

Partners

The assembled consortium consists of leading research groups within energy from biomass and the most central European manufacturers of wood stoves. The industrial partners have strong focus on R&D and continuously product development, especially within low load combustion.

R&D partners

SINTEF Energi AS (SINTEF Energy Research)

Norway's foremost contract research institute within energy research and the main R&D provider in the StableWood project. SINTEF Energy Research is among Europe's most experienced coordinators of large international multi-client strategic research projects. SINTEF Energy Research is a part of the SINTEF group, which is Europe's 4th largest independent R&D Institute. SINTEF Energy Research has a strong, synergic cooperation with The Norwegian University of Science and Technology, NTNU. In 2009 the Research Council of Norway established eight National Centres for Environmental Friendly Energy Research (CEER). SINTEF and NTNU host / lead six of these eight centres.

Norges teknisk-naturvitenskaplige universitet (NTNU)

NTNU has 20 000 students and a permanent staff of 2700 handling at any time more than 2 000 research projects. The international cooperation is very strong with more than 320 cooperation agreements with other universities worldwide. 314 doctoral degrees were awarded in 2008.

Industry partners

Dovre AS

Dovre was established in Ulefoss (Norway) in 1933 and is the world's oldest manufacturer of inserts (bricked in fireplaces). Dovrepeisen had a unique convection heating system, and obtained 50 years world wide patent. The principle is still used by several manufacturers world wide.

In 1991 the production was moved to Weelde in Belgium. Dovre has developed into a large and modern manufacturing company with one of Europe's largest foundries. Dovre is continuously working on product development, to offer new and exciting products with high standard and quality.

Granit Kleber AS

Granit Kleber AS (Norway/Sweden) was established in 1893 and has produced and exported soap stones for more than 100 years. Granit Kleber AS is the only company in Norway producing heat storing stoves for biomass (firewood) as fuel. The production of the soap stone stoves and fireplaces is going on at Otta in Gudbrandsdalen, while soap stone production takes place at Handöl, in Sweden.

Jøtulgruppen

Jøtul's origin started at Kværner Brug, which was founded in the outskirts of Christiania in 1853. Jøtul AS is a world leading Norwegian producer of stoves and fireplaces with subsidiaries in USA, France, United Kingdom, Denmark, Spain, Italy and Poland. Jøtul AS is part of the Jøtul Group that sells and markets its high quality products under the brands: Jøtul, Scan and Atra. In 2009 The Jøtul Group's turnover was approximately € 105 million.

The manufacturing units are located in Fredrikstad and Halden in Norway, Portland - Maine in USA, Motz en Chautagne in France, Gdansk in Poland, and in Vissenbjerg in Denmark. The Jøtul Group has approximately 750 employees.

Morsø AS

Morsø (Denmark) has more than 158 years of experience in making wood burning stoves and is at the forefront of developing cast iron stoves. Right from the earliest years, development and innovation have been an important driving force for Morsø Jernstøberi, and many epoch-making products and principles have been developed at Mors in Limfjorden.

Morsø has, step by step, led the way in both new designs and new ways of combining form and function; efficiency with beauty and comfort - and also in recent years with environmental awareness.



Newsletter 2-2012



StableWood

New solutions and technologies for heating of buildings with low heating demand: Stable heat release and distribution from batch combustion of wood

www.sintef.no/StableWood

This newsletter focuses on Strategies for targeted dissemination to end users. In addition information is given from other bioenergy activities and programs.

Strategies for targeted dissemination to end users

Even though much effort has been directed both towards technological improvements and end user education, there is still a considerable need for further improvements. In the StableWood project there is an ongoing activity that are looking at how to, in an optimum way, disseminate the necessary knowledge that enables the end users to operate their wood stoves and fireplaces in an optimum way, i.e. so that emissions are minimized and efficiencies are maximized. A lot of quality information is already available, both from SINTEF Energy Research, interest organizations and from the stove producers themselves. However, a significant effort is needed to improve this or assemble this in a way that makes it easy for the user to acquire the needed knowledge. An internal workgroup was organized in 2011 with representatives from the respective stove producers and SINTEF Energy Research with the intention of forming a long-term strategy on how to target dissemination to woodstove end-users. Some of the questions which have been raised are:

- How should one form an optimum long-term campaign to achieve increased end-user understanding of how to operate wood stoves to achieve maximum efficiency with a minimum of pollution?
- Specifically increased understanding/knowledge of
 - fuel properties
 - wood load ignition
 - wood stove combustion cycle
- Should the campaign distinguish between city and countryside end-users?
- Should one distinguish between certain groups related to end user age e.g. below and above 30 years?
- Who should be the owner of such a campaign? Should the campaign be taken to a certain level e.g. government, town government, ideal organizations etc. versus SINTEF Energy Research, versus specific stove producers or specific products?
- What is the best presentation form for such a campaign? In the shape of a film or as pamphlets or leaflets?



StableWood

- a Knowledge-building Project with User Involvement (KMB) co-funded by the Norwegian Research Council in the RENERGI-programme. Contact: oyvind.skreiberg@sintef.no

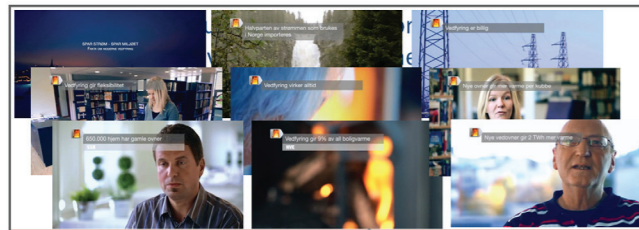


Much high quality informative and educative material is already available on several levels i.e. through interest organizations like Nobio, Norsk Varme and Norsk Ved and not at least through the stove producer's websites for which some examples are shown above.

Another very good example of an awareness campaign is a recent film produced by Norsk Varme in Corporation with NVE, Enova, Naturvernforbundet and SINTEF early in 2012. The film was named "Spør strøm-spør miljøet, Fakta om moderne vedfyring" and is available on the Web at:

www.varmefag.no/?ItemID=18354

www.youtube.com/watch?v=JJziV2nuxs4



The film was followed up by an accompanying booklet with the same heading providing more specific details regarding economy environment and energy.

Workgroup summary so far

As of today there's a wide span both in quality of the information material and how this material is distributed. The conclusion so far is that much high quality material is already available. The suggested strategy for the current campaign is as of now, to make a selection of the best and most relevant material available and thus appropriate for the goal of the long-term campaign and therein targeted audience. It was also agreed, based on previous experience, that the campaign should be as broad as possible, because it is not believed that a single level campaign is sufficient to reach all of the target audience. Therefore several parallel efforts are necessary on all possible levels, all the way from governmental institutions and departments and down to specific stove producers and even down to specific products. Some new ideas for dissemination channels are mobile based applications, initiate more integration with both national and regional chimney sweeper organizations, increased cooperation with nongovernmental environmental and nature protection organizations e.g. Naturvernforbundet together with regional town governments. Both municipal and state funding should be applied for, if this is judged necessary, to assure the necessary impact for such a long-term campaign.

Other news

IEA Task 32 Biomass Combustion and Cofiring

Small scale wood combustion is receiving continuing and considerable interest, and is also one of the subjects addressed in IEA Task 32. The workshop on Aerosols from Small Scale Biomass Combustion Plants arranged by Task 32 in Graz 27 January 2011 was followed up in connection with the IEA Bioenergy Conference in Vienna 13-15 November this year. The presentations can be downloaded from <http://www.ieabcc.nl/>

The European Energy Research Alliance (EERA)

SINTEF has been leading an effort to establish a stationary platform under the EERA umbrella (<http://www.eera-set.eu/>). SINTEF, VTT and ECN have been selected as leaders of the three key topics areas that have been defined: Residential heating and cooling, Industrial CHP and Utility cofiring. SINTEF Energy Research will be heading the key topic Residential heating and cooling, as well as having the overall lead of the Stationary platform. A work programme for the Stationary platform has been assembled. Michael Becidan and Øyvind Skreiberg will be the key persons from SINTEF Energy Research in the platform, as respectively Stationary platform leader and the key topic residential heating and cooling leader.

20th European Bioenergy Conference and Exhibition

This annual conference was this year arranged in Milan from the 18th to the 22nd of June. Results from the StableWood project were given in two presentations, one on "Environmental and energetic performance history and further improvement potential for wood stoves" and one on "Transient fuel models for wood log combustion". <http://www.conference-biomass.com/>

Bioenergidagene 2012

The annual bioenergy days in Norway, arranged by Nobio, were arranged 5-6 November at Hamar. SINTEF Energy Research participated and gave three presentations, whereof one on wood log combustion with the title "Ny og lovende teknologi for akkumulering av varme fra vedovner". This presentation and others from the bioenergy days can be downloaded from www.nobio.no

Lange spor (Long tracks)

In connection with the new research program, ENERGIX, funded by the Research Council of Norway (NFR), that shall replace RENERGI, so-called long tracks articles have been written for various renewable energy research areas that have received funding from NFR. They summarise the research efforts and achievements within these areas. As such they give a nice overview. As of now, one article on

wood log combustion is available and one on district heating. More articles from the bioenergy area, e.g. on pellets combustion, will come. Edvard Kårsvik has contributed to the wood log combustion article while Øyvind Skreiberg has contributed to the upcoming pellets combustion article.

Edvard Kårsvik has retired

Edvard Kårsvik, the father of the Norwegian wood stoves testing standard and the main researcher within this area for several decades has retired. During his time the particle emissions from wood stoves and fireplaces have been reduced one magnitude and few people can say that they have contributed to such an extent to reducing negative environmental impacts of energy conversion and use. His presence will be dearly missed, but a very competent group of researchers at SINTEF Energy Research will continue his good work, reducing the environmental impacts of wood log combustion in wood stoves and fireplaces even further, including tomorrow's units for low energy and passive houses.

SINTEF seminar on how to correctly use firewood

A seminar within the SINTEF series of seminars arranged several times each year on selected topics in Oslo was arranged December 4, with the title "Slik skal du fyre med ved" (Transl. to "This is how wood should be fired"). Morten Seljeskog from SINTEF Energy Research was one of three presenters, and gave a presentation with the title "Status på utviklingen av vedovner" (Transl. to "Wood stove development status"). The seminar received considerable attention and many questions were directed to the presenters in the discussion round after the presentation. The magazine Teknisk Ukeblad was quick to write an article on the subject, see below, with contributions from Morten.

SINTEF-seminar: Slik skal du fyre med ved

Sted	Radisson Blu Scandinavia Hotel, Meterom: Scandinavia Scene
Adresse	Holbergs gate 30, Oslo (se i kart)
Start	14:00 04.12.2012
Slutt	15:00 04.12.2012

Tirsdag 4. desember 2012 blir det arrangert SINTEF-seminar om vedfyring. Seminaret vil ta for seg hele kjeden fra produksjon av brensel, forbrenning på mest mulig effektiv måte, til arbeidet med å få optimalisert ovner.

[Legg til arrangement i kalender \(iCal\)](#)

De siste femti år har det skjedd store endringer rundt forståelse og kjennskap til hvordan vedfyring skal utføres. Bestselgerboka "Hel ved" har i tillegg vist hvor stor betydning ved har for Ola Nordmann.

Seminaret vil ta for seg hele kjeden fra produksjon av brensel, forbrenning på mest mulig effektiv måte, til arbeid med å få optimalisert ovner.

Foredrag:

Produksjon av brensel
vi seniorrådgiver Simen Gjølsetje, Norsk institutt for Skog og landskap

Status på utviklingen av vedovner
vi forsker Morten Seljeskog, SINTEF Energi

Regler og godkjenning av vedfyrte ildsteder
vi avdelingsjef Asbjørn Østnor, Norges Branntekniske Laboratorium



Bestselgerboka "Hel ved" har vist hvor stor betydning ved har for Ola Nordmann.

StableWood industry seminar 2012

November 28 the annual industry seminar in the StableWood project was arranged in Belgium, at the factory of the Belgian industrial participant in the StableWood project, Dovre. Status and achievements for the StableWood project was presented, and the seminar ended with a guided tour at the Dovre factory.

Upcoming conferences

In 2013 the annual bioenergy days will be replaced by the Nordic Baltic Bioenergy Conference, to be arranged in Oslo May 21-22 2013. The 21st European Bioenergy Conference and Exhibition will be arranged in Copenhagen June 3-7 2013. SINTEF will actively participate at both these events.



VEDOVNER OG FYRINGSTIPS

– Gamle ovner må byttes ut

61 prosent av alt svevestav kommer fra fyring med ved.

Av: Talle Sandvik

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