

Press Release

LEWA pumps + systems

Green Technologies Day

Alternative energy sources – what's next? / A preview of the markets of the future

The ability to create utility and added value for customers requires a keen nose for trends and an insider's sensibility. This is why LEWA pumps + systems invests in the know-how and expertise that allows the company to define itself as a 'service solution manufacturer' and a system provider. Because it's crucial to the company's long-term success, LEWA is already focusing on the technologies of the future. As part of the Green Technologies Day series, LEWA invited experts for an exchange of ideas.

It's an essential and supremely interesting question for every manufacturer: how will the important sales markets develop over the coming five, ten and twenty years? Where will new market potential be created in the short-term? And above all: what products and services does the customer need?

Those seeking to answer these questions in order to secure the future of their businesses are best advised to go right to the source – in other words, to listen to the voice of the customer and to scientific research.

Biofuels – a source of oil for the 21st century?

LEWA implemented this approach as part of its new Green Technologies Day series of events in the end of 2008. The launch event, under the motto "Biofuels – a source of oil for the 21st century?" highlighted current research activities, presented modern technology in use and served above all as a forum for exchanging experiences and knowledge.

The reason LEWA takes the topic of biofuels so seriously is no secret: by 2050, today's worldwide energy consumption is expected to double. Researchers and industry experts agree that crude oil and natural gas will not be able to meet this increased demand. And there's no dispute that fossil oil and gas in general will not be available for very much longer. Even the International Energy Agency (IEA), which certainly can't be accused of arguing against oil interests, has begun talking about depleted resources and the end of the era of cheap oil. "I think we should leave oil before it leaves us", said Chief IEA Economist Fatih Birol.

As a result, renewable and alternative sources of energy must be developed and exploited. The following related topics were discussed on the 1. Green Technologies Day:

- Development of biofuels – a guideline for the 3rd generation (Dr. Josef Lichtscheidl, OMV AG, Austria)
- Synthetic fuels – high-quality fuels from biomass (Dr. Nicolaus Dahmen, Karlsruhe Research Centre, Germany)

Press Release

- Hydrogen and fuel cells – strong partners for regenerative primary energies (Dr. Johannes Töpler, Chairman of the German Hydrogen and Fuel Cell Association, Germany)
- LEWA as a partner for innovative solutions in biochemical engineering (Dr. Andreas Höhler, CTO, LEWA)
- Microalgae – raw material for recyclables and energy (Prof. Walter Trösch, Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, Germany).

LEWA CTO Dr. Andreas Höhler: “We want to be a part of the development process in all of these areas from the outset, so that we can recognise and call attention to potential critical issues early on. For more than 50 years, LEWA has represented the technical benchmark in metering and process technology worldwide – and we want to keep it that way!”

Are hydrogen / fuel cells and microalgae sustainable?

Where is the future of development actually leading? Where biofuels are concerned, that question remains to be answered. Dr. Josef Lichtscheidl is the director of technology, project manager for the NExBTL project at OMV, and for the past 14 years an instructor in environmental technology and renewable energies at the University of Vienna. He describes the problematic issues this way: “The question is always: how many kilometres can I drive per hectare? In the manufacture of biodiesel we always run up against raw material limits”. He concludes that “too little biomass is being chased by too many ideas and projects”.

Dr. Nicolaus Dahmen of the Karlsruhe Research Centre underscored this aspect: “Among all energy sources, only biomass offers a C source. Our goal should not, therefore, be to want to extract energy from biomass, but rather to make it available as a C source to chemistry, for example”.

Does the fuel cell offer a solution? Dr. Johannes Töpler from the German Hydrogen and Fuel Cell Association is convinced that over the long term the future primary energy system will be dominated by electricity, and he foresees a transition from a fuel-based energy system to an electricity-based energy system. Hydrogen will function as an important medium for storing electricity and will become a strong partner for renewable energy in the transport sector. Important aspects here are that hydrogen can be manufactured from all energy sources, it is a reservoir for renewable energy, and it enables the use of efficient fuel cells.

The alternative of using microalgae as a raw material for recyclables and energy, presented by Prof. Walter Trösch of Fraunhofer IGB, was met with great interest. Particularly persuasive is the fact that algae can be cultivated without competing with agricultural production (ideally in the sea, eliminating the struggle with food production), and it consumes CO₂ rather than producing it.

Press Release

Greater demands on pump systems.

“The speakers have highlighted again and again that the important thing is the overall energy balance of a process. The pump systems used must therefore be as efficient as possible – that’s one of the many technical challenges we face”, said Dr. Andreas Höhler. Höhler sees the growing demands placed on pump systems for higher pressures, temperatures and flow rates as a trend in the field of green technologies. “LEWA is already well positioned in that area through our expertise in the oil and gas industry”.

CEO Bernd M. Stütz adds: “The event showed us once again: only dialog with experts from the side of the user as well as from research results in an understanding of the direction in which the markets and technologies are likely to develop. This is extremely important for us: we want to know and understand our customers’ future business models as well as their current ones”.

The seriousness with which LEWA approaches the protection of resources, energy-conscious behaviour and environmentally sound production can be seen within the company as well. For example, LEWA participates in the federal state of Baden-Württemberg’s ECOfit operational environmental programme. As part of this programme, the individual points of waste management, maintenance of air purity, use of water and energy savings are reviewed and evaluated. Within the scope of continuous improvement of environment-related performance, ECOfit also creates the basis within the company for achieving certification in accordance with EMAS or ISO 14001 at a later date.

In conclusion, the 1.Green Technologies Day at LEWA was indeed a platform for exchanging knowledge. The limited number of participants allowed active participation in the discussion by the plenum. Small wonder, then, that the speakers also praised the event and described it as fruitful. The 2.Green Technologies Day is already being planned for 2009. Register at www.lewa.de.

Press Release

Photos and digital texts can be found at www.lewa.com/press or at the Download Centre at www.lewa.com.



In his reception message LEWA CEO Bernd M. Stütz emphasised how important it is for companies to be able to assess the technologies of the future: “We want to know and understand our customers’ future business models as well as their current ones”.

Stuetz.jpg



Prof. Walter Trösch of Fraunhofer IGB spoke on the topic ‘Microalgae – raw material for recyclables and energy’.

Troesch.jpg



BTL plant (biomass to liquid) for the manufacture of fuels from unused biomasses.

Photo: Karlsruhe Research Centre

BTL_Karlsruhe.jpg

Press Release

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<p>Branchen:</p> <ul style="list-style-type: none"> • Öl & Gas (upstream & downstream) • Chemie & Petrochemie • Pharma & Kosmetik • Lebensmittel & Getränke • Kunststoffe • Wasch- & Reinigungsmittel • Specials (wie z.B. Umwelt, Energie, Odorierung) 	<p>Key industries:</p> <ul style="list-style-type: none"> • <i>Oil & gas (upstream & downstream)</i> • <i>Chemicals & petrochemicals</i> • <i>Pharmaceuticals & personal care</i> • <i>Food & beverages</i> • <i>Plastic processes</i> • <i>Cleaning & detergents</i> • <i>Specials (such as environmental, gas odorizing)</i>

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