Turning Torso is Sweden's tallest building // It is part of Västra Hamnen, a residential area in Malmö that depends entirely on its own autonomous energy supply, delivered by systems from E.ON.

A new popular sport up north

Internet quicklink → 417

E.ON's customers in Sweden are currently discovering a new hobby: reducing their power consumption. Using a new Internet portal, they can, for the first time, monitor their energy consumption precisely and identify electricity guzzlers in their home. With E.ON's support, some municipalities are also currently testing the possibility of making a complete switch to local, renewable energy sources. The goal is the same in every case: to increase energy efficiency and reduce expenditures on power and heat.

A clever way to save money: smart meters

There was a surprise in store for Magnus Berg recently: "We'd actually never been particularly interested in our energy consumption," says Berg, who lives in the Swedish town of Hjärup with his family of four. "But when our electricity bill started to go up and up, we wanted to find out why. And we discovered that water heating is one of the main culprits in our household."

E.ON's new "Energy Dialog" Internet portal now enables the Bergs to check their power consumption and pinpoint energy guzzlers in their household for the first time ever. Since first logging on to Energy Dialog, Magnus Berg has replaced all his light bulbs with energy-saving ones and is considering buying a heat pump—measures that mean no less quality of life for his family, but a substantial lowering of energy costs. All you need to participate in the energy-saving program is Internet access and a smart meter. E.ON Nordic has installed smart electricity meters in one million households in Sweden and is gradually making Energy Dialog available across its service territory. The free consumer portal is a prime example of how energy bills can be permanently reduced with relatively simple measures. This benefits not only consumers like the Berg family, who cut their power consumption by 15 percent within a few months, but also the climate and the economy, which will need to use less resources for energy generation in the future. But energy-efficiency investments also pay off for E.ON. Using the current consumption reports from the smart-meter network, in the future the company will be able to adapt its electricity production flexibly to actual demand. "The better we can predict the demand from our customers, the more efficiently we can use our existing generating capacity," explains Michael O'Hare, Business Development Manager at E.ON Nordic. Ideally, cutting back on energy consumption would also make it possible to avoid building expensive power plants, which are now even more difficult to finance in the current economic crisis.

Working together: E.ON Nordic helps Mora to reduce its CO_2 emissions

The imagination of E.ON's energy-efficiency experts extends much further: to Mora, for example, a small town in Sweden where E.ON Nordic has supplied district heating for many years. Mora is a community of only 20,000 residents, but it boasts a claim to national fame: the world's biggest cross-country skiing competition, the "Vasaloppet," traditionally finishes in Mora. At the moment, however, it looks as though the race itself is in jeopardy. "We are getting less snow here from one year to the next," explains Mora's mayor Peter Helander, "So we have decided to do something about it ourselves: to combat climate change and spur our local economy." Mora is currently rethinking its energy strategy and aims to surpass the EU's target of reducing carbon dioxide emissions by 20 percent by the year 2020. And E.ON Nordic could help them.

Together with Mora's town council, a local sawmill and some of the town's residents, E.ON Nordic is now testing a whole range of ideas to make the town self-sufficient, using only locally available and renewable resources in the future. For example, a cogeneration unit fuelled by waste timber from the sawmill could supply some of its heat and power. Additional energy could be provided by a wind farm, which E.ON would install and operate. The cogeneration and waste incineration plants currently operated by E.ON in Mora could then be replaced. Another idea is to use organic household waste to produce biogas, which could be used to fuel local buses. For this reason, E.ON Nordic last year ran a series of well-attended energy-saving workshops in Mora—and throughout the country—in collaboration with

the town's schoolchildren, citizens and political leaders. And, like everywhere else in Sweden, old electricity meters are currently being replaced in Mora by networked smart meters.

The most environmentally friendly energy is energy that's not used

"In the future," hopes Project Manager Michael O'Hare, "Mora will consume much less energy than it does today. And instead of oil from the Middle East, the town could be burning waste timber from the surrounding forests, have its own independent energy supply, and boost its local economy."

Right now, all of this is still a long way off. Nevertheless, a seven-person delegation from Mora has already been able to see for itself how smoothly an autonomous energy supply can work in practice. In December 2008, the fact-finders visited Malmö in southern Sweden, about 700 kilometers away, where over the few years, E.ON Nordic has helped to transform a previously empty harbor district into a highly attractive sustainable city. Today, "Västra Hamnen" (West Harbor) supplies all its own energy from local sources. Solar cells on the housetops and its own wind power plant supply electricity to the development on the shore of the Öresund—including the residents of the Turning Torso tower block, which is part of this district and Malmö's new landmark. Groundwater from a reservoir 90 meters (nearly 300 feet) underground delivers cooling water in summer and heat in winter. The range of renewable energies is rounded off by hot water from solar collectors and biogas from organic waste. All the energy systems were developed and installed by E.ON, and are still operated by the company.

That means that most of the current 1,500 residents get by on an annual consumption of less than 105 kWh per square meter of living space. By comparison, the average usage for Swedish households is around 240 kWh/m^2.

It is already foreseeable that the consumer of the future will use energy more cost-efficiently and wisely, and that this energy will be drawn increasingly from local renewable sources. It means nothing less than a quiet revolution in energy use—a revolution that starts with a glance at the electricity meter.

Billions to insure supply security

Internet quicklink → 408

E.ON Ruhrgas invests in long-term strategies to secure the supply of gas

In the early days of 2009, European consumers' faith in their gas supply was put to a big test: while many gas heating systems stayed cold, particularly in the Balkans, E.ON with its large capacities managed to maintain an unrestricted supply to all customers. As one of the leading gas companies in Europe, E.ON Ruhrgas was even in a position to help out countries like Hungary, Slovakia and Bosnia-Herzegovina with extra deliveries.

Up to 2011, the company will invest around €4 billion to further ensure supply security by enlarging its national and international pipeline and storage infrastructure, increasing its gas production, and developing liquid natural gas projects. A new subsidiary, E.ON Gas Storage GmbH, is responsible for managing and marketing all of E.ON's gas storage capacity in Europe. This capacity is available on an open-access basis, which not only promotes competition but also helps ensure that Europe has a crisis-proof supply of gas for the long term.

Power plant dialog

Internet quicklink → 305

Power plant dialog with local residents, environmentalists and trade unions

Large new construction projects often raise fears—particularly when the projects are for power stations. E.ON's answer is to invite its stakeholders to "power plant dialogs." For example, in the German town of Staudinger E.ON meets several times a year with politicians and representatives from the community, churches, industry and environmental protection associations. Controversial subjects such as emissions, planning procedures and renewable energies are discussed. The forum is moderated by a discussion leader and the results of its work is documented on a website (www.kraftwerksforum-staudinger.de). Though the discussions may be heated and occasionally exhausting, the forum has given the public a much better understanding of the Staudinger project.