Projects cover improved energy efficiency, renewable energy and new technology. The publication's final theme is 'horizontal management approaches', which includes emissions trading and reductions in the missions of CO<sub>2</sub> by local government authorities. **Life and Energy** can be downloaded from [http://ec.europa.eu/environment/life/infoproducts/energy/energy\\_hr.pdf](http://ec.europa.eu/environment/life/infoproducts/energy/energy_hr.pdf)

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For a free subscription, comments or further information send an email to the EMAS Helpdesk at: [emas@ec.europa.eu](mailto:emas@ec.europa.eu) or write to the following address:

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## Upcoming events

October 2007  
**Barcelona, Spain**  
**Post-grade on Environmental Management of enterprises and public organisations**  
Further information can be found under <http://www.ub.es/dppss/psicamb/gestio.htm>

25-26 September 2007  
**Austria**  
**EMAS prepares the ground to the ecological local authority**  
More information on the agenda of the 6 day workshop for local authorities is available from [hermine.dimitroff@ec4ward.at](mailto:hermine.dimitroff@ec4ward.at)

25 June 2007  
**Leicester, UK**  
**Introduction to EMAS/ISO 14001 - Training course**  
More information is available under <http://www.edie.net/training/CourseDetail.asp?id=1849>

19-20 June 2007  
**Salzburg, Austria**  
**Conference: Communicating EMAS**  
More information available under <http://www.emas.gv.at/article/articleview/56167/1/16773/>

12-15 June 2007  
**Brussels, Belgium**  
**Green Week 2007: 50 years of the Rome Treaty; Lessons from the past, challenges for the future**  
Get more information from the official web site: <http://ec.europa.eu/environment/greenweek/home.html>

12-13 June 2007  
**Austria**  
**EMAS prepares the ground to the ecological local authority**  
More information on the agenda of the 6 day workshop for local authorities is available from Mrs. Hermine Dimitroff-Ragatschnig.

June 2007  
**Berlin, Germany**  
**"We for EMAS" Campaign for making EMAS popular**  
How to participate: [www.wir-für-emas.de](http://www.wir-für-emas.de)

25 May 2007  
**Brussels, Belgium**  
**First European Environmental Verifier Day**  
Programme under [www.vnu-ev.de](http://www.vnu-ev.de)

22 May 2007  
**Theiß/Krems, Austria**  
**EcoEfficiency Workshop**  
More information is available under <http://www.emas.gv.at/article/articleview/56237/1/16773/>

21 May 2007  
**Cheltenham, UK**  
**Introduction to EMAS/ISO 14001 - Training course**  
More information is available under <http://www.edie.net/training/CourseDetail.asp?id=1849>

07-10 May 2007  
**Umweltinstitut Offenbach, Germany**  
**Seminar for environmental auditors, verifiers and consultants on EMAS and ISO 14001**  
More information is available under <http://www.umweltschutz-news.de/13gartikel902.html>

## Editorial

The European Commission's communication "Action Plan for Energy Efficiency: Realising the Potential" [com (2006) 545 Final] highlights the energy performance in the EU.

Europe continues to waste at least 20% of its energy due to inefficiency, with a potential cost of €100 billion annually. The Action Plan is intended to mobilise the general public and policy-makers at all levels of government, together with market actors, and to transform the internal energy market in a way that provides EU citizens with the globally most energy-efficient infrastructure, buildings, appliances, processes, transport means and energy systems.

The plan identifies ten priority actions covering all energy sectors to be initiated immediately and implemented as soon as possible for maximum effect and anticipates improvements within the next three-six years. An interim review of the plan is scheduled for 2009.

In this issue, we demonstrate how EMAS-registered companies like Bombardier Transportation and Laufen AG control their energy consumption and how significant energy savings can be achieved.

The EMAS Team, Environment Directorate General, Unit G2, European Commission.

## Energy efficiency under EMAS

## Report

## Lower Carbon Footprint for Transport Provider

**Bombardier Transportation Polska Sp. z o.o., with its head office in Wroclaw, is one of the 48 plants operated globally by Bombardier Inc., which has subsidiaries in 21 countries in the world. Wroclaw, the largest of the Polish plants, employs 750 people in its Locomotive, Truck and PCC (assembly of switch and control boxes) Divisions.**

The Wroclaw factory of Bombardier Transportation Polska Sp. z o.o., produces various types of locomotive bodies, various types of truck frames and switch and control boxes. Protection of natural environment is one of the factory's priorities and it has progressively

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Bombardier presented two new locomotives at the InnoTrans Train Fair in Berlin in September 2006. For both, the global player from Canada has presented Environmental Product Declarations, which are validated under EMAS and follow the ISO 14025.

reduced its environmental impacts through the implementation of an environmental management system. Special emphasis is placed on the reduction of VOC emissions, the reduction of waste and to decreasing energy consumption.

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Coal boilers were closed and replaced with modern gas system few years ago, and, in 2006 further improvements were made:

- the installation for heat recovery in one of locomotive body paint shop has permitted a 40% decrease in the consumption of fuel oil
- the replacement of two welding machines for energy-saving ones saved 287 MWh annually. A programme of

- further replacements will continue this improvement.
- improved production planning eliminated a third shift using energy-consuming equipment such as compressors, shot-blasting machines, etc
- a training program for employees, focusing on the opportunities for users to save energy in the workplace

## Research

### Project "Energy Efficiency Initiative 2007-2009". German EMAS companies demonstrate best practice in reducing CO<sub>2</sub> emissions to a roundtable of participating companies and institutions

Germany's "Förderkreis Umweltschutz in Unterfranken", a regional non-profit association which develops and supports sustainable environmental concepts like EMAS, and the „Modell Hohenlohe“ (a network of about 180 companies which works for better environmental management and sustainable economics) are the project managers for the "Energy Efficiency Initiative 2007-2009". Aiming at a CO<sub>2</sub>-reduction of 10% across the network, the project seeks improvements in energy efficiency and a consequential reduction in energy costs.

The supporting research programme will be delivered by the Fraunhofer Institute for Systems and Innovation Research (ISI), the BSR Sustainability GmbH, Karlsruhe and the Research Institute for Energy Economy (FFE) in Munich. This programme is to be financed by the Bavarian State Ministry of the Environment, Public health and Consumer Protection (BayStMUGV).

With an anticipated duration of two years, plus two additional years (for evaluation), the project was scheduled

to start in March 2007 and will provide an initial consultation for every company, continuous "round table" meetings (energy efficiency workshops) and supporting guidance. The network will gather 10 to 12 companies, of which 50% of them already have an environmental management system in place (either ISO 14001 or EMAS).

Establishing a network of participants (including two EMAS-registered firms - Danone in Ochsenfurt and GOK Regler & Armaturen GmbH & Co. KG in Marktbreit), consulting engineers and the research centres was very successful, and will allow an exchange of experiences and also promote convergence with the project objective.

The results of the pre-operating study by the "Modell Hohenlohe", conducted with 17 companies (at least 6 of them have EMAS - Richard Henkel, König & Meyer, GETRAG, SDZ Druck und Medien, SBH Entsorgung, EBM-Papst, and some other companies have ISO 14001) proved the feasibility of active climate protection in SMEs. Energy efficiency



was improved by 7,8%, the companies saved 10,4% (1,3 Million €) of energy costs and reduced of CO<sub>2</sub> emissions by 9.400 tons (10% of the initial levels).

More information: Förderkreis Umweltschutz in Unterfranken (FUU), Dr. Stefan Müssig, T ++49 931 40480148, [info@fuu-ev.de](mailto:info@fuu-ev.de), [www.fuu-ev.de](http://www.fuu-ev.de) and Modell Hohenlohe, Kurt Weissenbach, T ++49 7942 944910, [moho1@t-online.de](mailto:moho1@t-online.de), [www.modell-hohenlohe.de](http://www.modell-hohenlohe.de)

## Best practice

### Laufen Austria AG focuses on energy for cost savings

**Laufen Austria AG has two sites, in Wilhelmsburg (Lower Austria) and Gmunden (Upper Austria), which have been EMAS - registered since 1996 and employ 350 staff. Both sites produce high performance sanitary ceramics and have a combined turnover of € 54.3 Million in 2006. Energy-saving initiatives are now reducing costs and improving environmental and financial performance.**

Laufen Austria AG is a subsidiary of Keramik Holding AG Laufen, which is owned by CORPORACION EMPRESARIAL ROCA, S.A based in Barcelona, Spain - the world leader in sanitary ceramics manufacturing since 2005. Despite ten years of experience in environmental management, it has been a long time since Laufen Austria AG has considered an external energy audit. Management's decision to undertake such an audit has been justified by the savings in energy and material consumption.

Three examples of 'best practice' have emerged in 2006:

#### 1. Compressed air supply in the Gmunden site

Senior and functional managers meet regularly to discuss areas for improvement, prompted by legislation or stakeholder concerns. Environmental management, in the company's words, 'has to pay off'. Key performance indicators from the last 3-5 years of operation are regularly reviewed as these provide the possibility for follow-up on previously-implemented projects. Energy is a significant area for financial savings and is regularly reviewed.

More information is available from <http://www.laufen.co.at>

The compressed air system is an energy-intensive activity - typically running at efficiencies as low as 10-15%. Costs at Laufen suggested a more detailed study of their systems, which was undertaken by the energy consultant Sattler Energy Consulting GmbH. The consultant identified savings of 128 000 kWh per annum, reducing energy purchases by € 8100 per annum for a project cost of € 6000. Leakages were reduced by 50% and additional improvements obtained by reducing the pressure in the company's system by 1 bar.

#### 2. Oven Operating Parameters

These were improved by Laufen to reduce the consumption of natural gas without

prejudicing the quality of the finished ceramics. With the new parameters reducing energy consumption by 6.5 % in each cycle of operations, a further saving of € 7400 per annum was identified, which enabled the company to offset some of the surge in natural gas prices during 2006.

#### 3. Foundry Processes

In Wilhelmsburg, research technicians invested three years of preparatory work in the testing and upgrading of a process which is helping Laufen Austria in technology leadership. A partly-automated foundry recycles 540 tonnes of pottery clay each year, saving the company € 108.000 per annum.



When leaving the post-burning oven, sanitary ceramics have contributed to savings of up to 6.5 % savings in natural gas consumption. Better programming of the heaters helped in setting off the costs which have resulted from the increase of gas prices in 2006.