

Energy efficiency advancing in Europe

A three digit series, 20-20-20, is the key to European energy policy. These figures represent the target percentages by which Europe wants to reduce its greenhouse gas emissions, improve its energy efficiency, and increase its renewable energy use by the year 2020.

We are confident that we shall reach this target. A couple of years ago it seemed that we would be falling behind our energy efficiency goals, but by now the new initiatives and actions seem to be taking effect. If the policy decisions already taken are actually implemented in the Member States, we will reach our targets, confirms Pirjo-Liisa Koskimäki, Adviser for the European Commission's Directorate-General for Energy. Over the past seventeen years she has been in Brussels formulating and implementing the

European energy and transport policies.

Changes do not come about easily, says Koskimäki pointing out that the European building stock, for instance, is renewed only gradually. Europe is an old continent and its building stock has been largely built to completion, some of it hundreds of years ago. Of the total energy consumption, no less than 40 per cent is used for heating buildings.

This presents a real challenge, and not only in Europe. While progress in energy efficiency is beginning to be visible on the Old Continent, the growing total energy consumption in India and China, for instance, affects energy efficiency adversely on the global scale.

Directives are not the only means ahead

Legislation often tends to get the lime-light when European energy efficiency is

discussed. We do, however, have many more tools and means available to promote energy efficiency. The future European energy use is being shaped with the help of regulations, investments and knowledge.

– Legislation, of course, is important. Currently, the biggest EU cash flows go through the structural funds that promote renewable energy use and enhanced energy efficiency. And we also promote our goals through efficient communications, says Koskimäki.

Strange abbreviations

The directive names seem to be made up of a lot of unfamiliar acronyms, but they are essential for promoting energy efficiency.

The Energy Performance of Buildings Directive, or the EPBD, contains guidelines and controls for both new



LÄMMÖLLÄ – A FINNISH PUBLICATION PROMOTING ENERGY EFFICIENCY

The Finnish oil sector has concluded Höylä III, an energy efficiency agreement with the Finnish government. This agreement covers the period 2008–2016. The energy efficiency agreements contribute to the combat against climate change, in accordance with the Finnish energy and climate strategy.

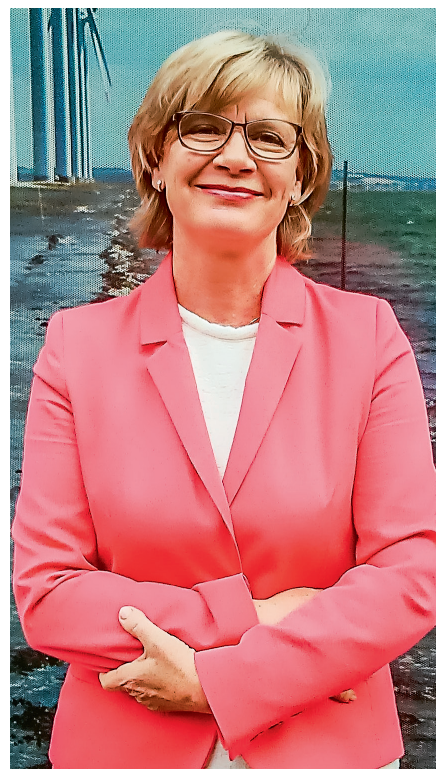
The periodical Lämmöllä is published by the Finnish oil sector to serve as a medium for consumer information. Lämmöllä is sent in 180 000 copies three times a year to the Finnish Petroleum Federation's member companies' heating oil customers. The publication contains up-to-date information and advice on many important issues, for instance on enhanced heating energy efficiency, on space heating systems and on their renovations, as well as on environmental issues.

building and for refurbishment construction. The provisions of this directive are transcribed into national building regulations. The three key provisions of the directive concern minimum energy efficiency standards set for buildings, energy certification, and periodic inspections of boilers and air conditioning equipment.

The framework directive is applied by each Member State. Each state determines the numerical values for the provisions independently and while doing that takes into account the local climate conditions, cost efficiency and

indoor air standards. As from the start of 2021, all new buildings must be nearly zero energy buildings.

The Ecodesign Directive determines the minimum requirements for energy related equipment, including boilers and the supplementing **Energy Labelling Directive** prescribes that various types of equipment must carry standardized labels that give the consumer comparable information on the energy efficiency of the equipment. Currently, the Commission is drafting a proposal concerning the energy efficiency and energy labelling of space heating



Pirjo-Liisa Koskimäki has been working at the heart of European energy policy-making for almost two decades. According to her, oil fired heating is increasingly used in parallel with other forms of heating.



systems. Drafting the enactments relating to heating systems has been a sustained and difficult process. The Commission Regulation was published in September 2013 and will enter into force in two years' time.

We have already become accustomed to our common household electrical appliances carrying energy labels. The national circumstances will be taken into consideration in the labelling of heating systems and therefore labelling will be applied differently in the different climatic zones.

The Renewable Energy Directive (RES) obliges the Member States to promote the use of renewable energy, and its EU target for 2020 has been set at 20 per cent. In Finland, this will bring up the share of renewable energy to 38 per cent of the total energy end use. According to the newest EU data, the average share of renewable energy is 13 per cent over the entire European Union.

Hybrid is a good alternative for oil heaters

– The long-term European Union objective is to minimize the use of fossil fuels. Pirjo-Liisa Koskimäki believes that by 2050 the use of fossil fuels for space heating will be minimal if not extinct.

She recommends that all those who have chosen to revamp their oil fired heating systems ought to consider supplementing it with hybrid systems, for instance heat pumps, heat retaining fireplaces, solar or wood heating.

Oil fired heating may yet have a long and prosperous future ahead, provided

The future European energy use is being shaped with the help of regulations, investments and knowledge.

NEARLY TWO DECADES OF WORK IN THE HEART OF EUROPE

Pirjo-Liisa Koskimäki acts as a policy adviser for the European Commission's Directorate-General for Energy focusing on renewable energy, research and innovation, as well as energy efficiency. She has been working for the European Commission since 1996.

Before this, Pirjo-Liisa Koskimäki worked for the Finnish Ministry of Trade and Industry (today known as the Ministry of Employment and the Economy) in various positions, including the Ministry's Energy department. In those years, she was involved in founding Motiva, among other things. Today Motiva is a state company specialized in energy and materials efficiency.

determines the outcome but additionally also the building, its inhabitants, their heating practices and habits and many other factors need to be taken into consideration when deciding which heating solution suits best each household and each property.

– Even the most modern technology and the biggest energy efficiency investments fail to give the desired benefits if the chosen technologies and equipment are not properly maintained.

Finnish energy saving agreements serve as a model for the rest of Europe

In Finland, energy savings are sought after through voluntary energy efficiency agreements of which the HÖYLÄ III Agreement concluded between the oil sector and the government is a good example.

Over the ongoing HÖYLÄ agreement period, as many as 110000 old oil boilers have been overhauled and renewed, and in addition to this the households heating with oil have taken other types of steps to improve their energy efficiency. The annual heating oil consumption of an average Finnish oil heated single-family house has been reduced from 2900 litres to 2300 litres.

– The oil heaters' active measures and the degree by which they have improved the energy efficiency are impressive. Finnish energy efficiency agreements are worthy of serving as a model for the rest of Europe. Correspondingly, the Germans are well advanced in the development of financing schemes to enhance energy efficiency. Great Britain, in its turn, has been successfully developing investment programs to promote energy efficiency, points out Pirjo-Liisa Koskimäki while listing good examples of European action designed to enhance energy efficiency. ■

that oil is used in the various combination systems in ways that meet the standards of zero energy buildings.

According to Koskimäki, the energy form is not the determinant factor in the Ecodesign standards. It is the energy efficiency, after all, that is decisive.

– There is no other package of energy equally energy efficient as oil is. The energy content of one litre of oil is immense. With the modern oil boiler technology we can achieve 96 per cent energy efficiency, and condensing boilers may go up to and even above 100 per cent energy efficiency.

But energy efficiency is – on the other hand – a sum total of many factors and elements. Not only the equipment

