




SolidStandards

Enhancing the implementation of quality and sustainability standards and certification schemes for solid biofuels (EIE/11/218)






D6.6

Report on feedback activities to national mirror committees and CEN and ISO relevant technical committees

Co-funded by the Intelligent Energy Europe Programme of the European Union

The SolidStandards project

The SolidStandards project addresses ongoing and recent developments related to solid biofuel quality and sustainability issues, in particular the development of related standards and certification systems. In the SolidStandards project, solid biofuel industry players will be informed and trained in the field of standards and certification and their feedback will be collected and provided to the related standardization committees and policy makers.

SolidStandards is coordinated by:

WIP Renewable Energies
Sylvensteinstrasse 2
81369 Munich, Germany
Cosette Khawaja & Rainer Janssen
cosette.khawaja@wip-munich.de
rainer.janssen@wip-munich.de
Tel. +49 (0)89 72012 740

About this document

This document is **Deliverable 6.6** of the SolidStandards project. It is the report on feedback activities to national mirror committees and CEN and ISO relevant technical committees. This document was prepared in **March 2014** by:

Indra te Ronde and Jarno Dakhorst
Netherlands Standardization Institute (NEN)
P.O. Box 5059, 2623 AX
Delft, The Netherlands
indra.teronde@nen.nl
Tel. + 31 15 26 90 406

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1. Introduction

This report on "feedback activities to national mirror committees and CEN and ISO relevant technical committees" is developed as part of the Intelligent Energy Europe funded project, SolidStandards (www.solidstandards.eu).

The SolidStandards project addresses the development of standards and certification systems for the quality and sustainability of solid biofuels. Ensuring both the quality and the sustainability of solid biofuels is critical for the further development of markets for solid biomass. These issues are being addressed through the on-going development of standards at CEN and ISO level, and the introduction of various voluntary certification systems. The SolidStandards project aims at enhancing the uptake of standards within the industry by providing training on standards implementation to solid biofuel producers across Europe. Furthermore, the project aims at providing input to on-going standardization processes and policy decisions by gathering and providing industry feedback to standardization committees and decision makers.

This report, deliverable 6.6 'Report on feedback activities to national mirror committees *and* CEN and ISO technical committees' gives an overview of all (official and) reported contact between the SolidStandard partners and (members of) national mirror committees and CEN and ISO technical committees' as part of the SolidStandards Project (2012-2014) (described in chapter 2). The national position papers and the European industry position paper were also presented to CEN/TC 335 and/or ISO/TC 238 and distributed among the members of these technical committees. If relevant feedback was given (through the national standardization body/national delegation), this is also mentioned in chapter 2.

This overview is limited to the most relevant feedback. Chapter 3 consists of a summary of all feedback and feedback activities, and this chapter contains some conclusions and recommendations.

Both the project partners and the European Commission can use this information for further actions , to a certain extent,. This report will be also publically available on the project website, so stakeholders can use the overview/outcome for their own benefit as well.

There are active national mirror committees in the following countries:

Country	Active national Mirror Committee	Feedback received
Austria	Yes, ONK 241, Energy from solid biomass	Yes
Bulgaria	No	
Croatia	Yes, Technical Committee 238 under HZN	Yes
Czech Republic	No, but has a working group no. 138	
Denmark	Yes, national committee S-358 Biofuels	Yes
Germany	Yes, mirror committee NA 062-05-82 AA Feste Biobrennstoffe	Yes
Finland	Yes, national mirror committee under SFS and Kemesta ry	Yes
Lithuania	Yes, national mirror committee under LST	No
The Netherlands	Yes, mirror committee 310029 Solid Biofuels under NEN	Yes
Poland	Yes, technical Committee 144 on Coke and Other Solid Formed Fuels	Yes

2. Feedback per country: an overview

2.1. Austria

2.1.1. National feedback

Holzforschung Austria has discussed the national industry paper of Austria with the national mirror committee of the Austrian Standardisation Institut.

In Austria the national committee ONK 241 “Energy from solid biomass” is mirror committee for CEN/TC 335 and ISO/TC 238. Before European and International standardization for solid biomass started to work on the topic of solid biomass, ONK 241 was one of the first to develop standards for wood chips, wood pellets and wood/bark briquettes.

The national committee mentioned a need for the standardization of torrefied material on international level. This work is already in progress as Austria has developed NWIPs for torrefied wood pellets and briquettes for WG2 of the ISO standardization committee ISO/TC 238.

Recently the need for a method to analyse the content of stones/mineral impurities in hog fuel was discussed in national and international committees after the discussion was initiated by the Austrian industry. It was decided that Austria should prepare a new work item proposal NWIP. This happened in the beginning of 2014 and the NWIP is going to be discussed in WG4 of the ISO standardization committee ISO/TC 238 at the next meeting in June 2014.
The European standard for the determination of particle size distribution ÖNORM EN 15149-1 has to be discussed again to clarify some details of the method. This work is in progress as part of WG4 of the ISO standardization committee ISO/TC 238.
Apart from that the national committee ONK 241 has satisfied the needs for new standards, e.g. on storage, maize cob and so on, in the past on national level already.

All committee members are in frequent contact with the solid biomass industry and the different needs for adjustments in existing standards or the development of new standards are always discussed promptly on the next meeting of the ONK 241. Especially with the revision of the EN standards for ISO standardization a continuous discussion of the comments was necessary. The following table lists the recent meetings, in which feedback on European standards was discussed.

date	attending CEN(ISO)/TC-member	topic
30.04.2013	Englisch Martin, BEA Rathbauer Josef, FJ-BLT Steiner Monika, HFA Wojcik Magda, ofi	*Martin Englisch and Magda Wojcik, who had participated in the ISO meeting in Bangkok, gave an overview on the outcomes of this meeting.* *The need for a method to analyze the content of stones in hog fuel was discussed in national and international committees. It was decided that Austria is going to prepare a new work item proposal NWIP for ISO/TC 238 on that topic.*
21.01.2013	Englisch Martin, ofi Rathbauer Josef, FJ-BLT Steiner Monika, HFA	*For the following standards comments were discussed and passed on to ISO secretariat:* *ISO CD 17829, ISO CD 17830, ISO CD 17831-1, ISO CD 17831-2, ISO CD 18122, ISO CD 18123, ISO CD 18134-2, ISO CD 18157-1* *Comments on ISO 17225 series were discussed and after some amendments passed to ISO secretariat. Additionally a document was prepared to explain especially the comments on wood chip particle size classification. The basis for these comments was a considerable number of test results gained in a project with the wood chip and paper industry. This document*

		was sent to ISO secretariat by ASI on the 05.03.2013 for further discussion at the ISO meeting in March 2013 in Bangkok (see attachment 1). Finally most of the Austrian comments were accepted at the ISO meeting. *Apart from the discussion of the comments on standards, it was agreed on, that a NWIP for torrified pellets would be elaborated by Martin Englisch and sent to ISO secretariat by ASI for further discussion at the ISO meeting in Bangkok.*
31.10.2012	Englisch Martin, ofi Pichler Wilfried, HFA Rathbauer Josef, FJ-BLT	*The discussion of the comments on prEN ISO 17225 series started but was going to be continued in the next meeting.*
29.08.2012	Englisch Martin, ofi Pichler Wilfried, HFA Rathbauer Josef, FJ-BLT	*Information was given, that comments on ISO 17225 series should be handed in until the end of the year.* *Discussion on the topic of safety in pellet storage with an expert of the Vienna fire department.*
25.06.2012	Englisch Martin, ofi Pichler Wilfried, HFA Rathbauer Josef, FJ-BLT	*Wilfried Pichler and Martin Englisch, who had participated in the ISO meeting in Stockholm, gave an overview on the outcomes of this meeting.* *Discussion of OENORM C 4005, a national supplement on EN 14961-1 for forest chips and OENORM C 4006, a national supplement on EN 14961-3 for wood briquettes.* *Discussion on the need to standardize bark briquettes.*
26.04.2012	--	*Confirmation from ASI that comments on ISO 17225 series were passed to ISO secretariat. In addition a paper on wood chip particle size was sent to ISO secretariat for further discussion of the particle size analysis at the ISO meeting in May 2012 in Stockholm (see attachment 2).*
20.03.2012	Englisch Martin, ofi Rathbauer Josef, FJ-BLT Steiner Monika, HFA	*Elaboration and discussion of ÖNORM C 4005, a national supplement on ÖNORM EN 14961-1 for forest chips.* *ÖNORM M 7137 was discussed.*
23.011.2011	Rathbauer Josef, FJ-BLT Steiner Monika, HFA	*The following standards were discussed and voted:* *EN 16126 and EN 16127* *ÖNORM M 7137 and ÖNORM C 4003 were discussed.*
27.09.2011	Englisch Martin, ofi Rathbauer Josef, FJ-BLT Steiner Monika, HFA	*For the following standards comments were discussed and passed on to CEN secretariat:* *ÖNORM EN 15234-2 to -6 and ÖNORM EN 14961-6* *Discussions mainly on ÖNORM C 4005 and ÖNORM M 7137*
31.05.2011	Englisch Martin, ofi Pichler Wilfried, HFA Rathbauer Josef, FJ-BLT	*Initiation of new national work item ÖNORM C 4006 for the certification of wood briquettes*
16.02.2011	Englisch Martin, ofi Pichler Wilfried, HFA Rathbauer Josef, FJ-BLT	*Initiation of new national work item ÖNORM C 4005 on forest chips*

At the committee meeting on 30.04.2013 Holzforschung Austria presented the SolidStandards project and explained the aims of this National Industry Position Paper. It was agreed on, that all important issues had already been discussed and that the final National Industry Position paper should only be distributed for acknowledgement among the ONK 241 members. This was done on 27th of June. No comments were received as of 01.07.2013.

2.1.2. Feedback on European industry position paper

There was no additional feedback given after publication of the European Industry Position paper.

2.2. Bulgaria

2.2.1. National feedback

There is no(t an active) mirror committee in the field of standardization of Solid Biofuels. The feedback collection was discussed with the National Institute for Standardisation (BDS) - CEN/TC-member.

The meeting with the representatives of BDS was held on 6th March 2013 in Sofia. The participant list includes the following representatives of the National Institute for Standardisation:
Ms. Bojidarka Haralampieva – Chief of the Department Construction, Structures and Materials to the Directorate standardization.

Ms. Ekaterina Slavova – Secretary of the Department Construction, Structures and Materials to the Directorate standardization.

The main discussion was connected with the high level and quality of the SolidStandards training, the need from implementation of all European standards for solid biofuel in the market, quality of sustainable certification schemes and sustainability and general policy of the government in the field of establishment of mechanisms and instruments for adopting of standards for national industry.

2.2.2. Feedback on European industry position paper

There was no additional comment after publication oft he National industry position paper and the European Industry Position paper.

2.3. Croatia

2.3.1. National feedback

The standardization activities regarding solid biofuels in Croatia are coordinated by the Technical Committee 238 (TC 238) on Solid Biofuels established in December 2011 within the Croatian Standardisation Institute (www.hzn.hr). Currently the following institutions are members of the TC 238: TC 238 has adopted the standards on solid biofuels developed by the European Committee on Standardisation as Croatian standards and has labelled them by adding HRN as a prefix (for example, standard EN 14961-1:2010 is labelled as HRN EN 14961-1:2010 Solid biofuels -- Fuel specifications and classes -- Part 1: General requirements). However, these standards have been adopted in original English language and at the moment the main activity of TC 238 is focused on the translation of the standards Croatian as well as unification of the relevant terminology on solid biofuels. This is especially important since different institutions and organisation have in the past used somewhat different terminology which could result in misunderstandings.

The specific need of TC 238 would be to include a representative of biomass boiler manufacturers, solid biofuel producers and consumer associations within the TC in order to have a point of view from the industry and consumers. This has been attempted various times but without success. As a general conclusion it can be said that one of the main problems regarding implementation of solid biofuels standards in Croatia at the moment there is the lack of human capacity, i.e. lack of persons with a knowledge and understanding of standardization activities, requirements, benefits and overall philosophy.

The discussion of issues regarding solid biofuels standardization status and activities in Croatia as well as collection of feedback implemented in this position paper was organised with prof. Željko Zečić,

Ph.D., who is acting as president of Croatian Technical Committee 238 on solid biofuels, formed within the Croatian Standardisation Institute (Hrvatski zavod za norme, www.hzn.hr). Prof. Zečić is currently a full-time professor at the Faculty of Forestry, University of Zagreb and is the head of the Laboratory for the testing of properties of solid biofuels established within the Faculty. The discussion took place on Thursday 6 June at REGEA premises.

REGEA is also active within the Technical Committee 238 as a member and the two workshops/training events organized within the SolidStandards project (first on wood pellets, second on wood chips) were in fact organized together with representatives of TC238 and were held at the premises of the Faculty of Forestry. In that regard, REGEA was prior to the discussion already familiar with the status of solid biofuels standardization in Croatia and thus the received comments and suggestions were mostly in the form of minor adjustments and data checking.

Thus it can be concluded that the results and opinions presented in this position paper reflect also those of the Technical Committee 238 on solid biofuels.

Currently the most important need in order to widen the activities is to engage more representatives from other groups of stakeholders (solid biofuels producers, industry of wood fired boilers, consumers associations). However, this has proved to be a rather difficult task.

2.3.2. Feedback on European industry position paper

There was no additional feedback given after publication the European Industry Position paper.

2.4. Czech Republic

2.4.1. National feedback

The feedback collection was discussed with the Czech Pellets Cluster, which holds the rights to the ENplus certification for the Czech Republic.
The meeting with the representatives of the Czech Pellets Cluster was held on 28th of June 2013 in Prague. The participant list includes the following representative of the Czech Pellets Cluster:
Mr. Vladimír Stupavský – Chairman of the Czech Pellet Cluster.

The main discussion was connected with the high level and quality of the SolidStandards training, the need from implementation of all European standards for solid biofuel in the market, quality of sustainable certification schemes and sustainability and general policy of the government in the field of establishment of mechanisms and instruments for adopting standards for national industry. Furthermore, the newly implemented ENplus certificate, the experience of Czech actors with the certificate and the possibilities of its development for the future has been discussed.

2.4.2. Feedback on European industry position paper

There was no additional feedback given after publishing the European Industry Position paper.

2.5. Denmark

2.5.1. National feedback

In Denmark the national committee S-358 Biofuels at the Danish Standards Foundation is the mirror committee for CEN/TC 335 and ISO/TC 238.
Apart from the solid biofuel standards, members of the committee are also involved with other standards:

- CEN TC 19 Petroleum products, lubricants and related products
- CEN TC 383 Sustainably produced biomass for energy applications
- ISO TC 248 Project committee; Sustainability criteria for bioenergy"
- ISO TC 255 Biogas

On the 10th of October 2013, the SolidStandards project and the feedback were discussed at the annual Danish mirror committee (standardization Committee 358) meeting at the Danish Standards. Present were representatives from Daka Denmark A/S, DONG Energy A/S, Energy and Oil Forum, FORCE Technology and Vattenfall A/S as well as the secretary from Danish Standards.

The project and the draft of this position paper were presented to the committee by Mrs. Susanne Westborg, FORCE Technology.
Regarding new areas for standardization, the committee pointed out the following areas:

- Fuel hygroscopicity, more precisely, the hygroscopic tendencies. Probably particularly relevant in connection with torrefied biomass
- Grindability, test which tell about the energy consumption of rolling mill / hammer mill and perhaps also something about the resulting powder's particle size distribution
- Dust forming properties, i.e. how much dust a specific biofuel generates when handled
- Explosion conditions, according to the committee members, foreign organisations provide determination of explosion limits, but the results depend on the current laboratory and its equipment / procedure

Regarding the relevance of certification systems the short general message from the committee would be that it is not relevant for utility companies.
In general, Danish Mirror Committee (and the participating companies and their employees) has been actively involved in the birth of the European complex of solid biofuel standards and is continuously involved with the development of the corresponding ISO standards. The Danish contribution has been continuously determined to develop standards that provide representative data and relevant and practically usable thresholds and procedures in daily operation for solid biofuel actors as well as fuel laboratories.

As the CEN standardization work was about to start, Mrs. Helle Junker (then ELSAM Engineering) made sure to translate the standardization methods from the in section 2.2 mentioned Danish "Recommended analysis methods" into English. Many of the now available EN standards for pre-treatment and analysis of solid biofuels are in fact an outcome of these methods.

2.5.2. Feedback on European industry position paper

There was no additional feedback given after publication the European Industry Position paper.

2.6. Germany

2.6.1. National feedback

The German mirror committee NA 062-05-82 AA “Feste Biobrennstoffe” counts 13 members.

The last meeting of the national mirror committee was held at 24th January 2013. At that point of time there were only little results from the workshops. For this reason, it was not possible to discuss the given ideas and results from the workshop. The next meeting of the national mirror committee will be held in January 2014. It is agreed with Hans Hartmann (convenor in the national mirror committee) and Jakob Bosch, (co-convenor) to bring in the themes for a further development of the standards during the next meeting. Comments by the workshop participants were discussed with Jakob Bosch. Outcome of the discussion was that topics in regards of safety and security in the use of biomass fuels is of high concern in the national mirror committee. While market actors often mention the dust problem, scientific researchers are more concerned about the emission of volatile organic compounds (VOC) and carbon-monoxide. However, till now the work on practicable solutions is going on and changes in existing standards must be based on reliable scientific research which is often done in European projects like for example “MixbioPells” or “SafePellets”. It was referred to the outcome of the “First International Workshop on Pellet Safety” which was held from 4th to 6th March 2013 in Fügen/Austria within the SafePellets project.

Safety issues are seen as a very important topic regarding storage and transportation of solid biofuels. Since it is already part of national legislations in most of the countries, and these legislations differ a lot, safety issues are not in the scope of the committee. In Germany requirements for transport and storage of wood pellets are already object of the VDI Directive 3464. Furthermore, it has to be stated that a comprehensive quality assurance system according to EN 15234 already helps to detect and to avoid safety problems because it forces the producers of wood fuels to be cautious in their production processes. Also the design of the end-user storage is not defined in a CEN standard. A recommendation paper of the German pellet association DEPV was published and has already been translated for the Irish market. The revised version of the paper will be provided to all national pellet associations organised in the European Pellet Council. Of course this paper does not have the status of a standard but it has been developed in collaboration with many actors of the sector. A need for defining an own standard for “biofuel storage” is not seen at the moment.

About new standards for HTC material was already discussed in the last meeting and it was agreed that more interests from market side is needed.

Currently non-woody pellets made from straw play a role in Europe, but not yet in Germany. Classes A and B defined in the standard are meant for the standardization of pellets made from all other raw materials. The classification system in EN 14961-1 offers another possibility to describe the properties of a fuel. In case other raw materials become more important in the future, special requirements for the produced pellets will be included in the revised version of the standard.

The own standard for industry-pellets is not in focus at the moment. The “Initiative Wood Pellets Buyers” (IWPB) already has worked out at a catalogue of requirements for industry pellets and will include these as own classes into the upcoming ISO standard 17225 for pellets. The IWPB is an interest group launched by GDF SUEZ and unites utility firms that fire large quantities of wood pellets. The goal is to enable the trading of industrial wood pellets among the partnering companies.
New standards for “sustainability” and maybe the further integration into the certification schemes are under development. At current state European CEN/TC 383 has developed the standard “EN 16214 - Sustainability criteria for the production of biofuels and bioliquids for energy” and it was published end of 2012. Till now it only deals with liquid and gaseous biofuels but it is under discussion that it will be extended also for solid biofuels in the future.

On international ISO level ISO/PC 248 the standard for criteria of sustainability in the field of bioenergy is still under development. It aims to provide criteria along the supply chain and the energetic use of biomass which also includes solid biofuels.

Additional comments German Mirror Committee NA 062-05-82 AA Feste Biobrennstoffe on the SolidStandards’ questionnaires are listed below:

Outcomes Questionnaire	**Comments NA 062-05-82 AA**
A need for further standardization is seen at field of hydrothermal carbonization of biomass (HTC)	A need for quality requirements for HTC-biofuels as well as other thermal treated bioenergy carriers is recognized by the members of the German Mirror Committee as well. Currently a product standard for these materials is under development on international level (as a part of ISO 17225)
The development of a standard/guideline for the measurement of ash melting behaviour was once mentioned in the questionnaire.	With CEN/TS 15370-1, a technical specification for the analysis of the ash melting behavior is available. It is often questioned how meaningful the results are for indicating the ash related problems in furnaces. Therefore, the working Group 4 of ISO/TC 238 “Solid Biofuels” is currently waiting for the outcome of the European Project “AshMelT” which aims at proposing a new (or additional) method to be standardised by ISO TC238 and thus it would become valid in Europe as well.
An own standard for industry-pellets was preferred by several participants.	A need for quality requirements for industrial pellets is recognized by the members of the German Mirror Committee as well. Three quality classes defining requirements for industrial pellets are included in the new product standard for pellets ISO 17225-2 which will replace EN 14961-2 in summer 2014.
The subject of sustainability within the product and certification standards should be implemented and was mentioned more often during discussions.	(Proof of) Sustainability is a subject which is out of scope of the standardization activities of the ISO TC 238 and the national mirror committees as it goes beyond the actual description of technical quality requirements for fuels. Both subjects will have to be brought together in a certification system. ISO/PC 248 “Sustainability criteria for bioenergy” is currently developing standards to assure the sustainability of bioenergy carriers.

In the opinion of several participants there is a need for the development of practice-oriented methods for producers and consumers to measure and to verify product characteristics. In particular there is a need for suitable rapid test methods that are feasible on site or at least without extensive laboratory testing.	CEN/TC 335 developed analysis methods for the precise evaluation of the properties of solid biofuels. These reference methods set the benchmark for the accuracy of rapid test methods.
The size-classes for wood chips in EN 14961 were criticized by lots of participants as “not suitable” in practice.	The size classes have been revised for the new product standard for wood chips ISO 17225-4 which will replace EN 14961-4 in summer 2014.

Additional comments German Mirror Committee NA 062-05-82 AA Feste Biobrennstoffe on the SolidStandards project deliverable “European Industry Position Paper”

Wood chips

- The initiative “Holzwärmeplus” is currently developing a system for the quality assurance of wood chip production.
- The German Pellet and Wood Energy Association (DEPV) plans the development of a certification scheme for wood chips.

Wood briquettes

- The German Pellet and Wood Energy Association (DEPV) is currently developing a certification scheme for wood briquettes which will probably be launched in June 2014.

2.6.2. Feedback on European industry position paper

Additional comments German Mirror Committee NA 062-05-82 AA Feste Biobrennstoffe on the SolidStandards project deliverable “European Industry Position Paper” (D 6.5)

The present document is appreciated positive by Chairman representatives of the German Mirror Committee NA 062-05-82 AA Feste Biobrennstoffe. It identifies gaps and potential improvements to the existing standards. Parts of it were already adopted by the upcoming ISO 17225 series of standards, which will supersede the European EN 14961 series, like it is described on the table summary. Suggestions from the document will be included in the future work of the German mirror Committee.

2.7. Finland

2.7.1. National feedback

The Finnish Standards Association (SFS) is the central standardization organization that controls and co-ordinates national standardization work in Finland.

The Finnish Mirror committee of Solid biofuels has participated actively in CEN/TC 335 and ISO/TC 238 standardization work. Finland through SFS is leading working group 2 in CEN/TC 335 (Fuel specifications and classes, fuel quality assurance) and working group 2 also in ISO/TC 238 (Fuel specifications and classes). The members of Finnish mirror committees have participated in working group meetings and commented draft standards. Kemesta ry is managing the Solid biofuel standardization work on behalf of SFS.

The Finnish national mirror committee of Solid biofuels has translated most important standards into Finnish and published these as two handbooks including English and Finnish texts.

In addition to solid biofuel standardization Finland is active also in the following related standardization work:

- CEN/TC 383 Sustainably produced biomass for energy applications (Kemesta ry and Finnish Petroleum Federation are in charge of the work)
- ISO/PC 248 Sustainability criteria for bioenergy (Kemesta ry and Finnish Petroleum Federation)
- CEN/TC 411 Bio-based products (Kemesta ry)

Sustainability standardization is responsibility of Kemesta ry and Finnish Petroleum Federation in turn of 2 year periods.

The draft report, which was sent to the Mirror Committee members in August 2013, was discussed in the meeting on 5 November 2013 in Helsinki. This was the second meeting organised by Kemesta ry, which is a new standardization organization in Finland and now responsible for solid biofuel standardization.

The Mirror Committee members have already commented SolidStandards material and standards during 2 stakeholder consultation and during SolidStandards training events. These comments were already included in the previous parts of the national industry position paper. Additional comments were received for Table 1 and 2 that data should be presented so that also < 2.5 MWth plants could be calculated. Also in the conclusions chapter torrefied biomass standardization should have a broader scope including also steam exploded biomass and hydro carbonisation and proposed standardization item should be: thermally treated biomass fuels.
Also map of small-scale plants managed by heating entrepreneurs was added after the meeting.

2.7.2. Feedback on European industry position paper

There was no additional feedback given after publication the European Industry Position paper.

Finnish wood fuel producers and users find particle size distribution still too complicated, but requirements in ISO 17225-1 and 4 can be met better. VTT has published in December 2013 Wood fuel quality guidelines, which include guidance to most important solid biofuels standards and this guideline is made in close cooperation with Finnish Bioenergy Association, Finnish Forest Industry Federation and Energy industries association.

2.8. Lithuania

2.8.1. National feedback

Technical committee 71 (LSTTK 71) is responsible for the standardization of solid biofuels. This committee is working within the scope of sustainably produced biomass, solid biofuels and solid recovered fuels for energy applications. The objectives of LSTTK 71 are:
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- standardization of solid biofuels and solid recovered fuels terminology, technical requirements, sampling and sample preparation methods;
- standardization of biomass terminology, technical requirements and assessment measures for evaluation of renewable energy sources` compliance to sustainability criteria set in the Directive 2009/28/EC.

Regarding solid biofuels standardization in Lithuania, there was only one standard adopted by LST, namely LST 1986:2007 - Solid fuel - Fuel peat. This standard determines peat that is used for fuel and peat briquettes technical requirements, methods for the determination of its qualities and technical supply conditions. Other standards were adopted for Lithuania from the Committee for European Standardisation (CEN). Basically, they cover:

- Solid biofuels terminology, definitions and descriptions, methods for the determination of solid biofuels qualities, fuel specifications and classes, sampling and sample preparation, fuel quality assurance and conversion of analytical results from one basis to another;
- Solid recovered fuels terminology, definitions and descriptions, methods for the determination of solid recovered fuels qualities, fuel specifications and classes and quality management systems.
- Sustainability criteria for the production of biofuels and bioliquids for energy applications.

All these standards involve no obligation at national level.

However, despite the understanding of the standardization and certification importance, it seems that most producers and suppliers in Lithuania still use locally agreed standards which are widely accepted in the “local” markets. A good example of this rather slow change is the uptake of the En plus certification – although the application of this scheme is possible since 2012, so far only two companies have been certified. This could be explained by the fact that standards are voluntary and therefore it takes time for the companies to see a genuine benefit and uptake it by their own volition. Despite that, association LITBIOMA highly encourages gradual progress in belief that, with

cooperation of the European Union and all involved countries, the uptake of standards and certification schemes will further accelerate the solid biofuels products safety, which in turn will lead to development of a healthier and more beneficial produce.

There was no possibility to discuss the feedback from the trainings with the national mirror committee.

2.8.2. Feedback on European industry position paper

There was no additional feedback given after publication the European Industry Position paper.

2.9. The Netherlands

2.9.1. National feedback

NEN discussed the concept version of the national industry paper with the Dutch mirror committee, 310 029 'Solid Biofuels' on 23 April 2013. A selection of committee members has delivered additional input and gave feedback (after that meeting). This input is integrated in the final version of the Dutch industry position paper, and has been shared with those who delivered input. This has contributed to the quality of this paper. This final version is also provided to the Dutch mirror committee in June 2013.

Activities of the national mirror committee 310 029 "Solid Biofuels" are aimed at contributing to and promoting the use of CEN and ISO standards related to solid biofuels in The Netherlands. Besides that, the committee monitors (first time) experiences by users of these standards. If problems occur caused by the requirements in the standards, the committee will try to resolve this in future revisions. The committee also investigates whether there are any obstacles for a smooth implementation of solid biofuels (both neat and solid recovered fuels (SRF)) as a result of law and legislation. In case there are any obstacles, the committee will look for options to take them away, wherever possible.

The Dutch technical agreement, NTA 8080, describes the requirements for sustainably produced biomass for energy applications (power, heat & cold and transportation fuels). It includes criteria for solid, liquid and gaseous biofuels. The standard is based on the so called Cramer criteria, named after the chairperson of the committee that developed the testing framework for sustainable biomass. These criteria are: Greenhouse gas emissions, competition with food and other local applications, biodiversity, environment, prosperity, and social well-being. NTA 8080 was published in 2009. Based on new insights and developments (for example at European level), NTA 8080 will be revised (an NTA shall be reviewed every three years to determine whether a revision is needed). These revision activities have already started and the scope will be broadened to biobased products as well.
New themes and needs

The committee also started with activities aimed at standardization of torrefaction. ECN is one of the organizations engaged in research on torrefaction. The results of previous research are used as input. The committee also started to focus on other themes, which are: Quality of biomass, and transport and storage. The work programme is derived from the work programme of CEN/TC 335, CEN/TC 343 and ISO/TC 238.

The committee will explore its role in the development of quality certificates for solid biofuels (together with BVOR and NL Agency).

The committee handles all documents from CEN/TC 335, CEN/TC 343 and ISO/TC 238 for discussion and voting. The committee functions as technical platform for international standardization activities. Four working groups are under Dutch leadership (CEN/TC 335/WG 3 Sampling and sample preparation, CEN/TC 335/WG 5 Chemical test methods, CEN/TC 343/WG 3 Sampling, sample preparation and supplementary test methods, and ISO/TC 238/WG 5 Chemical test methods).
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The committee defines the Dutch positions towards CEN/TC 335, CEN/TC 343 and ISO/TC 238, and provides input for new standardization topics in the field of solid biofuels. In doing so, the committee actively submits comments during the finalization of the upgrading of CEN standards to ISO standards. The committee also follows the developments of CEN/TC 411 "Bio-based products".
The committee act as sounding board for the SolidStandards projects.
National and European law and legislations

The committee discusses mandatory implications and related actions caused by (a possible change in) national and European policy. The committee follows developments regarding national and European law and legislation about solid biofuels, and discusses the impact and opportunities for standardization. An example is the possibility of mandatory co-firing targets (in The Netherlands).

The committee establishes and maintains relations with national and international platforms.

2.9.2.Feedback on European industry position paper

There was no additional feedback given after publication the European Industry Position paper.

2.10. Poland

2.10.1. National feedback

Polish Committee for Standardization (Polski Komitet Normalizacyjny - PKN), which is a national unit dedicated to the problems of standardization in Poland, has not undertaken initiative or actions related to the preparation of own national standardization solutions regarding solid biofuels. In response to the activities of the European Committee for Standardization, in particular the Technical Committee CEN/TC 335, solid biofuels topics were assigned to Technical Committee 144 on Coke and Other Solid Formed Fuels.
TC 144 deals with issues concerning coke, semi-coke, formed fuels, briquettes, solid biofuels (biomass for energy purposes), solid recovered fuels. The scope of work includes standards for types of coke, formed fuels, semi-coke, solid biofuels and solid recovered fuels including requirements for these fuels as commercial products as well as terminology, methods of sampling and testing methods for mechanical, physical and chemical properties of these objects. TC 144 works as well on coke and formed fuel storage, quality testing and requirements for fuels and barbecue lighter as commercial products.

The main objective of TC 144 is the development, evaluation and voting on standardization documents as well applying to assign a status of Polish Standards (PN) to international standards after their publication. Standards of particular importance for the coke, heat and electricity industry should be prepared in Polish language versions. However, due to limited financial sources standards of series EN 14961 and EN 15234 have not been translated yet what creates significant obstacle for implementation of standards by Polish market actors.

By the end of 2013 Technical Committee 144 on Coke and Other Solid Formed Fuels is going to continue on standardization activities regarding i.a. prPN-prEN ISO 17225 series (Solid biofuels - Fuel specifications and classes - Parts 1 to 7), prPN-prEN ISO 18134 series (Solid biofuels - Determination of moisture content) and other ISO standards concerning solid biofuels.
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Applying standardized solutions for transport and storage of biomass and solid biofuels (in particular fire protection) could contribute to increased use of biomass as fuel in public buildings. Currently, its use raises a number of concerns regarding safety issues (e.g. at schools).
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The following issues could become subjects to standardization processes:
- principles for storage of biomass and solid biofuels particularly exposed to weather conditions,
- safety of staff handling biomass and solid biofuels at large storage facilities as well as dealing with transport:
    - to prevent health hazards to workers deriving from bio-organisms (mainly fungi and decay)
    - to prevent self-ignition and fire (wood)
    - to prevent dust explosions

Other issues that could become subjects to standardization include:
- quick measurement methods of solid biofuels properties applicable at industrial conditions
- eligibility criteria for chemically treated/contaminated biomass for solid biofuels production (containing certain chemical substances)
- methods for determination of contaminants disqualifying biomass for production of solid biofuels
- methods for determining biodegradability of biomass

Since the introduction of EN standards on quality certification systems relatively short time has passed, therefore the national mirror committee does not have critical comments in this regard. After implementation of quality assurance systems and quality certification by a greater number of solid biofuels' producers, hopefully in the near future, it will be possible to gain experiences allowing to put relevant suggestions in this regard.
There were no suggestions regarding for new subjects for quality certification schemes in the questionnaires received.

The National Industry Position Paper was elaborated in strong cooperation with a member of TC 144 on Coke and Other Solid Formed Fuels operating within the Polish Committee for Standardization – Doctor Eng. Wojciech Cichy. Mr. Cichy is in charge of a team evaluating solid biofuels in the Accredited Laboratory functioning within the Institute of Wood Technology (ITD). He is also a solid biofuels consultant at the ITD's unit certifying products/articles.

In the course of the SolidStandards project Technical Committee 144 has not been convened. The TC 144 members communicate (consultations, voting) exclusively by electronic means through IT platform. For the purpose of the SolidStandards project Mr. Cichy consulted the paper also with Certification Centre of Wood Industry Products and Institute for Chemical Processing of Coal.

2.10.2. Feedback on European industry position paper

The European Industry Position Paper appeared to be very interesting for members of the Technical Committee responsible for solid biomass fuels. It has been noticed that Poland is up to date with works related to quality control and certification of solid biofuels comparing to other countries involved in the SolidStandards project. In Poland there are specific problems with solid biomass testing and certification due to the fact that it is mainly co-firing of biomass that is supposed to lead to meeting international commitments in the field of power generation from RES.

It is very much appreciated that there will be standard for non-woody briquettes (ISO/FDIS 17225-7 Solid biofuels – Fuel specifications and classes – Part 7: Graded non-woody briquettes), as there is a significant potential for production of this kind of solid biofuel as well as production lines in Poland.

Some additional comments on improvement of standards were made:

- It is recommended to consider an appropriate classification of briquettes and pellets made from blends of biomass (PelletsMix and BriquettesMix). The idea of blends is to get fuel with better fuel properties than the starting material by blending different types of biomass (e.g. adding woody biomass or fruit biomass to herbaceous biomass). Currently, such product can be classified as industrial solid biofuel.
- Table 1 in standard EN 14961-1 could be extended to new categories of raw materials from which solid biofuels can be produced:
  - currently it is problematic to classify leaves and needles (without share of wood). There could be a category like this under 'woody biomass'. Right now there is only subcategory 'logging residues' including '1.1.4.1. Fresh/Green, Broad-leaf (including leaves)' and '1.1.4.2. Fresh/Green, Coniferous (including needles)'
  - new types of herbaceous biomass are emerging, either deliberately cultivated for obtaining solid biofuels or waste from agricultural production, which are difficult to classify on the basis of the division given in Table 1 of EN 14961_1.

2.11. Feedback directly given by CEN/TC 355 and/or ISO/TC 238

No feedback was received directly from CEN/TC 255 and/or ISO TC/238. However, as described in this paper, several solid standard partners are involved in CEN/TC 255 and/or ISO/TC 238, so it is assumed that the SolidStandard papers are properly brought to the attention of these TC's.

Other: No (additional) feedback was received on D6.3 'Recommendation Paper on Standard Development for Solid Biofuel Storage' and D6.4 'Future developments impacting on the development of solid biofuel standards' (NEN informed and sent this paper to the ISO/TC 238 Secretary in September 2014).

3. Summary of feedback/conclusions and recommendations

It can be concluded that national industry position papers were discussed in (and thus feedback was received from) the national mirror commitees of Austria, Croatia, Denmark, Germany, Finland, The Netherlands and Poland. The national industry position paper (and the European industry position paper) was not discussed with the Lithuanian national mirror committee. However, the national industry position papers were discussed with a delegation of the Bulgarian National Institute for Standardisation (BDS) and discussed with the Czech Pellets Cluster (since there are no national mirror committees in Bulgaria/Czech Republic).

No feedback was received directly from CEN/TC 255 and/or ISO TC/238 on all of the Solid Standards Work Package 6 deliverables, but several solid standard partners are involved in CEN/TC 255 and/or ISO/TC 238. Therefore it is assumed that the SolidStandard papers are properly brought to the attention of these TC's.

Only the national mirror committees of Germany and Poland gave feedback on the European industry position paper.

The topics (1) safety/healthy related to storage and transport and (2) torrefaction/torrefied materials were mentioned by more than one country during feedback activities. There are needs for standardization of these topics (in the future).

The following topics were also mentioned by just one mirror committee (out of mirror committees/expert groups from 10 countries involved). These topics are:

- determination of the content of stones in a wood chip
- ash melting behavior
- quality requirements for industrial pellets (Note. this is published as Table 2 in EN ISO 17225-2)
- rapid test methods
- size classes (wood chips) ISO 17225-1 and 4 will replace EN 14961-1 and 4 in summer 2014
- to classify leaves and needles (without share of wood) (Note: Table 1 in EN ISO 17225-1 will include also wood with needles/leaves)
- new types of herbaceous biomass (Note: bamboo and residues from palm oil industry is added in Table 1 in EN ISO 17225-1

It is recommended to discuss outcomes of the SolidStandards Final Workshop (on 5 March 2014) at CEN/TC 355- and ISO/TC 238-level as well. There are possibly TC-members attending this workshop. The SolidStandards partners who are member of (one of) these TC's should also address the outcomes to (the secretaries) of these TC's as well. And, indirectly, it is advised that the SolidStandards Partners will send a letter to the secretaries of both TC's to inform them about the outcome of the Final Workshop and to provide them with a package of all relevant SolidStandards deliverables. It is also advisable to share the outcomes of this workshop with national mirror committees/expert groups in the 10 countries involved in the SolidStandards project.

Both the project partners and the European Commission can use this information for further actions. This report will be also publically available on the project website, so stakeholders can use the overview/outcome for their own benefit as well.