



IEE/09/758/SI2.558286 - MixBioPells

WP 6 / D 6.4

Summary review on national side workshop:

„MixBioPells: Marktfähige Nutzungskonzepte für alternative Biomassemischpellets“

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1 Basic data

Country: Germany	Conference: 2 nd International Biomass Conference, Leipzig	Date: 25.05.2011
No. of participants: 14	Organizer: DBFZ	Target groups: <ul style="list-style-type: none">• Pellet and combustion plant operators• Regional acting key actors and bio-business initiators• Policy makers• Engineers and consultants

2 Objectives of the workshop

The main objective of the workshop was to inform and sensitise national authorities and bio-business initiators about the topic of alternative pellets. The target groups should be informed about the project and the situation in their own country compared to other countries. Thus, presentation covering experiences with alternative mixed biomass pellets were given by the key actors involved in the project. Furthermore, a forum was provided for discussion of the presented information as well as the actual situation and requirements of the target groups. Also, the forum opened the possibility for the exchange of ideas.

The workshop was divided into two parts: Theoretical background (part 1) and reports about practical experience (part 2). After each of the presentations (10 - 15 minutes) given in part 1 and 2 about the same time was granted for discussion. The theoretical part covered the background of the project and common aspects of the energetic utilisation of alternative (mixed) biomass pellets. In the second part best practise examples and related problems during the development of bio-business activities were presented. The following fields of interest were identified:

- Providing a vast overview about constraints and drivers as well as possible solutions for the energetic utilisation of alternative (mixed) biomass pellets.
- Providing information about the situation in Germany compared to other European countries.
- Compiling different approaches, concerns and solutions of the heterogeneous target groups and discussion of further prospects.

3 Organisation of the workshop

The workshop was organised in close cooperation with the 2nd International Biomass Conference in Leipzig, Germany. Thus, the workshop was an integrated part of the conference. The key actors were contacted both with the conference and the MixBioPells mailing list. Additionally, the participants of the conference were informed about the side workshop via a conference presentation, a poster, project leaflets and information at the welcome desk. The workshop started after the end of the conference at 25th of May with a lunch. Afterwards, the workshop continued at 14:00 and was finalised about 17:30.

4 Results of the workshop

In total 14 persons have participated in the workshop. The distribution according to the target groups is listed in the following table:

Target group	Amount
Pellet and combustion plant operators	4
Regional acting key actors and bio-business initiators	3
policy makers	0
engineers and consultants	0
Others, e.g. research institutes, universities	5

Apparently, only plant operators as well as local key actors and researchers participated in the workshop. Policy makers, engineers and consultants did not join the workshop, even though policy makers known to the DBFZ were contacted individually prior to the conference. Due to several reasons (e.g. other conferences in the same time, holiday and other business dates) it was difficult to include this target group. Nevertheless, they claimed their interest on that topic and it was agreed to inform them separately about the results and available documents of the workshop (e.g. presentations, report, etc.).

Topic 1: Background and state of the art

The workshop was introduced by Volker Lenz (DBFZ). He gave a short overview about the actual situation for the use of renewables and the political targets in Germany and Europe. Afterwards, he focussed on common aspects of the energetic utilisation of woody biomass compared to non-woody biomass fuels to point out the objectives of the project. Thomas Zeng (DBFZ) highlighted the state of the art available for the production of standardised biomass pellets, combustion technologies and the related legal framework. It was shown that the production of standardised pellets requires a



suitable combination of raw materials and process parameters of the pellet press to facilitate the development of combustion systems for the use of alternative biomass pellets, particularly in small scale appliances. Especially compliance with statutory emission requirements is an issue. Though there are technologies partly available on the market to reduce emissions further developments for precipitators are needed.

The following discussion expressed high concerns regarding the legal framework, economics and availability of the raw materials. Especially the use in combustion plants without permission according to 1st BImSchV (up to 100 kW) is critical. According to §3 Abs.1 No. 8 licensed fuels are “straw, whole plants (also pellets), grains (also pellets), energy grain processing residues, husks, culms residues and similar herbaceous biomass substances (like straw, Miscanthus or hay)”. According to §3 Abs. 1 No. 13 “other renewable sources” such as fuel mixtures can be used. The combustion of the latter is combined with significant higher requirements, e.g. additional measurement program etc. Thus, alternative biomass pellets according to §3 Abs.1 No. 8 which are based on pure raw materials and with low critical emission related elements have the most promising potential. However, there are some uncertainties regarding the specification and use of licensed fuels according to §3 Abs. 1 No. 13 of 1.BimSchV and the related costs and missing precipitator technologies. Therefore, a market development is estimated in about 5 years. In contrast, for medium scale combustion plants the technical possibilities are already available and specific investments are significantly lower. Thus, in short and medium term energetic utilisation of alternative pellets will be focussed on this power range.

The discussion showed that there are differing opinions about the availability of the raw materials. Though large amounts of straw are produced annually there are big concerns about strongly fluctuating raw material prices and the sustainable use of these fuels, e.g. suitable cultivation strategies to avoid monoculture and soil erosion. Some uncertainties have also been raised about the economics of the pellet supply chain. There is a lack of information about the break even point especially under changing conditions (raw material prices, investments and capacity utilisation of the pellet press, etc).

Topic 2: Reports on practical experience

The second part mainly focussed on the reports of practical experiences on pelletising and combustion of alternative (mixed) biomass.

First, Mr. Pilz of Apoldaer Biomassewerk UG who has long time experience in pelletising of non-woody biomass, focussed his presentation on technical details, problems and solutions of the pelletising process. He clearly pointed out that long term experiences made during the production of



animal feed pellets can be transferred to the production of alternative and mixed biomass fuels. The main problem is still the availability of cost-effective raw materials and suitable markets.

Other presentations have focussed on integrated concepts for the energetic utilisation of biomass resources or residues on local level:

- Turnkey system developed by Pusch AG for pelletising and combustion of alternative and local available biomass
- Combustion of grape marc in Rhineland-Palatinate
- Combination of fermentation of horse manure, grass and landscape conservation material and combustion of digestates

The main objectives of these projects are to increase the value creation and process efficiencies by using local biomass resources in rural areas in terms of circular flow economy, heat integration and utilisation of biomass resources, e.g. with problematic fuel properties.

Conclusions

The presented projects and experiences as well as the discussion during the workshop has shown that the technical realisation of mixed biomass pellet production and combustion is possible. In many fields their application is possible and a large potential of biomass resources is available even though they are quite heterogeneous. Nevertheless, a market of alternative and mixed biomass fuels is at early stages. It was shown that many experiences were available especially in the field of pellet production and first utilisation concepts are successfully realised on regional level, especially above 100 kW. Further developments are strongly depending on:

- Availability of raw materials
- Development of legal framework, e.g. licensing of mixed biomass pellets according to §3 Abs.1 No. 13 of 1.BImSchV
- Transferability of local existing integrated concepts (isolated applications) to other regions or countries
- Economics of the whole supply chain which are mainly driven by the costs of raw materials, production of pellets and specific investments for the combustion plant

At the end, the participants had the possibility to assess the workshop. Five of twelve participants provided a feedback on the workshop (feedbackrate 42%). The participants had the possibility to rate the quality of the workshop based on five questions and a marking system. The results are listed in the following table:



Question	Mean value*
How would you rate the organization of the workshop	2
How would you rate the quality of the presentations in regard to timelines, information content and added value for your own professional activities	1,8
How would you rate the relevance of information and the relevance of the personal contacts for your own professional activities	2
How would you rate the relevance of the presented project (MixBioPells) for your own professional activities	2
How would you rate the workshop all in all	2,2

* Rating between 1 to 6 was possible

In particular, the participants highlighted the speciality of the topic, the reports of experience and the professionalism of the key actors. Some of the participants have missed detailed aspects on the economics and the detailed description of possible problems of the utilisation concepts.

5 Annex

5.1 Leaflet

Workshop „MixBioPells“:
Marktfähige Nutzungskonzepte für alternative Biomassemischpellets

Die derzeit favorisierte Nutzung von Holz zur Wärme- und Stromproduktion stößt in einigen Regionen aufgrund einer Verknappung der Ressourcen sowie steigender Brennstoffkosten an ihre Grenzen. Umso bedeutsamer ist der Beitrag, den alternative biogenen Festbrennstoffe wie Anbauholzmasse sowie industrielle Reststoffe biogenen Ursprungs zur Erweiterung des Heizstoff basis leisten können. Die Nutzung derartiger Biomassemischpellets wird derzeit jedoch durch verschiedene Einflussfaktoren eingeschränkt. Entsprechend befindet sich der Markt für Mischbrennstoffe in Europa im Anfangsstadium. Zur Verbesserung dieser Situation werden im Rahmen des EU Projektes „MixBioPells“ Hindernisse und Antriebsfaktoren zur energetischen Nutzung alternativer Biomassaressourcen in kleinen Anlagen, Förderanlagen sowie Heizkraftwerken untersucht und interessierten Akteuren zu Verfügung gestellt. Ziel des Workshops ist es, einen Überblick zur aktuellen Marktsituation bei der Produktion und energetischen Nutzung alternativer (Misch-) Brennstoffe zu geben und die Diskussion interessierter Akteure anzuregen. Die Workshopsprache ist Deutsch.

Weitere Informationen: www.mixbiopells.eu

Organisatorisches
Die Teilnahme am Workshop ist kostenfrei.
Vor dem Workshop (13:00 bis 14:00 Uhr) wird ein gemeinsames Mittagessen mit den Teilnehmern der Workshops „Grundlagenuntersuchungen zur thermoochimischen Nutzung von alternativen Biomassebrennstoffen – Fachdiskussion zu Ergebnissen und zukünftigen Schwerpunkten“ angeboten.
Am Ende der Veranstaltung besteht die Möglichkeit für weiterführende Gespräche bei Kaffee und Kuchen.

Veranstaltungsort
Foto: Karin Pfeiffer

Zeithistorisches Forum
Leipzig
Grimmaische Str. 6
04109 Leipzig
<http://www.hdg.de/leipzig/>

Anfahrt

Zeithistorisches Forum
Leipzig
Grimmaische Str. 6
04109 Leipzig
<http://www.hdg.de/leipzig/>

Workshop:
„MixBioPells“

25.05.2011
14:00-16:45
Zeithistorisches Forum Leipzig

DBFZ

25.05. 2011 Programm

Eröffnung
14:00 Projektvorstellung MixBioPells;
Volker Lenz (Deutsches BiomasseForschungszentrum; DBFZ)

Thema I: Hintergrund und Stand der Technik

14:20 Möglichkeiten zur Herstellung standardisierter Biomassepellets
Volker Lenz (Deutsches BiomasseForschungszentrum; DBFZ)

14:45 Technische und rechtliche Rahmenbedingungen zur Verbrennung alternativer Festbrennstoffe
Thomas Zeng (Deutsches BiomasseForschungszentrum; DBFZ)

15:10 Pause

Rückantwort

Workshop:
„MixBioPells: Marktfähige Nutzungskonzepte für alternative Biomassemischpellets“

25.05. 2011

Die Anmeldung kann über die Homepage der IBC (www.ibc-leipzig.de) erfolgen oder senden sie das ausgefüllte Formular an:

Deutsches BiomasseForschungszentrum (DBFZ)
Torgauer Straße 116
D-04347 Leipzig
Tel.: +49 341 2434 514
Fax: +49 341 2434 133
E-Mail: thomas.zeng@dbfz.de

Name, Vorname, Titel _____
Institution _____
Straße _____
Postleitzahl, Ort _____
Telefon _____
Fax _____
Email _____

Bitte geben Sie Ihren Namen und Ihre Kontaktdaten an. Ihre Daten werden im Rahmen des MixBioPells Projektes vertraulich behandelt!

5.2 List of participants

Nr.	Name	Firma / Institution	Adresse	Telefonnummer	Email	Unterschrift
1	JAKOB JÄGER	PLASCH ALU				
2	Sandor Lonyo	R&P Agoscience				
3	Michael Löhr	Machinentechnik Schulz-Ebert				
4	François Vallon	" "				
5	Dr. Brügelmann	Havala	" "			
6	carsten Riedel	AGENTA				
7	Detlef Wall	bio-loopup GmbH				
8	Stefan	eris-enova				



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Nr.	Name	Firma / Institution	Adresse	Telefonnummer	Email	Unterschrift
9	Wolfgang Uhl	Bau				
10	Pilz	A 32 46				
11	Gold Guthöfer	GnBW				
12	Lenz	DBFZ				
13	Kay	TU				
14	Zenz	DBFZ				
15						
16						
17						

Vielen Dank für Ihre Unterstützung!

5.3 Pictures

