

Highlights from 6th ExCo meeting in Turkey

The 6th IETS Executive Committee meeting was hosted by the Turkish Energy Institute, TUBITAK Marmara Research Centre in Istanbul in mid May.

New ideas

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- Energy efficient Separation Technologies Systems (Annex IX)
- Energy efficient Drying and Dewatering Technologies (Annex X)
- Industry-based Biorefineries (Annex XI)

In the meeting agenda there was also time to discuss new ideas for subtasks, annexes and possible areas of

cooperation. The following new ideas and proposals for Annexes were presented:

- Energy efficiency and energy recovery in the aluminium industry
- Process integration and energy efficiency for the steel industry
- Industrial CO₂ separation
- Clean Development Mechanism (CDM)
- Life Cycle Assessment (LCA)
- Industrial combustion
- Process integration for SMEs

More about existing and proposed annexes at www.iea-iets.org.

The meeting was preceded by a one day open workshop: IETS workshop on Cooperation between Government research programmes and industry in the IETS countries. A summary will soon be available at the IETS website.



Belgium
new IETS member

The IETS welcomes Belgium as a new member. We are looking forward to the cooperation with Belgian industry and researchers to find new solutions to sustainable developments.



Article:

Energy Saving and Energy Recovery in Norwegian Aluminium Industry

By Håkon Skistad, SINTEF, Norway

Potentials for improving energy efficiency

The aluminium producing industry is a major consumer of primary energy. In 2006, the Norwegian electric energy consumption for aluminium production was 25 TWh. More than half of the energy is lost as heat from the process, as heat to the flue gas system and used as energy to auxiliary systems in the aluminium plants.

The aluminium industry is working continuously with making the electrolysis process more efficient which is continuously reducing the specific energy consumption. However, the heat losses and the energy consumption for auxiliary systems have received very little attention. As a result of increasing energy prices and focus on environmental issues, this is now changing. In Norway, there is an increasing activity in this field, and we see a network being established to enhance the activity and the cooperation between industry plants. Activity spans from fundamental research projects to increased focus on maintenance.

The potential for energy saving in the aluminium industry in Norway can be illustrated by the following figure.

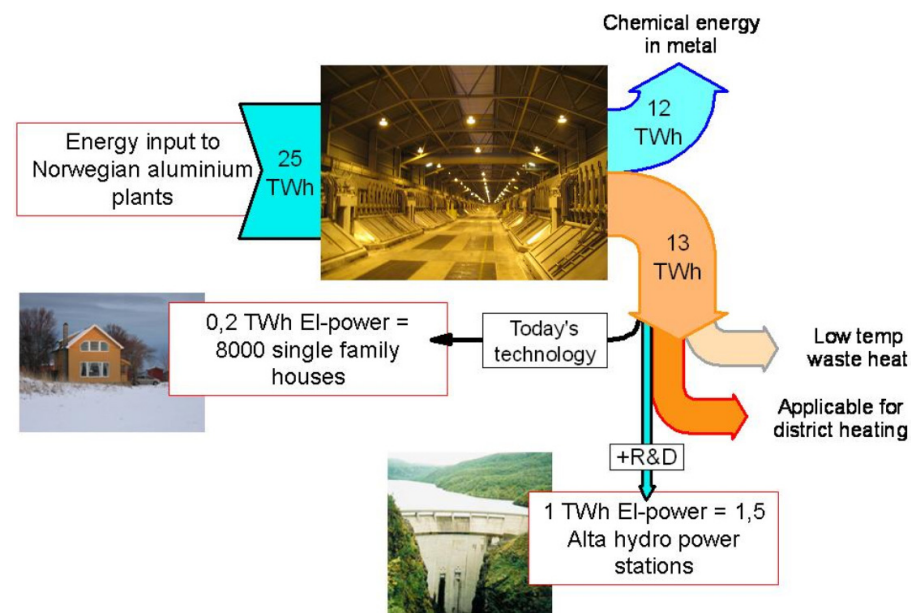
The waste heat can be utilised in two ways:

- High temperature waste heat (> 120 °C) can be utilised for electric power production
- Moderate temperature waste heat can be utilised for district heating

The potential for reducing electricity demand and generate new electric power from waste heat in the Norwegian aluminium plants is estimated to

- 1 % of the total energy use, i.e. 0,2 TWh/year by means of available technology:
- 4 % of the total energy use, i.e.1,5 TWh/year by means of new technology.

The potential for recovering waste for district heating is extremely large. The limiting factor is the demand for district heating energy in the vicinity of the plants.



Article continued:

Norwegian aluminium producers gather to save energy

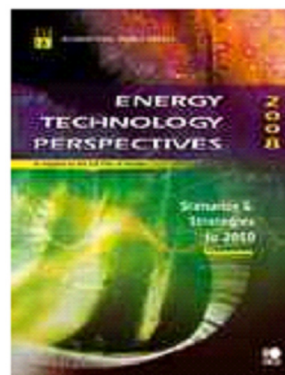
In a seminar in 2007, the Norwegian aluminium producers agreed upon a closer co-operation to increase energy efficiency and recover energy. The seminar was arranged by ENOVA, the Norwegian governmental body for improving the efficiency of stationary land-based use and production of energy.

The seminar concluded with a list of recommended measures for improving energy efficiency, ranging from research tasks like electricity production from low temperature waste heat, to maintenance issues like reducing leakages in compressed air piping systems. The activities will receive financial and organizational support by ENOVA. The R&D activities in the network will be executed in close co-operation with the research communities at the Norwegian University of Science and Technology (NTNU) and SINTEF.

Proposal for IEA/IETS Annex on energy efficiency in the aluminium industry

The ideas from the seminar are carried further in a proposal for an international activity through a proposal for an annex in the IEA/IETS. Preliminary title of the proposed annex is "ERA - Energy Efficiency and Energy Recovery in the Aluminium Industry". The aim of the annex is to exchange experiences on an international level and join efforts in international R&D-projects.

New publications



IEA: Energy Technology Perspectives

The G8 has requested the International Energy Agency to advise on alternative energy scenarios and strategies: how to bridge the gap between what is happening and what needs to be done in order to build a clean, clever and competitive energy future. The second edition of Energy Technology Perspectives provides a detailed analysis of the energy revolution that is needed for cutting CO2 emissions by up to 50%, and reducing fossil fuel dependency in the coming four decades.

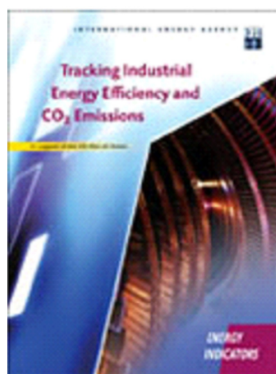
It provides an overview of:

- The latest IEA energy scenarios for the period 2005-2050;
- The technology development and financing needs for an energy transition, for all supply and demand sectors;
- The current status of and prospects for all major energy technologies.

We must act now if we are to unlock the potential of current and emerging technologies, and reduce the dependency on fossil fuels with its consequent effects on energy security and the environment. The study draws on the renowned expertise of the IEA and its energy technology network.

For more information, please visit the IEA Bookshop on <http://www.iea.org/w/bookshop/add.aspx?id=330>

New publications continued:



IEA: Tracking Industrial Energy Efficiency and CO2 Emissions

At their 2005 Gleneagles Summit the G8 leaders asked the IEA to provide advice on a clean, clever and competitive energy future, including a transformation of how we use energy in the industrial sector. The IEA publication, Tracking Industrial Energy Efficiency and CO2 Emissions was prepared in response to that request. The report uses the best publicly available statistics combined with innovative methodologies to examine trends in worldwide industrial energy efficiency and estimate the additional technical savings potential. The IETS Chairman, Prof. Thore Berntsson, contributed to the report with a chapter about process integration. For more information, please visit the IEA Bookshop on <http://www.iea.org/w/bookshop/add.aspx?id=298>



Final report Annex VI

Gasification of Black Liquor and Biomass

These projects seek to reduce the technological barriers to successful commercial-scale operation of biomass and black liquor gasification technologies, especially in the areas of gas clean-up, refractory and metallic materials, black liquor delivery systems.

<http://www.iea-iets.org/oslo/iea-iets.nsf/id/0071CD07D49893D1C1257107003FBB2D?>

Benchmarking Energy Use and GHG Emissions in Pulp and Paper Operations

In the completed Annex "Analysis and Policy Consequences (Annex VII)" the final report on subtask 7.1 "Benchmarking Energy Use and GHG Emissions in Pulp and Paper Operations" is now available at the IETS website: <http://www.iea-iets.org/oslo/iea-iets.nsf/id/CD6A250EF4C9FA48C125713800535861?OpenDocument>

The overall goal is to provide a tool for identifying:

- energy consumption and GHG emissions by product grade,
- inefficient unit operations
- research needs.

Upcoming Events

Programme for 2008

The next IETS ExCo will take place in November. Further details will be posted on the IETS website.

A workshop on Process integration for SMEs will be organised in Switzerland March 2009. Further details will be posted on the IETS website.

Workshops

Industry Scenarios and Indicators: Expert Review Workshop

A Workshop in the Framework of the G8 Dialogue on Climate Change, Clean Energy and Sustainable Development 11-12 February 2008, IEA Headquarters in Paris. The two main objectives of this workshop were to: 1) to discuss our industry scenario analysis for ETP 2008 and 2) to review the updates of the IEA work on industrial energy efficiency and CO2 emissions. The meeting also aimed to identify recommendations for promoting international technology transfer and measures to further engage Chinese industry. Read more here:
http://www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=355

see also www.iea-iets.org

IETS Member Countries



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Chair is Dr. Thore Berntsson, Sweden.

Contact details for the Country Representatives can be found on www.iea-iets.org.

Participation

«Energy technology innovation is occurring in an interconnected world in which national efforts no longer suffice.»

National energy R&D and demonstration programmes gain impact when incorporated into the larger context of international interdependence. Worldwide collaboration is needed to prepare any practical response to global environment issues. Membership in Implementing Agreements is open to governments and organisations designated by governments in both IEA Member and non-Member countries.

For further information about the IEA technology collaboration and its benefits, see www.iea-iets.org.

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