

UTILITIES

ONLINE MONITORING TOOL

THE WAY FORWARD IN ENERGY
MANAGEMENT



Taking steps towards
reducing your carbon
footprints



The way forward in energy management

TACKLING THE CORE OF THE ISSUE

Governments all over the world have been taking aggressive steps to protect the environment. Concerned about air and water pollution, and the loss of endangered species, governments have worked hard to improve human health, and to reduce the harmful effects of human activities on wildlife and on unspoiled areas.

Many of their choices have done a lot of good. But equally many regulatory efforts have been costly and wasteful. Some of them have aggravated the very problems they were meant to solve as in the aggressive controls of new sources of air pollution that have extended the life of old, dirty sources.

As energy prices continue to rise, most European governments are keen to build low-carbon cities. Energy suppliers and their customers, for their part, will need to interact closely. Together, they can devise smarter ways to manage and reduce energy use - at work and home. These 'smarter' homes and businesses will employ technology that tells us the impact of choosing to use energy at a particular time. The impact it will have on budget and on the environment. So we behave in a way that sustains our energy supplies.

The challenge to create the right consumer behaviours has two significant elements; one is that the incentive to change to something better is hard to capture. If you engage in environmentally costly behaviour, through your energy and water use, you will probably pay nothing for the environmental harm you inflict.

The other element that contributes to excessive pollution is that consumers do

not get a reaction to the environmental consequences of their actions. If your use of energy produces air or water pollution you are unlikely to know or appreciate the fact, certainly not on a continuing basis. Even if you know the reaction, it is probably not significant to your behaviour. Those who turn up the heating and leave it on for weeks are unlikely to think, day by day, about the personal and social costs.

GETTING TO THE INFORMATION YOU NEED

Information is the key. As an energy supplier, you need to give out the right information at the right time. That means using all the media available – displays around the home, smart phones and the Internet – to get this information to the relevant users when they need it.

By providing tools that measure utility usage, you can encourage users to closely track how much electricity and water they are using. It's easy to see how having these details, just a click away, can be empowering. Knowing and understanding their usage patterns will help them use energy more intelligently. Each user makes a little difference. Before you know it the entire energy distribution chain is transformed.

Governments around the world are also doing their bit. They have introduced environmental regulatory schemes that add to the information requirements of users. The schemes contain listing and publishing of participants. They have been used across various activities that include energy efficiency in the UK and a climate change order for municipalities in Sweden.

CHANGING BEHAVIOUR

Customers are demanding sustainable services from you. Not more energy, but more help with controlling what they use and spend. To address this demand, you've got to move away from the norm and turn into information-sharing, smart suppliers. You'll need to rethink your commercial strategy. It's the perfect time to get hold of technology that can unlock great opportunities for you. This can help you formulate deals and communication channels that encourage your customers to use energy carefully and consciously. It can also assist you to offer new tariffs that reward customers for making the right decisions.

Equipped with information, consumers can take greater control of energy usage. Going forward they could even transform from being simple energy consumers to energy producers themselves.

Studies predict that local homeowners will band together and these special communities will begin to trade energy generation — both locally and virtually. They would make energy sustainable.

Those who decide energy policy recognise that times are changing. Their role is to facilitate and support this transformation. For the decisions they make today will have an enormous impact on the future - of distribution models, smart investment and sustainable production technologies. Success also depends on how united we are in making the future a much greener one – customers, businesses, distribution companies, energy producers, entrepreneurs and investors.



CHANGING COMPETITIVE LANDSCAPE

The energy distribution model is set to change. The various players – from producers to suppliers to end users – are expected to don bigger roles in saving energy and contributing to the community.

A new breed of energy service companies will replace the utility company. They'll decide and act with greater freedom and enterprise. For example, they would invest more in local energy production projects based on green technologies.

In parallel, community energy enterprises will come forth to allow communities to broker energy within their local distribution systems. As primary users begin to cut down energy usage and even participate in producing it, the role of the community energy enterprise will only grow.

With this two-way flow of energy, the enterprises will help balance services across the local unit and the national grid. This will bring to each household and business exactly the amount of energy it needs.

No matter what role, all these players have to rely on detailed, timely information to make powerful, effective decisions. This is no easy task. That's why we believe that the utilities sector needs a forward-thinking partner and industry innovator like Logica. We'll help you join the energy revolution and empower you every step of the way.



HARNESSING THE POWER OF INFORMATION

What if a way can be found to ensure people see how much energy they have used each day? Like putting up a web portal service where consumers can see how they are doing relative to the rest of the community participants. This has been an effective strategy, more than the emails or text notifications. Could this information be a powerful mechanism to change people's behaviours? Well, yes.

This goes a long way to solve the underlying problem that energy is invisible and people do not know when they are using a lot of it. Add to this the ability to compare how you are doing against your neighbour, street and suburb. And you have a powerful tool to begin to change consumer behaviour. Nobody likes to be seen to be at the bottom of the list.

Logica has collaborated with an energy company from the city of Växjö in Sweden, to devise an online monitoring tool (OMT). Easy to use, this web-based tool provides customers of electricity and other utilities, detailed information about their usage.

How much energy is consumed per square meter? By how much does consumption differ, hour to hour? By making such metrics available to the user, OMT gives just the right foundation to build your smart home or business.

OMT works simply. Users can check all kinds of comparative data, online. For example their month-to-month consumption is presented with easy-to-follow colour codes. These readily show up any change in consumption patterns.



As the demand for increased services is tackled, you'll soon be able to send signals directly into the smart home or business. These will instruct non-critical appliances with in-built artificial intelligence to reduce consumption or shut off.

This will change the way utilities cope with peaks in demand. Rather than calling for megawatts (MW) of central production capacity to be brought online to meet demand peaks, you'll be calling for negawatts – to reduce demand.

ABILITY TO COMPARE AGAINST HOUSEHOLDS AND APARTMENTS

Customers can sign up for energy-reducing competitions in their homes and see the results updated in real-time. This introduces an exciting competitive edge. It also serves as an ingenious feedback mechanism that encourages customers to change their attitude towards energy usage.

Customers can sign up for a competition as a household, or participate in a team with others. In week-long competitions, participants have shown significant energy savings consistently — as much as 30%.

The real genius of OMT is that it makes energy and water usage visible in an inclusive way. It also can be easily linked to a personal mobile device or phone and through its ability to support multimedia formats, the tool can affect the entire energy distribution chain.

VEAB acquires green credentials

Växjö is the greenest city in Europe, according to the BBC. Currently, 95% of its energy source for district heating and electricity comes from bio-fuels.

As part of its demand management programme, Växjö saves 1000 megawatt hours every year.

CASE STUDY

NOW IT'S THE TURN OF HOUSEHOLDS TO "COMPETE" TO SAVE ENERGY

Växjö Energi AB (VEAB) is a 121-year old energy company from Växjö in southern Sweden. Targeting more energy efficient behaviour in the city, VEAB introduced an online monitoring tool EnergiKollen. It has been received very well by customers.

The main idea was to get consumers to take an interest in and enjoy using energy in a sustainable way. EnergiKollen is a web hosted service with easy-to-follow graphics outlining changes of energy use. It collects data from energy meters around Växjö and gives direct feedback to consumers. Customers can log on to the service via the internet, free of charge. Because users see how easy it is to understand their energy consumption, they feel encouraged to behave in a more energy-efficient way.

For the first year and a half, 25% of the city's private households have used the tool. They were found to be four times more energy efficient than the households that don't use it.

VEAB has since sold the concept to businesses. About a 100 of them (10% of the total number of businesses in the area) have signed contracts. And the numbers are growing rapidly.

"VEAB is part of many initiatives contributing to a better environment and we are in the forefront when it comes to sustainable energy development. We have succeeded in reducing carbon dioxide emissions from fossil fuels by 86 per cent since 1993, while reducing the total amount of emissions by 30 per cent per capita in the town of Växjö. With EnergiKollen we can build on our achievements and offer our customers what we always strive for – namely the opportunity to impact and reduce energy consumption," says Ann-Mari Ståhlberg, CEO of VEAB.

"Energy services are a growing market for utilities," explains Jan Johansson, an engineer at VEAB and director of energy services. "From the number of hits we're getting and the declining trends in energy usage, we find that EnergiKollen is generating a lot of benefits for our customers and our business."

Logica is a business and technology service company, employing 39,000 people. It provides business consulting, systems integration and outsourcing to clients around the world, including many of Europe's largest businesses. Logica creates value for clients by successfully integrating people, business and technology. It is committed to long term collaboration, applying insight to create innovative answers to clients' business needs. Logica is listed on both the London Stock Exchange and Euronext (Amsterdam) (LSE: LOG; Euronext: LOG). More information is available at www.logica.com

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