IEE/09/758/SI2.558286 - MixBioPells

WP 2 / D 2.1.

Summary review of regional workshops

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Intelligent Energy Europe

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0. Preface

The regional workshop was used to present the project idea to local key actors, to discuss the situations within the regions and to get them involved in the project. Additionally the best way for information gathering was agreed with the key actors and the confidentiality of data was discussed.

The project partners invited relevant key actors in order to start the involvement to the MixBioPells project. The invitations had been sent out per Email and in some cases per mail. Additionally the invitations were repeated by phone calls, in doing so the opportunity was taken to illustrate the benefits for the participating key actors. Unfortunately, the target of at least 20 participating key actors could not be reached in every partner region, although the partners were eager to reach the target. The reasons, why the group of people who are interested in alternative pellets was quite small at that time, differ from country to country. In Austria and Germany the complicated legal framework leads to uncertainties, in Finland and Sweden the pellets industry produces large amounts per year, but is rather small in actors.

Despite these circumstances, the workshops were successful, because:

- the participating key actors had been (and are still) very interested in alternative pellets, so the maximum cooperation of the local key actors can be ensured**,**
- first ideas for the case studies had been identified,
- the exchange of ideas between the key actors had been inspired,
- first drivers and restraints had been identified,
- an initial discussion on relevant raw materials had been conducted,
- and further steps regarding the information gathering and the confidentiality of data had been discussed.

The chapters 1-5 are a summary of all workshops together. This summary is available in all partner country languages at the project website. Additionally you can find all individual workshop summaries of the partners, including agenda (English and national languages), relating presentations and participant lists, in the annex. They are also available at the project website. At the end you can find a participant list with indications and corresponding assignments to the target group.

1. Introduction

The market integration of alternative biomass pellets is still blocked by various constraints. Within the EU project MixBioPells the project partners identify the constraints and drivers in detail and find promising market introduction concepts for enhancing the market relevance of alternative pellets in Europe.

Since kind and potential of the available raw materials and the local frameworks differ significantly between the European countries and even between the regions of one country, each project partner will concentrate on one region in his country to analyse the local situation. So already existing networks will be detected or new ones can be built up in the selected regions. This close cooperation gives the possibility to develop fitting concepts for better market integration of alternative pellets. Within the scope of the project regional case studies are conducted in order to investigate and improve the energetic utilisation of alternative pellets.

In order to get to know the key actors of the whole pellet chain and for a vivid exchange of information start workshops for the case studies were held in each partner country (see schedule 1).

Schedule 1: Basic Data of the Start - Workshops of the project partners

Organiser	**BE2020+**	**CTI**	**DBFZ**	**DTI**	**SP**	**PROTECMA**	**VTT**
Date	06.10.2010	24.09.2010	03.09.2010	11.11.2010	28.09.2010	27.–29. 10.2010[1]	26.08.2010
Location	Austria	Italy	Germany	Denmark	Sweden	Spain	Finland
Nr. of participants	20	16	10	27	10	70	13

[1] paralell to the International bioenergetic fair Expobioenergia in Valladolid, Spain

2. Objective

The aim of the workshops was the identification of suitable raw materials for alternative biomass pellets in the particular region and the establishment of two regional case studies together with the subcontractors and the stakeholders of the whole pellet chain. For the successful implementation of the case studies an intensive information exchange between all workshop participants was promoted in order to intensify the networking activities. Furthermore next activities have been coordinated.

3. Results

3.1. Discussion

The workshops showed the importance of the project in creating a network of partners and stakeholders interested and involved in the production of pellets from alternative biomass. Furthermore the need for contact with experts for the legal framework of the combustion of alternative pellets was identified. Another point of discussion was the economic situation and the price development of the raw material basis and their competitive sectors. The main topic of the workshops was also the discussion about obstacles and possibilities of alternative biomass pellets. Following **concerns and obstacles** could be identified:

- Legal frameworks:
  - There is not enough information about legal frameworks available.
  - The requirements for the combustion of alternative pellets are too restrictive.
  - There are grey areas in law.

- Emissions and Particulate matter
  - There are restrictive laws concerning the particulate matter emission.
  - There is an uncertainty about the particulate matter from the combustion of different raw materials.
  - There are stringent conditions concerning the allowed emissions.

- Corrosion
  - There is the fear of increased corrosion from the combustion of alternative pellets and of the associated high costs for maintenance and repair.

- Ash characteristics
  - There is uncertainty about the ash characteristics of the alternative biomass.
  - There are concerns about higher ash contents.

- Type tests for combustion technologies
  - The type tests for combustion technologies are strict and expensive. Thereby a test for a single boiler does often not pay off.

- Profitability
  - There are concerns about the profitability of the pellets production facilities.
  - So far there are only a few experiences with real scale pelletizing and combustion technologies for alternative raw material.

- Amount of alternative material
  - There are concerns about the availability of alternative biomass for pelletizing for commercial utilization.

3.2. Ongoing activities and potential case studies

Following activities and intended projects have been discussed at the workshops. These projects are potential starting points for the case studies.

BE2020+; Austria

One project is called “AEW- Agrarenergie Weinviertel”. The AWE is a cooperation of 30 farmers, who cultivate miscanthus and fabricate briquettes themselves. Currently Mr. Zimmermann operates a heat distribution system for 6 households.

The second project is called “Straw pellets in Neusiedl/Zaya”. The enterprise “FEX” is a pellets producer. Currently this enterprise produces only pellets for the use as litter or animal feed. In future the objective is to produce straw pellets for thermal utilisation. In this case the straw suppliers could also be the costumers.

In addition a project was presented where corn cobs and hay were pelletized. The farmers are the raw material suppliers, the pelletizer and the customers rolled into one.

CTI, Italy

One project is about a manufacturer of agricultural machinery (Claudio Bonamini - MAREV) who has made a series of mechanical systems to collect vine prunings from the vineyard and then processed into small logs. Moreover, it is being built a machine for grinding and pelleting of the material (100% pruning) directly to the farm. The general idea is to leave the pellet to the farmer for his own utilization. Morover there is a plant able to produce pellet for local market. The whole system is proposed in an area of northern Italy characterized by strong diffusion of vineyards.

DBFZ, Germany

One intended project is a profitability study for the energetic utilization of pelletized residues from a paper manufacture in a 14,5 MW power plant. For this purpose the subcontractor will carry out further project development with the client.

Another intended project is the investigation of an integrated concept for the energetic utilization of pellets based on dried digestate. Depending on the input materials and the line operation of the biogas plant the available fuels qualities are varying. Based on this the key actors will be encouraged to build up a new supply chain for the energetic utilization of digestate from biogas plants.

DTI, Denmark

The intended projects consider pelletizing lines with power plant incorporation for alternative (cheap) raw material types with market implementation and power plant combustion, the pelletizing line for straw pellet

production with market implementation as well as the improvement of small and medium scale boilers for alternative boilers.

SP, Sweden

One intended project is the establishment of a system for handling and storage of briquettes, where no direct access to the boiler / storage room is available. Katrineholms municipal housing companies: boilers meet requirements for combustion of both pellets and briquettes, but not for handling of briquettes. Other project ideas consider the storage and packaging of raw materials and a large scale production of new mixed pellets.

Another project, which has made positive experiences with the combustion of agricultural waste in Sweden, was presented.

Protecma, Spain

Two intended projects have been discussed. One project is about the energetic use of olive stone from oil industry: The different qualities and experience gained with combustion should be studied.

The other project is the energetic use of Almond shells and the influence of the almond "skin" concerning corrosion. The study should base on practical experiences in Spain.

VTT, Finland

Besides other subjects it was discussed local raw materials for pellets. In Finland one alternative raw material in energy production is reed canary grass. It can be mixed with wood and produced pellets. Also farmers get incomes from the raw material. A pelletizer was interested to test pelletising of wood and reed canary grass. Other local raw materials are different straws and peat. Another pelletiser promised to test pelletising of peat and straw mix.

Mixed pellets are not ready to markets, those has to be tested. For the combustion and gasification testing was suggested to two companies. They were interested to test the produced mixed pellets.

3.3. Identified raw material

Following raw material could be identified for pelletizing and combustion:

- Energy crops:
  - Miscanthus
  - reed canary grass
  - corn
  - hemp

- wheat
- Residues from agriculture:
  - straw
  - corn cobs
  - rye straw
  - residues from drying and cleaning of grain

- Residues from landscape gardening:
  - clearings of roads
  - railroad tracks and power lines
  - recovery of urban green residues

- Residues from the processing of rapes:
  - rape residues with residual seed

- Others:
  - residues from a paper manufacture
  - peat
  - prunings of arboreous or fructiferous trees
  - poultry litter
  - chicken feathers
  - animal dung
  - digestate
  - almond shells
  - olive stone

4. Feedback

The workshop participants in all partner countries except Spain were asked to answer a feedback questionnaire. The following figures (1-5) present the results of the first five feedback questions

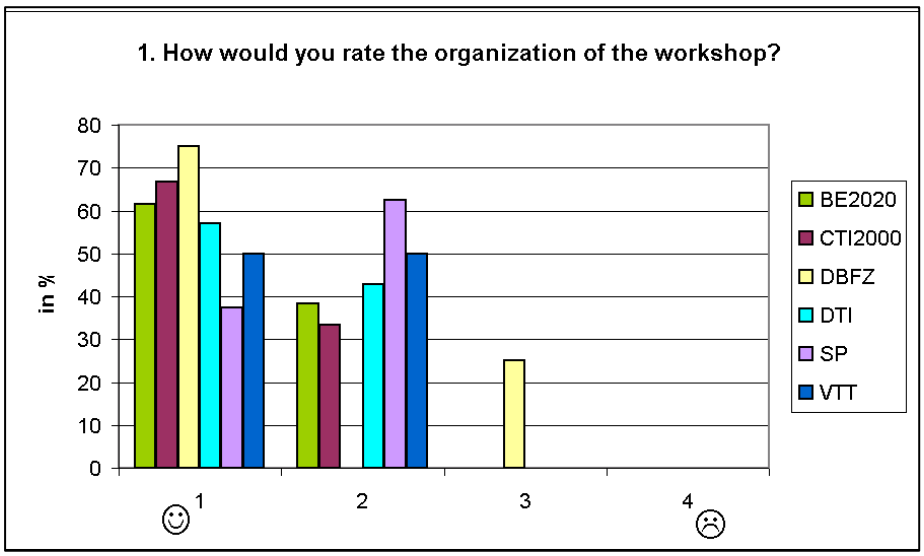

Figure 1: Rating of the workshop organization

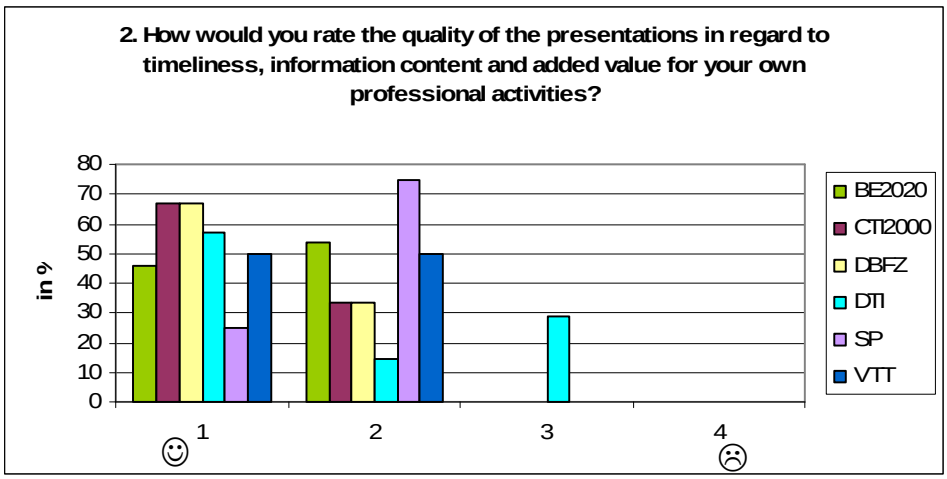

Figure 2: Rating of the quality of the presentations

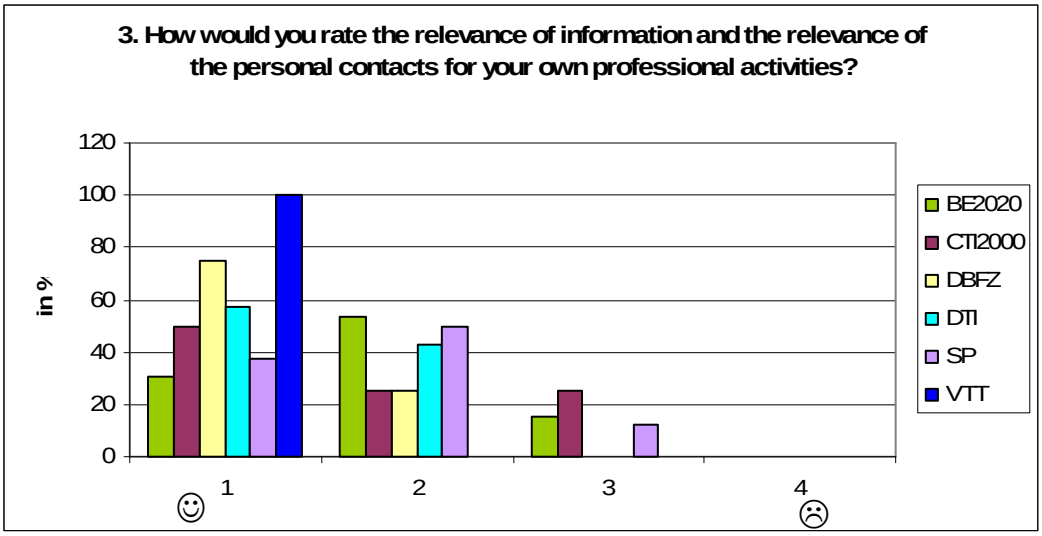

Figure 3: Rating of the relevance of information and of the personal contacts

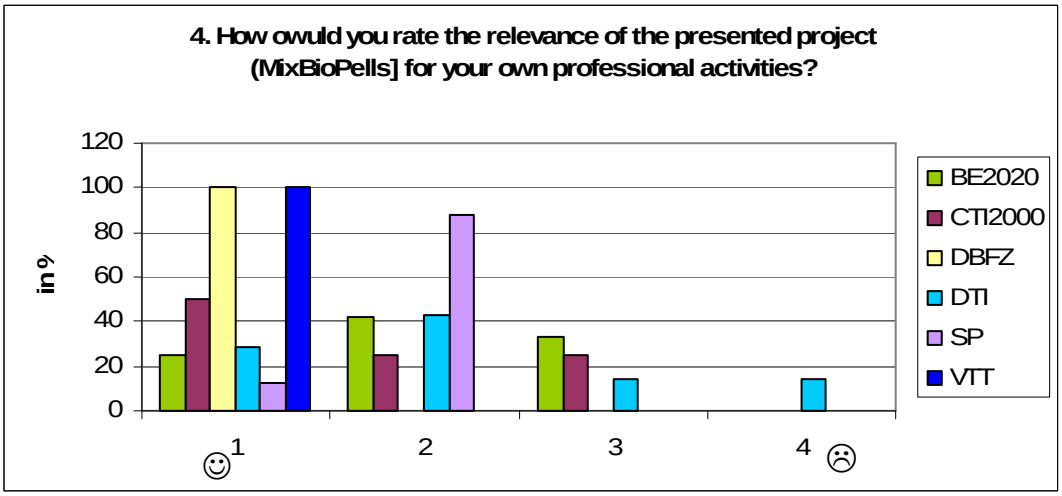

Figure 4: Rating of the relevance of the MixBioPells project

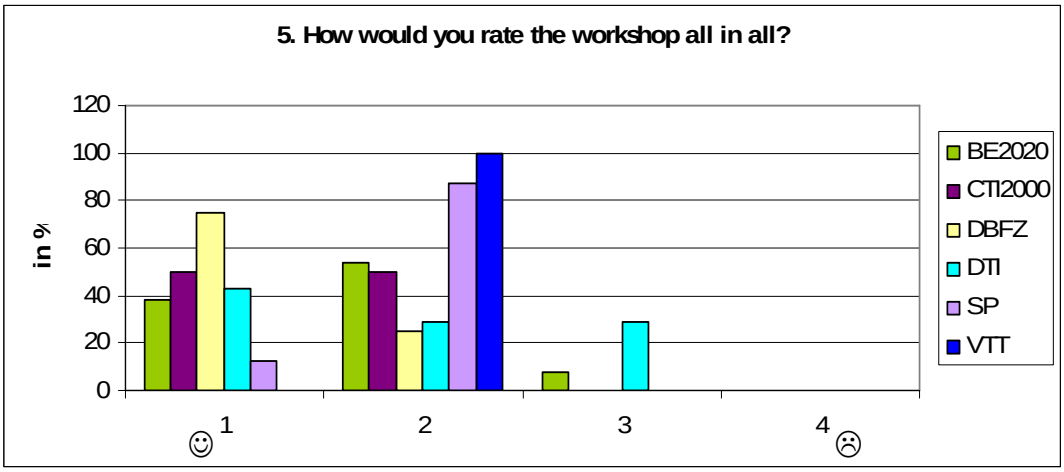

Figure 5: Ratining of the workshop

Questions 6-8 were put in open questions. A summary of the answers is given below:

- **Question 6: Which part if the workshops did you particularly like?**

Frequently mentioned answers were the good organisation of the workshops and the possibility of an open discussion. The workshop participants benefit from the contact with other key actors.

- **Question 7: What have you missed?**

The workshop participants missed some information about legal frameworks as well as combustion technologies and they would also appreciate if more stakeholders would participate at the workshop.

- **Question 8: Which needs/ expectations do you have for future meetings?**

The workshop participants are expecting more details about the next steps and more information about the profitability analysis. In addition the participants desire more network activities and the involvement of politicians.

5. Follow up

The focus of the next steps is set on the specification of the case studies. In addition the relevant raw material will have to be chosen. Next, the gathering of information for the cost analysis of the case studies is important in order to evaluate the costs of energy production using alternative pellets. Moreover, the expenses identified are compared to energy production costs of other fossil heating systems. The contacts and the results of the open discussion within the start workshops are the basis for the next activities.

6. Annex

6.1. Summary review Italy

Workshop summary incl. participant list

Invitation incl. agenda in Italian

Invitation incl. agenda in English

Presentations

6.2. Summary review Germany

Workshop summary incl. agenda in English

Invitation incl. agenda in German

Participant list

Presentations

Information about Pusch AG

6.3. Summary review Denmark

Workshop summary

Invitation

Agenda in English and Danish

Participant list

Presentations

6.4. Summary review Spain

Workshop summary incl. agenda in Spanish and English

Invitation

Participant list

Presentations

6.5. Summary review Sweden

Workshop summary

Invitation + agenda in Swedish

Invitation + agenda in English

Participant list

Presentations

Workshop advertisement

6.6. Summary review Finland

Workshop summary incl. agenda in Finnish and participant list

Agenda in English

Presentations

6.7. Summary review Austria

Workshop summary incl. agenda in English

Invitation incl. agenda in German

Participant list

Presentations

Workshop posters

6.8. Participant list with indications