



Industrial Energy-Related Technologies and Systems

An Implementing Agreement established under the auspices of the International Energy Agency

ENERGY EFFICIENT DRYING AND DEWATERING TECHNOLOGIES

ANNEX X

Separation processes such as distillation, evaporation and drying, are used in the production of all kind of different products and the energy use in this sector constitutes a major part of the total industrial energy use.

The activity in this project – named Annex X - will focus on knowledge transfer and deployment of information between the members of the IETS countries.

The need for enhanced assessment of key energy-related drying and dewatering technologies highlights the need for dissemination of results from different areas and different countries. Some of the objectives of this Annex are to highlight ongoing research projects in the drying area, compile relevant information about legislation and how to increase the dry matter content.

Objectives

The objectives of this Annex are the following:

- a) Make available information about ongoing research projects in the drying area, present a survey of the energy used for drying in the participating countries and establish methods for benchmarking of different dryers.
- b) Compile the relevant legislation for drying of sludges, biowastes and solid biofuels as well compare a number of methods for drying of these products.
- c) Compile available information about how the dry matter content can be increased for mechanical dewatering of sludges, biowastes and solid biofuels.



Technical Sector

Solids drying can be found in many areas of human activities, from the household to the process industry. In many cases drying is not only the final step in the total dewatering process but also the final step in a production process.

In the drying process the energy use and costs can be reduced by a number of methods:

- optimize the process or change to a more energy efficient process such as drying in superheated steam
- recover a larger part of the secondary energy for low-temperature heating within the process system or deliver it externally to district heating networks
- replace expensive primary energy sources with less expensive such as replacing oil with biofuels
- switch to energy sources which have less environmental impact reducing the costs for pollution abatement techniques and emission taxes for carbon dioxide and possibly resulting in green certificates for produced renewable electricity

Activities & deliverables

The objectives shall be achieved by performing the following Subtasks:

Subtask A: Database and energy audits

Subtask B: Drying and dewatering of sludges, biowastes and solid biofuels

The deliverables in the project will be the following:

- Project reports presented to the IETS Executive Committee
- Newsletters presented at the IETS homepage
- For each of the two subtasks summarize the results in the format of a book that can be distributed to industry and organizations.

Participating Countries

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IETS

www.iea-iets.org

The Industrial Energy Related Technologies and Systems (IETS) Implementing Agreement is an initiative within IEA (International Energy Agency). The mission of IETS is to foster international cooperation among OECD and non-OECD countries for accelerated research and technology development of industrial energy-related technologies and systems. In doing so, IETS seeks to enhance knowledge of cost-effective new industrial technologies and system layouts that enable increased productivity and better product quality while improving energy efficiency and sustainability.

In IEA terminology, the term Task is used for the collaborative IEA projects. The tasks are outlined in Annexes, which are appendixes to the Implementing Agreement for IETS. The Annex describes the scope of work and briefly summarizes the joint activities to be carried out within the framework of that Task.