

Turn of energy policies for members of the public

Exhibition on the Turn of Energy Policies and Wind Power in Baar

The next stage of public participation in the BMBF „Lokale Passung“ (local fit) project for the Baar, Thierhaupten, Münster and Holzheim municipalities was heralded with an exhibition on the turn of energy policies, on Saturday, 12 July. Since the end of July, all households in these four communities have also been surveyed.

More than 140 visitors took the opportunity to find out about different technical solutions such as wind power, photovoltaics and increasing energy efficiency. With the engineers of bifa Umweltinstitut, the visitors were able to sit at computer terminals and develop their own plan for their local community's turn of energy policies or watch 3D simulations to get an impression of the effects that

wind turbines have on the landscape. In addition, posters provided information, for example, on opportunities for public participation, the legal basis of the planning and the rights and duties of investors.

The exhibition was also the kick-off point for the household surveys, which started at the end of July: These will not only collect information on the population's attitude to the turn in energy policies, but also data on energy consumption, e.g. in relation to building characteristics, the condition of the heating systems or local consumer behaviour. This information can be used to calculate current and future demand and specific savings potential can also be identified.

In the next step, the results will be presented in stakeholder workshops and

public participation workshops – with the objective of developing appropriate local concepts for energy supply together with interested members of the public. Within the scope of this project, the project partners, LMU and bifa, can also assist the local communities with the implementation of such concepts.



Contact: Dr. Michael Schneider
mschneider@bifa.de

Material efficiency

Guidelines for production companies

On behalf of the Bavarian State Minister of Economic Affairs and Media, Energy and Technology (Bayerische Staatsministerium für Wirtschaft und Medien, Energie und Technologie), bifa carried out a study into „Material efficiency and materials in critical supply in Bavaria's production industry“.

To this end, among other things, 40 in-depth interviews were held with business practitioners and research and consulting experts. The focus was on the applications: alloy metals, low-density structural metals, regenerative raw materials, rare earth metals, pigments, paints and lacquers as well as catalysts. bifa's project partner for the study was the Paper Foundation („Papiertechnische Stiftung“ – PTS).

Above all, conventional materials such as aluminium and wood are cost relevant. In contrast, the so-called „strategic metals“ are mostly used by only a few companies in Bavaria. The gist of the interviewees' answers was: Many companies have already done most of their homework. Above all, most companies with high material costs are already very efficient.

Nonetheless, it is important to work on this topic continuously, because there are always new opportunities to further reduce the use of materials. Improved material efficiency helps to cut costs, and it reduces strategic risks caused by critical price fluctuations. Especially in SMEs, the systematic recording of material consumption and losses and their causes are often a way to achieve further improvements for clear, manageable costs. In larger companies advances can be achieved through more intensive co-operation along value-added chains and through fundamental changes to products.

The 48-page brochure provides information on how measures to increase material efficiency are hindered and which factors have a useful effect. Tips on grants and funding options round off the brochure.

The brochure (available in German only) can be downloaded now, free of charge as a pdf, from www.bifa.de/publikationen.

Contact: Dr. Siegfried Kreibe
skreibe@bifa.de

Events

Folgen des Klimawandels Perspektiven für das Bauge- werbe, den Handel und die produzierende Wirtschaft

16.10.2014, Huber-Technik, Erding
21.10.2014, Modehaus Jung, Augsburg

LEW Hausmesse Energiewende in der Praxis

18.11.2014, SGL arena Augsburg
Registration only via LEW!

Metall-Rohstoffe – viel Wind um nichts? Talk im Technikum

04.03.2015, bifa

Publication

Materialeffizienz und ver- sorgungskritische Materialien in der produzierenden Wirtschaft. Ein Leitfaden

Free pdf-download:
www.bifa.de/publikationen

Full speed ahead – energy in the district

Landkreis Straubing-Bogen develops energy use plan

In April 2013, the Landkreis Straubing-Bogen district started „Volle Kraft voraus! Energienutzungsplan für die Zukunft“ (Full speed ahead! Energy use plan for the future), a large energy project, which brings together and purposefully optimises the diverse activities and measures for energy development in the district. The project was implemented by bifa Umweltinstitut in cooperation with COPLAN AG.

„Energy use plan (ENP) – what's that?“ was the response of several municipal representatives when meeting with the mayor began in May 2013. At this event they were able to find out about the contents and objectives of the energy use plan for the first time. The next step was to inform the local stakeholders and citizens about the project. In four public participation events, the representatives

and residents of the municipality took the opportunity to find out about the project and in return to express their expectations and wishes. Those who were interested could read all about the project progress on the internet site www.straubing-bogen.de, in the especially produced ENP circular and in the local press.

To determine the actual situation, it was necessary to carry out a comprehensive analysis, e.g. of the consumption data and energy infrastructure. For this, all companies, businesspersons, energy suppliers, local communities and some private persons in the district Landkreis Straubing-Bogen were asked to provide their current data. After the purely technical collection and preparation of the data the exciting part >>

Furthermore in this issue:

Copper recovery from residual materials

bifa starts second cooperation project with Wieland-Werke AG and Knittel GmbH



p. 3

Businesses focus on adapting to climate change

bifa presents the results of its study in Augsburg and Erding



p. 3

Turn of energy policies for members of the public

Exhibition on the Turn of Energy Policies and Wind Power in Baar



p. 4

>> Praxis Vorschläge eingebracht, die dann die Grundlage zur Entwicklung konkreter Maßnahmenpakete darstellten. „Es wurden gemeinsam mit den Leuten vor Ort realistische Projekte erarbeitet, die zeitnah in unserem Landkreis umgesetzt werden können“, sagte stolz der damalige Landrat Alfred Reisinger. Bis es jedoch so weit war, gab es eine Menge Arbeit für die Teilnehmer der beiden Workshops. Die Auswertung hatte gezeigt, dass der Landkreis bereits heute eine gute energetische Basis hat, die aber weiter ausbaubar ist. Der Landkreis Straubing-Bogen hat bereits einen hohen Deckungsanteil erneuerbarer Energien am Stromverbrauch, der in der Jahresbilanz bei rund 86 Prozent liegt und hauptsächlich von

PV-Anlagen erzeugt wird. Bis zu 30 Prozent des erneuerbar erzeugten Stroms können aber zum Zeitpunkt der Erzeugung (Mittagszeit) nicht innerhalb des Landkreises verbraucht werden und werden deshalb exportiert. Unter dem Motto „Gemeinsam können wir das optimieren“ lud das Projektteam im März 2014 zum ersten Workshop ins Landratsamt ein. Es kamen Experten und Entscheidungsträger sowie Akteure zur Umsetzung aus den jeweiligen Bereichen. Das Ziel des zweiten Workshops im Juni 2014 war es, die anvisierten Projektansätze weiterzuentwickeln und die Umsetzung als Pilotprojekt zu beginnen. An vier Thementischen wurden unterschiedliche Vorhaben weiter ausgearbeitet, unter anderem ein Wärmenetz

in einer Gemeinde im Landkreis, ein Biogas-anlagenstammtisch in Zusammenarbeit mit C.A.R.M.E.N. e.V. in Straubing, die Optimierung der Abwärmenutzung an einer konkreten Biogasanlage, die Einführung eines kommunalen Energiemanagements in einer ILE-Region sowie eine intelligente Stromversorgung mit einem Smart-Grid-Ansatz in der Gemeinde Ascha. Im August wurde zum Gäubodenfest der Energienutzungsplan im Kreistag vorgestellt und von den Landkreisvertretern als Startschuss in die Energiezukunft des Landkreises gewürdigt.

Contact: Markus Hertel
mhertel@bifa.de



Ecoefficiency of biomaterial composting

Encapsulation with semipermeable membrane cover

On behalf of W. L. Gore & Associates GmbH (Gore), bifa carried out an ecoefficiency analysis of biomaterial composting through encapsulation with semipermeable membrane cover. Up-to-date values from gewitra GmbH's investigations were used for the emissions from treatment using this method. In addition, with regard to the compost quantities/qualities produced, it was assumed that these are the same as those achieved with closed composting methods. The environmental effect of membrane production is negligibly small compared to the actual composting process.

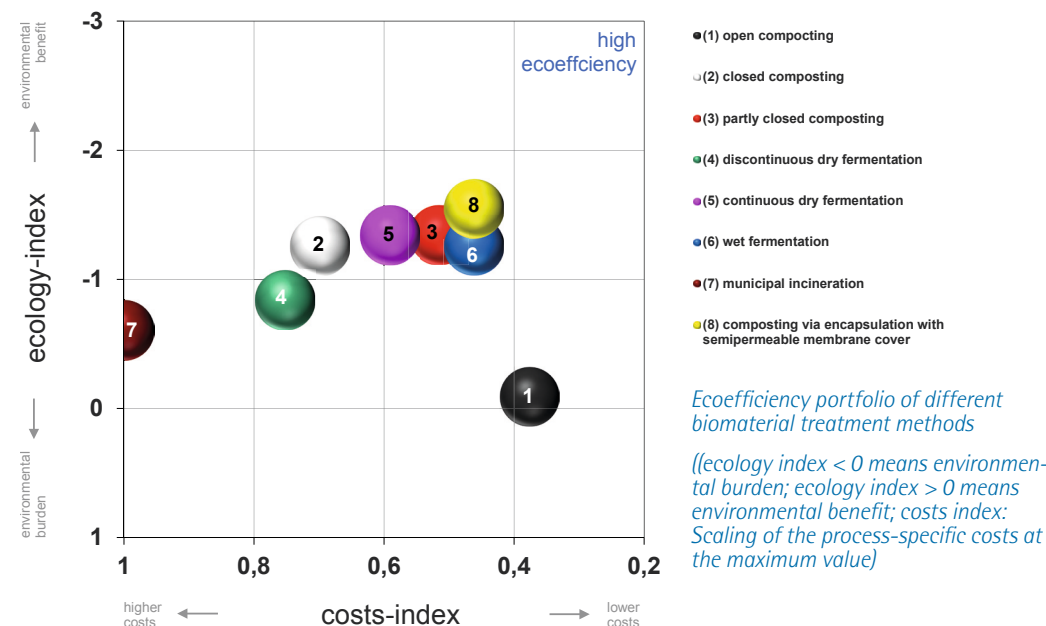
Composting through encapsulation with semipermeable membrane cover differs in the following ways from closed/partially enclosed composting:

- lower electricity requirements,
- and due to the design, the specific process management and interaction of the membrane and a condensate film, which forms on the underside of the cover during the process, high emission retention of methane, nitrous oxide and ammonia is achieved during the composting process.

In the portfolio, the ecoefficiency of composting via encapsulation with semipermeable membrane cover is compared with the ecoefficiency of average plants using alternative methods to treat biomaterials. Composting via encapsulation with semipermeable membrane cover has the lowest ecology index and is therefore the method with the highest environmental benefit, but is close to closed/partially closed composting and plug-flow/wet fermentation. From a costs point of view, composting under a semipermeable membrane cover lies between partially enclosed composting and open composting.

Aside from determination of the environmental impacts as part of the ecoefficiency examination, composting via encapsulation with semipermeable membrane cover as a system in mounds or a side wall version is eligible for approval in Germany, if verification is provided of its equivalence with a closed system, which is the case for the system built in Germany to date.

Contact: Thorsten Pitschke
tpitschke@bifa.de



Copper recovery from residual materials

bifa starts second cooperation project with Wieland-Werke AG and Knittel GmbH

The objective of the follow-up project is the targeted development and implementation of a method for combined recovery of previously separately recoverable composite packaging (from Knittel GmbH) and copper-containing residual streams from metalworking (from the production processes of Wieland-Werke AG) and in a large-scale plant.

In the cooperation project with Wieland-Werke AG and Knittel GmbH, funded by the Bavarian State Ministry of the Environment and Consumer Protection, as a forerunner, a combined recycling method was developed for secondary raw materials from previously separately recovered composite packaging and used pickling acid from the metalworking industry and other copper-containing waste streams from production processes. The objective in project phase 1 was to try out possible implementation in a large-scale recovery plant to substitute primary raw materials.

Further implementation of the process from laboratory scale now leads to a test setup in pilot plant scale. Here the fundamentals for scaling up are to be created and process management knowledge obtained for continuous operation. In addition, the project will examine the question of additional residual materials that could be used as input materials.

From an ecological and economic point of view, coupling two inherently separately treated residual material streams



Copper cementate following temperature

from different industries in order to increase raw material efficiency is extremely interesting. Rising raw material prices in the past were the result of rapidly growing demand. Experts assess that this trend will continue. For example, at € 5,400/tonne, copper is twice as expensive as it was in the 1990s. The market prices for PE commercial mixed films with a high proportion of transparent films of 80 to 90 percent are currently between €150 and €220/tonne, although this price is subject to large price fluctuations depending on the PE quality.

The project undertaken by bifa in cooperation with Wieland-Werke AG and Knittel GmbH will last for 14 months up to the end of September 2015.

Contact: Markus Hertel
mhertel@bifa.de

Businesses focus on adapting to climate change

bifa presents the results of its study in Augsburg and Erding

Climate change is already an important topic in Bavarian companies. A new study by bifa and the Ludwig-Maximilian University, Munich, on behalf of the State Ministry of the Environment and Consumer Protection („Staatsministerium für Umwelt und Verbraucherschutz“) shows that businesses are increasingly examining the consequences of climate change.

At the same time, their attention is being drawn more and more to the topic of adapting to the unavoidable consequences: Which climate-induced changes will businesses increasingly have to deal with in the future? How will any changes and shifts in average temperatures or more frequent and more intensive local extreme weather conditions (e.g. storms and floods) affect com-

panies? Are businesses prepared for this, i.e. do they have suitable adaptation capacities to ward off risks or to grasp opportunities, such as those that lie in the development of a climate-focussed economy and therefore new markets?

These questions were examined in this study in the following way, together with and within the scope of case studies with seven companies from production industry, commerce and the building trade. Expert interviews were held with industry representatives, based on systematic analysis of existing studies. These results were in turn used to develop strategies in especially conceived workshops and consultations with the participating companies. The most important opportunities and risks were assessed, the need for ac-

tion named and measures were formulated, which the companies can implement and which increase their adaptability significantly.

The most important results of the study as well as practical ideas for businesses will be presented at two events in Augsburg and Erding and will be made available in guidelines, which are available from www.bestellen.bayern.de.



Contact: Dr. Michael Schneider
mschneider@bifa.de